Species

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Species Survival Commission

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Special quadrennium issue

Reviewing four years of conservation activity

Successes, challenges and future goals

Species 54

Contents

Species is the magazine of the IUCN Global Species Programme and the IUCN Species Survival Commission. Commission members, in addition to providing leadership for conservation efforts for specific plant, fungi and animal groups, contribute technical and scientific counsel to biodiversity conservation projects throughout the world. They provide advice to governments, international conventions, and conservation organizations.

Team Species Dena Cator, Elise Jueni, Lynne Labanne, Rachel Roberts, Andrew Rodrigues, Claire Santer, Camellia Williams.

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Cover Lesser Antillean Iguana (*Iguana delicatissima*) © Charles Knapp

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Email: species@iucn.org

For address changes, notify:

SSC Membership
Species Programme, IUCN
Rue Mauverney 28
CH-1196 Gland, Switzerland

Phone: +44 22 999 0268
Fax: +44 22 999 0015
Email: sscmembership@iucn.org

Please contact Team Species at species@iucn.org for more information.

Species is available electronically at: www.iucn.org/species

Water Deer (*Hydropotes inermis*). © Chen Min

Species Survival Commission

Quadrennium Report 2009–2012

Introduction

We must start with a very large thank you to Conservation International (CI), the Environment Agency Abu Dhabi (EAD), the MAVA Foundation, the Al Ain Zoo, the UNEP World Conservation Monitoring Centre (UNEP-WCMC), the World Association of Zoos and Aquariums, Chester Zoo, Bristol Zoo, and the Zoological Society of London (ZSL) for providing such generous financial assistance for the SSC office during the 2009–2012 quadrennium. This enabled Simon Stuart to be a full-time SSC Chair, and to have a small, highly effective staff team in my office. We should also say at the outset that the SSC works to the same strategic plan and programme as the Global Species Programme (GSP) in the IUCN Secretariat; the activities of the SSC and GSP are intentionally intertwined and mutually supportive, and so no effort is made to separate them in this report. A major highlight of the quadrennium was the signing of the SSC's first ever dedicated framework agreement. This was with the EAD for 2011 to 2013, and this most generous funding allows us to move ahead with some important strategic priorities that were previously unfunded.

SSC Mandate, Strategic Plan and Priorities

During the 2009–2012 intersessional period SSC, with support from the Global Species Programme, focused on implementing its 2009–2012 Species Strategic Plan. This report discusses our accomplishments for the period 2009–2012, in line with the Commission Mandate approved at the WCC4 in Barcelona, Spain.

1. **Commission Mandate**
   In the intersessional period of 2009–2012, the Species Survival Commission (SSC) will continue to play a leading role in enabling IUCN to be the world's most authoritative voice on behalf of global biodiversity conservation and the sustainability of natural resource use. In particular, SSC and its worldwide network are uniquely placed to allow IUCN to fulfil two essential functions for the global community, namely:
   - to inform the world about the status and trends of global biodiversity, thus providing measures for the health of our one and only biosphere; and
   - to monitor, evaluate and report on the effectiveness of the combined global conservation actions to mitigate current and emerging threats to biodiversity.

2. **SSC Vision**
   A world that values and conserves present levels of biodiversity.

3. **SSC Goal**
   The extinction crisis and massive loss of biodiversity are universally adopted as a shared responsibility and addressed by concerted actions throughout the world.

4. **SSC Objectives**
   For the intersessional period 2009–2012 SSC, working in collaboration with members, other IUCN Commissions and the IUCN Secretariat, will pursue the following key objectives in helping to deliver IUCN's "One Programme" commitment:
   a) *Status of Biodiversity*
      Observing and monitoring species with the aspiration to remain the leading global organization monitoring the status and trends of the world's biodiversity and informing the world and its decision-makers about its full range of values.
   b) *Pressures on Biodiversity*
      Analysing the impact of threats to biodiversity with the aspiration to be a leading authority in the analysis of factors responsible for the decline of species and their relative impacts.
   c) *Response to Biodiversity Loss*
      Facilitating and undertaking action with the aspiration to deliver solutions for halting biodiversity decline by convening, advising, facilitating and supporting key players in their efforts to mitigate the pressures on biodiversity and to reduce the rate of species decline.

5. **Priorities and achievements for the 2009–2012 intersessional period**
   The specific working priorities of SSC are derived from and focused on the 10 IUCN Global Results and grouped into 22 Key Species Results each of which has a number of measurable targets to be attained by the end of 2012. These Key Species Results are listed below (in italics), with the 2009–2012 achievements (not in italics). As always, what is left out of this report is much more than what is included. In addition, given the way that we often work "behind the scenes", for instance in some policy fora, it is not always possible or desirable to claim attribution, so again it is necessary to downplay what has been achieved. There have, of course, been a very large number of important activities carried out among the SSC Specialist Groups and Sub-Committees, and in the IUCN GSP – far more than there is space to report on here. As a result, a fuller and much longer report on the activities of all of the components of the SSC is being prepared.
   a) *Policy and Governance in regions and globally (public sector): Species information contributed to influence*

IUCN SSC Chairs Meeting Group Photo Febuary 2012 Abu Dhabi. © IUCN SSC

policy and governance systems with regard to the sustainable management of natural resources and the management of invasive species. As is widely known, biodiversity loss and species extinctions are continuing at unprecedented rates, and urgent action is needed to ensure the resilience of nature and to avoid catastrophic tipping points. Recovering from such dramatic changes in biodiversity will be costly. As a result, the SSC and GSP (the IUCN delegation was headed by the Director, GSP) were heavily engaged in the negotiations for the new strategic plan of the Convention on Biological Diversity (CBD). We participated in all of the long series of meetings leading up to the 10th Conference of the Parties (COP10) of the CBD in Nagoya, Japan, in October 2010, at which the strategic plan, including the 20 Aichi Biodiversity Targets was adopted. Most notably, the SSC was closely involved in the drafting of the ambitious Aichi Target 12 of the CBD SP: **By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained**. However, we also participated in the negotiations on several other Aichi Targets that are very important for species, notably Targets 1, 5, 6, 9, 10, 11, 13, 14, 15, 17 and 19. It is hard to over-emphasize the importance of the achievement in Nagoya; the CBD SP provides a roadmap for biodiversity conservation for the next decades, with clear commitments to conserve biodiversity from almost all of the world's governments. It has been followed up by the other biodiversity-related conventions and several UN organizations 'mapping' (an exercise carried out by IUCN) their remits to the Aichi targets. The second important species-related achievement from Nagoya was the updated Global Strategy on Plant Conservation (GSPC), and the SSC was also heavily engaged in the negotiations that led to its adoption.

We have to work in support of the Convention on International Trade in Endangered Species (CITES), working closely with TRAFFIC. We participated actively in all of the important CITES meetings, including COP14 (in Doha, Qatar, March 2010), and all meetings of the Standing, Animals and Plants Committees this year. SSC Specialist Groups engaged on a number of issues in relation to CITES, including on seahorses, sharks, chameleons, crocodilians, tortoises and turtles, galliforms, tigers, elephants and rhinos, with specific attention given to Crowned Cranes from East Africa, Bottle-nosed Dolphins in the Solomon Islands, the Humphead Wrasse in East and Southeast Asia. Prior to COP14, IUCN and TRAFFIC published the *Analyses of Proposals to Amend the CITES Appendices*, which is the key document in terms of providing the best science to the governments to guide them in their decisions on listing proposals. This is the ninth time that we have produced the *Analyses.* Since COP14, at the request of the Council of IUCN, we have been conducting a review of IUCN engagement in CITES. As part of this, Council has already reaffirmed CITES as a priority for the institution and a more thorough exercise to agree full CITES engagement strategy is nearing completion. Meanwhile, we have continued to participate in several CITES processes, including: technical support for the workshop on Asian snakes (April 2011), a detailed report on the application of the CITES Listing Criteria, and several meetings relating to our collaboration with the CITES Secretariat on the MIKE (Monitoring Illegal Killing of Elephants) project (including trying to secure funding to extend MIKE to its next phase of implementation).

The SSC also participated in COP10 the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in Bergen, Norway, November 2011. IUCN and SSC had a high profile at this meeting, with important inputs from a number of SSC Specialist Groups, and the Wildlife Health Specialist Group (WHSG) was named in an important decision on disease in migratory species. On the issue of "health", three UN organizations, WHO, FAO and OIE have been collaborating on a One Health Initiative. However, because these organizations do not encompass wildlife and ecosystem health, IUCN is now bringing in this aspect through the WHSG. This now enables us to operate at a more strategic level on wildlife health than ever before, and this is helped by funding that has allowed for the recruitment of a small staff team for the first time.

We have contributed to the work of the Ramsar Convention through the work our GSP Freshwater Biodiversity Assessment Unit. This has covered the value of wetlands to livelihoods (see below) and discussions on the selection of sites of importance for freshwater biodiversity (KBAs see also below).

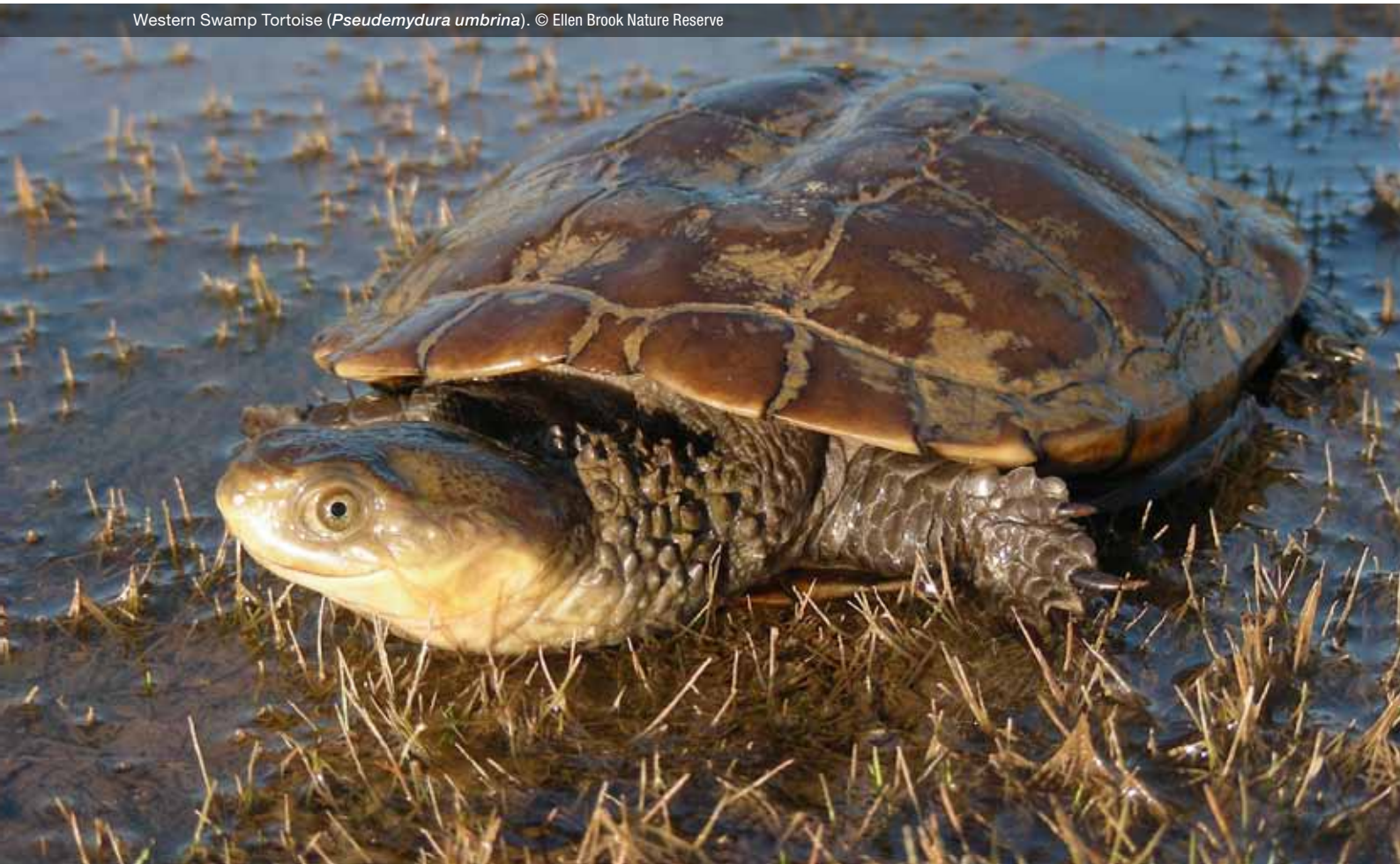
We have participated in the annual meetings of the International Whaling Commission (IWC) Scientific Committee, and in 2010 we prepared an IUCN policy statement raising concerns that the attempts to bridge the divide in the IWC were not taking sufficient notice of sound science. SSC also provided important inputs into the formal IUCN position on the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). We also played a prominent role in the Eye on Earth Summit (EoE), along with other IUCN staff, in Abu Dhabi in December 2011. In both the IPBES and EoE negotiations we have emphasized the importance of ensuring that global biodiversity monitoring systems build on existing programmes (notably the IUCN knowledge products), and do not wastefully compete with ongoing initiatives.

b) *Policy at national level: Species-based information provided to IUCN members, IUCN Regional and Country Offices and partner organizations to influence national policy making*. Throughout the 2009–2012 quadrennium, the SSC has made interventions to address some crucially important species conservation issues at the national level. A request to the government of the Seychelles asking them to extend a planned nature reserve so that it includes the foraging areas of the Critically Endangered Seychelles Free-tailed Bat was successful. We also contacted governments in the following countries: Ukraine to draw attention to illegal mass poisoning of geese; Zimbabwe to urge actions to address a serious escalation in rhino poaching; Costa Rica on marine turtle conservation; Argentina concerning draft legislation (eventually withdrawn) that could have had a serious impact on wild populations of Guanaco and Vicuña; India concerning threats to Gangetic River Dolphins if proposed dams on the Brahmaputra River go ahead; New Zealand to oppose (successfully) re-scheduling of land to allow mining on the Corromandel Peninsula, the main site for the Critically Endangered Archey's Frog; Indonesia concerning plans to clear the Bukit Tigapuluh forest landscape in Sumatra, with likely severe impacts on large mammals and other species; Chile to express concern about cliff diving in the vicinity of an important seabird colony on Easter Island; and Macedonia concerning major infrastructure threats to Mavrovo National Park, which is the last source population of the Eurasian Lynx in the Balkans.

We have also had important contacts with the government of China concerning proposals to place a barrage at the outlet of Poyang Lake, where 98% of the world's Siberian Cranes spend the winter. The government delayed the project pending further studies, and IUCN (in partnership with Wetlands International) submitted a very thorough report on the issue to the Prime Minister; we are currently awaiting the government's decision. We also expressed serious concern to China about proposals to build a dam in the Yangtze National Native Fish Reserve, which could block the migratory routes of Critically Endangered migratory fish species.

We contacted the government of the Republic of Korea concerning the reclamation of tidal mudflats at Song Do and in other locations, contrary to a commitment that the government made to Ramsar COP10. The reclamation of these mudflats has been linked to serious declines in wetland birds along the East Asian

Western Swamp Tortoise (***Pseudemydura umbrina***). © Ellen Brook Nature Reserve



flyway (including the Spoon-billed Sandpiper which is heading rapidly towards extinction). We are now carrying out an independent study, engaging government agencies and other stakeholders from all parts of the region, of the issue to inform the IUCN World Conservation Congress when it discusses this issue in Jeju in September 2012.

Other important national-level initiatives have included a major collaboration with Brazil on Red Listing, including a high-level *Colóquio a Proteção de Espécies Ameaçadas de Extinção* held in October 2011. In South Africa Simon Stuart took part in the launch of a ground-breaking publication: *Ensuring a Future for South Africa's Frogs – a Strategy for Conservation Research*. This is a model for other countries to follow.

c) *IUCN Red List Assessments globally: Conservation status, trends and distribution of selected taxonomic groups assessed at the global level*. We signed the new Red List Partnership Agreement on 21 June 2010. The Red List Partners are those organizations that have committed resources (financial and in-kind) to support The IUCN Red List, in particular the various biodiversity assessment projects that feed data into The IUCN Red List of Threatened Species™. The Partners are BirdLife International, Botanic Gardens Conservation International, Conservation International (CI), Department of Animal and Human Biology at the University of Rome "La Sapienza", NatureServe, Royal Botanic Gardens Kew (RBGK), Texas A&M University, Wildscreen and Zoological Society of London (ZSL). The expansion of the Partnership is extremely good news for the SSC, and a vote of confidence in The IUCN Red List. With the new partnership, we have re-established the SSC Red List Committee (RLC), which provides strategic oversight for The IUCN Red List, and which is currently preparing a new draft strategy for The IUCN Red List for 2012 to 2020.

The IUCN Red List was updated nine times during the 2009–2012 quadrennium, four of these being during the International Year of Biodiversity in 2010. As of early 2012, The IUCN Red List comprised 61,914 species, of which 865 are Extinct or Extinct in the Wild, 3,879 Critically Endangered, 5,689 Endangered, and 10,002 Vulnerable, and 9,709 are Data Deficient. The findings of this work are too extensive to summarize fairly here. Unfortunately, there have been many more deteriorations in The IUCN Red List status of various species than improvements. Deteriorations have been noted, for example in several species of turtles, molluscs and amphibians (amphibians remain one of the most threatened groups with an estimated 41% at risk). However, there have been some improvements in status due to conservation, and the downlisting of the Arabian Oryx from Endangered to Vulnerable in 2011 is especially noteworthy given that the species was Extinct in the Wild less than 40 years ago. Two species of plant also improved in status, one from Corsica, the other from Sicily. New Caledonia's endemic reptiles were assessed for the first time and a shocking 67% were found to be threatened, especially by ongoing habitat loss and fragmentation as the nickel mining industry continues to expand, but also by the effects of invasive alien species. Many newly discovered species are proving to be threatened, for example the Siau Island Tarsier, described in 2010 from Indonesia and classified as Critically Endangered.

A major event in 2010 was the publication of a short paper by senior SSC authors in the Policy Forum section of *Science* Magazine entitled "The Barometer of Life". This paper calls for a major investment in broadening the taxonomic base of The IUCN Red List so that it can truly fulfill its enormous potential as the Barometer of Life on earth. Our estimate of the true cost of establishing the Barometer of Life is USD 60 million, including the costs of the information systems, training, and support to national listing processes, and we are now working to identify donors for this ambitious sum, working in close partnership especially with Conservation International and NatureServe.

d) *IUCN Red List Assessments at national and regional scales: Conservation status, trends and distribution of species assessed, correctly applying the IUCN Regional Categories and Criteria*. The Red List Index has been adopted by the United Nations as one of the indicators for the 2015 Millennium Development Goal 7 on environmental sustainability. As a result, all countries of the world are now being asked to develop their own national Red Lists in order to measure trends in the status of their species. In order to support this rapidly growing need, the SSC National Red Listing Working Group, in collaboration with ZSL, convened a meeting in London in September 2009. It was agreed that the SSC and GSP need to establish a proactive training initiative to help countries develop and enhance their national Red Listing programmes, and to develop improved means of incorporating data from national Red Lists into the global IUCN Red List. This work has started with the training programme being generously supported by the MAVA Foundation. Another very important new development was the launch of a joint SSC-ZSL website on which information on national red lists from around the world can be found – see http://www.nationalredlist.org/site.aspx.

The update of The IUCN Red List in November 2011 focused on the results of the European Red List assessments funded by the European Commission. The results reveal that in Europe at least: 44% of all freshwater molluscs; 37% of all freshwater fish; 23% of all amphibians; 20% of selected terrestrial molluscs; 19% of all reptiles; 15% of all dragonflies; 11% of a selection of saproxylic beetles; 9% of all butterflies; and 467 of the 1805 vascular plant species assessed are threatened.

e) *The neglected taxa: Prominence of hitherto under-represented marine, freshwater, plants and invertebrate species conservation issues increased in the global conservation community*. Fungi must be the

most neglected of all the neglected taxonomic groups in the conservation world. However, during this quadrennium fungal conservation in SSC has had a boost, and we now have five Specialist Groups: Chytrid, Zygomycete, Downy Mildew and Slime Mould; Cup-fungus, Truffle and Ally; Lichen; Mushroom, Bracket and Puffball; and Rust and Smut. A historic first SSC Fungal Conservation Meeting took place in Whitby, UK, in October 2009 to plan the activities of the new SSC fungi network. Despite this, fungi remain hardly represented on The IUCN Red List, and there is much work still to be done.

We have seen a large increase in the number of well-documented plant IUCN Red List assessments over the quadrennium, including endemic species from South Africa, the Caucasus, the Eastern Arc in East Africa, and New Caledonia. The Cactus and Succulent Specialist Group is making very good headway with their Global Cactus Assessment. The Cycad Specialist Group completed its second assessment of every cycad species. We also completed the first ever IUCN Red List assessments of every species of sea-grass and mangrove, and are well on the way to completing the second assessment of every species of conifer. Work is also underway to complete the magnolia assessments and include them into The IUCN Red List. A major activity has been the Sampled Red List Index (SRLI) project, the plant component of which is being implemented by the RBGK. Huge progress has been made on this during the quadrennium, with representative samples being assessed of all the major plant groups. Preliminary results have already been published by RBGK, and these will shortly be included on The IUCN Red List – for the first time giving us an overall picture of the status of the plant kingdom.

A number of important and exciting new marine assessments have been completed, including on sea-snakes, lobsters, and commercial sea-cucumbers. Work is ongoing on the cone shells and the squids, cuttlefishes, octopuses and nautiloids. Most of the attention, however, has been on the marine fishes, several groups of which (including all the sharks, rays and skates, groupers, wrasses, tunas, billfishes, angelfishes, butterflyfishes, parrotfishes, croakers, surgeonfishes, and hagfishes and some of the blennioids, and seabreams) have now been completed. Some of the fish assessments have been conducted on a regional basis, with the Mediterranean and Eastern Tropical Pacific so far completed, and work is ongoing in the Gulf of Mexico. In 2011 an important paper was published in *Science* on the tuna and billfish assessment showing that the level of threat of these is strongly correlated with generation length and market price.

A particularly major achiever took place in September 2010 with the completion of The IUCN Red List assessment of African freshwater species. This was the culmination of five years of work, led by the GSP Freshwater Biodiversity Unit (FBU), working with several SSC Specialist Groups. During this project, 5,167 African freshwater species were assessed by 200 scientists. These included all known African freshwater fish, molluscs, crabs, dragonflies and damselflies, and selected families of aquatic plants. Many of the species included are of great economic importance, and even the loss of a single species could have a dramatic impact on human livelihoods. For example, in Lake Malawi, a group of fish, known as “chambo” by locals, forms an extremely important source of food. Of these, *Oreochromis karongae*, an Endangered species, has been hugely overfished, with an estimated 70% reduction in the population over the past 10 years. In Lake Victoria, a decline in water quality and the introduction of the Nile Perch (*Lates niloticus*) have caused a reduction in many native species over the past thirty years, threatening traditional fisheries. This IUCN Red List assessment studied 191 fish species in Lake Victoria and found that 45% are threatened or thought to be extinct. Around the great lakes of Africa, fish provide the main source of protein and livelihoods for many of the continent’s poorest people. The livelihoods of an estimated 7.5 million people in sub-Saharan Africa depend on inland fisheries. These new data in The IUCN Red List will be invaluable in helping to safeguard these fisheries, freshwater supplies and the many other associated resources. Priority areas of highly threatened and range-restricted African freshwater species can now be identified. For example, in the waters of the crater-lake Barombi Mbo in Cameroon, 11 species of fish are highly threatened and live a precarious existence as deforestation increases the risk of lake ‘burping’, where large levels of carbon dioxide are released from deep within the lake suffocating the fish. Without management intervention these species, some of which are important food sources, may be lost forever. Fish are clearly important to people, both as a source of food and income. But other freshwater species such as molluscs, dragonflies, crabs and aquatic plants also play vital roles in maintaining functioning wetlands and these should not be ignored. In the rapids of the lower reaches of the Congo River 11 species of mollusc, found only within a 100 km stretch of water, are highly threatened due to upstream pollution. Molluscs such as these provide important functions including water filtration. The results of the African freshwater assessments are published and analyzed in an outstanding IUCN publication, *The Diversity of Life in Freshwaters: Underwater, Under Threat*, in 2011. The freshwater assessments have now expanded into Asia, in part due to a very successful fund-raising collaboration between Conservation International and the FBU. Other important freshwater assessments were completed during the quadrennium: crayfishes (over 500 species); sturgeon (for which a shocking 85% of species are threatened, and 63% are Critically Endangered (some possibly already Extinct)); and several groups from the Eastern Himalayas: dragonflies, molluscs and freshwater fishes. In general this work is also impressively highlighting the links

Dancing Jewel (*Platycypha caligata*). © Viola Clausnitzer

between species and people, an often neglected consideration.

The zoological side of the SRLI project is run by ZSL, and among others they have completed assessments of random samples of 1,500 dragonfly species and 1,500 reptile species. ZSL is also working on SRLI samples of butterflies, and has also driven some comprehensive assessments of various invertebrate groups. ZSL convened the Foundations of Biodiversity conference in February 2010, focusing attention on all neglected groups of animals, fungi and plants.

f) *Population level monitoring: Trends and distribution of selected species assessed at population level*. Several SSC Specialist Groups have continued the important work of monitoring trends of populations of species. The longest running and most sophisticated of these is the African Elephant Database (AED), run by the African Elephant Specialist Group. Plans have been completed to expand this into the African and Asian Elephant Database in collaboration with the Asian Elephant Specialist Group. Both rhino Specialist Groups have continued to keep a close watch on rhino population numbers, and the African Rhino Specialist Group updated the population numbers for Black and White Rhinos at its meeting in South Africa in March 2011. The Crocodile Specialist Group, in collaboration with UNEP-WCMC, developed a new database of African crocodile population surveys. Most of the Specialist Groups dealing with large animals are doing population monitoring at least at some level, and the possibility of building this into a more formal process within SSC is being considered.

g) *Analysis of threats to biodiversity: Impacts of major drivers of biodiversity loss analyzed and utilized to develop solutions, especially in relation to emerging issues*. In 2009 we published *Wildlife in a Changing World*, a beautifully produced analysis of the 2008 IUCN Red List. This is the most recent, comprehensive global analysis to emerge from The IUCN Red List, and it covers all of the major biomes and threatening processes. We have done some more specific work on particular drivers of biodiversity loss, as indicated in the following paragraphs.

The SSC Marine Conservation Sub-Committee (MCSC) has laid the groundwork for a proposed SSC bycatch initiative. Review papers have been prepared on bycatch of both marine and freshwater fishes, and of marine invertebrates, all showing that this is a very serious, growing, and largely unregulated threat. It is hoped that the bycatch initiative can be fully launched in the next quadrennium. The MCSC, together with our new Coral Specialist Group, has also focused on the disturbing evidence that the future of coral reefs is bleak unless atmospheric carbon dioxide levels can be reduced to below 350 parts per million (ppm). Given that the current level is approaching 400 ppm and rising, and that the international negotiators at this time seem unable to agree on measures that would stabilize the level even at 450 ppm, it is clear that we are heading to a catastrophe which could wipe out an

entire marine ecosystem, with untold impacts in terms of species extinctions, and serious loss of human livelihoods. The practical response to this threat is proving elusive, but the SSC will continue to collaborate with others to explore options for increasing the resilience of corals, at least in local situations, in order to buy more time in the hope that the international negotiations will deliver much-needed results.

The Invasive Species Specialist Group (ISSG) has continued to be very active, working with the Invasive Species Initiative in the GSP. The ISSG is currently working with the Red List Unit (RLU) in the GSP to redevelop the Global Invasive Species Database, with a particular view to integrating it more closely with The IUCN Red List, and to make it more useful in facilitating early warning and rapid response actions in relation to invasives. The ISSG has also maintained the Aliens list serve (allowing enquirers to seek solutions from experts on invasive species problems that they face), published *Aliens* newsletter, and featured an Invasive Species of the Week on its website.

In 2011 the SSC established a joint task force with the IUCN Commission on Ecosystem Management (CEM) on systemic pesticides. These systemic pesticides have been implicated in the decline of a number of groups of invertebrates, including pollinators such as honey bees. A number of environmental groups have called for neonicotinoid pesticides to be banned, but these calls have been strongly contested by the industry. The SSC and CEM are therefore reviewing the scientific evidence in depth with a view to determining the true environmental impacts of systemic pesticides.

h) *Biodiversity Indicators: Status and trend of biodiversity, and effectiveness of conservation actions, monitored over time through selected species indices and indicators*. During the IYB the world had to examine its progress against the CBD's 2010 Biodiversity Target to reduce the rate of biodiversity loss. The SSC participated fully in this process (through our involvement in the 2010 Biodiversity Indicators Partnership), in particular through the Red List Index (RLI). The results of all the official indicators of the CBD Target, including the RLI, were published in 2010 in the 3rd *Global Biodiversity Outlook (GBO-3)*, and summarized in an important paper published in *Science* entitled "Global Biodiversity: Indicators of Recent Declines". The results showed that the rate of biodiversity loss is not slowing, while the pressures on biodiversity are growing rapidly. But most worrying of all, the rate of increase in responses to these pressures has slowed since 2002 when the Target was set. In other words, the gap between the pressures and the responses is widening, and the only possible result of this is acceleration in biodiversity loss and species extinctions, with growing risks to human wellbeing – unless of course the new CBD Strategic Plan is implemented with urgency. GBO-3 also showed the importance of IUCN knowledge products and The IUCN Red List in particular, for the development of indicators to measure status and trends in biodiversity. The most meaningful indicator of the benefits of biodiversity to people, for instance, the 'food and medicine indicator', is based on The IUCN Red List.


Wild wheat in Uzbekistan. © Ehsan Dulloo

During CBD COP10, a major paper was published in *Science* "The Impact of Conservation on the Status of the World's Vertebrates". The SSC and GSP led on this paper, which had 175 authors. The headline message of the paper was that, although the status of biodiversity continues to deteriorate, focused conservation efforts do work and have a measurable effect on the RLI globally. Conservation now needs to be scaled up! We are working on developing improved methods for measuring the impact of conservation on species, and hope to publish these in the next quadrennium.

i) *Species Conservation Strategies, Action Plans and Tools: Conservation action for species improved through application of IUCN species specific conservation strategies and action plans and other relevant tools*. In the last quadrennium, the SSC Species Conservation Planning Task Force produced a very important set of guidelines, *Strategic Planning for Species Conservation*, outlining a new SSC approach to conservation planning for species. In this quadrennium a new SSC Species Conservation Planning Sub-Committee (SCPSC) was established to promote the adoption and implementation of the guidelines through the SSC Specialist Groups. The work of the SCPSC is being generously supported by the EAD and the Al Ain Zoo. The SSC has now adopted a new process through which we will endorse species conservation plans, and we now expect to see a number of new SSC-endorsed conservation plans appearing in coming years. Two have already appeared, on the Critically Endangered Golden Mantella, a frog known from a single site in Madagascar, and on the Ethiopian Wolf. In both cases these plans were developed with the local communities and, critically, endorsed by the government. The SCPSC is now starting a programme for mentoring SSC Specialist Groups in species conservations planning, and supporting the Sawfish Action Plan of

the Shark Specialist Group, the Asian Wild Buffalo Action Plan of the Asian Wild Cattle Specialist Group, the Brown Howler Monkey Action Plan of the Conservation Breeding (CBSG) and Primate Specialist Groups, and the Djibouti Biodiversity Action Plan (involving the IUCN Eastern and Southern African Regional Office and the Antelope and Equid Specialist Groups). The partnership between the SCPSC and CBSG is very important when it comes to pushing ahead species conservation planning in the SSC, and CBSG is working with a number of components of the SSC to assist in this regard. Linked in some ways to the species conservation planning process is a new initiative in SSC to develop guidance for species-level priority setting, and the inaugural workshop for this process took place in Caracas in September 2011.

The Re-introduction Specialist Group remained very active advising and guiding re-introduction projects worldwide. Notably, the second and third editions of the excellent series, *Global Re-introduction Perspectives*, were published in 2010 and 2012 respectively. This second issue contained 72 case-studies and the third issue had 50 case-studies. These include re-introduction projects for invertebrates, fish, amphibians, reptiles, birds, mammals and plants. The joint work of Re-introduction and Invasive Species Specialist Groups to revise the IUCN Re-introduction Guidelines and Policy Statement on the Translocation of Living Organisms has been a major activity this quadrennium and it is hoped that this work will be completed for the end of 2012. This work has been generously funded by Al Ain Zoo. The new Re-introduction Guidelines will, among others things, develop IUCN policy on options to address climate change, including difficult topics such as assisted colonization.

We have continued to address the amphibian extinction crisis, and in the response to Resolution 4.017 (Stopping the Amphibian Crisis) from the IUCN World Conservation Congress (WCC) in Barcelona in 2008, an Amphibian Mini-Summit was convened in London in August 2009. Following this meeting we formed a new inter-institutional Amphibian Survival Alliance (ASA), and six institutions and one individual formed the founding group and provided the necessary core funding. We are extremely grateful to all of them. As a result we fund-raised for and then appointed the ASA Director and the Chief Scientist in 2011. The priorities for the ASA are the conservation of key sites for amphibians (very many of these fall outside protected areas), and fostering research on threatening processes, especially on the management of the devastating fungal disease, chytridiomycosis. In 2011 we harmonized the SSC's three initiatives on amphibians: ASA; Amphibian Ark (AArk); and the Amphibian Specialist Group (ASG). AArk has become the *ex situ* programme of the ASA, and the ASA is now the "host institution" of the ASG. The staff working for ASA, AArk and ASG are now members of a single team. These changes bring about much needed coherence in global amphibian conservation, and as a result of this, a unified approach to fund-raising and work planning is now been developed. As a result of the work of ASA, AArk and ASG, 12 national and regional amphibian action plans have been or are being developed, 55 threatened species protected *in situ* (including 22,000 ha of new protected areas), conservation needs have been assessed for 2,435 amphibian species, and *ex situ* programmes have been established for 100 threatened species.

Another major conservation crisis concerns the rapid declines of large animals in Asia, especially Southeast Asia. This includes most species of large mammals, turtles, and freshwater fishes such as the Mekong Giant Catfish and Chinese Paddlefish; many of these species could go extinct unless action is taken very soon. In collaboration with the Secretariat and various IUCN Members, the SSC is launching a new initiative to address the crisis called Action Asia. There is an especially urgent need for increased law enforcement on the ground in the places where the most threatened species occur. We have started an important collaboration with the European Association of Zoos and Aquariums (EAZA), which invited us to join a major fund-raising campaign for Action Asia, starting in September 2011 and running to 2013 to raise funds from the European zoo-going public for the conservation of severely threatened large animals in Southeast Asia.

We have had a major focus on the Sumatran and Javan Rhinos, two of the most seriously threatened large mammals on earth. Both of these species now appear to be extinct on the Asia mainland, or almost so, and so their future depends mainly on the conservation of the last few populations in Indonesia. The IUCN SSC Asian Rhino Specialist Group, working with the Wildlife Conservation Society (WCS), Taman Safari Indonesia, International Rhino Foundation, Indonesian Rhino Foundation, WWF and the IUCN Asia Regional Office, prepared a statement on these two species which was adopted by the SSC Steering Committee at its meeting in Indonesia in July 2011. On the basis of this statement, Simon Stuart was able to meet with Vice President Dr Boediono in October 2011 in Jakarta. The Vice President was very receptive to the six urgent recommendations given to him, and we are anxiously waiting to hear whether or not these proposals will be formally adopted by the government. SSC has also been involved in many other initiatives in Asia, including advising on the conservation of the Critically Endangered Delacour's Langur in Vietnam, and on the planned re-introduction of the Cheetah to India. We also participated in the Global Tiger Initiative (GTI), which reached its culmination in November 2010 with the Global Tiger Forum in St Petersburg. This was the first time that five heads of government have come together to agree plans to conserve a single species. The Russian Prime Minister, Vladimir Putin, convened the meeting, which was also attended by the Chinese Premier Wen Jiabao. Significant momentum in tiger conservation was achieved at the meeting, and IUCN will have particular roles to play in future.

j) *Area-based conservation planning: Biodiversity conservation action improved through the application of refined area-based conservation planning standards*. A joint SSC-WCPA Task Force on Biodiversity and Protected Areas was formed during the quadrennium. Two initial activities have been given to the task force. The first is to carry out a study looking at how well protected areas conserve biodiversity, and what the relationship is between this and the IUCN management categories for protected areas. The second is to develop new criteria for identifying and designating sites of importance for biodiversity, and to run an expert review and consultation process within IUCN to reach consensus on these criteria. Criteria have already been formulated for identifying Key Biodiversity Areas (KBAs), and these will now be subject to extensive review with the aim of reaching global agreement on a new system (the final name might change from KBAs). Through the generosity of the MAVA Foundation, we have appointed a new member of staff to support the Task Force in its work on developing the "KBA" criteria. The task force has appointed leaders for the following working groups: Criteria and Thresholds; Delineation; Documentation, Validation and Endorsement; Application; and Ecosystems. Other working groups might yet be formed. The consultation process started with a workshop in Auckland in December 2011 at the Society for Conservation Biology's Annual Meeting. The next step will be an over-arching workshop during 2012 to complete the process design and to ensure buy-in from all the major communities that we need to have behind the new IUCN standard for "KBAs", already recognized as needing to develop into an IUCN flagship knowledge product.

k) *Species Information Service: A state-of-the-art Species Information Service in place, for managing and disseminating species information and incorporating general biodiversity, sustainable use, economic and livelihood issues*. The Species Information Service (SIS) is the underlying software for The IUCN Red List. A major advance took place in January 2012 when SIS version 2 was launched, with a dedicated back-end database ensuring data integrity and stability. The SIS now has 3,000 users worldwide. The SSC, GSP and IUCN Red List Partners, have 800 active accounts between them. This gives an idea of the scientific network that lies behind The IUCN Red List. Many further advances to the SIS are under development, including incorporating more data relating to human livelihoods. Another important advance is the new IUCN Red List map browser, released in December 2011, designed to facilitate the exploration and visualization of species distribution ranges, and to overlay them with other datasets such as protected areas. The significant advances in our software have been possible due to generous support from the MAVA Foundation and others. We have also taken concrete steps to integrate The IUCN Red List with the joint UNEP WCMC World Database on Protected Areas.

Closely related to the improvements in the SIS, the SSC Standards and Petitions Sub-Committee (SPSC) and Red List Technical Working Group (RLTWG) have continued to work through a range of issues relating to The IUCN Red List, the data standards and definitions, the documentation requirements, and the implications of all of this for the underlying software – the SIS. Among the outputs of this work are the *Guidelines for Using The IUCN Red List Categories and Criteria*, which have been updated annually by the SPSC, the most recent version being 9.0 dated September 2011. The RLTWG, working with the GSP, has been leading a very important SSC-wide consultation process on revising the documentation standards for The IUCN Red List. The aim is to have broad consensus on the revised standards, ready to come into force at the beginning of the next IUCN quadrennium. The RLTWG also worked on proposing changes to The IUCN Red List peer review system, and reviewing the rules for re-assessing species.

The development of the software is taking into account the future IUCN Red List of Threatened Ecosystems (RLE) to ensure that it will be fully integrated with the existing species IUCN Red List. The RLE is being led by the CEM, with the support of the SSC, and with funding from the MAVA Foundation and the Gordon and Betty Moore Foundation.

Brazilian Merganser (*Mergus octosetaceus*). © Adriano Gambarini

l) *Biodiversity and climate change: Biodiversity considerations introduced into emerging global or regional policies in the energy production sector.* Due to lack of resources, the SSC has not been able to prioritize work on this Key Species Result. The results of our analyses of the impacts of climate change on species (see (n) below) are, however, an essential basis for incorporating biodiversity considerations into policies in the energy production sector.

m) *Biodiversity conservation and carbon off-set schemes: Carbon offset and carbon credit trading schemes used to enhance biodiversity conservation, especially for plants and other carbon fixing species*. Due to lack

of resources, the SSC has not been able to prioritize work on this Key Species Result. The results of our analyses of the impacts of climate change on species (see (n) below) are, however, an essential basis for incorporating biodiversity considerations into carbon offset and carbon trading schemes.

n) *Response of species to climate change: Impacts of climate change on species and the response of species to climate change documented, analysed and taken into account in public and private sector adaptation policies and practices at global and regional levels*. We have continued our work to develop a traits-based approach to assessing species' vulnerability to climate change, having tested the approach on birds, amphibians and corals. We expect the final details of this to be published in a peer-reviewed journal before the end of 2012 in a paper entitled "*Climate change susceptibility of the world's birds, amphibians and corals*". This will become a new approach to assessing the impacts of climate change on species, in addition to climate-envelope modeling which is already widely used. Meanwhile, we are already pioneering our new methodology with economically valuable species in the Albertine Rift region of central Africa with a view to gaining insights on how climate change might impact the livelihoods of populations dependent on wild species. This work has been funded by the MacArthur Foundation.

In response to IUCN Resolution 4.016 (Development of climate change guidelines for IUCN Red List assessments) from the WCC in Barcelona in 2008, the SPSC completed interim climate change guidelines from The IUCN Red List in early 2010. The SPSC is working on more detailed, definitive guidelines, this requires some detailed modeling and is proceeding more slowly than we would like because of limited funding.

In 2011 a new SSC Climate Change Task Force (CCTF) was established, and this will guide our future work on climate change, working solely with the Climate Change Unit in the GSP. We are very grateful to WCS for their support of the CCTF.

o) *Biodiversity and energy production: Biodiversity considerations introduced into emerging global or regional policies in the energy production sector (especially biofuels)*. Due to lack of resources, the SSC has not been able to prioritize work on this Key Species Result. We did, however, nominate experts to sit on the "Independent Advisory Panel on the "Remediation and Rehabilitation of Biodiversity and Habitats of Oil Spill Sites in the Niger Delta" and participated in the IUCN-Shell Biofuels Workshop held in Switzerland in 2011. Additionally we make IUCN Red List data available to help guide the work of the energy production sector (see (u) below). Our other link to this work comes from the development of conservation planning tools such as the KBA standard to inform decision-making regarding where, for instance, to develop oil palm plantations in a way that minimizes the destruction of biodiversity.

Zeus olympius. © David Minter

p) *Biodiversity and development strategies: Biodiversity and livelihoods considerations fully reflected in development strategies and policies (such as the Precautionary Principles, aid agency policies, National Biodiversity Strategies and Action Plans and Poverty Reduction Strategies)*. Due to lack of resources, the SSC has not been able to prioritize work on this Key Species Result. However, work on a number of other Key Species Results is relevant here, for example (b) above and (s) below.

q) *Vulnerability to natural hazards: Regional and national environmental management strategies to reduce vulnerability to natural hazards influenced by sound analyses of the relationship between species and human livelihoods*. Due to lack of resources, the SSC has not so far been able to prioritize work on this Key Species Result.

r) *Human wildlife interaction: Livelihoods of people and species conservation enhanced through improved human-wildlife interactions*. Work on this area was called for in Resolution 4.039 (Cross-Commission Collaboration on Sustainable Use of Biological Resources) from the WCC in Barcelona in October 2008. In October 2009 a meeting with the Chair of the IUCN Commission on Environmental, Economic and Social Policy (CEESP) was convened to plan our future work on sustainable use and human-wildlife interactions. At this meeting it was decided that we could not advance major new initiatives on both topics simultaneously, and so we prioritized sustainable use, on which we already had more capacity. We expect a great focus on human-wildlife interactions in the 2013–2016 quadrennium. However, a number of SSC Specialist Groups have continued to work in this area as part of their regular business.

s) *Species values for ecosystem goods and services: Species-related ecosystem goods and services evaluated and analyzed*. In the coming year we expect to devote greater efforts to examining the links between species and human well-being. In the race between conservation and development it is very clear that we need to identify and raise awareness of the

importance of species to people's livelihoods and to national economies. In an effort to assist this process for wetlands we have developed "An Integrated Wetland Assessment Toolkit" which provides a methodology and case studies to determine the full value of a wetland in terms of its biodiversity, economic value, and importance to peoples' livelihoods, thus filling an important methodological gap. You can find the report at: www.iucn.org/species/IWAToolkit.

t) *Biodiversity and food production: Biodiversity considerations introduced into emerging policies in the food production sector (agriculture, fisheries, and aquaculture)*. Due to lack of resources, the SSC has not so far been able to prioritize work on this Key Species Result. However, the SSC Marine Conservation Sub-Committee (MCSC) is in the process of developing new programmes of work, one on engagement with Regional Fisheries Management Organizations (RFMOs), and one on bycatch, and these will be relevant to the fisheries and aquaculture sectors. A number of SSC Specialist Groups, including the Shark, Group and Wrasse, and Tuna and Billfish Specialist Groups, continue to engage to fisheries policy issues to help ensure sustainability, and eliminate threats from bycatch. Also, the SSC-CEM Task Force on Systemic Pesticides (see (g) above) will probably engage with the agriculture sector in the 2013–2016 quadrennium. We also have an active SSC Crop Wild Relatives Specialist Group carrying out work that is critical to the future of food security, and this we be a growing priority for IUCN in the next quadrennium.

u) *Species information for private sector: Species information contributed to reduce the negative impacts and strengthen the benefits of offsets in industries and, where relevant, their products on biodiversity, and to the development of biodiversity strategies in the private sector.* In June 2010, IUCN formally joined the Integrated Biodiversity Assessment Tool (IBAT) Partnership, together with BirdLife International, CI and UNEP-WCMC. IBAT bring The IUCN Red List, the World Database on Protected Areas, Important Bird Areas, and Key Biodiversity Areas into a single online tool. The specific website "IBAT for Business" supports the private sector, development banks and others in making sound decisions that take full regard of the available conservation-related data. We have done a lot of work to put IBAT on a secure financial footing through subscriptions from corporations, and this is progressing well. We are also very grateful to the MacArthur Foundation for providing much-valued bridging funds to support IBAT for 2011–2012 while adequate subscription income becomes available. In addition to the IBAT Partnership, we have also worked directly with a number of businesses on the provision of species information to support their decision-making.

v) *Use of wild living resources: Sustainable harvest and trade of wild living resources are promoted and adopted through cooperation with relevant parts of the private and public sector.* As mentioned in (r) above, in response to Resolution 4.039 Simon Stuart convened, together with the Chair of CEESP, a workshop in October 2009 to plan our future work on sustainable use. At this meeting it was agreed that the SSC's existing Sustainable Use Specialist Group (SUSG) would form the basis for a SSC/CEESP group (the final name of which will be agreed in 2012). Significant energies have been devoted to securing core funding for the new "SUSG", and we are most grateful to EAD for their generous support which has allowed us to proceed with a recruitment process for the new Chair, who was appointed in December 2011. Already, we are very excited to see our sustainable use activities picking up speed, and to see this happen as a CESP/SSC collaboration.

The SSC of course remains very active on sustainable use issues through a number of its Specialist Groups, such as the South American Camelid and Crocodile Specialist Groups. One particular initiative with which Simon Stuart has been involved, is being led by Rich Harris of the Caprinae Specialist Group on conservation hunting in China, in close collaboration with the Chinese State Forestry Administration. From this a number of new initiatives are expected to flow, including a more in-depth collaboration with China in improving conservation hunting, and a new process to develop new SSC guidelines on trophy hunting for conservation. The Plant Conservation Sub-Committee (PCSC) has been prioritizing species groups of high economic value for IUCN Red List assessments (including timber trees, medicinal plants and crop wild relatives).

6. Governance

The SSC has continued to enjoy strong governance as follows:

a) *Participation on Council by the SSC Chair.* Simon Stuart attended all Council meetings in the 2009–2012 intersessional period and served on the Programme and Policy Committee, and the Climate Change and IPBES Working Groups. His performance as Chair was appraised by the President (as per Regulation 78.c). As part of his duties he undertook a strategic analysis of the evolution of IUCN's budget since 2000 in order to gain insights as to the types of information that the Council requires in order to discharge its oversight responsibilities with regard to the budget, specifically to ensure that investments are made to deliver the highest priority results in the IUCN Programme. Simon Stuart also developed a paper for the May 2011 Council meeting to start the process for preparing the World Species Congress in 2015 (as per Resolution 4.019 (World Species Congress)). This paper was accepted by Council, and the Director General has since written to all IUCN State Members inviting expressions of interest in hosting the Congress.

b) *SSC Steering Committee.* The regionally balanced Steering Committee consisted of 21 global leaders in

the species conservation community, with seven institutional observers from major conservation organizations. The SSC Steering Committee met five times during the quadrennium: Switzerland (June 2009), Venezuela (January 2010), Switzerland (December 2010), Indonesia (July 2011), and Abu Dhabi (February 2012). In addition to its regular work of governing the Commission, the Steering Committee conducted a performance appraisal of the SSC Chair in 2011, and also led the process to receive nominations from SSC members for the position of SSC Chair in the 2013–2016 IUCN quadrennium. The SSC Deputy Chair has handled these activities with great discretion and professionalism.

c) *SSC Sub-Committees*. The SSC has operated seven sub-committees to address major areas of work that are too large to be managed by the Steering Committee on its own. The Freshwater, Invertebrate, Marine and Plant Conservation Sub-Committees have each met three times. They represent the interests of their respective components of the SSC Network, help to prioritize their work and improve their strategic engagement with SSC and other parts of IUCN. The Species Conservation Planning Sub-Committee is assisting the SSC Specialist Groups to move beyond Red Listing to plan for species conservation (see (i) above). The Red List Committee oversees the strategic development of The IUCN Red List, and the Standards and Petitions Sub-Committee acts as the independent "supreme court" over The IUCN Red List, handling petitions against listing, and maintaining the Red List Guidelines.

d) *Specialist Groups, Red List Authorities and Task Forces*. The SSC currently has 106 Specialist Groups (SGs). Most of these have a taxonomic focus, but five are disciplinary: Conservation Breeding; Invasive Species; Re-introductions; Sustainable Use; and Wildlife Health. There are 17 Stand-alone Red List Authorities (RLAs), and a further 71 RLAs within Specialist Groups. The SSC also has three Task Forces: one of Biodiversity and Protected Areas shared with WCPA; one on Systemic Pesticides (shared with CEM); and one Climate Change (CCTF). Fifteen new groups were established during the quadrennium: Anolid Lizards; Aquatic Plants; Australasian Marsupials and Monotremes; Boas and Pythons; Brazil Plants; Bumblebees; Bustards; Butterflies; Carnivorous Plants; Grasshoppers; New World Marsupials; Pangolins; Small Mammals; Vipers; and Vultures. During the quadrennium we had leadership transitions in 12 groups: African Rhinos; Arabian Plants; Bison; Conservation Breeding; Dragonflies; Flamingos; Marine Invertebrates RLA; Otters; Peccaries; Pelicans; Polar Bears; and Tortoises and Freshwater Turtles. In the case of the Flamingo and Otter Specialist Groups, the transitions were sadly necessitated by the deaths of the incumbent chairs. In early 2011 a new agreement with Wetlands International (WI) was signed governing the 13 SGs shared between SSC and WI, and broadening the collaboration more generally between the two organizations. The great mass of work carried out by the SSC is done by the SGs, RLAs and TFs – too much to be reported on here. The number of SSC members is constantly changing, but at the end of 2011 it stood at around 8,000.

e) *Second SSC Chairs' Meeting*. Thanks to the extraordinary generosity of the EAD and the Mohamed bin Zayed Species Conservation Fund (MBZ), the second ever SSC Chairs' meeting was held in Abu Dhabi on 23–27 February 2012. About 260 SSC leaders took part, including all SG and TF Chairs and Stand-alone RLA Focal Points, all SSC Steering Committee and Sub-Committee members, many GSP staff, senior managers from IUCN headquarters, all IUCN regional offices, all IUCN Red List Partners, and representatives of all of the other IUCN Commissions. This was an unprecedented opportunity to plan for the 2013–2016 Quadrennium and for the World Species Congress, as well as forging new alliances within SSC, and between SSC and other parts of IUCN. Specifically, this meeting was an opportunity to:
- To allow the SSC leaders to get to know each other better and to develop new collaborations
- To develop partnerships with IUCN Commissions, Programmes, Regional Offices, Members and Partners
- To learn about new products and tools
- To complete plans for SSC's work in 2013–2016
- To develop major new global and regional initiatives
- To plan for the 2015 World Species Congress
- To consult on developing policies, guidelines and standards
- To thank the SSC Chairs for all their hard work
- A variety of different sessions were held, including:
- Plenary sessions dealing with major topics of broad interest
- Workshops (for example on global and regional initiatives, international conventions, new tools and training, etc)
- Working Group to plan for the World Species Congress in 2015
- Networking (market-place sessions with IUCN regions, SSC Sub-Committees, SSC disciplinary Specialist Groups and other Commissions)
- Consultations (to develop new IUCN and SSC policies and guidelines)
- Informal networking and mixers.

The formal report of this extremely important meeting will be circulated prior to the World Conservation Congress in Korea.

f) *SSC Awards*. The SSC's highest honour, the Peter Scott Award for Conservation Merit, was given to five people during the quadrennium: Raoul du Toit for this pioneering work on the conservation of both rhinos in Zimbabwe; the late Sue Mainka for her work on conserving the Giant Panda, leading the IUCN Species Programme, and encouraging conservationists in Asia;

Martin Brooks for his long and effective service as Chair of the African Rhino Specialist Group; Anders Rhodin for his leadership of the Tortoise and Freshwater Turtle Specialist Group; and Luigi Boitani for his dedicated service of SSC in numerous roles over a 40-year period. The new George Rabb Award for Conservation Innovation was established, generously funded by former SSC Chair George Rabb himself. The first two recipients are Bob Lacy and Resit Akçakaya for their ground-breaking work on population viability assessment, and the handling of uncertainty in making consistent IUCN Red List assessments. The Harry Messel Award for Conservation Leadership was given to six people: Viola Clausnitzer; Richard Emslie; Sonja Fordham; Dave Garshelis; Barbara Goettsch; and Alexine Keuroghlian. The SSC Chairs Citation of Excellence was given to 14 people/groups: the Freshwater Biodiversity Unit in the GSP; Frédéric Launay; Gabriela Lichtenstein; Patricia Moehlman; Sanjay Molur; Caroline Pollock; Randy Reeves; the Sampled Red List Index for Plants Project at the Royal Botanic Gardens, Kew; Jane Smart; Andrew Smith; Pritpal Singh Soorae; Jean-Christophe Vié; Grahame Webb; and Doreen Zivkovic.

g) *Recognizing SSC Members*. In addition to the awards mentioned above, the Steering Committee felt that we are not recognizing long-serving, hard-working SSC members appropriately. Accordingly, it was decided to re-establish the SSC Roll of Honour, which includes a very limited number of people who have made extraordinary leadership contributions to the Commission. The Roll previously included HRH Prince Bernhard; Lieut. Col. C.L. Boyle; Richard Fitter; Maisie Fitter; Kai Curry-Lindahl; Boonsong Lekagul; Ian Grimwood; Grenville Lucas; and Alexey Yablokov. The new members of the Roll of Honour agreed by Steering Committee are: Sir Peter Scott; George Rabb; Ralph Daly; Lee Talbot; and Hal Coolidge. We are also establishing a new category of SSC Distinguished Service Members (DSM), and we are currently going through a very large task to identify all those who have served the SSC in important roles over the last 30 years, in order to identify DSM candidates. We hope to make these DSM appointments before the end of the quadrennium.

7. Communications

We have enjoyed some very successful publicity during the quadrennium. Almost all of our IUCN Red List update launches have been accompanied by significant media coverage. This was especially the case during CBD COP10 when an IUCN Red List launch took place simultaneously with the release of our *Science* paper "*The Impact of Conservation on the Status of the World's Vertebrates*" (see (h) above). We also gained important public profile with a number of other media releases, for example when we ran a story in February 2011 provided by the SSC Lagomorph Specialist Group to mark the start of the Chinese Year of the Rabbit.

Our most prominent contribution to raising the profile of the IYB was *Species of the Day*, implemented with the support of UNEP and Wildscreen. We had a different species account for every day of 2010, each with text, a photograph and a map. *Species of the Day* was placed

Antsingy Leaf Chameleon (*Brookesia perarmata*). © Richard KB Jenkins Madagasikara

on The IUCN Red List website, and generated enormous interest among the public, with over 600 other websites and blogs linked to it, and over 4,000 followers on Twitter. From 2011 onwards we have continued these popular species account on a weekly basis, called *Amazing Species*. We also developed a partnership with Collin Bartholomew publishers to produce a beautiful book, based on almost all of the 2010 *Species of the Day* profiles. The book, *Species on the Edge of Survival*, appeared in bookshops in September 2011. The IUCN Red List website continues to enjoy a very high visitor rate, which has been climbing to about 15,000 unique visitors per day, with occasional peaks of nearly 30,000. This is probably IUCN's most visible window to the outside world, the visitor rate to The IUCN Red List website being much higher than to the main IUCN website itself. With the generous support of Rolex, we are now developing a popular interface for The IUCN Red List website. We have undertaken a major upgrade and improvement of the species pages on the IUCN website, and this went live in February 2012, with greatly improved presentation and navigation.

8. Finances and Fund-raising

The SSC Commission Operations Fund (COF) is insufficient for the governance needs of the Commission and the Office of the SSC Chair. SSC COF has decreased from CHF 297,000 to 268,000 per annum over this intersessional period due to the overall decrease in core funding available to IUCN. Likewise, the core funds allocated to the GSP do not cover even the core functions of maintaining The IUCN Red List standards, producing the annual IUCN Red List, or providing the necessary support to the Commission, and have decreased from over CHF 1,000,000 per annum to less than CHF 800,000 per annum. External donor funds for the programmatic contribution of the SSC must therefore be raised from external sources.

We have been successful in increasing significantly the project funding available to the SSC and GSP. As mentioned in the Introduction, the highlight of the quadrennium was the signing of a new framework agreement between the SSC and the EAD which provides extremely generous and much-needed funding support for key aspects of our work, notably the SUSG, IUCN Red List training, IUCN Red List assessments in the West Asian region, developing links between The IUCN Red List and the GISD, assistance to Specialist Groups in Species Conservation Planning, developing criteria for "KBAs", developing Action Asia, and completing The IUCN Red List assessments of cacti, conifers and magnolias.

The other major highlight was the establishment of the SOS - Save Our Species Fund, supported to the tune of USD 10 million by the Global Environment Facility (GEF) and the World Bank, with the first matching funding so far raised from Nokia and the French Government. The SOS Secretariat has been established in the GSP, and an SSC SOS Working Group is advising the SOS Donor Council on funding priorities and is screening funding applications. The first public call for SOS proposals was issued in July 2011 for conservation projects on amphibians, threatened large animals in Asia and Africa, and Critically Endangered birds. Over 400 proposals were received, of which 23 were eventually funded.

Extremely generous financial support has also been provided by numerous other supporters, including the MAVA Foundation, CI, the European Commission, the New Hampshire Charitable Foundation, the US State Department, the MacArthur Foundation, the Government of France, Rolex and numerous others, as well as the support to the SSC Chairs' Office (see Introduction), and the essential in-kind support from The IUCN Red List Partners.

9. Acknowledgements

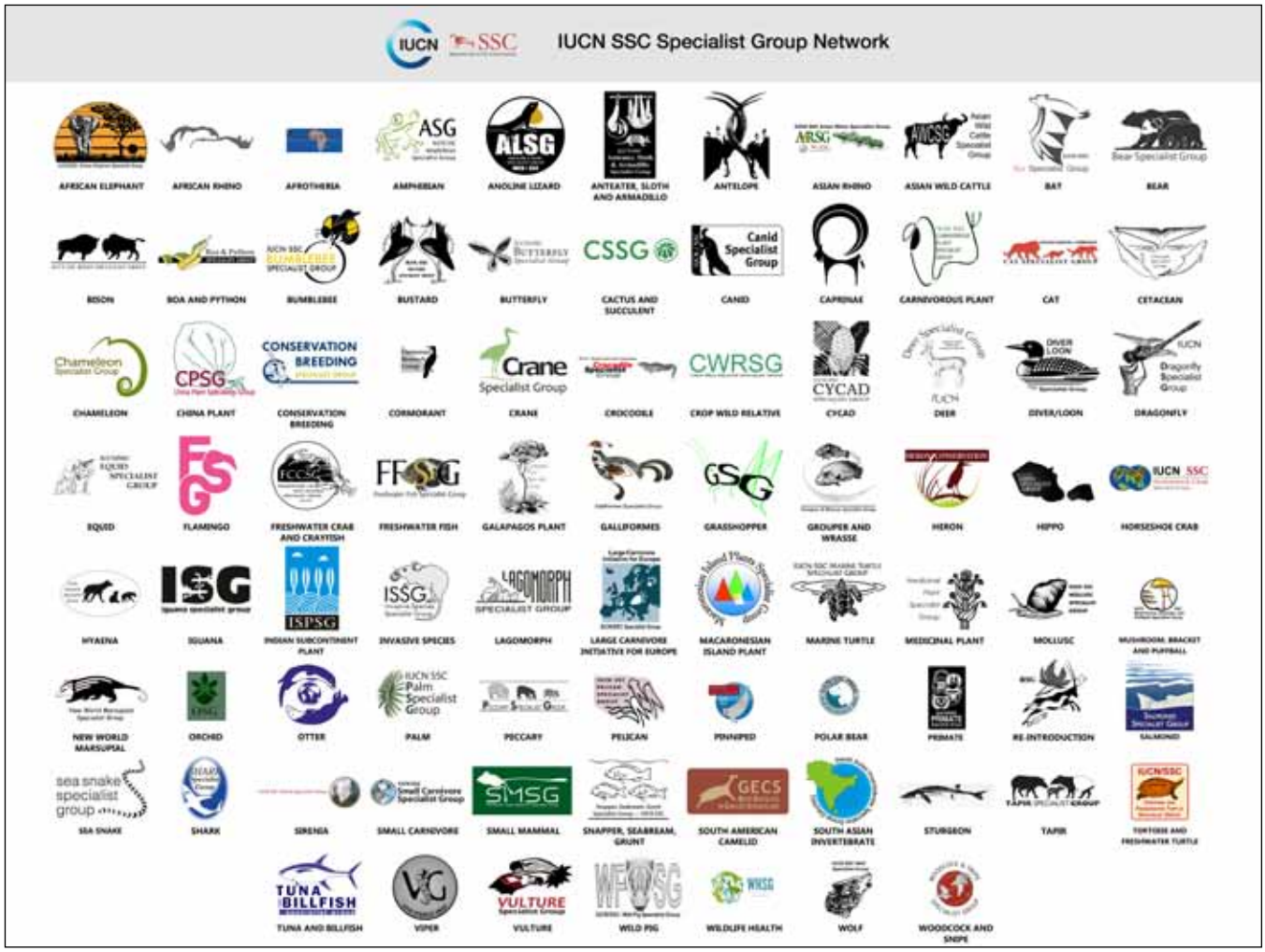
It is impossible to thank by name here all of the many people and institutions who have made it possible for the SSC and GSP to function so well this quadrennium. We have had enormous support from many quarters, and we are most grateful for all of it, especially the thousands of SSC members who give their time free of charge, and our many wonderful donors. However, we close by thanking the EAD's Director General, Ms Razan Khalifa Al-Mubarak for her extraordinarily generous support of the SSC. We would also like to name Jon Paul Rodríguez, Frédéric Launay, Russ Mittermeier, George Rabb, and Jean-Christophe Vié as outstanding colleagues. We thank all of the GSP staff, too numerous to mention, and the excellent staff in the SSC Chair's Office: Mike Hoffmann (Senior Scientific Officer); Rachel Roberts (Executive Assistant); Jeremy Harris (Development Director); Katharine Holmes (intern); and Jennifer Luedtke (intern).

Simon Stuart
Chair, IUCN Species Survival Commission

Jane Smart
Director, IUCN Global Species Programme
Global Director, Biodiversity Conservation Group

Specialist Group reports

Activity reports from the IUCN SSC Specialist Groups, Red List Authorities, Disciplinary Groups, Task Forces and Sub-Committees



African Elephant Specialist Group

Activity Report 2009–2012

The African Elephant Specialist Group (AfESG) held yet another vibrant and successful members meeting in November 2009. The Group turned out in force and took advantage of the opportunity, realizing that funding realities may make it difficult to bring all the members together again anytime soon. Since then communication has relied heavily on the use of a Google Group for listserve capabilities. We appointed 10 new members in the middle of the quadrennium, while sadly two of our members, both from West Africa, passed away.

While our African Elephant Database was hibernating, we worked intensively to develop an online multi-species database. Many other Specialist Groups expressed interest in using the new system for their species. And now the *African and Asian Elephant Database* is live and we are preparing a new set of population estimates for Africa.

In collaboration with CITES MIKE (Monitoring the Illegal Killing of Elephants) programme, we researched and published a study on the elephant meat trade in Central Africa. With regard to sustainable use and human livelihoods, we have actively contributed to the CBD Liaison Group on Bushmeat, the CITES Central Africa Bushmeat Working Group, and the newly formed CEESP/SSC Sustainable Use and Livelihoods Specialist Group. We designed a programmatic approach for the vertical integration of human-elephant conflict mitigation, which is now being used by the IUCN ESARO Regional Office and partners to raise funds for more comprehensive approaches to this ever-expanding issue.

The AfESG provided technical support to three African elephant range State meetings during this quadrennium and assisted in the preparation of a number of national action plans, as well as the continent-wide African Elephant Action Plan, adopted by consensus in March 2010.

Six issues of *Pachyderm*, the journal of the African Elephant, African Rhino and Asian Rhino Specialist Groups, were published, including the landmark 50th issue.

We have continued to provide technical input into CITES processes and consultations. In partnership with the Asian Elephant Specialist Group, MIKE and TRAFFIC's Elephant Trade Information System (ETIS), we have prepared two comprehensive overviews of the entire ivory supply chain for the CITES Parties, as well as participating in COP15, and two Standing Committee meetings.

Facts

Chair: Holly Dublin
Red List Authority Focal Point: Diane Skinner
Number of members: 54
Website: www.african-elephant.org

Success stories

- The 2009 members meeting.
- Working to enhance understanding of the entire supply chain for ivory, in partnership with CITES monitoring programmes, MIKE and ETIS, in particular preparing two comprehensive overviews of the entire ivory supply chain for CITES.
- The launch of the Africa and Asia Elephant Database online platform.
- The publication of 50 issues of *Pachyderm* since 1983.
- Collaborating with consumer, transiting and producing nations on the ivory flows initiative.

Challenges

- Conservation challenges include: a recent upsurge in poaching and the illegal trade in ivory; escalating habitat loss and fragmentation; growing human-elephant conflict; and identification of negative localized impacts habitats by elephants at high densities.
- Other challenges are: satisfying the data requirements for Red List assessments; current debates on African elephant taxonomy; providing strategic advice on conservation in West and Central Africa; and the unending search for new funding in an increasingly difficult global economy.

Future Goals

- Finding innovative solutions to the growing demand for ivory and its impact on elephant populations.
- Revitalizing the human-elephant conflict Working Group.
- Engaging in programmatic partnerships with IUCN Regional Offices in Africa.
- Revamping the AfESG website and bringing the African Elephant Library fully online.
- Continuing to provide technical information to support decision-making at national, sub-regional and international levels, including the multilateral environmental agreements.
- Supporting the membership effectively.

African Elephant (*Loxodonta Africana*). © IUCN Photo Library Alicia Wirz

African Rhino Specialist Group

Activity Report 2009–2012

Attended CITES CoP15 and 61st and 62nd meetings of CITES Standing Committee. Submitted mandated joint AfRSG/AsRSG/TRAFFIC report for CoP15 and two information documents for SC meetings. Also participated in the CITES Rhino Working Group set up at SC61.

Successfully organized the biennial AfRSG meeting in Mokala NP, South Africa, attended by 50 international delegates. Continental numbers and a list of Continental Key and Important rhino populations were updated at this meeting. Red List entries also updated with latest information.

Assisted with the development and facilitation of strategic rhino conservation plan revisions for Botswana, Zimbabwe, Kenya, South Africa and Tanzania. A strategic plan for South Africa's important white rhino population is also in draft phase. Also assisted Namibia with a review of its rhino security plans.

Provided advice and technical assistance and training to numerous national programmes and organizations.

Aided in minimizing illegal rhino related activities by assisting with the development and presentation of evidence in mitigation of sentence in a number of bench mark rhino cases. Worked as part of a team producing an information handbook on rhino for judiciary.

Facilitated greater cohesion amongst South African private rhino owners.

Actively participated in numerous rhino focused meetings/discussions, such as 'Coalition against Wildlife Trafficking (CAWT)' meeting, South African National Dialogue meetings, South African Scientific Authority alternative management options meeting, S.A. Parliamentary portfolio meeting, AWF/KWS rhino meeting in Kenya, SADC Rhino Management Group, and Rhino and Elephant Security Group/Interpol Environmental Crime Working Group meetings.

Continued editorial assistance to *Pachyderm* journal.

Success stories

- Continental numbers of both white and black rhinos continue to grow, despite increased poaching.
- African rhino Red List entries updated.
- Provision of evidence in rhino cases has seen record high sentencing and support for RhoDIS DNA initiative.
- Greater cohesion of South African private rhino owners.
- Rhino plans developed for most rhino range states.

IUCN SSC Sir Peter Scott Medal for Conservation was awarded to the previous Chairman (Dr M. Brooks) and Lowveld Trust's R. du Toit, who also won a Goldmann Award. Dr R. Emslie was awarded IUCN SSC Harry Messel Award for Conservation Leadership.

Challenges

- To reduce poaching as a result of unprecedentedly high black market value of rhino horn.
- A need for greater international cooperation, alignment of legislation and awareness in fighting the illegal trafficking of rhino horn.
- Increase the value of rhino in the face of increased protection costs and a reduction in live sales demand.
- Objectively explore alternative strategies to sustainably conserve rhinos.

Future Goals

- Reduce poaching, black market value and illegal demand for rhino horn that is driving rhino poaching.
- Development of an enabling environment to facilitate the continued expansion of rhino numbers and range.
- Evaluate the pros and cons of alternative strategies to sustainably secure rhinos into the future.
- Enhance international cooperation and sharing of information to reduce the illegal trade in horn.
- Increase the international status of rhino related crimes. Promote the need for strong and consistent penalties for rhino crimes and the use of RhoDISTM central DNA database for rhinos in tracking of horn, prosecution of rhino cases and rhino research.

Black Rhinoceros (*Diceros bicornis*). © Lucky Mavrandonis

Facts

Chair: Michael Knight
Deputy Chair: Benson Okita-Ouma, MBS
Red List Authority Focal Point: Richard Emslie
Number of members: 31
Website: www.rhinos.org/professional-resources/iucn-african-rhino-specialist-group

Afrotheria Specialist Group

Activity Report 2009–2012

In addition to providing information requested from organizations and individuals on hyraxes, the aardvark, tenrecs, golden moles, and sengis (elephant-shrews), we also have been proactive in several areas.

– Our group co-sponsored a symposium on afrotheres at a conference on African small mammals in Swaziland.
– We supported a successful application for funding research on sengis in Mozambique.
– We provided guidance on numerous research projects focusing on afrotheres across Africa, but especially on giant sengis in forested areas of eastern and central Africa.

We continued our support of local efforts to conserve the critically endangered population of Juliana's golden mole near Pretoria, South Africa. We also have expanded our efforts to encourage research on the aardvark.

Once a year, we produce our newsletter "Afrotherian Conservation", and also maintain and update our website: www.afrotheria.net, where back issues of the newsletter are archived and our membership roster is maintained. The site also includes extensive profiles and information on each of our groups, which serves to increase public awareness of afrotheres and their conservation.

Success stories

- Formed the Afrotheria Specialist Group in 2001 from existing inactive groups and included species not previously covered.
- Completed Red List assessment for all 78 species of smaller afrotheres.
- Participated in the discovery and description of a new species, the grey-faced sengi (see image).
- Supported successful funding of an important taxonomic study of golden moles.

Challenges

- Maintaining motivation and momentum of current and future volunteer group-members.
- Continue to increase awareness of the little known smaller afrotheres.
- Develop support among specialists and conservation organizations to assemble a comprehensive conservation plan for the Red Listed smaller afrotheres.

Future Goals

Our goals to conserve the five afrothere groups and their habitats have not changed since our start in 2001:

- To provide sound scientific advice to conservationists, governments, and other interested groups.
- To raise public awareness.
- To develop research and conservation programmes.
- When the above goals are met, broader IUCN conservation objectives will be advanced.

Grey-faced Sengi (*Rhynchocyon udzungwensis*). © F. Rovero (Trento Museum of Natural Sciences, Italy)

Facts

Chair: Galen B. Rathbun
Red List Authority Focal Point: Galen B. Rathbun
Newsletter Editor: P.J. Stephenson
Number of members: 33
Website: www.afrotheria.net/ASG.html

Amphibian Specialist Group

Activity Report 2009–2012

During the last quadrennium the Amphibian Specialist Group (ASG) has continued to grow in membership and productivity. A number of regional groups have taken a very active approach to developing internal priorities with very positive, high profile outcomes. These include the Madagascar, South African and Caribbean groups to name but a few.

As a global effort the ASG has worked with local partners to establish 14 new protected areas, encompassing 22,000 ha and home to 55 threatened or endemic species, across three continents. Twelve National and Regional Action Plans were created and implemented, with many more on the way.

Red Listing efforts continue with a number of assessments/reassessments published on The IUCN Red List and the launch of an interactive online assessment forum. Capacity building efforts continue with a number of seed grants being dispersed and training courses being run in Colombia and Haiti.

A suite of communication tools were also launched or updated including a new website, social media tools and significant updates to *FrogLog*, our bimonthly newsletter. We also partnered with SOS – Save our Species and Nokia to create the first IUCN app – the Fantastic World of Frogs.

In 2010 we partnered with teams across the globe to launch the Search for Lost Frogs, an unprecedented global initiative to find amphibian species thought to be potentially extinct. To date, more than 15 species have been rediscovered and the initiative continues to grow.

The ASG would like to thank the following for their support: Andrew Sabin and the Sabin Family Foundation; George Meyer and Maria Semple; SOS – Save Our Species; The John D. and Catherine T. MacArthur Foundation; Conservation International; The Mohamed bin Zayed Species Conservation Fund; Global Wildlife Conservation; National Fish and Wildlife Foundation; Latham & Watkins; Strachan Donnelley; George Rabb; Chicago Community Foundation; and Detroit Zoological Society.

In addition, regional nodes of the ASG have been supported by a range of local and international donors which we would like to extend our thanks to and look forward to furthering our combined efforts during the coming quadrennium.

Success stories

- The Search for Lost Frogs, a campaign spearheaded by the ASG, dispatched 33 expeditions and 126 researchers in 21 countries to find some of the world's rarest amphibians – some not seen this century. Over 15 species rediscoveries have been made to date, generating 650 news articles in 20 countries and over a billion potential viewers.

Challenges

- Habitat loss impacts 90% of threatened amphibian species but organizations fail to include amphibians in conservation planning.
- Knowledge of chytridiomycosis has improved, but the disease cannot yet be mitigated in the wild.
- IUCN Red List requirements and limited resources inhibit reassessments of species.

Future Goals

- Continue with the creation and implementation of National and Regional Action Plans.
- Further our partnership with the Amphibian Survival Alliance to amplify our conservation impact.
- Develop more efficient lines of communication with our members to improve regional support.
- Expand the Seed Grant program to help answer conservation needs driven questions.
- Obtain funds needed to update the amphibian assessment database by 2014.

Facts

Co-chairs: Dr Jim Collins and Dr Claude Gascon
Red List Authority Focal Point: Dr Ariadne Angulo
Number of members: 700
Website: www.amphibians.org

Bornean Rainbow Toad (*Ansonia latidisca*), a species that had not been seen since the 1920s, rediscovered during the Search for Lost Frogs.

Anoline Lizard Specialist Group

Activity Report 2009–2012

The Anoline Lizard Specialist Group (ALSG) is a new Specialist Group, proposed, approved, and inaugurated in 2011. In its first year, the ALSG has established a Steering Committee and consolidated a membership of 50 specialists with a wide range of expertise in anole biology, applied conservation, and zoo research. ALSG members hail from 16 countries, and broadly represent the geographic and taxonomic diversity of anole species.

At a May 2012 workshop in Costa Rica, the ALSG worked with the Snake and Lizard Red List Authority to conduct IUCN Red List assessments for the 79 species of Central American *Anolis* that had not been previously assessed. These accounts are currently in review, with a publication target of 2013.

The ALSG held its first business meeting in Vancouver, Canada, in August 2012, where the co-chairs and attending members developed a two year plan to complete IUCN Red List assessments for all anole species, and to initiate the creation of Species Recovery Plans for those identified as most threatened. Coincident with this meeting, the ALSG also launched an official website in August 2012: www.anolisconservation.org.

We would like to thank our institutional sponsor the Museum of Comparative Zoology at Harvard University.

Success stories

- The establishment of the group's Steering Committee and initial membership with good representation across expertise and geographic fields means we are ready for action!

Challenges

- The biggest conservation challenges are habitat destruction, invasive species, rapidly changing climate, and high demand from the pet trade.
- Lack of recognition that these species are threatened.
- Lack of understanding of the importance of anoles within communities.

Future Goals

- Development programs with AZA-accredited zoos for *ex situ* breeding and recovery of Critically Endangered anole species.
- Conduct IUCN Red List assessments for all anoline lizards (fewer than 50% have been assessed).
- Develop species conservation strategies for threatened and near threatened anoline lizards. Work with governments and NGOs to implement these.
- Solicit funding and/or sponsorship for anoline lizard conservation activities.
- Raise awareness of anoline lizard conservation issues with (1) the public; (2) conservation organizations; and (3) international regulatory bodies (e.g., CITES).

Facts

Co-chairs: Dr Luke Mahler and Dr María del Rosario Castañeda
Red List Authority Focal Point: Gregory Mayer
Number of members: 50

Blue Anole lizard. © Luke Mahler

Anteater, Sloth and Armadillo Specialist Group

Activity Report 2009–2012

During the last quadrennium, the Anteater, Sloth and Armadillo Specialist Group (ASASG) has built up an active group of committed specialists by renewing our list of members, including several young scientists dedicated to the conservation of xenarthrans. This allowed us to achieve several ambitious goals and initiate long-term activities.

Most importantly, we reassessed the conservation status of all 31 species of Xenarthra for The IUCN Red List of Threatened Species™. Two sloths, one anteater, and four armadillos are now listed in a threatened category. We also identified Xenarthra specialists and enthusiasts in most range countries to involve them in Specialist Group activities and obtain updated information on the status of xenarthrans in their ranges.

After three years of inactivity, we revived our newsletter *Edentata* and converted it to a peer-reviewed electronic journal with at least one issue per year. During this quadrennium, we published three issues with 38 articles, short communications and field notes (one more with at least eight articles is in preparation), plus a special issue on the latest IUCN Red List assessments that includes species profiles and updated range maps.

To raise public awareness, we have designed a new website on xenarthrans and our Specialist Group, which is available in English, Spanish, and Portuguese. In combination with the use of Facebook, we have managed to reach a wide audience with which we are interacting on a regular basis. We have also organized several symposia on Xenarthra conservation at national and international congresses to improve communication with the scientific community, and provided scientific advice to conservationists, governments, and other interested groups.

Finally, we have initiated the development of a Sloth Action Plan, an ambitious project that will help us define conservation priorities and provide guidelines to ensure the long-term survival of these fascinating species. We will extend this work to anteaters and armadillos in future. We would like to take this opportunity to thank Conservation International and the San Antonio Zoological Society for their generous financial support.

Success stories

- We have been dedicated to the conservation of xenarthrans for 30 years.
- Our newsletter *Edentata*, initiated in 1994, is sent to nearly 400 readers.
- Our website www.xenarthrans.org, available in three languages, is widely used as a reference.

Challenges

- Many species are still insufficiently known to realistically assess their conservation status.
- The regional conservation status of several species may be more critical than their international status.
- Laws protecting xenarthrans exist in many range countries, but are not always enforced.

Future Goals

- Hold regional workshops to develop a Sloth Action Plan.
- Initiate Action Plans for anteaters and armadillos.
- Collaborate on national and regional IUCN Red List assessments of xenarthrans in different range countries.
- Support the development and implementation of regional and local policies for conservation of xenarthrans.
- Organize Group activities within scientific meetings.
- Obtain funding for the Xenarthra Conservation Fund, for field conservation.

Pygmy Three-toed Sloth (*Bradypus pygmaeus*). © Bryson Voirin

Facts

Chair: Mariella Superina
Red List Authority Focal Point: Agustin M. Abba
Number of members: 20
Website: www.xenarthrans.org

Antelope Specialist Group

Activity Report 2009–2012

– Maintained and updated priority antelope species files.
– Reviewed and revised IUCN Red List assessments.
– Published two issues of *Gnusletter* annually.
– Produced an Antelope Specialist Group (ASG) data resource CD.
– Liaised with CITES on major trade issues concerning antelopes.
– Responded to requests from UNESCO on World Heritage Sites containing antelopes.
– Worked with CMS on the saiga MoU.
– Liaised with AZA and EAZA on *ex situ* and *in situ* conservation.
– Established an African Buffalo Interest Group (AfBIG) within ASG.
– Supported grant and funding applications for antelope conservation and research.
– Provided advice to members, NGOs and governments on strategic planning, conservation and re-introduction of antelopes.
– Coorganized with ZSL the 1st Antelope Symposium, London, 17–18 November 2011.
– Participating in the World Conservation Congress and organizing one Knowledge Café on antelopes: Jeju, 2012.
– Addresses to international audiences and forums on critical issues driving antelope conservation such as e.g. enhancing the conservation benefits and promoting best practices of sustainable use of antelopes, antelope ranching, antelope hunting; understanding the bushmeat issue in respect to antelope conservation and envisaging solutions to the problems raised.
– Field operations by ASG members such as: translocation of giant sable in Angola; rapid assessment survey of antelopes in Somaliland; re-introduction of the African buffalo to Gilé National Reserve, Mozambique.

Success stories

- First global antelope symposium coorganized with ZSL, held in London, 17–18 November 2011.
- African Buffalo Interest Group (AfBIG) established within ASG.
- Arabian Oryx downlisted to Vulnerable.
- Giant sable successfully translocated.

Challenges

- Ensuring a higher profile for antelope conservation.
- Enhancing global (national and international) interest in antelopes.
- Improving the conservation status of the most threatened antelopes.
- Securing adequate funding to ensure that ASG operates effectively.

Future Goals

- Coordinate work on key antelope areas.
- Facilitate development and implementation of Conservation Strategies and National Action Plans for all key species
- Revise and update all antelope Red List assessments.
- Update all country profiles and the African Antelope Database.
- Recruit new members from under-represented regions
- Establish an ASG Taxonomic Working Group to review changes in antelope taxonomy.

Beira (*Dorcatragus megalotis*) in Somaliland. © D. Mallon

Facts

Co-chairs: Philippe Chardonnet and David Mallon
Red List Authority Focal Point: David Mallon
Number of members: 75
Website: http://neaasg.org/

Arctic Plant Specialist Group

2011 Update

Held international Conservation of Arctic Flora and Fauna (CAFF) XIII workshop on rare Arctic plants and Circumboreal Vegetation Mapping (CBVM) in Iceland.

Monitored GLORIA (Global Observation Research Initiative in Alpine Environments) sites in Selawik National Wildlife Refuge, Alaska; two other CAFF Arctic States joined the GLORIA effort: Iceland and Faroe Islands. Vegetation and temperature data collected at GLORIA sites will be used to discern trends in species diversity and assess and predict losses in biodiversity and other threats to fragile alpine ecosystems under accelerating climate change pressures.

Vladivostok 2012 Workshop: *East Asian Flora and its Role in the Formation of the World's Vegetation* (special session on the CBVM) www.geobotanica.ru/symposium.

Success stories

- Initiated development of an Arctic Plant Portal for Arctic plants.
- Published a Circumboreal Vegetation Mapping (CBVM) Concept Paper (*CAFF Proceedings Series Report No. 3*).
- Published an International Arctic Vegetation Database (IAVD) Concept Paper (*CAFF Proceedings Series Report No. 5*).

Challenges

- Immensity of the Arctic and Boreal regions.
- Paucity of information on rare plant distribution in the Arctic.
- High cost of data acquisition.
- Rapidly changing northern ecosystems.
- Funding for the CBVM and IAVD.

Future Goals

- Produce Circumboreal Vegetation Map (CBVM) to provide a common legend and language for boreal ecosystems; identify and map regions of diversity, rarity, and value. The CBVM will provide a framework for conservation of boreal biodiversity.
- Produce International Arctic Vegetation Database (IAVD), a pan-Arctic ecological information system for research, nature conservation, education, and policy making.
- Greater cooperation with IUCN, communicating IUCN concerns to CAFF and Senior Arctic Officials.

Facts

Chair: Stephen Talbot
Red List Authority Focal Point: Mora Aronsson
Number of members: 13

Asian Elephant Specialist Group

Activity Report 2009–2012

Over the 2009–2012 period, the Asian Elephant Specialist Group (AsESG) has been active on a number of fronts. We have continued to publish our journal, *Gajah*, in both hard and downloadable PDF form and have also made back issues of *Gajah* available for download from our website. Our Wild Elephant and Elephant Habitat Management Task Force published a report on the "Extent and distribution of some invasive plant species in Asian elephant habitats" and our Veterinary Task Force provided new health protocols and a bibliography on elephant tuberculosis on our website.

We also made significant progress with the joint African/Asian Elephant Database (working with the AfESG): Asian elephant range data from the range-wide mapping workshop are now included in the database and the population data are being entered. On the policy front, the AsESG participated in the E:8 (Elephant 8) meeting, which was part of the preparations for the Elephant 50:50 Congress to be held in India in 2013; participated in a review of the analytical framework for the CITES Monitoring the Illegal Killing of Elephants (MIKE) program; and contributed to the joint ETIS/IUCN/MIKE/CITES Secretariat/WCMC reports to the 61st and 62nd Meetings of the CITES Standing Committee, "Status Of Elephant Populations, Levels Of Illegal Killing And The Trade In Ivory", as well as to the discussions at the meetings themselves.

On a more sober note, the AsESG listed Sumatran Elephants (*E. m. sumatranus*) as Critically Endangered on The IUCN Red List of Threatened Species in November 2011. The primary reason for the Critically Endangered listing was the scale and rate of habitat loss: taking ca. 25 years as a single generation for Asian elephants, then over 69% of potential Sumatran elephant habitat has been lost within just one generation and the driving forces behind this habitat loss are still continuing. Moreover, there is clear direct evidence from two Sumatran Provinces (Riau and Lampung) to show that entire elephant populations have disappeared as a result of the habitat loss over the past 25 years. The AsESG has offered its help in addressing the threats to Sumatra's elephants to the Indonesian authorities.

Success stories

- Began workshop preparation to help Indonesia update its Elephant Action Plan.
- Included Asian elephant data in first iteration of the joint African and Asian Elephant Database (with AfESG).
- Identified possible donor to support a project officer.
- Helped prepare for E:50 (Elephant 50) Congress.
- Contributed to the joint ETIS/IUCN/MIKE/CITES Secretariat/WCMC reports to the 61st and 62nd Meetings of the CITES Standing Committee, "Status of Elephant Populations, Levels of Illegal Killing and The Trade in Ivory", and to the discussions at the meetings themselves (thus helping influence policy).
- Published a report on the "Extent and distribution of some invasive plant species in Asian elephant habitats".

Challenges

- For AsESG, the lack of any staff, so everything has to be done on a voluntary basis.
- For Asian elephants, it is: habitat loss, fragmentation, and degradation; human-elephant conflict; illegal killing; and the genetic and demographic problems faced by small isolated populations.

Future Goals

- Complete IUCN Asian Elephant Conservation Strategy (using the new IUCN Species Conservation Planning Guidelines).
- Help the Indonesian government update its Elephant Action Plan.
- Facilitate and promote the inclusion of additional data in the joint African and Asian Elephant Database.
- Continue to help the CITES MIKE and ETIS Programs and thus influence policy.
- Appoint salaried Programme Officer to improve communication and coordination.

Asian Elephant (***Elephas maximus***).

Facts

Co-chairs: Ajay Desai and Simon Hedges
Red List Authority Focal Point: Simon Hedges
Number of members: 92
Website: www.asesg.org

Asian Rhino Specialist Group

Activity Report 2009–2012

Reviewed and updated IUCN Red List for Asian Rhinos along with the Red List Authority.

Organized meetings for all three species of Asian Rhinos to review and plan future actions needed to ensure the survival of all three species of Asian Rhino.

Chair's report regularly submitted for publication in the *Pachyderm* – the journal of the African Elephant, African Rhino and Asian Rhino Specialist Group.

The Asian Rhino Specialist Group would like to thanks the following donors and supporters – The WWF-AREAS Programme, International Rhino Foundation, Save the Rhino International as key donors and Aaranyak, Yayasan Badak Indonesia, Taman Safari-Indonesia, Assam Forest Department, National Trust for Nature Conservation, Nepal for providing in-kind support towards AsRSG meeting logistics.

Success stories

- The number of Greater One-horned Rhinos in India and Nepal increased. Current global wild population of Greater One-horned Rhino is over 3,000.
- Work closely with IUCN and TRAFFIC and African Rhino Specialist Group (AsRSG) to prepare document needed for CITES with regards to Asian Rhinos and illegal trade.
- Declaration of International Year of Rhinos by the Indonesian President on 5th June 2012, which was made possible due to the close working of the AsRSG with SSC Chair Dr Simon Stuart and African Rhino Specialist Group (AfRSG) to secure as much support as possible from rhino range countries in Asia and Africa.

Challenges

- Invasive plant species in rhino habitats shrinking suitable habitat for rhinos.
- Intelligence gathering to counter rhino poaching in rhino range countries in Asia.
- Anticipated increase in rhino horn trade in Asia that could enhance rhino horn demand in traditional medicines that use rhino horn as ingredient.
- Continued awareness to halt rhino poaching and subsequent trade.

Future Goals

- Raise further awareness of rhino conservation and check illegal killing of rhinos.
- Continue to provide scientific inputs to conservation agencies and scientists to enhance better management of rhinos in the wild.
- Secure a second habitat in Indonesia for Javan Rhinos, to ensure its future.
- Continued monitoring of various threats faced by Asian Rhinos to adopt timely actions.
- Encourage and enhance use of DNA based research tools to generate vital information on all three species of Asian Rhinos including population estimation.

© Dr Bibhab Kumar Talukdar

Facts

Chair: Dr Bibhab Kumar Talukdar
Red List Authority Focal Point: Dr Susie Ellis
Number of members: 65
Website: www.rhinos.org/professional-resources/iucn-asian-rhino-specialist

Asian Wild Cattle Specialist Group

Activity Report 2009–2012

To complement its three taxa-focused Working Groups (for saola, dwarf buffalo, and large Bovini), the Asian Wild Cattle Specialist Group (AWCSG) has established two topic-focused Working Groups. One is Conservation Planning, which aims to prioritize conservation efforts for Asian wild cattle and buffaloes. The other is Captive Breeding, which aims to develop the relationship between *ex situ* and *in situ* conservation efforts. Two more groups are under development.

Some significant conservation planning has been achieved by the AWCSG in the last four years with the publication of the Regional Conservation Strategy for Wild Cattle and Buffaloes in South-east Asia, which covers all nine species and was developed with participation of 11 range States. At the national level, two conservation planning workshops were successfully held in Indonesia covering the banteng and the anoas, and a portfolio of priority projects for the conservation of saola in Laos and Vietnam was drafted. A South Asia regional meeting produced a "Status Review of Wild Cattle in South Asia". See the group website www.asianwildcattle.org for more details.

The AWCSG has been instrumental in supporting capacity building for Indonesian zoo studbook keepers and protected area managers. Over 40 Indonesian conservation professionals participated in a four-day Studbook and Population Management Training Workshop run in partnership with CBSG, AZA, and EAZA. This will lead to better management of 16 species in Indonesia.

In addition to their contributions to the AWCSG's regional and national planning efforts, the taxa-focused working groups have also conducted or supported a number of other projects. An assessment of camera trap images from a wide range of projects in Indochina to identify possible kouprey pictures was completed, but unfortunately no evidence of kouprey was found. An assessment of the threats to banteng in Baluran National Park in Indonesia was conducted and a Java-wide banteng conservation project is now being planned. Finally, the saola has been selected as the flagship species of EAZA's Annual Fund-raising Campaign "South-East Asian Mammals 2011–12", which will raise greatly the profile of this species in Europe and will generate funds for conservation activities.

Facts

Chair: James Burton
Red List Authority Focal Points: James Burton, Simon Hedges, Will Duckworth
Number of members: 50
Website: www.asianwildcattle.org

Success stories

- Saola in the news: a story about a captured saola released by the Specialist Group through IUCN SSC generated the biggest media response of any IUCN story in 2011, thus helping to raise the saola's profile.
- Saola has been selected as the flagship species of the European Association of Zoos and Aquaria (EAZA) Annual Fund-raising Campaign "South-East Asian Mammals 2011–12".

Challenges

- Ensuring Asian wild cattle conservation is well embedded into national biodiversity agendas; this is a good way to gain greater finances for their protection.
- Capacity development to enhance protected area manager skills, to limit habitat degradation and reduce hunting

Future Goals

- Publish the Anoa and Banteng National Action Plans in Indonesia with in-country partners: significant contributions to national policies and CBD Target 2.1.
- Continue implementation of above plans with in-country partners, including environmental education for local communities and training in law enforcement for park rangers.
- Conservation research: working with partners to gain a greater understanding of Asian wild cattle conservation needs, e.g. conservation genetics of the Banteng.

Studbook and population management training workshop participants.

Australasian Marsupial and Monotreme Specialist Group

Activity Report 2009–2012

The Australasian Marsupial and Monotreme Specialist Group was reformed in 2011, after a long hiatus.

Members of the group work in government agencies responsible for species management in Australia, NGOs active in land management and restoration as well as academic institutions.

We have not yet had a full meeting, but many members from northern Australia participated in an Australian Centre for Ecological Analysis and Synthesis workshop on mammal declines in northern Australia. This clarified spatial and temporal patterns of change, identified life-history and ecological correlates of decline, and narrowed the hypotheses of cause.

Success stories

- Work by the Australian Wildlife Conservancy (represented by two members of the Specialist Group) has established a series of large reserves across the tropical north, with removal of introduced herbivores, changed fire regimes, and recovery of top predator (dingo) populations. These changes have been followed by recovery of mammals in some (but not all) sites.

Challenges

- Many marsupials are in rapid decline across northern Australia. This is unexpected, because these landscapes are largely intact. We urgently need to understand the causes and implement effective management.
- The decline of the Tasmanian devil may be causing declines of other species: we need to understand and manage this.

Future Goals

- Review of conservation status of mammals in the northern tropics of Australia, to formally establish the extent of recent declines and motivate coordinated action for recovery.
- Conduct continent-wide analysis of cost-effectiveness for prioritization of conservation action to prevent loss of marsupial and monotreme biodiversity.

Koala (*Phascolarctos cinereus*). IUCN Photo Library © Jeffrey McNeely

Facts

Chair: Chris Johnson
Red List Authority Focal Point: tbc
Number of members: 25

Bat Specialist Group

Activity Report 2009–2012

– Latin American network for bat conservation (RELCOM) extended to 14 countries.
– BatLife Europe launched, trustees appointed and members invited.
– Revision of Old World Fruit Bat Action Plan initiated.
– Effects of White Nose Syndrome (WNS – caused by fungus *Geomyces destructans*) on North American bat populations monitored.
– Surveying for presence of *G. destructans* in Europe and raising awareness about its potential effects.
– Integrative approach to bat conservation being forged in Canada, US and Mexico.
– Supporting EUROBATS initiative 'Year of the Bat' 2011–2102.
– Assisted in preparation of guano harvesting guidelines. Investigated conflict between fruit farmers and the endemic fruit bat of Mauritius.

Success stories

- New priority areas for bat conservation identified in Mexico – some declared
- Delisting of a federally endangered Mexican bat, the Lesser Long-nosed Bat *(Leptonycteris yerbabuanae)*, from Mexico's Federal List of Endangered Species.
- Supported successful capacity building initiatives in South (CCINSA) and South East (SEABCRU) Asia

Challenges

- Severe depletions of North American bat populations by WNS.
- Increasing use of Old World fruit bats as bushmeat.
- Old World fruit bats implicated as vectors of newly emergent viral diseases.
- Indian government ignores request to delist forest bats as vermin.

Future Goals

- Expand BatLife Europe and RELCOM.
- Initiate capacity-building for bat conservation in Africa, parts of South and Southeast Asia and all of Central Asia.
- Establish North American Bat Conservation Alliance.
- Publish revised Old World Fruit Bat Action Plan.
- Establish demonstration projects for sustainable harvesting of bat guano and bats as bushmeat.
- Initiate projects designed to mitigate the conflict between fruit farmers and fruit bats.
- Delist forest-feeding fruit bats as vermin in India's wildlife legislation.

Facts

Co-chairs: Rodrigo Medellin and Paul Racey
Red List Authority Focal Points: Two vacancies – for Old and New Worlds
Number of members: 140
Website: www.iucnbsg.org

Bear Specialist Group

Activity Report 2009–2012

For the past four years we have been evaluating the greatest threats for bears around the world. We ranked the severity of different threats for each of the seven species under our purview. We also investigated the various conservation measures employed to address these threats, including their prevalence, usefulness, and practicality in different parts of the world. We focused particular attention on Eurasia, where some bear populations are especially small and isolated, and where geographic ranges are changing most rapidly.

Bear Specialist Group members have been on the ground conducting a number of surveys and monitoring projects to assess population trends and area of occupancy, and better gauge specific local threats. Through this monitoring we learned that two of three species of bears have been extirpated from Bangladesh, one of four extirpated from China, and the only bear species in Austria disappeared.

We have added a number of new members to provide information in range countries where the status, threats, and conservation of bears had not been previously documented (e.g., Caucasus and Central Asia). We also added a team of specialists (expert team) to address human–bear conflicts, as this problem has been increasing in many areas. We presently have eight expert teams focused on particular species or regions, and three teams concerned with specific topics. Each team worked on a conservation-related project that they considered most imperative, including refinement of monitoring methods, revision of range maps, analysis of the spatial distribution of human–bear conflicts and illegal hunting, and a compilation of genetic information that may affect future augmentations of small populations. Reports from each team will be presented at an international bear conference in India in November 2012. Previous meetings of the Bear Specialist Group, since 2009, included a symposium in Taiwan, and conferences in Tbilisi, Georgia and Ottawa, Canada.

The first conservation action plan for an Asian bear species was completed in 2012, and after considerable analysis of information on commercial poaching and markets for bear parts in Asia, we developed our first IUCN motion, which recommended the phasing-out of bear farming because it negatively impacts wild bears.

Success stories

- Increased training courses, workshops, awareness campaigns, and development of conservation action plans.
- Increased publication of articles on bear conservation in our newsletter (average six per quarterly issue).
- Added 40 new members in four years.
- Two members recognized by national governments for outstanding conservation achievements.

Challenges

- Bears face significant challenges from commercial poaching, loss of forested habitat, small separated populations, and conflicts with people stemming from damage to crops and predation of livestock.
- Our biggest challenge is to gain sufficient influence to persuade governments and industry to reduce these impacts.

Future Goals

- Finalize range maps for the Asian bears.
- Conservation Action Plan for four species of bears in India.
- Find representatives for seven of the 65 range countries for which we do not have members.
- Raise funds to support more training, surveys, research, and local conservation efforts.
- Enhance collaboration with other conservation organizations and industry.
- Increase information flow to governments about status and threats to bears, and recommended conservation actions.

Brown Bear (*Ursus arctos*). © I. Seryodkin

Facts

Co-chairs: Dave Garshelis and Bruce McLellan
Red List Authority Focal Point: Rob Steinmetz
Number of members: 180
Website: www.bearbiology.com

Bison Specialist Group

IUCN SSC BISON SPECIALIST GROUP

Activity Report 2009–2012, America and Europe

American:

– The 2010 status review and conservation guidelines was printed and distributed throughout North America. A second printing was necessary.
– A new BSG chair was established as Dr Cormack Gates was replaced by Keith Aune. New North American BSG members were solicited and past members invited to an expanded North American BSG comprised of 65 members and growing.
– Bison restoration initiatives in North America are now based on the best available science and seek to ecologically restore this keystone herbivore.
– Members of the BSG have engaged in multiple bison restoration projects in North America and the species is on track toward ecological recovery.
– Several important bison conservation actions are being taken by the governments of the US and Canada.
– COSEWIC is reviewing the status of bison in Canada and the US federal agencies are calling for the restoration of bison on National Parks and Refuges.
– The US Congress is debating the Bison Legacy Act which will designate bison as the US National Mammal.

European:

– The joint programme for wisent conservation in Europe (EBCC) aimed to preserve the gene pool of the species and improve its management was initiated and implemented in 2010. Our network now consists of a main office and 10 regional centres. The program is financed by European Bison Friends Society, which is sponsored through Polish institutions and Wildlife Conservation Society.
– Our annual conference in 2012 was tenth and gathered more than 130 people from across Europe.
– The fifth volume of European Bison Conservation Newsletter was released in 2012.
– Continuation of re-introduction projects (Carpathians, Russia, West Poland) and new perspectives in Denmark, Germany and Spain.
– We prepared a manual on species management for improving welfare in captivity.
– In March 2012 European bison were released in Romania. We have prepared an application for Life+ fund, to support international activities.

Facts

Co-chairs: Keith Aune (American), Wanda Olech (Europe)
Red List Authority Focal Point: Cormack Gates
Number of members: 65 American and 24 European
Website: European Bison - http://ebac.sggw.pl/

Success stories

- **American:** We distributed 500 copies of our status review and conservation guidelines, which prompted many agencies and NGOs to implement restoration and recovery of the American Bison. Site based restoration projects are now underway in Mexico, USA and Canada. The IUCN status review and guidelines informed those species conservation efforts.
- **European:** We are the most proud of new herds of European Bison. The re-introduction project in the East Carpathians is developing wonderfully. Population of the species is increasing steadily, and more than 80% of herds are actively involved in our conservation program.

Challenges

- The recovery of the **American Bison** is hindered by conflicting legal status and confused public perceptions about bison. Throughout its historic range bison are typically perceived as an extinct ancient relic or domestic livestock. This confusion hinders social, and political acceptance of conservation efforts to restore bison as wildlife.
- Improving the legal status of **European Bison** as well as management practices especially in *ex situ* conservation. Also for aim of conservation program improve the cooperation and information exchange provided by EBCC.

Future Goals

- **American:** We are developing new goals for the North American BSG following our success in completing the North American status review. We are conducting a member recruitment process to engage new members and retire those who are not able to serve on the BSG.
- **European:** Increase the population size, and save its genetic diversity, in captive herds improve of the welfare of animals. The return of free roaming European Bison to western Europe. Improvement of EBCC structure. Prepare manuals and digital publication base.
- **Together:** We hope to organize a meeting of entire BSG to share knowledge and experiences.

European Bison (*Bison bonasus*). © Mieczyslaw Hlawiczka

Boa and Python Specialist Group

Activity Report 2009–2012

The Boa and Python Specialist Group was established in August 2011. Its creation was overdue and extremely necessary considering the threats these species face worldwide. Boas and pythons are widely distributed in tropical and subtropical regions of the world, however, clear-cutting of forests; substitution of natural habitats by crops and infrastructure; introduced predators and competitors; international trade; and climate change, threaten their survival globally.

During our first year of existence we concentrated on appointing core members on a global scale and looked for a broad range of expertise. Our 58 members report from 20 different countries, ranging from renowned herpetologists and researchers to young professionals directly involved in snake conservation.

We have been working on: defining the scope of our remit (number of species and families); developing a corporate image (logo, webpage, Facebook); contacting potential sponsors; and on enhancing communication activities among members and the community through the recent creation of a Newsletter, *Serpens*.

By attending the 2nd IUCN SSC Chairs' Meeting at Abu Dhabi, 23–27 February 2012, United Arab Emirates, we established contacts with other Specialist Groups and learned of the broad expertise provided by the IUCN SSC family. Our RLA Focal Point, Mark Auliya, has been providing assistance with the different global and regional assessments that include species in our remit.

We are currently focusing on the significant trade in Southeast Asian pythons through different initiatives related to CITES. We integrate the CITES Standing Committee Working Group on Snakes, and recently co-authored a report together with the International Trade Centre (ITC) and TRAFFIC on the subject. In connection with this activity we visited Lao PDR, Vietnam, and Sabah, Borneo, to make a first approach on the feasibility of producing captive-bred pythons within closed-cycle facilities to supply the leather trade. In the same line, we have just initiated a more thorough screening and assessment of the large-scale, commercial, closed-cycle python breeding systems in Southeast Asia.

Finally, and due to the initiative of some of its Caribbean members, the BPSG is foreseeing having a first regional meeting during the next year, probably in Puerto Rico.

Facts

Chair: Tomás Waller
Red List Authority Focal Point: Mark Auliya
Executive Officer: Guillermo Puccio
***Serpens* Newsletter Editor:** Jessica Lyons
Number of members: 58

Success stories

- The BPSG is very recent. Within a few months a core group of experts, both geographically and thematically well represented, has been brought together. This can be considered a successful starting point.

Challenges

- Mobilization of members and fund-raising for projects.
- Enhance conservation status (CBD Targets 11 and 12).
- Ensure trade is sustainable following Addis Ababa and Malawi principles (CBD Targets 4 and 18).
- Prevention of species becoming invasive (CBD Target 9).

Future Goals

- Species Action Planning.
- Complete IUCN Red List Assessment.
- Literature database and newsletter.
- Conservation-oriented research and action on priority taxa.
- Assess status and propose management solutions for species affected by significant trade.
- Identify and address urgent taxonomic trade-related issues.
- Monitor invasive pathways and develop innovative approaches to prevent further expansions.

Yellow Anaconda (*Eunectes notaeus*). © BPSG - J.Draque

Bryophyte Specialist Group

Activity Report 2009–2012

The last three years have seen an enormous improvement in our knowledge of the bryophytes worldwide, and especially of their taxonomy and distribution.

In April 2012, in cooperation with the Hungarian Natural History Museum, we arranged the 8th international Conference of Bryophyte Conservation – following up on the 2010 Aichi Biodiversity Targets.

In June 2012 a Round Table discussion on how to harmonize the Bryophyte Red Lists of Russia with other countries in northern Europe was held during a conference in northern Russia. The participants at the conference were very interested in following the IUCN system in developing their own Red List.

Facts

Co-chairs: Dr Benito Tan and Tomas Hallingbäck
Red List Authority Focal Point: Tomas Hallingbäck
Number of members: 28
Website: http://www.artdata.slu.se/guest/SSCBryo/SSCBryo.html

Success stories

- A good example is Europe, just to mention one. Spain has produced an Atlas of Endangered Bryophytes, a project already on line: http://www.uv.es/abraesp/ABrA_english/Home.html.
- Over the last year, under the auspices of the European subgroup of the IUCN Bryophyte Specialist Group, a small pilot project has been taking place to assess the feasibility of a new bryophyte IUCN Red List for Europe. Key products from this project have been a short report outlining the need for a new list and describing ways in which it could be taken forward; a list of current European checklists and Red Lists; an assessment of current relevant bryological work across Europe; an updated list of country contacts; and a draft spreadsheet showing the distribution of European mosses by country. We are now examining the results of the pilot project and should in autumn 2012 determine a way forward for a full conservation reassessment of the European bryophyte flora and a new IUCN Red List.
- A substantial success is the implementation of the European Community Habitat Directive which today includes several bryophyte species and includes mandatory legislation as well as many practical conservation measures.
- We have achieved target 1 of the Global Strategy for Plant Conservation: a checklist of all known Liverworts (http://www.theplantlist.org).

Challenges

- We badly need to update bryophytes on the global IUCN Red List. For The IUCN Red List to be credible, it needs to be updated regularly, both regionally and globally, using the best scientific information available. However, there are few bryologists and many are jobless or have no funding so building human capacity is a key activity.

Future Goals

- Facilitate the development and implementation of Conservation Strategies and Action Plans for threatened species.
- Assess the status and conservation needs of species in regions outside Europe.
- Recruit new members from under-represented regions.

Bumblebee Specialist Group

2011 Update

- The IUCN Bumblebee Specialist Group (BBSG) was formed during early 2011. The group is in the process of inviting members and coordinating a worldwide status assessment of bumblebees.
- Eleven individuals from nine Geographic Regions have agreed to serve as Regional Coordinators for the BBSG.
- In addition membership lists from five regions have been identified and members are currently being invited.
- In addition to the appointment of a Scientific Advisor, focal points for Red Listing, wildlife health, and trade have been appointed.
- A Conservation Genetics sub-committee was formed.
- A website for this group has been developed.

Success stories

- The BBSG is still in the early stages of development. We hope to report on successes in the near future.

Challenges

- Historic abundance and distribution data is lacking for many species.
- For many species, the taxonomy has not been resolved.
- Members and Regional Coordinators are busy, and they are being asked to contribute without compensation.

Future Goals

- The primary initial goal of this group is to accomplish a status assessment of the c.250 species of bumblebees worldwide using the Red List Categories and Criteria.
- Once accomplished, species that are considered imperiled (EW, CR, EN, VU, NT) can be added to nations' and states' respective threatened and endangered species lists and prioritized for conservation action.

Facts

Co-chairs: Paul Williams
Red List Authority Focal Point: Sarina Jepsen
Website: IUCN SSC Bumblebee Specialist Group

Bombus kashmirensis. © Paul Williams

Bustard Specialist Group

2011 Update

The Bustard Specialist Group has just very recently been revived with the appointment of Nigel Collar as Chair in February 2012.

Challenges

- Intensification of agriculture in Europe and Asia.
- Degradation of grasslands by increasing number of livestock.
- Other factors causing desertification.
- Expansion of power lines through bustard habitats.
- Excessive hunting by Arab falconers and local people.
- Generally increasing levels of human disturbance.

Future Goals

- Highest priority must go to the study and recovery of the two Critically Endangered and one Endangered species that occur in the Indian subcontinent (and Cambodia).
- The effects of Arab hunting on Sahelian bustards are in need of study and reversal.
- A model of sustainable hunting by Arab falconers urgently needs to be developed and adopted.
- These goals will link into the CBD targets on reducing biodiversity loss (preventing species extinction, improving status); maintaining ecosystem integrity; promoting sustainable use; and mobilising financial and technical resources into less developed states.

Facts

Chair: Nigel Collar
Red List Authority Focal Point: to be appointed
Number of members: under recruitment

Buff-crested Bustard (*Eupodotis gindiana*). © Andy Swash

Butterfly Specialist Group

Activity Report 2009–2012

– The IUCN Butterfly Specialist Group (BSG) was formed in late 2010. The group has formed an initial steering committee.
– We have identified over 150 people who are interested in being involved in the BSG.
– As an initial task of this group, the Xerces Society and several members of the now-identified steering committee developed a survey of butterfly conservation needs.
– Over 161 people from 39 counties have filled out the survey. (For the full survey go to: http://www.xerces.org/iucn-ssc-butterfly-specialist-group/)

Success stories

- The BSG is just gearing up. We have had initial success with response to the survey of butterfly needs and identifying people who want to be engaged.

Challenges

- There are over 18,000 species of butterflies worldwide and in many of the areas with the highest diversity we lack basic information on historic abundance, distribution and even taxonomy.
- So far we have been unable to capitalise on funding for the coordination of this Specialist Group.

Future Goals

- The next step will be for the steering committee to develop a needs- and opportunity-based plan that will allow us to direct resources to areas with the greatest need and highest potential for our efforts to make a meaningful impact.
- Develop communication strategies to ensure that all partners are included and engaged.
- We need to raise funds for managing this effort and for projects identified through our planning.

Leona's Little Blue (*Philotiella Leona*). © Xerces Society

Facts

Chair: Scott Hoffman Black
Red List Authority Focal Point: Owen Lewis
Number of members: 13
Website: www.xerces.org/iucn-ssc-butterfly-specialist-group/

Cactus and Succulent Plant Specialist Group

Activity Report 2009–2012

A substantial proportion of the Cactus and Succulent Plant Specialist Group (CSSG) activities revolved around the Global Cactus Assessment, a major project aimed at evaluating all 1,500 species belonging to the cactus family under The IUCN Red List criteria. The project was successfully concluded recently under the direction of Bárbara Goettsch, with the participation of many members of our Specialist Group.

Several regional workshops were organized in different countries throughout the distribution range of the family. Members of the CSSG, along with a large contingent of regional experts, including professional botanists, ecologists, conservation biologists, and plant amateurs, assessed the totality of species in the family.

The project counted on the generous support of several governmental and academic institutions, including CONABIO, CONANP, Conservation International, Chester Zoo and the Desert Botanical Garden, INE, Jardin Exotique de Monaco, UNAM, University of Sheffield, and benefitted from the continuous support of IUCN Red List facilitators of the IUCN Global Species Programme. The results, yet to be published on The IUCN Red List website, confirm the highly endangered conservation status of the Cactaceae.

Success stories

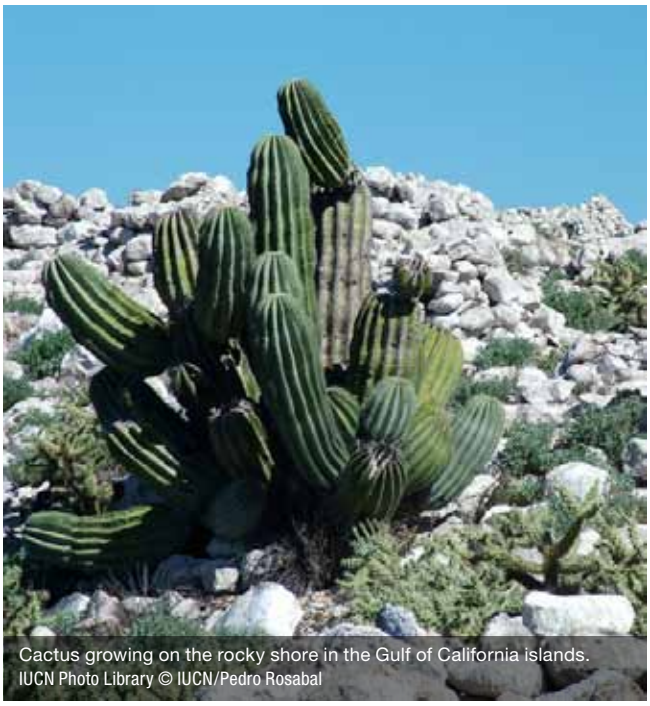
- The Global Cactus Assessment is virtually concluded, although a small proportion of the species are still to be assessed.
- Several regional workshops were organized in North, Central and South America with the participation of several group members and regional experts to assess the majority of cactus species. Bárbara Goettsch was project coordinator.

Challenges

- The Global Cactus Assessment confirmed the critical conservation status of a significant proportion of cactus species, especially in North America. Our biggest challenge is to bring this knowledge to the attention of local governments, policy makers, and the general public.

Future Goals

- A great deal of information has been produced on the conservation status of cactus species, both at taxonomic and regional levels. The following step is to convert this important body of knowledge into real conservation action.
- We need to increase awareness among the general public about the factors affecting the survival of succulent plant species and the integrity of their habitat.



Cactus growing on the rocky shore in the Gulf of California islands.
IUCN Photo Library © IUCN/Pedro Rosabal

Facts

Chair: Héctor M. Hernández
Red List Authority Focal Point: Wolfgang Stuppy
Number of members: 38
Website: Cactus and Succulent Plant Specialist Group

Canid Specialist Group

Activity Report 2009–2012

The most prolific (and satisfying) role of the Canid Specialist Group (CSG) remains networking with people who have similar interests in canid conservation. The CSG maintains a full and active membership, some of whom are members of taxon-focused Working Groups (i.e. African Wild Dog, Amazonian Canids, Ethiopian Wolf, Dhole, Maned Wolf, Disease and Epidemiology). The group also maintains an active "Friends of the CSG" group embracing canid enthusiasts worldwide.

In the current quadrennium, our main areas of progress have included:

- A comprehensive conservation strategy for Ethiopian wolves (http://www.ethiopianwolf.org/SPEWC.pdf) produced in 2011, and implementing a national action plan for the species.
- In collaboration with the Cat Specialist Group, we are developing joint regional conservation strategies for African wild dogs and cheetahs, already complete for Eastern and Southern Africa, and in preparation for Western and Central Africa. (http://cheetahandwilddog.org/).
- The establishment of an Amazonian canids working group under the leadership of Karen DeMatteo.
- Implementing a field project in Niger to develop a better understanding of the ecology and conservation needs of Saharan foxes.
- Undertaking IUCN Red List reassessments for a number of species, including: *Atelocynus microtis*; *Canis simensis*; *Lycaon pictus*; *Speothos venaticus*; and *Vulpes pallida*. Next priorities include *Chrysocyon brachyurus*, *Cuon alpinus* and *Urocyon littoralis*.
- Publication of 13 editions of *Canid News* in the quadrennium, accompanied by a complete redesign of the journal. (http://www.canids.org/canidnews/).

The most difficult aspect remains our inability to raise financial resources to support important projects, with a number of projects originally identified in the 2004 Canid Action Plan still requiring resourcing (and many new needs besides). Nonetheless, the CSG remains grateful to its supporters, including the Wildlife Conservation Research Unit at the University of Oxford (our host), the Born Free Foundation and St Louis Zoo.

Success stories

- In 1995 we established the Ethiopian Wolf Conservation Programme, in partnership with the Ethiopian government, the University of Oxford and donors, to protect the rarest of all wild canids.
- Our 800+ electronic mailing list (Canids-L), website, and peer-reviewed online journal *Canid News* have proven to be very popular and useful.

Challenges

- Many wild canids antagonise human interests, often resulting in persecution. Our challenge is to increase tolerance and mitigate conflict.
- Canids are susceptible to diseases. Effective vaccination approaches are needed to protect small populations from rabies and canine distemper.

Future Goals

- Our priority is fine-tuning of our global network of canid experts using a working group approach.
- We will promote the formulation and implementation of strategic plans for key canid species.
- We would like to see more bottom-up initiatives and dynamism amongst the SG membership.
- We will seek a better synergy with other carnivore Specialist Groups, to deliver more efficient conservation actions benefiting multiple carnivore species.

Facts

Chair: Claudio Sillero
Red List Authority Focal Point: Mike Hoffmann
Number of members: 68
Website: www.canids.org

Fifteen-member Dhole pack (*Cuon alpinus*) in pre-hunt bonding ritual. Bandipur National Park, India. © Krupakar Senani

Caprinae Specialist Group

2011 Update

– Workshop on Conservation Trophy Hunting in China.
– Assistance in workshop on Conservation Trophy Hunting in Central Asia.
– Research on disease transmission from livestock to mountain ungulates.
– Research on selective effects of trophy hunting.
– Clarifying taxonomy for conservation.

Success stories

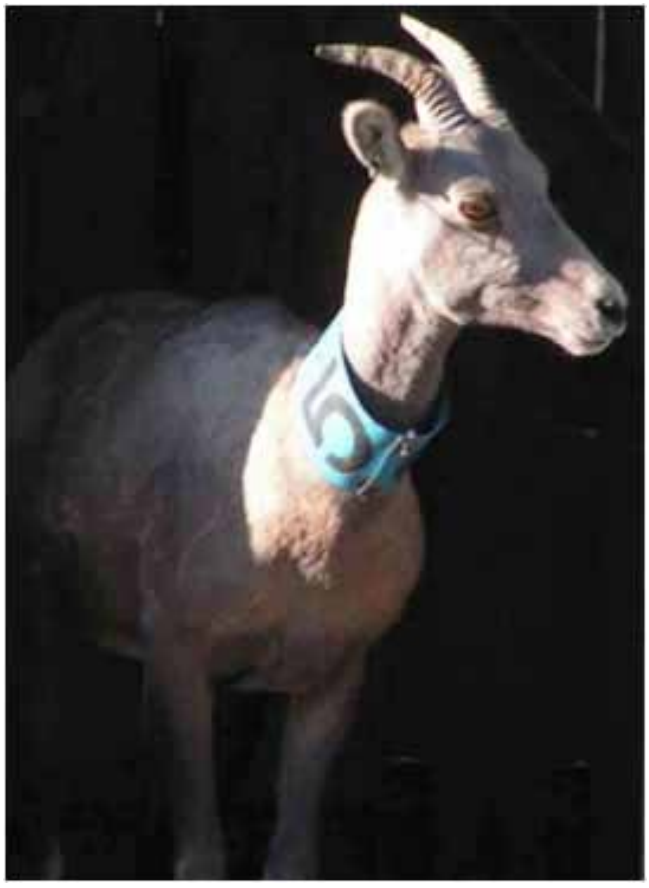
- Conservation Trophy Hunting of Markhor in Pakistan.
- Policies separating domestic sheep from bighorn sheep to prevent disease transmission.
- Better understanding of the taxonomy of mountain ungulates.

Challenges

- Increasing habitat degradation and disease transmission from livestock.
- Expanding agricultural, recreational and industrial footprint in mountain ecosystems.
- Habitat deterioration due to global change.
- Persisting taxonomic confusion.

Future Goals

- Increased use of Conservation Trophy hunting to maintain mountain ecosystems.
- Better understanding of the potential evolutionary effects of selective hunting.
- Continued research on population dynamics, evolutionary ecology, taxonomy and disease prevention.



Facts

Chair: Marco Festa-Bianchet
Red List Authority Focal Point: Richard Harris
Number of members: 39
Website: http://pages.usherbrooke.ca/mfesta/iucnwork.htm

Carnivorous Plant Specialist Group

Activity Report 2009–2012

The Carnivorous Plant Specialist Group (CPSG) was formally established in November 2011 and is still in the early stages of development. The geographical scope of the group is global, whilst the biological scope encompasses all genera of carnivorous plants, with the sole exception of *Utricularia.*

A significant early milestone in the development of the CPSG was the appointment of Sir David Attenborough as the group's Patron. Sir David has maintained a strong interest in carnivorous plants throughout his extraordinary career, and we are greatly honoured to have his active support.

The CPSG is in the process of establishing an online presence and currently inviting specialist members to join the group to form a core membership and commence the task of updating The IUCN Red List assessments for all carnivorous plant species. The Chair, Robert Cantley, has received IUCN Red List training and in collaboration with the Red List Authority Focal Point, Charles Clarke, the first revised IUCN Red List assessments (involving a series of threatened species of *Nepenthes* pitcher plants) will be undertaken in the third quarter of 2012.

The group's nomination of the recently discovered *Nepenthes attenboroughii* for the ZSL and IUCN SSC's' forthcoming 'Breaking Point' project has been accepted and also endorsed by Sir David Attenborough, in whose honour the plant was named.

Several species of carnivorous plants have been submitted to the IUCN SSC's 'Amazing Species' website with one having been published to date.

The CPSG is in the process of preparing a shortlist of conservation projects involving carnivorous plants, which are either already underway, or in the process of being developed. The primary goal is to accelerate and enhance these projects by assisting them to seek and obtain financial and other support that they need in order to help them succeed. The CPSG is already corresponding with the managers of several candidate projects and we expect to be able to align several of them with IUCN guidelines towards the end of 2012.

Success stories

- Group established under the patronage of Sir David Attenborough.
- Successful nomination of *Nepenthes attenboroughii* for the ZSL and IUCN SSC's' 'Breaking Point' project.
- Excellent early response from experts world-wide to the group's requests for assistance to urgently implement IUCN Red List assessments for all carnivorous plants.

Challenges

- To provide IUCN Red List assessments for all carnivorous plants as quickly as possible, commencing with those taxa that appear to be the most threatened. Some of these are only recently discovered and many are in extremely remote or otherwise inaccessible locations. It is therefore an urgent challenge to obtain the data required to enable reliable IUCN Red List assessments to be made, as a first step towards implementing conservation measures.
- To bring together several currently disparate conservation projects and provide necessary assistance and guidance to help enable them to achieve their goals in keeping with IUCN guidelines.

Future Goals

- Establish a presence online, with effectively managed membership and newsletter.
- Commence IUCN Red List assessments on a priority basis of taxa most in need of protection.
- Identify a host institute capable of assisting with administrative workload.
- Develop and implement further Conservation Strategies and Action Plans.

Nepenthes pitopangii (Sulawesi Indonesia). © Stewart McPherson

Facts

Chair: Robert Cantley
Red List Authority Focal Point: Charles Clarke

Cat Specialist Group

Activity Report 2009–2012

The Cat Specialist Group is responsible for the global assessment of the conservation status of all 37 wild living cat species. The main tasks of the Cat Specialist Group include:
– maintain the network of cat experts and partners;
– continuously assess the status and conservation needs of the 37 cat species and initiate conservation activities;
– support governments with strategic conservation planning;
– develop capacity in felid conservation;
– provide services to members and partners; and
– assure the financial resources for the Cat Specialist Group.

During the past quadrennium the Cat Specialist Group has participated in the assessment of the status and conservation needs of clouded leopards and small felids in Southeast Asia and Borneo, and facilitated two workshops for the assessment of felids in China and in Iran. The Group has also participated in a regional assessment of the cat species on the Arabian Peninsula.

Strategic conservation planning and the implementation of strategies and plans formed an important part of the Cat Specialist Group's activities during the past quadrennium. The Cat Specialist Group supported and helped to facilitate workshops for the development of Regional Conservation Strategy (RCS) in North, Central and West Africa, and National Action Plans in South Sudan, Mozambique, Brazil and Iran. To drive the implementation of the RCS for the leopard in the Caucasus eco-region, the Cat Specialist Group has run a series of workshops in Turkey and Georgia. As part of the Species Conservation Planning Sub-Committed, the co-chairs have been involved in further developing the guidelines and in supporting other Specialist Groups getting involved in strategic conservation planning.

The Cat Specialist Group started a capacity development programme, the Cat Conservation Course, in 2010. To facilitate access to relevant conservation information for all members, the Cat SG maintains the Digital Cat Library with now over 8,000 publications. *Cat News* has been re-launched in a modernized look and with a formal review process in 2009. Three special issues on Cats in China have been published during the past quadrennium, with snapshots of all cat species and on jaguars in Brazil.

Facts
Co-chairs: Christine Breitenmoser-Würsten and Urs Breitenmoser
Red List Authority Focal Point: Kristin Nowell
Number of members: 201

Success stories
- Increased knowledge on status and conservation needs for many of the cat species in Borneo, China and Iran.
- Driving the implementation of the Regional Conservation Strategy for the leopard in the Caucasus.
- Maintenance of a high profile for the Cat Specialist Group through products such as *Cat News*, the website and the Digital Cat Library.
- Complete strategic planning for cheetah and wild dog across Africa with a third workshop for North, Central and West Africa.

Challenges
- The world's focus is on charismatic big cats and spectacular projects. Half of all cat projects concern *Panthera* species (lion, tiger, jaguar, snow leopard and leopard), but we have very limited information about the distribution, trends and conservation needs of the remaining 32 cat species.

Future Goals
- Facilitate development and implementation of Conservation Strategies and Action Plans for threatened species/ populations.
- Assess the status and conservation needs of cats in South Asia.
- Initiate cat conservation projects in NW Africa, Middle East and Central Asia.
- Recruit new members from under-represented regions.
- Review of felid taxonomy.
- Develop capacity via the Cat Conservation Course and in-country training where needed.

Sand Cat (*Felis margarita*) – one of the smallest and least known cat species. © Naein DoE, I.R. Iran

Cetacean Specialist Group

Activity Report 2009–2012

The niche occupied by the Cetacean Specialist Group (CSG) has been defined over past decades by several factors, among them the existence of cetacean-centred intergovernmental bodies with their own scientific advisory capacity (e.g. IWC, CMS agreements) and a community of NGOs with a strong advocacy focus on cetacean conservation (e.g. Whale and Dolphin Conservation Society, WWF, IFAW), thanks largely to the charisma of cetaceans, as well as their historical economic importance. Our members are interspersed throughout those other groups and therefore our work often takes place in a collaborative context rather than solely under the CSG itself. The CSG has sought to focus its dedicated efforts on species and populations that (a) are in trouble, (b) are not already the subject of rigorous scientific and conservation attention, and (c) occur in parts of the world where support for cetacean conservation is insufficient.

Although some longstanding problems of cetacean conservation seem largely resolved, notably the massive carnage from commercial whaling, the millions of dolphins killed in the eastern tropical Pacific tuna purse seine fishery, and the hundreds of thousands of cetaceans that used to die in high-seas driftnets, some old problems, especially incidental mortality in fishing gear (bycatch, mainly in gillnets and trawls), remain. Others are either newly recognized or new on the scene: increasing ship traffic, which heightens the risk of ship strikes and turns up the volume of low-frequency noise; growing use of military sonar known to cause cetacean mortality; greater use of the oceans (and river drainage areas) for recreation, energy production (oil, gas, renewables) and protein extraction (fishing, aquaculture); proliferation of debris leading to more entanglement and ingestion of plastics; expanding demand for meat and blubber of freshwater and coastal cetaceans for human consumption and as fish bait. Hanging like a dark cloud over these concerns is rapid, apparently intractable climate disruption.

The CSG website provides an up-to-date list of cetacean species and their IUCN Red List status, news items, brief accounts of special projects and a downloads page giving easy access to otherwise hard to get grey-literature reports.

Facts

Chair: Randall Reeves
Red List Authority Focal Point: William F. Perrin
Number of members: 109
Website: www.iucn-csg.org

Success stories

- Cancellation of a large-scale petrochemical land reclamation project in western Taiwan to protect habitat of a local population of Indo-Pacific humpback dolphins (thanks to efforts of John Wang and others).
- Continued progress towards eliminating gillnets from the northern Gulf of California (Mexico) to reduce Vaquita (*Phocoena sinus*) bycatch (thanks to efforts of Lorenzo Rojas-Bracho and others).

Challenges

- Lack of stable base funding to support 'secretariat' work by chair, deputy chair and regional coordinators.
- Lack of up-to-date Action Plan (last one 'expired' in 2010).
- Biggest challenge may be diversity and complexity of threats to both cetaceans and their habitat (bycatch, noise, chemical pollution).

Future Goals

- Continue pursuing initiatives on bycatch reduction (focus on artisanal gillnet fisheries).
- Continue work on both design and effectiveness of Marine (and Freshwater!) Protected Areas.
- Consolidate and expand efforts to engage with oil and gas industry to better understand and mitigate the risks to cetacean populations.
- Consolidate and expand efforts to address threats to freshwater cetacean habitats, including dam construction (e.g. Mekong, Brahmaputra, Xingu rivers) and extractive activities (e.g. mining, commercial fishing).

The Endangered Ganges River Dolphin (*Platanista gangetica gangetica*). They still have a fairly extensive range in rivers and deltas of the South Asian subcontinent. Water policies in the range states (India, Bangladesh and Nepal) will be key to the ability of this subspecies to persist. © Mowgliz

Chameleon Specialist Group

Activity Report 2009–2012

The Chameleon Specialist Group was formed in 2010 and currently has 11 members. The group has mainly focussed on assessing the extinction risk of chameleons for The IUCN Red List of Threatened Species™ and contributing to CITES.

In 2011, all species of Malagasy chameleon were added to The IUCN Red List, although this still leaves a further 96 species to be assessed in the next quadrennium. Parallel efforts by members of the group have resulted in the description of at least five new species, including some from northern Madagascar that are amongst the smallest vertebrates in the world. This research is particularly important because it feeds into conservation assessments and planning. For example, a recently published paper on the *Calumma nasutum* group demonstrated that much of the cryptic species diversity of chameleons is still poorly understood and intensive research is necessary before the conservation status of many species can be assessed.

In 2011, group members in Madagascar developed a Species Conservation Strategy for the Critically Endangered Belalanda Chameleon using IUCN guidelines on species planning. The group has collaborated most effectively with regard to international trade issues. A number of African chameleons appear to be illegally or unsustainably traded, and the group has contributed to the 25th and 26th Animals Committee meeting, as well as the 62nd Standing Committee meeting. The group contributed to building the capacity of CITES authorities in Madagascar to deliver non-detriment findings. By 2016, we aim to have every known chameleon species included on The IUCN Red List.

Success stories

- Establishment of the Chameleon Specialist Group in 2010.
- Co-hosting workshop with the government of Madagascar, Conservation International and Madagasikara Voakajy to assess The IUCN Red List status of 74 chameleon species.
- Advancing the understanding of chameleon taxonomy and evolution on western Indian Ocean islands and in east Africa.
- Supporting CITES to ensure that exports of live chameleons are not detrimental to wild populations.
- Publishing a study that shows ecotourists rank chameleons second only to lemurs in Madagascar.

Challenges

- Bridging the gap between conservation science and conservation actions.
- We are a small group and most members are more actively involved in research than conservation.
- We need to expand the group to include members with expertise on captive chameleons and species from central-west Africa.

Future Goals

- Ensure conservation status of all chameleon species is assessed on The IUCN Red List.
- Promote *in situ* conservation efforts for chameleon species at the highest risk of extinction.
- Influence policy decisions at all levels for the conservation and sustainable use of chameleons.
- Continue to support the implementation of CITES Appendixes I and II.
- Focus on Aichi Target 12 through identifying threatened species and promoting their conservation.

Facts

Chair: Dr Richard Jenkins
Red List Authority Focal Point: Dr Krystal Tolley
Number of members: 11
Website: Chameleon Specialist Group

Brookesia minima, a tiny Madagascan dwarf chameleon. IUCN Photo Library © Dennis Hosack

China Plant Specialist Group

2011 Update

Updating the China Plants of Catalogue (CNPC). The CNPC provides an updated checklist of China's higher plants and sets a national standard. It is one component of Species 2000 China Node and can be accessed via internet (http://www.sp2000.cn/joacn/) and by delivered CD.

The "Red List of China Plants" is a four year project supported by the Ministry of Environmental Protection. Approximately 30,000 species have been assessed. Among these, more than 3,600 species are listed as threatened, each with a full justification.

Numerous presentations and lectures made by members at domestic and international meetings and workshops dealing with priority areas of plant conservation, and on the Convention on Biological Diversity CoP 10 and new Global Strategy for Plant Conservation, etc.

Success stories

- Approximately 300 botanical experts countrywide have been involved in the catalogue (CNPC) and Red Listing in order to guarantee project quality. This success is due to the Specialist Group's organization and the key role of its members.
- Close communication with IUCN SSC community and other professional organizations, to learn from their experiences, to master the topic's current status and apply to my own project.

Challenges

- It is still very difficult to get funding for the Specialist Group. This results in few opportunities to undertake group activities.
- Some species are becoming increasingly threatened due to the broad cultivation of *Eucalyptus* species and *Hevea brasilliensis* in tropical and subtropical regions in south and south-west China.

Future Goals

- Focus on further activities for the threatened species of our Red Listing including carrying out further field investigations into some key Data Deficient species and setting up a monitoring network and mechanism for threatened species.
- We will continue to advise decision-makers on plant diversity priority areas and priority taxa.
- We will use some key species as models of ideal conservation and sustainable utilization to raise public awareness.

Facts

Chair: Hai-Ning QIN
Red List Authority Focal Point: Hai-Ning QIN
Number of members: 47
Website: www.chinaplant.org/cpsg/en.php

Camellia nitidissima.

Chytrid, Zygomycete, Downy Mildew and Slime Mould Specialist Group

Activity Report 2009–2012

The Specialist Group for Chytrids, Zygomycetes, Downy Mildews and Slime Moulds has the daunting challenge of acting within IUCN as a voice for the conservation of a disparate range of organisms which spread over at least three biological kingdoms. Chytrids and Zygomycetes belong in the kingdom of Fungi, while downy mildews are chromistans and slime moulds are protozoans. Collectively, they have all traditionally been studied as part of mycology, the study of fungi, but individually they present very different conservational needs.

Over the past four years a lot has been done to make conservationists more aware of these organisms. With such a large number of species covered by this one Specialist Group, it was considered prudent to prioritise and to start with the slime moulds. These remarkable protozoans are phenomenally photogenic and have the 'cute' factor which is less evident in the other groups.

At least some slime moulds are endangered, but it is not known how many and very little is known about the threats they face. For one group, however, the nivicolous or snow-line slime moulds, the picture is clear. These species only fruit next to melting snow patches where there has been continuous snow cover for several months, and where high insolation produces a rapid change of temperature. They are particularly vulnerable to climate change, and the initial work of this group has concentrated on these organisms. A set of postcards of endangered charismatic slime moulds has been produced, each with a short message explaining how human activity has affected the species, and have been distributed at scientific meetings.

In addition, workshops have been held involving slime mould specialists, with training in how to apply IUCN Red List categories and criteria to the slime moulds. This Specialist Group is working closely with the other four IUCN fungal Specialist Groups and hopes that over the next four years we can take our organisms into the mainstream of the conservation movement.

Success stories

- Project on conservation of slime moulds supported by Mohamed bin Zayed Species Conservation Fund.
- Joint action with other IUCN fungal Specialist Groups to establish the *International Society for Fungal Conservation*.
- Training workshops in use of The IUCN Red List Categories and Criteria.

Challenges

- Lack of awareness about slime moulds as a group worthy of protection, not only among the general public, but also, too often, among scientists and policy makers.
- Emphasis on negative aspects of chytrids, zygomycetes and downy mildews, and lack of awareness of their positive values, not only among the general public, but also, too often, among scientists and policy makers.
- Too little new information about when and where species occur, and poor accessibility of existing information**.**

Future Goals

- To develop capacity for the conservation of these organisms.
- To promote understanding that they are all different from animals and plants, and need equal protection.
- To raise their profile and integrate them in CBD reporting.

Facts

Chair: Mayra Camino Vilaró
Red List Authority Focal Point: Mayra Camino Vilaró
Number of members: 5


Lamproderma ovoideum. © Alain Michaud

Conifer Specialist Group

2011 Update

– Global reassessment of all 615 species of conifer.
– A second assessment since 1998 is aimed at providing data for The IUCN Red List Index. This is an index indicating trends in conservation status. Conifers will be the first group of plants providing data for The IUCN Red List Index.
– The IUCN Red List as well as The IUCN Red List Index are tools IUCN uses to influence policy.

Success stories

- Second IUCN Red Listing of conifers completed at the end of 2011.
- *In situ* and *ex situ* conservation of rare and threatened conifers initiated in China, Vietnam and Chile.
- Assistance with surveys in other parts of the world.

Challenges

- Engaging more members of the group to actively participate in our work.
- Deforestation resulting in habitat loss and exploitation beyond sustainability.

Future Goals

- Recommendations for *in situ* and *ex situ* conservation of Critically Endangered species on The IUCN Red List of conifers.
- Comprehensive distribution mapping of all species, presented in an Atlas of the World's Conifers.
- Providing baseline data for conservation of conifers.

Facts
Chair: Aljos Farjon
Red List Authority Focal Point: Philip Thomas
Number of members: 40

Coral Specialist Group

Activity Report 2009–2012

This marks the first quadrennium of the Coral Specialist Group (CSG), as it was established following the World Conservation Congress in Barcelona in 2008. The basic membership of the group has been established, but we continue to scope for activities where the CSG can fulfil a role that other organizations do not cover. We are striving to find a niche for the Specialist Group against the backdrop of a vast amount of activity in coral and reef conservation globally. Scoping during this first period has focused in the following areas, to be continued in the next four years:

– The Red List Authority was formally established during the 12th International Coral Reef Symposium in July 2012, following a meeting with interested representatives from the Scleractinia Working Group.
– Within the Western Indian Ocean, building capacity for conservation of regional endemic corals in collaboration with the Zoological Society of London's EDGE of Existence programme and CORDIO.
– As contributions to the Convention on Biological Diversity, in particular the Aichi Targets (Target 10 mentions coral reefs as a focal ecosystem): a GEOBON (Group on Earth Observations Biodiversity Observation Network) process to identify Essential Biodiversity Variables (EBVs); a CBD Indicators working group; and the Global Coral Reef Monitoring Network (GCRMN) of the International Coral Reef Initiative (ICRI), to align all of these processes focused on globally coordinated monitoring and reporting of coral reef health.
– Scoping of new projects to increase access to online coral identification materials, for example the Corallosphere, CoralHub, and new emerging tools such as Coral Geographic, a website on Western Indian Ocean corals, and development of a virtual library including 3D images to facilitate capacity building in coral taxonomy and identification.
– Scoping of linkages with the International Society for Reef Studies and the International Coral Reef Initiative.
– Participation in SSC initiatives, including the Marine Conservation Sub-Committee and the SSC Chairs meeting in Abu Dhabi, UAE, in February 2012.

Success stories

- The taxonomy of the reef-building Scleractinia is extremely complicated and presently under major revision making informed species-based conservation very challenging. Recognizing that this state of flux will continue for some time, and that no single individual or institution is an authority on all hard corals, the Red List Authority has been linked to the principal expert group working on coral taxonomy, the Scleractinia Working Group, and members within it have agreed to act as the RLA.

Challenges

- The complementary challenges of fund-raising and identifying focal areas where the group provides something that existing work and institutions on coral reefs do not.
- Leveraging work under the group out of members' existing projects and programmes.
- Corals are threatened by climate change and overexploitation and habitat change driven by local and global population and economic growth.

Future Goals

- Prioritization of Red Listing Data Deficient species, of regionally specific gaps and priorities, and an updated Red List assessment to determine the Red List Index for corals.
- Develop pilot regional conservation plans for coral species.
- Incorporate coral reefs into global observatories and reporting systems.
- Incorporate climate change and ocean acidification into Red List process for corals.
- Incorporate ongoing taxonomic revisions into Red List process for corals.
- Expand and diversify membership in and role of CSG.
- Initiate a process for Red Listing of coral reef ecosystems.

Craterastrea laevis is one of the least known corals of the west and northern Indian Ocean. It is found in deep and silty environments, far from the usual dive sites on open reefs. © David Obura

Facts

Chair: David Obura
Red List Authority Focal Point: Flávia Nunes
Number of members: 25

Cormorant Specialist Group

2011 Update

Contribution to the final report of the EU project INTERCAFE aiming at resolving the perceived conflict between Great Cormorants, fishes and fisheries by:

1. a Pan-European review about ecology of Cormorants and water systems; and
2. Cormorant Manual trying to compile all existing information about Cormorant-fisheries research.

– Publication of the Proceedings of the Villeneuve meeting including publication of the first two Pan-European Cormorant counts.
– Organization of the 8th International meeting on Cormorants in Medemblik, The Netherlands with 55 participants from 23 countries (24–27 November 2011).
– Start of collaboration into the new joint EU-project CorMan.
– Significant contribution to policy regarding integrated management of conflicting species by providing valuable data and information about water systems crucial to the preservation of freshwater and coastal ecosystems.

Success stories

- Since 1985, regular meetings have brought together all available technical and scientific information and thereby have stimulated fundamental and applied research on Great Cormorants in Europe.
- The coordination of one of the largest and long-term colour ring programme on a wild living bird species, providing valuable information about migratory movements and population dynamics over more than 30 years.

Challenges

- To continue to serve policy makers with a balanced view about preservation of a group of conflicting species in combination with adequate conflict-handling using an integrated approach.
- To extend the work of the group to rare or vulnerable species of cormorants and shags, by comparing their status and ecological requirements, and aiming at improving their conservation status.

Future Goals

- Organization of a Pan-European breeding count of Great Cormorant in 2012.
- Organization of a Pan-European winter count of Great Cormorant in January 2013, both in collaboration with CorMan.
- Extend the network of cormorant and shag workers in other parts of the world, focusing on the rare and vulnerable species of *Phalacrocoracidae* starting in 2012 with a management plan on King Shag in New Zealand.

Facts

Chair: Mennobart van Eerden
Deputy Chair: Rosemarie Parz-Gollner
Number of members: over 500
Website: Cormorant Specialist Group

Crane Specialist Group

Activity Report 2009–2012

In 2010, 30 Crane Specialist Group (CSG) members from thirteen countries gathered in Russia to discuss issues for cranes related to agriculture and climate change. In addition, the CSG drafted a work plan for 2010–13 reviewed by all group members. Proceedings will be published shortly.

We began development of a Crane Conservation Plan, completing a threat matrix for all 15 crane species, circulated among group members for comment, and are now drafting assessments of status, threats, and conservation actions for each species. This process has refined population estimates. We also developed and tested a template for creating range maps compatible with The IUCN Red List requirements.

We are progressing well in developing a publication for researchers and managers on Cranes and Agriculture, summarizing the conflicts, opportunities, proven solutions for conflict mitigation, and needs for further research and collaboration.

We have secured funding and government support for a workshop on Cranes and Agriculture to occur in China in December 2012, enabling discussion and wider input on the documents under preparation.

The CSG has actively promoted an ecosystem approach to management of Poyang Lake, in particular with reference to a dam proposed for the lake's outlet. Poyang Lake is winter home to 400,000 waterbirds including 98% of the Critically Endangered Siberian Crane. Through CSG efforts, two articles were published in *Science* about the dam proposal, a 46-page report was prepared and circulated (with the IUCN China Office), and a report prepared assessing impacts on waterbirds of severe flooding in summer 2010– an event that led to food scarcity and abnormal waterbird foraging behaviour.

We secured funding and initiated a watershed management planning process for the Giltchin River in Amur Region, as a model for eastern Russia, and initiated a three-year project on cranes, water, local communities, and climate change for two crane areas in northeast China.

The CSG gathered evidence that led to the two African crowned crane species being included in the Significant Trade Review process under CITES in 2009. Members assembled data documenting a drastic decline in the Grey Crowned Crane resulting in the uplisting of this species to Endangered status in 2012.

Facts

Chair: James Harris
Deputy Chair: George Archibald
Programme Officer: Claire Mirande
Number of members: 270
Website: Crane Specialist Group

Success stories

- Water management plans developed in part with our help have been adopted, funded, and implemented at three National Nature Reserves in northeast China.
- A Significant Trade Review, conducted under CITES for the two African crowned cranes, will continue with a full review process for all but four range countries.

Challenges

For the Crane Specialist Group:

- Promoting broad participation for publications and meetings given the number and scattered distribution of group members.

For cranes:

- Safeguarding wetland and grassland habitats.
- Maintaining or restoring natural hydrological cycles essential for sustaining crane habitats.

Future Goals

- Develop an international network promoting solutions to crane collisions with power lines through a focused meeting in December 2012 (CBD targets 2, 4, and 12).
- Promote integration of crane/biodiversity conservation into agricultural landscapes, through workshops, publications, and demonstrations (CBD targets 2, 4, 5, and 7).
- Complete the Crane Conservation Plan (CBD targets 11, 12, 14 and 19).
- Reduce impacts of trade on African cranes through focus on both supply and demand (CBD targets 1, 12).

Grey Crowned Crane (*Balearica regulorum*). © Mike Endres

Crocodile Specialist Group

Activity Report 2009–2012

In 2009 the Crocodile Specialist Group (CSG) commenced a Student Research Assistance scheme to encourage and assist mainly post graduate students that chose to do their research on crocodiles. Each successful applicant that meets the criteria receives a USD 1,000 grant. To date, some 51 grants have been awarded. It is from the ranks of these students that future CSG membership will be derived.

During 2010–11 the Crocodile Survey Status and Action Plans for all 23 species of crocodiles were reviewed and updated by CSG members. Red List Authority assessments have been undertaken for *Crocodylus acutus*, *C. moreletii*, *C. palustris*, *C. siamensis* and *C. mindorensis*. These have been circulated to CSG members for comment prior to endorsement by the Chairman and submission to IUCN Red List staff for review and publication on The IUCN Red List website. This only leaves *Tomistoma schlegelii*, *Osteolaemus tetraspis* and *C. niloticus* to be completed later.

A CSG *Crocodylus siamensis* Task Force has been established to assist the re-introduction of the Critically Endangered *C. siamensis* in Thailand and Cambodia.

The International Association of Crocodile Specialists (IACS) has been incorporated in Australia to manage the financial affairs of the CSG.

Success stories

- Introduction of the CSG Student Research Assistance Scheme in 2009 has resulted in 51 grants of USD 1,000 each to date.
- Completion of CSG Action Plans for all 23 species.
- Significant progress with IUCN Red List assessments of crocodilian species.
- Establishment of *C. siamensis* Task Force.

Challenges

- Building sufficient resources to sustain the CSG financially.
- Encouraging countries which trade in crocodilian skins and products to comply with CITES.
- Dealing with Human-Crocodile Conflict (HCC).
- Resistance to re-introduction of crocodilians into areas from which they have long been absent.
- Assisting CSG members to obtain the resources needed to conserve crocodilians.

Future Goals

- Re-introduction of *C. siamensis* into the wild in Thailand, Cambodia and Vietnam.
- Achieving some form of sustainable protection for Lake Mesangat, East Kalimantan, Indonesia.
- Demonstrating that use and trade, if correctly managed, can be effective tools for providing benefits to both crocodilians and local people.
- Development of a Crocodilian Capacity Building Manual.

Facts

Chair: Prof. Grahame Webb
Deputy Chairs: Dr Dietrich Jelden and Dr Alejandro Larriera
Executive Officer: Tom Dacey
Red List Authority Focal Point: James Perran Ross
Number of members: 470
Website: http://iucncsg.org/

Crop Wild Relative Specialist Group

Activity Report 2009–2012

The aim of the Crop Wild Relative Specialist Group (CWRSG) is to promote the conservation and sustainable use of crop wild relatives (CWR) as a means of contributing to food security, aiding poverty alleviation, while at the same time protecting the natural environment. During the period, the members of CWRSG have made significant contributions to increasing the awareness of the importance of CWR to the agriculture and environment sectors, as demonstrated by the specific inclusion of text promoting CWR conservation in the CBD Strategic Plan Target 13 (CBD, 2010a) and CBD Global Strategy for Plant Conservation 2011–2020 Target 9 (CBD, 2010b).

Further, at the request of the FAO Commission on Genetic Resources for Food and Agriculture (CGRFA), the group prepared an important thematic background study on "Establishment of a global network for the *in situ* conservation of crop wild relatives: status and needs" (Maxted and Kell, 2009). This document helped to highlight the importance of CWR and identified high priority sites for the *in situ* conservation of a range of priority crop gene pools. It also contributed to the preparation of the Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture, in which CWR received much recognition.

Another significant achievement was the conclusion of the EU-funded project AEGRO which culminated in an international symposium on CWR and landraces held in Madeira, Portugal in September 2010 and the publication of the associated book, "Agrobiodiversity conservation: securing the diversity of crop wild relatives and landraces" published by CAB International.

During the symposium, a horizon scanning exercise was undertaken to review the current status of European CWR and landrace conservation and agree priorities for their conservation over the next 30 years. Members of the group also collaborated in developing a new EU Framework 7 project, PGR Secure which aims at developing novel characterization techniques and conservation strategies for European CWR and landrace diversity to enhance crop improvement by breeders. A key event jointly organized by PGR Secure and the European Cooperative Programme on Plant Genetic Resources (ECPGR) was the workshop, 'Conservation strategies for European crop wild relative and landrace diversity', held in Palanga, Lithuania, 7–9 September 2011, at which European PGRFA experts from 38 European countries (including members of the CWRSG) convened to develop national strategy protocols for CWR and landrace diversity.

IUCN Red List assessments have also been a major focus of the work of the CWRSG during this quadrennium with the production of the European Red List of Vascular Plants being a key product and which includes Red List assessments of 572 European CWR and was funded by IUCN and the European Commission. CWRSG members also produced a first annotated global checklist of CWR taxa, which includes a list of 1,392 priority CWR species that require immediate conservation action as well as several national checklists such as in Albania, Armenia, Bolivia, China, Czech Republic, Cyprus, Finland, Germany, Ireland, Italy, Madagascar, Norway, Portugal, Sri Lanka, Spain, Switzerland, Uzbekistan and the United Kingdom. Finally with support from FAO, a toolkit on *in situ* conservation of CWR and landraces is being developed.

Success stories

- Publication of regional IUCN Red List assessments of 572 priority European CWR.

Challenges

- Make the agro-biodiversity and biodiversity conservation link.
- Develop means of genetic diversity threat assessment.
- Promote CWR sustainable use.

Future Goals

- Establishment of Global Network of *in situ* CWR Genetic Reserves.
- Systematic *ex situ* conservation of global priority CWR diversity.
- Develop strategies for gathering, documenting and disseminating information on CWR.
- Promote their integrated conservation and sustainable use.
- Increase awareness of CWR species among government, institutions, decision-makers and general public.

Lathyrus belinensis.

Facts

Co-chairs: Ehsan Dulloo and Nigel Maxted
Red List Authority Focal Point: Ehsan Dulloo
Number of members: 33
Website: www.cwrsg.org/index.asp

Cuban Plant Specialist Group

2011 Update

The National Strategy for Plant Conservation 2011–2020. This strategy was designed by the Cuban Plant Specialist Group (CPSG) considering the Global Strategy for Plant Conservation and the CBD targets. The final draft was approved in our 2011 Annual Meeting and submitted to the authorities for final approval.

National Workshop on invasive plants in Cuba. A national List of invasive and potentially invasive plants in Cuba, and a theoretical and ethical framework for studying and managing invasive plants in our country was presented to the CPSG and other experts for validation.

The Action Plan for Biodiversity Conservation in Cuba 2011–2015. The Action Plan was approved taking into account the National Strategy for Plant Conservation.

Success stories

- *Coccothrinax crinita* subsp. *crinita* (Arecaceae) – 852 individuals were re-introduced into the wild in the last four years.
- *Melocactus actinacanthus* (Cactaceae) – 34 individuals were re-introduced in the wild.
- Red List of the Vascular Flora of Pinar del Rio Province – Edited by the late Dr A. Urquiola and other colleagues.

Challenges

- **For the CPSG**: Raise funds for improving connectivity, for facilitating networking and active conservation, and for raising public awareness.
- **For Cuban plant conservation**: to stop habitat degradation and fragmentation.

Future Goals

- Conclude the assessment of the conservation situation of the Cuban flora.
- Update the National Red List of Plants.
- Elaborate the National Red Book of Plants.

Facts

Chair: Dr Angela T. Leiva Sanchez
Red List Authority Focal Point: Dr Angela T. Leiva Sanchez
Number of members: 30

Cup Fungus, Truffle and Ally Specialist Group

Activity Report 2009–2012

Fungi are almost totally overlooked by the conservation movement. This is potentially disastrous because plants (the producers) and animals (the consumers) need fungi (the recyclers). Without them life on this planet would be unsustainable. But fungi have no magical protection against habitat loss, climate change and pollution: they are just as threatened as animals and plants.

Over the past four years a lot has been done to make conservationists more aware of fungi, starting with IUCN itself. In 2008 the SSC had only two fungal Specialist Groups (one for lichens, the other for everything else), and fungi were treated as an obscure corner of the plant kingdom. In 2009 the number of Specialist Groups was increased to five and IUCN held its first meeting devoted entirely to fungi. The SSC now recognizes that fungi are totally different from, but just as important as animals and plants.

The Cup Fungus, Truffle and Ally Specialist Group, one of the SSC's three new fungal groups, has worked hard to raise the profile of fungal conservation. The "Orphans of Rio" campaign is highlighting the almost total neglect of fungi by the Rio Convention. In August 2010, the International Society for Fungal Conservation was established. This is the first society anywhere explicitly devoted to protecting fungi. It already has more than 300 Members in over 60 countries, and its publication, *Fungal Conservation*, appears twice yearly.

The fungal conservation movement still faces daunting challenges. To change attitudes, infrastructure is needed to deliver education. At the same time, our goal, to protect fungi, should not be forgotten. This group has made preliminary Red List evaluations of 1,500 fungi, something never done before, and has begun Red List assessments for desert truffles – a high profile group under considerable pressure from climate change, habitat destruction and exploitation.

This is a great start. Our hope for the next four years is to take fungi into the mainstream of the conservation movement.

Success stories

- Conservation status evaluations of 1,500 ascomycetes prepared for IUCN's Sampled Red List Index project.
- Wording of Global Strategy for Plant Conservation altered to make clear that fungi are distinct and also require consideration.
- Project on conservation of desert truffles supported by Mohamed bin Zayed Species Conservation Fund.

Challenges

- Lack of awareness of the importance of fungi, not only among the general public, but also, too often, among scientists and policy makers.
- Too little new information about when and where species occur, and poor accessibility of existing information.
- Far too few resources available for fungal conservation.

Future Goals

- To develop capacity for the conservation of fungi.
- To promote understanding that fungi are different from animals and plants, and need equal protection.
- To raise the profile of fungi, and integrate them in all CBD reporting.
- To develop the Species Information System to permit assessment of all fungi.
- To understand better what threats exist for fungi.
- To explore how to conserve endangered parasitic fungi, and establish policy on that issue.

Collage of cup fungi. © David Minter

Facts

Chair: David Minter
Red List Authority Focal Point: David Minter
Number of members: 10

Cycad Specialist Group

2011 Update

- Convened the 9th International Cycad Congress in China (Dec 2011).
- Published the three-yearly update of the World List of cycads, contributing to Target 1 of the GSPC.
- Completed the 2010 Global Cycad Assessment.
- Established an ethnobotany subgroup to promote sustainable use with initial projects in India and Honduras.
- Established a subgroup to develop a network of population monitoring sites to inform decisions relating to conservation.

Success stories

- Completed, legally-binding species management plan for the South African Albany Cycad.
- A community project for *Cycas debaoensis* in China has stabilized the population. Now taken over by the Guangxi Provincial Forestry dept, who have established a restoration project.
- More than 50% of cycads in population based *ex situ* genebanks.

Challenges

- Large proportion of threatened taxa all requiring urgent action.
- Multiple threats, including global trade, traditional use, habitat loss, invasive pests and disease.
- Invasive pests are causing rapid changes in once stable populations, especially on islands.

Future Goals

- Continue to update World List (GSPC target 1).
- Finalize IUCN Red List assessments for new species (20–40 taxa).
- Strengthen work of the ethnobotany subgroup looking at livelihoods associated with cycads (CBD target 14).
- Establish a database of cycads in genebanks.
- Work with other agencies to limit pathways for spread of pests and diseases.

Facts

Chair: Prof. John Donaldson
Red List Authority Focal Point: Prof. John Donaldson
Number of members: 29

Deer Specialist Group

Activity Report 2009–2012

As chairs of the Deer Specialist Group (DSG) we are reporting the main activities performed in the last quadrennium (2009–2012). We have achieved our main goals that were to:

a) stimulate research in the "hotspot deer diversity regions" Asia and Latino America to obtain scientific knowledge;
b) to evaluate the species status and propose conservation guidelines; and
c) to obtain funds to support the small grants to qualified young field biologist proposals.

The DSG members and chairs actively participated in and organized several workshops, symposia, and meetings with the aim to disseminate conservation and management strategies for the deer species. Several publications, scientific articles, books and general dissemination material were edited by our membership.

We evaluated all deer species with the valuable support of our specialist network and wish to highlight the excellent contributions of our Red List Authority Focal Points: Dr Patricia Black de Decima (New World Deer Species) and Dr Will Duckworth (Old World Deer Species), and their leadership to achieve and organize the valuable Red List assessment information. Their roles will be important in the next quadrennium as we strive to complete the reassessments and deal with the issues of species' taxonomy.

We obtained support for activating a Small Grant Program, and five field projects in the hotspot and conservation priority regions were funded through the generous support of the Mohamed bin Zayed Species Conservation Fund.

For the next quadrennium we will continue to encourage our membership to be more active and participative in deer conservation. We decided the best way to increase efficiency and participatory activity is to reorganize the DSG around regions of interest and identify leaders for each sub-group. These six regions will be: European Temperate and Arctic, South Asia (India/Nepal), Southeast Asia, Tropical Asia Island, Asia Temperate, and Americas. We will approach members who have been active conservationists in each region to assume a leadership role and to coordinate activities by their sub-group. We will assign species to each sub-group and each group will complete the Red List reviews for their species. We will also form subgroups to deal with specific issues of taxonomy and re-introduced and, or translocated populations. We will encourage members to attend the next International Deer Congress as a way to bring the membership together for discussions.

Success stories

- Involving both government and NGO agencies in deer species research, assessment and conservation issues.
- Our small grant program funded by MBZ Conservation Fund.
- Nomination of Arerunguá in Uruguay as a Conservation Priority Area based on the occurrence of Pampas Deer (*Ozotoceros bezoarticus*).
- Neotropical Cervidology book published.

Challenges

- Achieve viable Neotropical deer populations in the future.

Future Goals

- To resolve the systematics of several deer taxa including the Old World *Dama mesopotamica* and the new World genus *Mazam.*
- To encourage research on wild musk deer populations and other Asian species.
- Publication of a popular guide "Deer: the answer guide" by Johns Hopkins Press, in 2012.

Marsh Deer (*Blastocerus dichotomus*). © J.M.B. Duarte

Facts

Co-chairs: Susana González and William J. McShea
Red List Authority Focal Points: Patricia Black and Will Duckworth
Number of members: 120
Website: http://www.iibce.edu.uy/DEER/

Diver/Loon Specialist Group

Activity Report 2009–2012

The main objective of the Diver/Loon Specialist Group is to facilitate communication among loon researchers worldwide. A special effort was made to develop an efficient communication network among loon researchers living in both the Old and New World.

Our affiliates are involved in the monitoring of loon populations either at the state, provincial or local level depending on the circumstances. We maintained close contact and coordinated activities with pre-existing, very effective volunteer organizations interested in the preservation of loons.

Beside a regular annual workshop we organized conferences on loon research separately in Europe and in North America, in association with the meetings of other bird organizations. The scientific workshops are the major media of communication among members of the Specialist Group. The Proceedings (extended Abstracts) of these workshops are published speedily after the meetings. The improvement of the accuracy of the world loon population estimates and the monitoring of population trends is a major activity of the Specialist Group.

The research conducted includes the banding of individual birds, following their movements and determining their site fidelity and longevity. We also did research on the determination of body burden of toxic substances in loon populations in different geographical areas. The results of our research activities help decision-makers to make regulations in the area of CBD targets to improve the status and sustain threatened species.

Common Loon (*Gavia immer*). © Art Weber/U.S. Fish and Wildlife Service

Facts

Chair: Joseph Kerekes
Number of members: 45 core members (professionals) connected to more than 2,000 citizen loon enthusiasts engaged in various conservation activities.

Success stories

- The functioning of viable, self sustaining volunteer organizations for the protection and preservation of common loon populations in the USA (in 14 states where loons breed), in Canada and Scandinavia.
- Introduction of lead legislations, USA.
- Improvement of the loon's life history with the use of banding.
- Preservation of breeding loon populations in a large number of lakes where expanding human development (housing, recreation) takes place.
- Establishment of an endowment to support students to study loons at graduate level.
- The identification of the Common Loon, based on mercury body burden research, as an indicator species of ecological risk.

Challenges

- We face a huge challenge in the under populated North beyond the reach of our volunteer organizations. Big industrial developments take place in the North (large mining projects of different kinds, oil sand recovery projects on an enormous scale). We know very little of the existing status of Gavide in these areas and our monitoring effort is extremely weak or non-existent.
- Effect of climate change on populations.
- Effect of toxic chemicals (PBDE, etc) on loon populations.
- Increased recreational use of lakes.
- Disruption of food webs, oceans and lakes.
- Causes of the apparent decline of loon populations in the North Sea.
- Oil spills.

Future Goals

- Introduction of effective lead and mercury control legislation.
- Research on contaminants.
- Maintain and increase efforts of public awareness of preservation of loon breeding habitats against "development" pressures.
- Improve the communication among our groups using the internet as a main vehicle.
- Organize loon conferences and workshops to keep communication flowing and improve knowledge and techniques among participants.
- Develop new management techniques.
- The results of our research activities help decision-makers to make regulations in the area of CBD targets to improve the status and sustain threatened species.

Dragonfly Specialist Group

Activity Report 2009–2012

The Dragonfly Specialist Group has been involved in several Freshwater Biodiversity Projects coordinated by IUCN's Freshwater Unit in Cambridge: Arabian Peninsula, Western Ghats, East Himalayas, Indo-Burma, New Zealand. Assessments for Regions in South America are underway and will involve regional experts from the Dragonfly Specialist Groups.

The Africa Freshwater Assessment has been completed and a report published. The reception of this project has been good and it made it to the front cover of *Frontiers in Ecology and Environment* (10, 3) "Focus on African freshwaters: hotspots of dragonfly diversity and conservation concern".

Building on this success, K-D.B. Dijkstra and Michael Samways received a grant from the JRS Biodiversity Foundation to work with a team of MSc and PhD students to make all knowledge available online that is needed to use African dragonflies in environmental assessments, i.e. their identification, distribution, ecology and indication value.

Dragonflies are well represented in the Breaking Point Initiative: three species were selected for inclusion in the list of the 100 most critically endangered species, with *Risiocnemis seidenschwarzi* from Cebu Island, Philippines, selected for a longer feature.

Matjaz Bedjanic was awarded a Rufford Small Grant for his project: "Distribution Atlas of the Dragonflies of Sri Lanka: focus on the globally endangered species included on The IUCN Red List of Threatened Species."

The Chair, Viola Clausnitzer, received the Harry Messel Award for "Conservation Leadership in recognition of her leadership of Odonata Red List assessments, especially in Africa, and her chairing of the SSC Dragonfly Specialist Group", during the SSC Chairs meeting in Abu Dhabi in February 2012. This prize is an honour for the entire group.

Members of the DSG participated at various meetings (global and regional scale), e.g. LIFE meeting in England, IPBES meetings in Bonn and Nairobi, IUCN SSC workshops in England and the USA.

Success stories

- Red List assessments for New Zealand, the Arabian Peninsula and parts of Southeast Asia.
- Distribution maps prepared for all African species.
- Front cover publication in *Frontiers in Ecology and the Environment* on African dragonflies.
- Harry Messel Award for Conservation Leadership for the group's chair in Abu Dhabi, Feb 2012.
- JRS Biodiversity Foundation grant for African dragonflies in environmental assessments.
- Rufford Small Grant for a distribution atlas of Sri Lanka's dragonflies.
- Highly cited Author Award for "Odonata enter the biodiversity crisis debate: The first global assessment of an insect group", by *Biological Conservation.*

Challenges

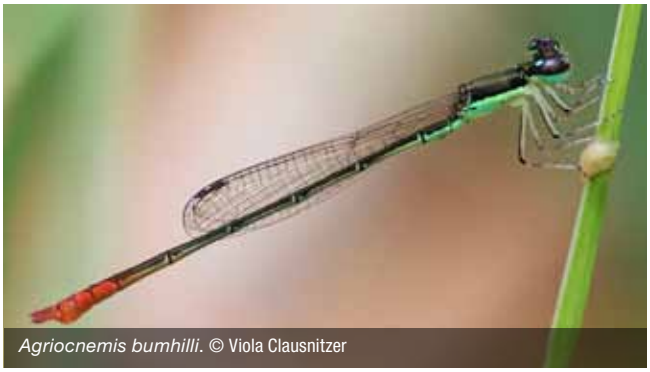
- The world's focus is still largely on fluffy-furry animals and spectacular projects. Invertebrates usually get less attention and far less funding for conservation or assessment projects. In many cases, we need information about the distribution, trends and conservation needs of the species, before we are able to work on conservation actions. A main focus will therefore be the high numbers of data deficient (DD) species among dragonflies.

Future Goals

- Secure more funding for surveys and the implementation of species specific conservation actions.
- Complete global dragonfly assessment.
- Focus on South America and Pacific Islands in respect of assessments and conservation initiatives.
- Update IUCN Red List assessments older than 10 years.
- Enhance national Red Listing projects.
- Merge existing data sets with the global IUCN Red List (e.g. North America).
- Allocate data to minimize the number of DD species.
- Preparation of a website to establish dragonflies as indicators for ecosystem health ('guardians of the watershed') in tropics.

Facts

Chair: Viola Clausnitzer who took over from Vincent Kalkman during the quadrennium
Red List Authority Focal Point: Frank Suhling
Number of members: 45



Agriocnemis bumhilli. © Viola Clausnitzer

Duck Specialist Group

Activity Report 2009–2012

The Duck Specialist Group's priority in 2009 was to find a new Chair and re-establish itself. The current Chair took on the role in 2010 and with support from hosting organization, the Wildfowl & Wetlands Trust, has been able to undertake essential activities to begin re-establishing the group.

The membership and e-forum lists have been updated, and expertise information has been collated for 67% of members. Regional Coordinators for Africa and South America were appointed in 2012. Communication has also been improved, both with members and with Wetlands International and IUCN SSC, including more regular use of the e-forum, the development of an active web page hosted by Wetlands International, and a stronger presence at key conferences and meetings.

Financial support was secured for the first time in 2012 from the Federation des Associations de Chasse et Conservation de la Faune Sauvage de l'UE (FACE) and Tour du Valat. This unrestricted funding is an important step for DSG and will facilitate key activities that support continued development and growth.

Several important conferences took place in this quadrennial, including the 5th North American Duck Symposium in August 2009, the 4th International Sea Duck Conference in September 2011, and the 2nd and 3rd Pan-European Duck Symposia in March 2009 and April 2012, respectively. At the 3rd PEDS, DSG members drafted the Jindrichuv Hradec statement in order to highlight key issues for duck conservation and management in Europe that were raised at the conference. A planning workshop on European seaduck conservation was also held at PEDS3, during which priority activities were agreed.

Support for numerous key products and activities were also provided by members, including: Wetlands International's AEWA Conservation Status Report; Waterbird Population Estimates 5; and African-Eurasian Waterbird Monitoring Partnership; SSC communications; and IUCN Red List assessments of various seaducks, including the Velvet Scoter, Long-tailed Duck, Baer's Pochard and White-headed Steamerduck.

Success stories

- Re-invigoration of the Group after a long period of inactivity, including gain of institutional and financial support, improved engagement with members and key partners, improved communication, and support for key conservation activities.

Challenges

- Continued development of the group with limited resources.
- The development of adequate monitoring systems that underpin status assessments in South and Central America, Africa and Asia.
- Continuing to adequately monitor and manage European duck populations, especially those that are hunted.
- Development of effective bag monitoring systems.
- Developing and implementing key conservation needs for European seaducks, particularly IUCN Red Listed species, including completion of an AEWA Single Species Action Plan for Long-tailed Duck.

Future Goals

- Establish complete network of regional coordinators and a coordinating committee.
- Recruit new members from under-represented regions.
- Develop communication tools, particularly a website that includes best practice information, a project register and online library.
- Establish European Seaduck Task Force.
- Support the development of the International Waterbird Census and other monitoring systems.
- Complete Ducks of the Western Palearctic review book.
- Ensure established symposia and conferences continue to take place, and develop 1st Asian duck conference before end of 2016.

Facts

Chair: Richard Hearn
Regional Coordinators: Doug Harebottle (Africa), Daniel Blanco (South America)
Number of members: 109

Long-tailed Duck (*Clangula hyemalis*). © John Anderson

Equid Specialist Group

IUCN/SSC EQUID SPECIALIST GROUP

Activity Report 2009–2012

Wild equids (zebras, asses, and horses) were once among the most abundant herbivores in Africa and Asia. Today there are only seven species of equids and most of these are endangered. Our greatest challenge is to improve the conservation status of these species and their habitats. The long term goal of the Equid Specialist Group is to conserve biological diversity by developing and executing programs to study, save and manage wisely wild equids and their habitats. In an effort to achieve this long-term goal, priorities are:

1. to identify and work with scientists, government personnel, and local residents in the countries where wild zebras, asses, and horses exist;
2. to help raise funds for equid research and conservation programs;
3. secure funding for the training of nationals in equid range states;
4. to coordinate with and assist other species survival groups, and;
5. implement the actions recommended in the 2002 Equid Action Plan.

During this four-year period the IUCN SSC Equid Specialist Group has supported and facilitated meetings:

1. Mongolia: "Endangered Equids of Mongolia: Conservation Challenges and Opportunities in 2010 and beyond."
2. Eritrea: African Wild Ass: Species conservation strategic planning meeting.
3. Djibouti: workshop on "Conserving Djibouti's priority land animals."

A critical aspect of conserving wild equids and their ecosystems is capacity building in range states. Almaz Tadesse has successfully completed her PhD on, "Sustaining the Alledeghi Grassland of Ethiopia: Influences of Pastoralism and Vegetation Change." The Alledeghi grassland is home to the most important Grevy's Zebra population in Ethiopia. Fanuel Kebede has completed his research and analyzes for his PhD on the "Ecology and Community-based Conservation of the African Wild Ass and the Grevy's Zebra in the Afar Region, Ethiopia." In cooperation with the Hamelmalo College of Agriculture, Eritrea, an MSc program has been developed that will provide training and expertise that is needed in wildlife ecology and management.

Facts

Chair: Patricia D. Moehlman
Red List Authority Focal Point: Patricia D. Moehlman
Number of members: 67
Website: www.equids.org

Success stories

- Przewalski's Horse (*Equus ferus*) downlisted from Critically Endangered to Endangered.
- Mountain Zebra (*Equus zebra*) downlisted from Endangered to Vulnerable.
- Financial support for MSc's and PhD's in range states.
- Development and funding of an MSc training program in wildlife ecology in Eritrea.
- The accomplishments of the members of the Equid Specialist Group doing research and conservation on all seven species of wild equids.

Challenges

- Tracking the status and trends of all equid species.
- Mining and agricultural development projects threaten access to critical resources.
- Competition with livestock for forage and water may affect population dynamics.
- Protected areas need support.
- Local resource users need to be integrated into the protection and management of wild equid populations.

Future Goals

- Continuation of training programs for nationals in range states.
- National action plan for the three wild equids in Ethiopia.
- National action plan for the two wild equids in Mongolia.
- Community workshop and demarcation of the Allegeghi wildlife reserve in Ethiopia.
- Develop guidelines for the translocation and, or re-introduction of wild equids.
- Conference on wild equids.
- Continued assessment of status and trends of all wild equid species.
- Training and National Action Plans provide knowledge on biodiversity status and, or trends and directly influence policy in terms of needed conservation actions.

African Wild Ass (*Equus africanus*). © Patricia D. Moehlman

Flamingo Specialist Group

2011 Update

The Flamingo Specialist Group (FSG) is coordinated from the Wildfowl and Wetlands Trust (WWT), Slimbridge, UK, as part of the IUCN SSC/Wetlands International Waterbird Network and works globally across the range of all flamingo species. The FSG works to achieve the following objectives:

- Developing and maintaining an active network of *in situ* and *ex situ* flamingo specialists.
- Stimulating and supporting information exchange.
- Encouraging development and implementation of conservation action plans.
- Promoting innovative conservation approaches for people and flamingos in the context of climate change.
- Providing information and advice in support of the programmes of Wetlands International, IUCN SSC, and others.

During the period the FSG has:
- Published *Flamingo*, the FSG annual bulletin.
- Developed a dedicated FSG website: www.flamingo-sg.org
- Established a Small Grants Fund.
- Recruited two new *ex situ* coordinators.

Success stories
- Organizing a global meeting in 1998 in Miami.
- Establishing a communication mechanism for all members and regular production of a bulletin.
- Developing a large membership base covering all species and range countries.
- Production of the International Single Species Action Plan for the Lesser Flamingo.
- Raising funds to establish a Small Grants Fund.

Challenges
- **For the group**: maintaining communication and raising funds to sustain the Small Grants Fund.
- **For flamingos**: the main challenge is habitat loss and degradation. Other challenges include egg removal at colonies and human disturbance at breeding and feeding sites.

Future Goals
- Finalization of a CMS Action Plan for the High Andes Flamingos.
- Implementation of the International Single Species Action Plan for the Lesser Flamingo, including the development of National Action Plans for South Africa and Botswana.
- Development of an online reporting system for breeding and ringing events.
- The FSG will continue to work towards the achievement of SSC and Wetlands International objectives within the context of the conservation of flamingos worldwide.

Facts
Chair: Rebecca Lee
Number of members: 305
Website: www.flamingo-sg.org


© Omar Rocha

Freshwater Crab and Crayfish Specialist Group

Activity Report 2009–2012

- The Freshwater Crab and Crayfish Specialist Group (FCCSG) was formed in 2009 and comprises 25 decapod crustacean biologists and conservationists of whom 11 are freshwater crab specialists (Africa, Asia, Neotropics) and 14 are crayfish specialists (Europe, North and South America, Australia).
- The FCCSG adds two major freshwater invertebrate groups to The IUCN Red List (which has long been dominated by vertebrates) and contributes large numbers of species to CBD targets.
- The worlds 1,280 species of freshwater crabs were added to The IUCN Red List in 2009 and the world's 569 species of crayfish were added in 2010.
- Appointed Red List Authority focal points for crayfish (Keith Crandall) and freshwater crabs (Darren Yeo).
- Developed a logo for the FCCSG.
- The FCCSG maintains an updated species list of freshwater crabs and crayfish with the aim of making conservation assessments of new taxa.
- Conservation assessments for nine new species of Indo-Burmese freshwater crabs are currently underway.
- Initiated three possible SSC Strategic Conservation Plans aimed at conserving Critically Endangered species of crayfish in Tennessee, and threatened species of freshwater crabs in Singapore and Borneo. Currently drafting personnel lists, budgets, and identifying locations for workshops.
- Have focused attention on freshwater crabs and crayfish through contributions to a number of publications and at professional meetings.
- FCCSG members organized a conference on "Freshwater Decapods" in Frankfurt in 2010, and will publish the proceedings late in 2012.
- Included five species of freshwater crab in the *Species of the Day t*hat were subsequently included in *Species on the Edge of Survival* (IUCN, 2011).
- Three FCCSG members wrote a chapter on freshwater crabs for the upcoming IUCN report on freshwater biodiversity in the Indo-Burma region.
- Initiated global Red List assessments for 1,200 species of freshwater shrimps led by Sammy De Grave, University of Oxford, UK.
- Plan to encourage global Red List assessments for 68 species of anomuran freshwater crabs (Aeglidae).
- Plan to create the FCCSG conservation website to supplement and, or replace current crayfish and freshwater crab sites.

Success stories

- Coorganizer of an international conference on the Freshwater Decapods in Frankfurt, 2010; keynote address at the conference on "Freshwater Decapod Conservation: Recent Progress and Future Challenges," to be published in the conference proceedings (2011).
- Initiation of a new initiative to use the newly published world species list of the freshwater shrimps for a global IUCN Red List assessment of this species and a project has been identified and funding been secured for this assessment.

Challenges

- Although freshwater crabs and crayfish are large and conspicuous macro-invertebrates in freshwater ecosystems around the world, and although many species are ecologically and commercially important, the group includes a lot of inconspicuous and uncharismatic species. Consequently it is difficult to generate wider interest for their conservation.

Future Goals

- Undertake IUCN Red List assessments of all of the new species of freshwater crabs and crayfish which have been described since the last global assessments of these two groups.
- To complete distribution maps for the remainder of the assessed species of freshwater crabs and make them available on The IUCN Red List website.
- To develop Species Conservation Strategies for one or more threatened species of crayfish and freshwater crabs.

Facts

Co-chairs: Keith Crandall and Neil Cumberlidge
Red List Authority Focal Points: Keith Crandall and Darren C.J. Yeo
Number of members: 25

Freshwater Fish Specialist Group

Activity Report 2009–2012

- Recruited new Programme Officer Katalin Csatadi in 2012 to replace Claudine Gibson.
- Organised 2010 meeting "4th International Zoo and Aquarium Symposium on Global Freshwater Fish Conservation: Linking *In Situ* and *Ex Situ* Actions".
- Organized 2010 meeting "4th International Zoo and Aquarium Symposium on Global Freshwater Fish Conservation: Linking In-Situ and Ex-Situ Actions."
- Organized 2012 meeting 'Global Challenges in Caring for and Conserving Freshwater Fishes', held in liaison with World Fishes Congress (Edinburgh, May 2012). The meeting consisted of 40 talks and five workshops about Sustainability; The Global Freshwater Observatory Network; The impact of dams; The Census of Freshwater Life and the newly founded Anguillid Specialist Subgroup. The meeting was attended by 60 scientists from all around the world.
- Contributed to IUCN publication: *The Diversity of Life in African Freshwaters: Under Water, Under Threat.*
- Participated in the Wetlands International (WI) strategy development workshop, Netherlands 2011; and WI Symposium, Edinburgh 2011.
- Liaison and support for IUCN Freshwater Biodiversity Unit and various SSC Specialist Groups including Salmonid, Sturgeon, Sharks and Rays, Sustainable Use, and Invasive Species.
- Assisted with The IUCN Red List assessment project of freshwater species in South Asia and Africa (Pan-African Freshwater species project).
- Assisted in the preparation of several IUCN policy and strategy documents including on impact of dams on Chinese Freshwater fishes.
- Funded, translated and distributed *Global Aquarium Strategy for Conservation* (WAZA 2010–11).
- Created online membership registration system ensuring the further growth of the FFSG network; FFSG folder and T-shirt; website (www.iucnffsg.org); Facebook page (www.facebook.com/ffsg).

Facts

Chair: Gordon McGregor Reid
Red List Authority Focal Point: Katalin Csatadi
Number of members: 194
Website: IUCN/WI Freshwater Fish Specialist Group

Success stories

- Numerous projects funded to date with cumulative value more than EUR 100,000.
- Financial and other support for formation of IUCN SSC Freshwater Biodiversity Sub-Committee, via Mexican workshop 2011.
- Facilitation of 2011 Red Listing Workshop for New Zealand fishes and other freshwater biodiversity, via generous grant from Biofresh (EC Funded Project: *226874*).
- Further growth of network and recruitment of key geographical and thematic specialists.
- Establishment of FFSG Eel Specialist Subgroup (ESSG) in partnership with commercial interests.

Challenges

- Biggest challenge is forging practical, global strategy for freshwater fish conservation in face of limited scientific data on thousands of species; rapidly declining freshwater fisheries worldwide; extinctions; and a lack of political will and resources to address these.
- FFSG concerned with conserving aquatic environment worldwide, maintaining fish biodiversity and ensuring sustainable fisheries in relation to people and water resource use.
- Freshwater fishes face many threats: overfishing, deforestation, natural system modification (dams and agriculture), drought, pollution (domestic, industrial, pharmaceutical, radiation and thermal), alien invasive species, unsustainable aquaculture and global climate change.

Future Goals

- FFSG Vision is *Freshwater Fishes sustained in their natural environments.*
- FFSG Mission is *to achieve conservation and sustainable use of indigenous freshwater fishes and their habitats* through generating and disseminating sound scientific knowledge; creating widespread awareness of their values; and influencing decision-making processes at all levels.
- We work together in areas including strategy and policy development, provision of technical information and advice, training and education, biodiversity assessments and Red Listing.
- IUCN Red List indicates 37% of 15,000 FW fishes Threatened.
- More than 91 documented Extinctions. UN forecasts 20% of FW fishes extinct in next 30 years (ca. 2,400 sp.).
- FFSG works to help monitor and counter negative impacts as per CBD targets 2010–2012.

Freshwater Plant Specialist Group

Activity Report 2009–2012

Established in early 2012, the remit of the Freshwater Plant Specialist Group (FPSG) is the conservation of all freshwater, wetland-dependent, vascular plants, bryophytes, lichens and algae in the world. Many of these species are covered by other freshwater Specialist Groups and therefore, the FPSG will provide support, information and assistance to other groups as relevant. Equally, the FPSG will provide support and information to other wetland-related taxonomic Specialist Groups.

The mission of the FPSG is to assess the conservation status of wetland-dependent plants, identify their conservation needs and stimulate action to address these. The work of the FPSG is expected to change over time:

- In 2012 a preliminary global list of wetland-dependent plants will be prepared and established as a relational database, with funding from BioFresh and support from the Centre for Ecology and Hydrology (CEH).
- The next main stage will involve application of The IUCN Red List Categories and Criteria to all wetland-dependent taxa. The Freshwater Biodiversity Unit of IUCN has already carried out more than 1,000 assessments of freshwater plants and this work will continue. Other SGs and organizations have also undertaken assessments and these are expected to continue. The FPSG will contribute to these programmes as and where relevant as well as initiating a programme of IUCN Red List assessments for particular taxa or regions.
- As assessments are completed for regions either the FPSG or its members will prepare regional action plans for the conservation of wetland-dependent plants with the ultimate aim of developing a global action plan for the conservation of wetland-dependent plants. The first target for this approach is Europe. In 2012 the remaining wetland-dependent vascular plants should be assessed. Once this is completed, funds will be sought to prepare an action plan for the conservation of wetland-dependent vascular plants in Europe.
- Specific projects will be carried out by or supported by the FPSG to address the conservation needs of taxa identified in action plans.

One of the guiding principles of the FPSG will be to adopt a rigorous approach to the acceptance and application of data. Where possible IUCN Red List Assessment and subsequent data use will derive from an Ecological Profiling approach, where only vouchered or otherwise confirmed data will be used. This ensures that decisions taken on conservation action are appropriate, relevant and targeted to the needs of the taxon.

Challenges

- The main challenge is finding funding to cover the costs of establishing the Specialist Group.

Future Goals

- Establishing an industry-led Kitemark or sustainability standard for the aquatic plant trade with application from collection or breeding through to sale or even beyond following the “Green Fish Initiative” and the experience of the Freshwater Fish Specialist Group. A preliminary concept has been prepared.
- Cultivation of wetland-dependent plants in zoos and aquaria for *ex situ* conservation, for example, *Callitriche pulchra,* which is currently known from a single pool in karstic limestone on the island of Gavdos off the south coast of Crete (although it has been recorded from other pools on the island and three wadis in Libya).
- Species Conservation Action Planning for *Eryngium viviparum* which has been declining sharply in its Brittany stronghold for some time and now survives only through management intervention. It still survives in a few areas in the Iberian Peninsula. The FPSG will support the Conservatoire Botanique National de Brest in preparation of an Action Plan for the conservation of this species and will seek funding for this process.

Baldellia ranunculoides ssp. *repens*, Etang de Bellebouche, Parc Naturel Régional de la Brenne, France. © R.V. Lansdown

Facts

Chair: Richard V. Lansdown
Red List Authority Focal Point: To be appointed
Number of members: under appointment

Galapagos Plant Specialist Group

Activity Report 2009–2012

The Galapagos Plant Specialist Group (GPSG) is small and has always focused on IUCN Red Listing since its establishment in 2002 because other activities such as research and conservation of the native flora have been managed and coordinated on behalf of the Ecuadorian Government by two institutions in Galapagos, the Charles Darwin Research Station (CDRS) and Galapagos National Park (GNP). Most of the members of the GPSG work for (or formerly did so) one of these two institutions and the Group has therefore always tried to complement their work. During the period 2009–12, the group's main task was to contribute the Galapagos species accounts to the second edition of the Ecuadorian plant red data book, which was published at the beginning of 2012.

Following changes in the programmes at CDRS and GNP, the group has recently been re-examining its role, and has concluded that there is room for expansion of programmes of science and conservation for threatened Galapagos plants. We are still in the process of exploring ways to achieve this, given the tight restrictions on carrying out research and conservation work in the archipelago. The group has also planned a reassessment of The IUCN Red List status of the entire endemic vascular flora (c. 180 species, 230 taxa), which should begin in 2012 or 2013.

Success stories

- The complete endemic vascular flora was Red Listed in the period up to 2007.
- A comprehensive research and management programme for Galapagos threatened plants has been designed, based on objective priorities determined through Red Listing.

Challenges

- Limited finance.
- Small membership.
- The main challenge is how to increase attention and resources from relevant authorities and donors for Galapagos plant conservation.

Future Goals

- Assist the Charles Darwin Research Station and Galapagos National Park to expand programmes of research and conservation for Galapagos endemic plants.
- Begin (mid-2012) a complete revision of the Red List of Galapagos endemic plants.

Facts

Chair: Dr Alan Tye
Red List Authority Focal Point: Dr Alan Tye
Number of members: 11

Galliformes Specialist Group

Activity Report 2009–2012

The Galliformes Specialist Group (GSG) was formed in 2009 to represent all the Galliformes species, following a period of 20 years during which there had been up to five separate SSC Specialist Groups working on behalf of different geo-taxonomic groups of these highly threatened birds. The World Pheasant Association (WPA) remains a close partner engaging in advocacy, project planning and implementation on some of our most threatened species: e.g. Djibouti Francolin (*Francolinus ochropectus*) (Critically Endangered, (CR)), Trinidad Piping-guan (*Pipile pipile*) (CR), Maleo (*Macrocephalon maleo*) (Endangered (EN)).

We have also worked closely with BirdLife International, as the Red List Authority for all birds, which maintains a Threatened Galliformes Forum jointly moderated by WPA, in order to debate IUCN Red List re-classifications. In 2009, we added the Hainan Peacock-pheasant (*Polyplectron katsumatae*) to our species list, but as an Endangered island endemic. Swierstra's Francolin (*Francolinus swierstrai*) and Wattled Curassow (*Crax globulosa*) were uplisted to EN in 2010. The following year Sula Megapode (*Megapodius bernsteinii*) was uplisted to Vulnerable (VU). Edwards's Pheasant (*Lophura edwardsi*) has recently been uplisted to CR. In order to catalyze our global work strategically, we need to find a priority-setting mechanism for projects that goes beyond IUCN Red List status alone and gives some weight to the feasibility for action on the ground.

The GSG membership has the best information available on status, biology, threats and solutions for its species, whilst the WPA membership has specialized husbandry expertise, and zoos have additional strengths in education and outreach. With SSC encouragement we are seeking gains for threatened Galliformes from forming ever closer liaisons within this triangle.

Capacity building remains one of the GSG's main pre-occupations. The GSG contributed importantly to WPA's International Galliformes Symposium (Chiang Mai, November 2010) and the ensuing workshop for early-career conservation scientists. We also ran a field survey workshop in the Pakistan Himalayas (2011). Many members review proposals and draft publications for each other across the continents, but we still need to make greater use of the professional expertise of our many Northern Hemisphere members, for the benefit of those elsewhere and the species they are trying to save.

Facts

Co-chairs: Peter Garson and Ilse Storch
Red List Authority Focal Point: Richard Fuller
Number of members: c.250
Website: http://www.galliformes-sg.org/home.html

Success stories

- Our large network provides the means for self-help through advising on project plans, arranging bespoke training and helping with publications.
- Our link with the World Pheasant Association enables them to use our network in building partnerships to implement projects on some of our most threatened species, such as Djibouti Francolin (CR) and Edwards's Pheasant (CR).

Challenges

- Galliformes habitats (especially forests) are being disrupted and many species are also over-hunted, so 73 (26%) are classified as threatened on The IUCN Red List (CR, EN, VU).
- The key is to integrate Galliformes conservation with local human needs: especially in relation to forestry, farming, bushmeat exploitation and tourism.

Future Goals

- We need institutional core support so that we can become more proactive in catalysing the most urgent projects.
- We need to implement a system for prioritizing projects globally so that strategic targeting improves.
- We seek to involve our many Northern Hemisphere grouse experts in helping with field techniques, data analysis and publication elsewhere.
- We need to become more effective at converting our science into conservation action through other stakeholders.
- We want to work with zoo professionals to rationalize intensive and extensive work on our threatened species.

Cabot's Tragopan (*Tragopan caboti*). © via He Fenqi

Global Tree Specialist Group

2011 Update

Publication of:
- *The Red List of Rhododendrons.*
- *The Red List Mexican Cloud Forest Trees.*
- Global Surveys of *ex situ* collections of Rhododendrons.
- Progress on developing *The Red List of trees of montane forests of the northern Andes.*

Success stories

Publication of Red Lists on:
- Rhododendrons
- Mexican Cloud Forest Trees
- Maples
- Trees of Central Asia.

Global Surveys of *ex situ* collections of:
- Rhododendrons
- Maples
- Oaks
- North American Collections.

Challenges
- How to prioritize and fund conservation assessments and action when a potential 50,000 species are threatened in light of existing threats and future climate change impacts.
- Meeting the documentation standards required for inclusion in The IUCN Red List.

Future Goals
- 2011 Global Tree Specialist Group meeting in China.
- Development of an IUCN Red List of Montane Trees, Betulaceae, Theaceae.
- Fund-raising for a 10-year plan to IUCN Red List all the world's trees in support of GSPC Target 2 and the Aichi Targets more broadly as well as UNFCC and REDD+.

Facts

Chair: Sara Oldfield
Red List Authority Focal Point: Dr Adrian Newton
Number of members: 85
Website: http://www.globaltrees.org/gtsg.htm

Goose Specialist Group

2011 Update

March 2011: 13th Meeting of the Goose Specialist Group (GSG). It was attended by 140 participants from 18 different countries. As part of this meeting a special symposium on the impact of growing biofuels on feeding opportunities for geese was held.

– May 2011: the 12th issue of our electronic goose bulletin appeared.
– November 2011: the 13th issue of our electronic goose bulletin appeared.
– December 2011: the GSG board attended a Meeting organized by Russian Ministry of Natural Resources in Hannover discussing the possibilities for Russia to join the African-Eurasian migratory Waterbird Agreement (AEWA).

Influence on politics:

– After the meeting in Kalmykia, the Kalmykian government implemented special rules to improve the protection of migratory geese, viz. total ban on spring hunting and creating special temporary hunting-free zones during autumn migration.

Success stories

- To facilitate data entry by volunteer observers a special website has been created: www.geese.org. Now more than 1,600,000 observations of individually marked geese have been stored in a spatial Oracle-database, collected by over 5,000 observers. Through the database the observers get immediate feed-back on the whereabouts of the marked birds they report.
- Revival of Goose Bulletin. An editorial team led by Johan Mooij has revived the Goose Bulletin appearing twice per year.
- Our membership has increased to 600 members.

Challenges

- Finding financial resources for future GSG meetings.
- Restoration of Lesser White-fronted Goose in Europe.
- Better information on status of Red-breasted Geese (*Branta ruficollis*) by concerted research effort in Russia, Kazakhstan, Ukraine, Romania and Bulgaria.
- Stop the alarming decline in Taiga Bean Geese (*Anser fabalis fabalis*) in Russia and Scandinavia.
- Improving cooperation between hunters and conservationists to protect goose populations.
- Promote population dynamic studies for better management of geese at the population level.

Future Goals

- Brent Goose meeting in France, January 2013.
- Goose meeting in China, autumn 2014.

Facts
Chair: Barwolt S. Ebbinge
Number of members: 600
Website: http://www.geese.org/gsg/

Grasshopper Specialist Group

Activity Report 2009–2012

The Grasshopper Specialist Group was established in 2010 and already has 55 members from 27 countries. We coordinate and promote several conservation projects throughout the world dealing with the conservation of Orthoptera (ca. 26,000 known species of grasshoppers, crickets, and bush-crickets), mantids (ca. 2,400 valid species) and stick insects (ca. 3,000 valid species).

One of our main projects is the European Red-Listing of Orthoptera (ERO), which is coordinated by Baudewijn Odé, Roy Kleukers and Luc Willemse and aims at complete Red List assessments for all European Orthoptera (more than 1,000 species). The first recent assessment (*Chorthippus lacustris*) has just been published in the 2012.1 update of The IUCN Red List. The next batch (59 assessments) will be published with the next Red List update (2012.2).

Another Red Listing project is the South African Red Listing Initiative (SARL), which is coordinated by Corinna Bazelet. The first three assessments will be published in 2012.2. We also manage and review assessments from other regions, such as the Seychelles (39 Orthotpera, 25 Blattodea, six phasmids, five Dermaptera, four Isoptera and one Mantid assessed by Justing Gerlach) and the first assessments of three Orthoptera from Turkey.

The Crau Steppe Grasshopper (*Prionotropis hystrix rhodanica*) project, coordinated by Laurent Tatin and Antoine Foucart, is for the protection of this endemic grasshopper in the Crau Steppe, France, endangered by construction plans of the French army. A mapping project of the complete distribution of this grasshopper was started this year with alarming results (only four subpopulations have been found).

The Beydaglari bush-cricket (*Psorodonotus ebneri*) project is coordinated by Battal Çiplak. This species occurs only on a moist grassland site in the Beydaglari mountains near Antalya (Turkey). The last population is currently being studied by the Turkish research team.

Finally, we are also participating in several outreach projects, such as 'Amazing Species' and the IUCN World Conservation Congress in Jeju, where we will organize a Knowledge Café on "bioacoustics for species monitoring".

Success stories

- Roberto Battiston was able to rediscover a rare mantid species, *Aperomantis aptera*, at its type locality in Morocco.
- We started to raise our profile by launching a website (gsg.myspecies.info/) and a newsletter *Newshopper*.
- *Psorodonotus ebneri* was chosen for the breaking Point Initiative (100 species with imminent risk of extinction).

Challenges

- IUCN Red List assessments for Orthoptera are a challenging task due to data deficiency in many regions, particularly in species-rich areas (Tropics and Mediterranean).
- The main threat to Orthoptera is land use changes (particularly agriculture). Stopping the loss of natural or traditionally managed landscapes will be a challenge, particularly in the biodiversity hotspots.

Future Goals

- IUCN Red List assessments for European Orthoptera are planned to be finished by 2016.
- IUCN Red List assessments for South African bush-crickets are planned to be finished by 2015.
- We plan to compile conservation action plans for highly threatened Orthoptera, such as *Psorodonotus ebneri* and *Prionotropis hystrix rhodanica*.
- Some large and impressive Orthoptera species are good candidates for *ex situ* conservation. We plan to increase the number of Orthoptera species in zoos.

Facts

Chair: Axel Hochkirch
Red List Authority Focal Point: Baudewijn Odé
Number of members: 55

Crau Plain Grasshopper (*Prionotropis hystrix rhodanica*).

Grouper and Wrasse Specialist Group

2011 Update

– Production of comprehensive field and market guide to groupers of the world (162 species) co-published by NISC and IUCN.
– Follow-up field survey for Napoleon Wrasse (*Cheilinus undulatus*) abundance in Indonesia (CITES related work – Non-Detriment Finding [NDF]).
– Publication in 'Fish and Fisheries' journal on IUCN Red List assessments and conservation status of groupers globally. This stressed the need for management and sustainable use practices, to ensure persistence of populations and that fisheries and livelihoods depend on them.

Success stories

- Completion of IUCN Red List assessments for all wrasses* and groupers (c. 700 species). *With IUCN SSC Marine Biodiversity Unit.
- Engagement for sustainable international trade in Napoleon Wrasse in relation to its 2004 CITES Appendix II listing.
- Grouper and Wrasse Specialist Group newsletter and website.
- Management related initiatives with threatened groupers, e.g. Nassau Grouper (*Epinephelus striatus*) and Goliath Grouper (*Epinephelus itajara*).
- Management and monitoring of grouper spawning aggregations.

Challenges

- Lack of or ineffective fishery management
- General misperception that marine fishes (especially commercial species such as the groupers) cannot go extinct or be seriously threatened.
- Illegal, unmonitored and unregulated trade (IUU).
- Non-implementation of CITES Appendix II by China (Mainland) for commercial marine fishes.

Future Goals

- Continue working with Napoleon Wrasse in relation to its CITES Appendix II listing with major importing and exporting countries to reduce IUU and follow up on NDF work in Southeast Asia.
- Increase and strengthen protection of spawning aggregations of commercially exploited groupers.
- Improve public awareness regarding threats to commercially important species from over-exploitation and implications for food security and livelihoods from lack of management.

Facts
Co-chairs: Yvonne Sadovy and Matthew Craig
Number of members: 40
Website: Groupers and Wrasse Specialist Group

Leopard Coral Grouper (*Plectropomus leopardus*). IUCN Photo Library
© Giles Winstanley

Hawaii Plant Specialist Group

Activity Report 2009–2012

The Hawaii Plant Specialist Group (HPSG) focused on the Plant Extinction Prevention (PEP) Program, rare plant database development, seed storage protocols and distribution, and IUCN Red List assessments.

The PEP program continues to grow and now has 13 staff and offices on five islands. This program focuses on plants with fewer than 50 individuals in the wild, to store genetic material, protect remaining plants, survey for additional individuals, and re-introduce into protected areas. In 2009, HPSG revized the PEP criteria and evaluated nearly 400 plant species of which 173 are PEP species (less than 50 individuals in the wild) and 80% of those species are listed as endangered. In 2009, PEP received a State and private forestry grant from US Forest Service for two years with funds to help start a PEP program in Guam. In 2011, PEP received their second US Forest Service Forest Stewardship Grant in partnership with the newly formed Guam PEP program.

Through the State of Hawaii, HPSG is using PEP as a prototype to develop a shared State-wide database of rare plant information with the conservation community. A rare plant facility coordinator has been hired to help design this database and to develop a universal numbering system for PEPP species, island codes, and standardizing collection codes.

An HPSG meeting held in 2010 focused on sharing rare plant restoration success stories in Hawaii. Discussions on issues pertaining to seed storage distribution from seed storage facilities continued. Protocols are being developed that will include information about ownership of the seeds, purpose of seed collections, and a list of possible partners for seed distribution.

Other efforts are still ongoing: (1) assessing and reassessing the plants of Hawaii with The IUCN Red List; (2) adding PEP species to The IUCN Red List; and (3) determining a process to certify commercial nurseries to grow material for restoration to ensure proper genetic and sanitation protocols.

Success stories

- Plant Extinction Prevention (PEP) program has trained botanists on Guam to initiate a Guam PEP program.
- In 2011, PEP monitored 103 of 201 PEP species, collected from 49 species, surveyed 34 species, managed threats around 48 species, and re-introduced 24 species.
- In total, 85% of the PEP species have some material in genetic storage.

Challenges

- Adequate secure funding to maintain the PEP Program.
- Additional funding for the non-PEP but still at risk species.
- Integrating rare plant protection needs with landscape-level conservation actions.

Future Goals

- Share the PEP concept with other island groups for protecting their rarest species.
- Determine how to expand protection to additional at risk species.

Facts

Chair: Marie M. Bruegmann
Red List Authority Focal Point: Marie M. Bruegmann
Number of members: 92

Heron Specialist Group

Activity Report 2009–2012

The Heron Specialist Group has advanced opportunities for communication within the Group significantly and for providing information on heron conservation and biology to the world more widely. As a result, HeronConservation is now better positioned to serve as the overall umbrella for heron biology and conservation and for professional communication on herons. The Group's new website (www.HeronConservation.org) was launched in 2011, as was the journal of Heron Biology and Conservation. The Group promoted global standards for census and monitoring and created the Global Heron Count Database for census information. The Group's 2007 document *"Conserving Herons: A Conservation Action Plan for the Herons of the World"* was made available on the website and continues to guide priority activities.

The HeronConservation website includes sections on species biology and ranges, heron conservation news and updated heron bibliography, formal conservation plans, and conservation tools. Many of the features provide opportunities for direct interactive reader update of information. HeronConservation has launched additional communication opportunities including Facebook and flickr.

HeronConservation has encouraged conservation programmes on priority species including the White-Bellied Heron, White-eared Night Heron, Madagascar Pond Heron Reddish Egret, Agami Heron, Zigzag Heron, the tiger herons and large bitterns. It has also encouraged the conservation of herons in important regions such as Bhutan, China, Madagascar, East Africa, and Florida (USA), and West Indies. It has increased its monitoring of breeding range changes, which appear to be taking place with accelerating frequency, and of under-reported plumage variability. HeronConservation took an active role in reassessing population estimates in cooperation with Wetlands International and in IUCN Red List deliberations in cooperation with BirdLife International, leading to increased accuracy in both results. The Group is placing emphasis on encouraging conservation genetics and population studies on herons, which may reveal the existence of important geographic distinctiveness.

Success stories

- Conservation of White-bellied Heron advanced by successful rearing of captive young by the Bhutan Royal Society for the Protection of Nature.
- Madagascar Pond Heron Working Group formed.
- Increased understanding of status of White-eared Night Heron in China by Professor He Fen-qi.
- Increased understanding of conservation genetics of Reddish Egret by Professor Clay Green.

Challenges

- Increasing capacity for heron conservation worldwide through incorporation of priority species and habitats in broader scale conservation programmes.
- Continuing to increase communication opportunities among heron specialists.
- Habitat conservation in face of losses, especially due to large development activities such as hydropower on rivers, especially in Bhutan, and alteration of coastal zones, especially in Asia.

Future Goals

- Further developing communication within the Group.
- Encouraging heron conservation within larger conservation planning and action.
- Supporting conservation efforts for priority heron species.
- Continuing to identify and support conservation of important areas for herons.
- Increasing understanding of biology and conservation status of poorly known and priority species.
- Increasing accuracy of population estimates.

Great Blue Heron (*Ardea herodias*) nest. © Kirsten Hines

Facts

Chair: Jim Kushlan
Global Vice-chair: Rob Clay
Number of members: 110
Website: Heron Specialist Group

Hippo Specialist Group

Activity Report 2009–2012

The Pygmy Hippo subgroup convened a Pygmy Hippo Conservation Strategy Workshop, Monrovia, Liberia, 22–24 November 2010. Based on that workshop, a Pygmy Hippo Conservation Plan has been developed (e-copies available for distribution). This multi-national plan outlines ongoing and future research and conservation needs for this endangered species.

The Hippo Specialist Group is also a partner on a recently-funded NSF proposal that focuses on characterizing and quantifying the ecological role and importance of common hippos to grasslands and river systems.

The University of Georgia Pygmy Hippo Project is making excellent progress in working with local communities to document and track pygmy hippos in Sierra Leone's Tiwai Island region, and educate residents on the importance of pygmy hippos to an intact forest ecosystem. This is an exciting project that serves as an excellent model for how to develop pgymy hippo efforts in other West African countries where this species resides.

Success stories

- Development of a multinational conservation plan for pygmy hippos.
- Dramatic increase in research and field surveys for pygmy hippos.
- Growing level of coordination and cooperation among field projects.
- Continued integration of research and conservation efforts.

Challenges

- Fund acquisition for hippo research and conservation continues to be challenging.
- The need for regional conservation efforts continues to be a priority.
- Coordination with TRAFFIC and other bodies to ensure sustainable use of extant hippo populations.

Future Goals

- Continue to build group membership.
- Implementation of the Pygmy Hippo conservation plan.
- Development of an updated common hippo conservation plan.
- Strong partnerships are needed between IUCN and land management agencies to provide guidance and technical expertise to promote hippo conservation.

The University of Georgia Pygmy Hippo Project captures pygmy hippos on remote cameras.

Facts

Chair: Rebecca Lewison
Red List Authority Focal Point: Rebecca Lewison
Number of members: 40
Website: http://moray.ml.duke.edu/projects/hippos/

Horseshoe Crab Specialist Group

Activity Report 2009–2012

- The Specialist Group (SG) was established in May 2012 as a direct outcome of the International Workshop on the Science and Conservation of Asian Horseshoe Crabs which was held in Hong Kong in June 2011.
- Based on the distinct geographic ranges of the four extant horseshoe crab species, the SG was established with US and Southeast Asian Co-chairs.
- A Steering Committee comprising eight individuals has been formed.
- A Conservation Action Plan has been formulated.
- Working groups on 'Red List Assessments', 'Trade, Industry and Use' and 'Education' have been established.
- A centralized bibliography for horseshoe crab research and conservation has been developed (http://horseshoecrab.org/).
- Abstracts and presentations from the Hong Kong International Workshop have been made available online to scientists and conservationists (http://www.cityu.edu.hk/bch/iwscahc2011/).

Success stories

Because the Specialist Group is newly established, progress will be reported in future updates.

Challenges

- Horseshoe crabs face multiple threats which vary across ranges, including loss of habitat through coastline development, overharvesting for use as food, bait and biomedical purposes, and lack of species and habitat protections.
- Quantitatively precise data on abundance and distribution are largely unavailable for assessment of the three Southeast Asian species, and recent monitoring efforts are locally focused and not standardized.
- Input is currently lacking from portions of the geographic ranges of the Southeast Asian horseshoe crabs, including Bangladesh, Brunei, Cambodia, Indonesia, Myanmar, Philippines, Thailand and Vietnam.

Future Goals

- Raise public awareness of the economic and ecological importance of horseshoe crabs, and promote them as a flagship species for intertidal wetland conservation.
- Initiate programmes to ensure habitat protection, restoration and stock enhancement.
- Assess population status, levels of exploitation and conservation needs of horseshoe crabs, prioritizing completion of IUCN Red List Assessments on the three Southeast Asian species, currently listed as "data deficient."
- Work with the biomedical industry to promote the conservation of horseshoe crab populations through practices that reduce harvesting mortality.

Facts

Co-chairs: Mark Botton (US) and Paul Shin (Southeast Asia):
Red List Authority Focal Point: Mark Botton (US), Paul Shin (Southeast Asia):
Number of members: The Specialist Group is newly formed. A membership recruitment exercise is underway.

Mating pair of *Carcinoscorpius rotundicauda*, Lantau, Hong Kong. July 2012. © Kevin Laurie

Hyaena Specialist Group

Activity Report 2009–2012

– Improving public image of hyaenid species by working with media.
– Building predator-proof demonstration corrals made of inexpensive local materials in rural African communities.
– Gathering data on hyaenids in western Africa.
– Working with Kenya Wildlife Service and other management agencies to train a new generation of managers focusing on conservation of hyaenids and other large African carnivores.
– Collecting data on densities and distributions of striped hyaenas throughout Africa and central Asia.

Success stories

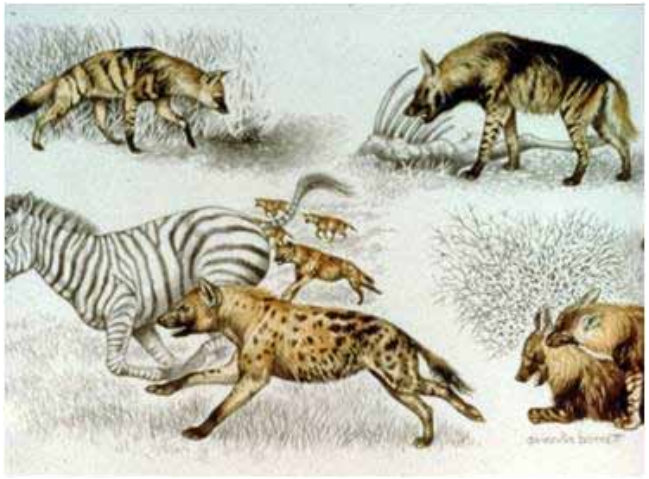
- Cole Burton (HSG member) and colleagues begin documenting hyaena abundances in western Africa.
- Collaboration with Kenya Wildlife Service Training Institute to educate future wildlife managers about hyaenids.
- Media coverage, educating public about hyaenas and their conservation.

Challenges

- Negative public attitudes toward members of the hyaena family.
- Reduction of livestock killing by brown, striped, and spotted hyaenas.
- Habitat reduction due to land-use change and war.

Future Goals

- Reducing human-hyaena conflict in Ethiopia and elsewhere in Africa and Asia.
- Working with local communities in rural Africa to improve husbandry to minimize livestock killing.
- Developing the spotted hyena as an "ecosystem sentinel" in African ecosystems; can behavioural or endocrine stress indicators that predict health of spotted hyena populations also be used to predict health of populations of sympatric carnivores and herbivores?



Facts
Chair: Kay E. Holekamp
Red List Authority Focal Point: Stephanie Dloniak
Number of members: 28
Website: http://www.hyaenidae.org/the-hyaenidae.html

Iguana Specialist Group

2011 Update

– The Iguana Specialist Group (ISG) held their annual meeting in Guatemala and held a SRP workshop for Motagua Spiny-tailed Iguana (*Ctenosaura palearis*).
– The ISG website was redesigned and updated.
– An iguana husbandry manual has been produced in Spanish.
– The IUCN Red List Assessments updated for 10 taxa.
– First version of Iguanas of the World Checklist published.
– Drafts of Conservation Action Plans for Lesser Antillean Green Iguana and Jamaican Iguana were circulated.

Success stories

- Action Plan published for West Indian Iguana species.
- SRP workshops held and published for 17 species.
- Successful population supplementation or re-introduction programs for eight species using captive breeding, headstarting, and/or translocation.
- CITES protection received for four Ctenosaura species.

Challenges

- Protecting critical habitat and combating threats such as invasive species, habitat destruction, and illegal collection.
- Balancing land-use needs of humans and iguanas.
- Funding our conservation programmes and building capacity of range country authorities.
- Meeting increasing needs with a volunteer-based group.

Future Goals

- Hold 2012 ISG meeting in Mexico with SRP workshop for local taxa.
- Recruit new ISG members for poorly represented taxa.
- Implement large-scale invasive species eradication programs.
- Complete revisions of IUCN Red List Assessments for all taxa.
- Further development of ISG website with additional resources.
- Obtain funding for a paid ISG position to increase our capacity.

Facts
Co-Chairs: Dr Glenn Gerber and Dr Miguel García
Red List Authority Focal Point: Tandora Grant
Number of members: 85
Website: www.iucn-isg.org

Indian Subcontinent Plant Specialist Group

Activity Report 2009–2012

The Chair's office continued with its work on IUCN Red List assessments of the endemic plants of the region. About 2,000 plants in the Indian peninsular region have been assessed for The IUCN Red List. Rapid assessment of plants in the extra-peninsular region, including the Himalaya, is underway. Quantitative data through field evaluation is being collected for all the endemics on a priority basis.

The achievements of the Western Ghats sub-group, under Dr S.R. Yadav, Nodal Officer, Indian Subcontinent Plant Specialist Group (ISPSG), are:

- A total of 17 threatened plants, including *Abutilon ranadei, Hubbardia heptaneuron, Erinocarpus nimmoni* were targeted for recovery programmes with funding support from the Department of Biotechnology (DBT), New Delhi.
- As part of a translocation programme, the Critically Endangered endemic plant, *Camptorrhiza indica,* was established in different locations. The newly established populations have increased the area of occupancy of the species from a mere 5 km^2 to about 50 km^2.

The Eastern Ghats sub-group, including Dr Ravi Prasad Rao, Prof. D. Narasimhan and others, is involved in quantitative assessment and mapping of threatened species of the region. The achievements include:

- Stratification of 2,652 grids of 40 km^2 in the Eastern Ghats with data on distribution and population status collected.
- 2,331 taxa (2,273 species) recorded from the sampled units with current population status; this includes 28 threatened taxa figuring in the Red Data Book of Indian Plants.

With regard to *ex situ* conservation efforts, Dr A.K. Goel initiated a study on the conservation biology of *Isonandra villosa*; the species is feared to have gone extinct in the wild and the individuals at National Botanical Research Institute, Lucknow, are the only surviving ones known at present. *Ex situ* conservation of *Indopiptadenia oudhensis,* belonging to a monotypic endemic genus occurring in the Indo-Nepal border in Suhelwa Wildlife Sanctuary, has also been attempted. Dr M. Sabu re-established the populations of *Plagiostachys nicobarica* in its natural habitat; the natural populations of this endangered species were almost wiped out in December 2004 when the Andaman and Nicobar islands were struck by a tsunami.

Facts

Chair: Dr M. Ahmedulllah
Red List Authority Focal Point: Dr M. Ahmedulllah
Number of members: 29

Success stories

- Red Listing of endemic plants; first batch of assessments comprising 2,000 species completed.
- Action plan for top 50 endangered plants finalized.
- Recovery programmes for 17 endangered plants, including two that are listed under the CITES appendices, completed.
- Advocated expansion of the scope of Wildlife Protection Act (1972) to include 13 threatened plant species.

Challenges

- Quantitative assessment of about 5,600 endemic plants of the Indian subcontinent; collection of field data across a vast geographic spread, with diverse ecosystems and, or inaccessible forest areas, remains an exciting challenge.
- Involving local and, or marginalized communities – whose livelihoods depend on forests – in plant conservation programmes.

Future Goals

Increase stakeholder involvement in the conservation of plants through:

- The Red Listing of about 5,600 endemic plants, recovery programmes of prioritized endangered plants, and ensuring inclusion of more candidate plant species in national and state legislations and negative lists for according protection.
- Raising awareness of the urgent need for including 'plant conservation areas' for demarcating and notifying protected areas to policy makers and biodiversity managers.

Abutilon ranadei. © Woodrow & Stapf

Korean Plant Specialist Group

Activity Report 2009–2012

The first IUCN Red List Assessment Workshop in Korea was held under the guidance of The IUCN Red List Unit based in Cambridge, with the participation of 26 staff from relevant conservation, government and non-government organizations. This workshop was a timely and important event for plant conservation in Korea.

The Korea National Arboretum in collaboration with the Korean Plant Specialist Group (KPSG) assessed Korean endemic plants.

The KPSG collaborated with the Korean Association of Botanical Gardens and Arboreta, to develop the national guidelines for the Global Strategy for Plant Conservation (GSPC) at the end of 2011. These guidelines will be applied to both check the progress of the GSPC and to improve the management of botanic gardens and arboreta in Korea.

Success stories

- A number of KPSG members participated in The IUCN Red List Assessment Workshop hosted by the Korea National Arboretum.
- The KPSG held an IUCN Red List Assessment Training Workshop in collaboration with the Korea National Arboretum supported by The IUCN Red List Unit, Cambridge.
- The KPSG membership collaboration with the Korean National Committee (KNC) for the national Red List of Korea. The KNC started the work from the end of 2011.

Challenges

- We need to integrate and promote collaboration among fragmented conservation sectors to form a target-oriented conservation body working for the conservation of plants in Korea.

Future Goals

- Scientific meetings to promote an understanding of Red Listing and its process among young field biologists.
- Plant re-introduction workshop in collaboration with the Korea National Arboretum will be held in the 2013.
- Manuals on germplasm collection and re-introduction of threatened plant species will be prepared in Korean edition.

Participants at the Red List Assessor training workshop, 2011. © Korea National Arboretum

Korean Fir (*Abies Koreana*). © Wilson

Facts

Chair: Dr Yong-Shik KIM
Red List Authority Focal Point: Dr Chin-Sung CHANG
Number of members: 33

Lagomorph Specialist Group

Activity Report 2009–2012

The world's lagomorphs (~90 species of rabbits, hares and pikas) are spread around the world, and thus the Lagomorph Specialist Group (LSG) members are similarly widely dispersed. Over the past four years there has been strong activity in all regions, designed to improve the status of lagomorphs through direct conservation action, research, education and community involvement.

The Pika Fan Club in Japan portrays the Northern Pika (*Ochotona hyperborean*) as a flagship species to stop development projects that would seriously compromise the natural environment on Hokkaido; they held a concert and meeting in March 2012 attended by 1,200 people.

The Riverine Rabbit (*Bunolagus monticularis*) project in South Africa continues to coordinate a wide variety of support from NGOs, academic institutions, and local land owners, to conserve this critically endangered species. Currently they are engaged in re-vegetation and environmental education projects, as well as forward-thinking monitoring involving camera traps and detector dogs.

Talus-dwelling pikas in North America and China may serve as indicator species for the effects of global warming, and many LSG members are working on these species. Surveys continue to determine the status of what may be the most seriously impacted species, the Ili pika (*Ochotona iliensis*).

The previously unstudied insular San Jose Brush Rabbit (*Sylvilagus mansuetus*) in the Gulf of California was censused for the first time, and its IUCN Red List status was changed from Near Threatened to Critically Endangered.

The Irish Hare (*Lepus timidus hibernicu*) may be seriously impacted by the invasive European hare (*Lepus europaeus*), and LSG members have drafted an action plan and eradication strategy to preserve this subspecies in its native range.

Success stories

- 2011 was the Year of the Rabbit in the Chinese calendar, and we circulated a press release highlighting the plight of endangered lagomorphs that was picked up by 1,400 media outlets.
- Continued strong effort to recover the Riverine Rabbit in the Karoo of South Africa; with enhanced community involvement, environmental education and habitat restoration.

Challenges

- As always, funding and communications for our wide-spread group.
- Overcoming the perception that all rabbits are common and not in need of conservation intervention, when a high percentage are among the most endangered of all mammals.

Future Goals

- Updated action plan in book format "*Lagomorphs: The Pikas, Rabbits and Hares of the World*".
- Stop needless control efforts directed at common native lagomorphs.
- Reverse negative population trends in threatened species of lagomorphs.
- Increase understanding of the role played by disease in population dynamics.
- Increased understanding of how climate change may affect populations and their distribution.

Facts

Chair: Andrew T. Smith
Red List Authority Focal Point: Andrew T. Smith
Number of members: 60
Website: Lagomorph Specialist Group

Glover's pika (*Ochotona gloveri*). © Andrew Smith

Lichen Specialist Group

2011 Update

Awareness raising – Brochure – "What do you know about steppe lichens? Minute world under your feet" (in Ukrainian, 20 pages with photographs; supported by Rufford SGF).

Book – "The change in biodiversity in Switzerland since 1900 – has the lowest point been reached?" Available in German and French, this is a co-authored book published under the umbrella of the Swiss Academy of Sciences. Lichens are included in the chapters about forests, agriculture and urban areas.

Fund-raising – Biodiversity and Livelihood development in land-use gradients in an Era of Climate Change in the Himalayas, Nepal (Swiss National Science Foundation; includes WP on lichen conservation biology).
Swiss project on conservation biology and management of *Bactrospora dryina*.

Raising awareness about lichens.

Success stories
- Arid lichens from the Red Data Book of Ukraine: studying, conservation and perspectives.

Challenges
- More lichen species to be IUCN Red Listed.
- Promote research in lichen conservation biology.
- Capacity building in lichen conservation.
- Ways of 'enlichenment' (Trevor Goward).
- Searching for sponsors for lichen conservation projects!

Future Goals
- Population dynamics of patch-tracking symbiotic organisms in primeval and managed landscapes.
- Conservation biology of lichens.
- Restoration of microbial soil crusts in steppe zones and semi-desert ecotopes.
- Include algal symbionts!

Facts
Chair: Christoph Scheidegger
Number of members: 17

Lobaria pulmonaria.

Macaronesian Island Plant Specialist Group

Activity Report 2009–2012

During the period, several members of the Macaronesian Island Specialist Group have contributed to the preparation and updating of the Red Book of Spanish Flora. This project, funded by the Spanish Ministry of Agriculture, Education and Environment, identifies the most threatened plants in Spain. The Spanish Government recently included plants that are listed in the EC Habitat Directive, in the "*Royal Decree for the development of the Wild Species List in Special Protection and the National Catalogue of Endangered Plants*". Members of the Specialist Group were involved in the fieldwork for the Canary Islands to collect data for each population of the Habitat Directive species on its area of occurrence, habitat characteristics, number of mature individuals, as well as main threats for every location. From the total 65 species of the Canary Islands included in Annex II and IV of the Habitat Directive, the current inventories reveal 63 as classified as threatened on The IUCN Red List (30 CE, 18 En, 15 Vu, one LC and one DD).

Group members have also been involved in monitoring population dynamics, and in 2009 results were published in a book entitled, "*Populations in peril. Demographic viability of threatened Spanish vascular flora*". Although this book covers only a small sample of threatened Spanish flora, it represents a significant milestone and illustrates how available techniques can be applied to resolve critical deficiencies in terms of the diagnosis of plant conservation status. Monitoring reveals data on changes in population size, as a product of the balance between deaths and recruitment, as well as the probability of extinction in the future. In agreement with IUCN Red List criteria A and E, the data obtained enables the most prescriptive parameters to be applied, resulting in accurate cataloguing and conservation approaches.

Finally, the Group has been actively involved in the analysis of trends in threats to the extinction risks of the Spanish flora by comparing the two Spanish Red Lists published in 2000 and 2008. 515 species (34%) of the Canary Islands flora is currently included in the 2008 National Red List, and a total of 199 of them (38%) have changed IUCN threat category during that period, resulting from the increase of knowledge of plants, coupled with the changes resulting from the improvement of the IUCN criteria (from the 1994 to the 2001 versions). The most important results obtained from this study (Red List Index) reveal that our knowledge of the threatened flora of Spain is now greatly improved, but the degree and effectiveness of plant conservation has not followed the same pattern. For the Canary Islands, the main threats have been related with landslides, predation by herbivores, grazing, plant competition and storms.

Success stories

- Several members involved in the preparation and updating of the Red Book of Spanish Flora.
- Preparation of the top Macaronesian Island Plants.
- Contribution to the European Red List of Vascular Plants.

Future Goals

- Increase knowledge on the conservation biology of endangered plants.
- Promote cooperation between the various states in the region (Portugal, Spain and Cabo Verde).

Bencomia exstipulata.

Facts

Chair: Ángel Bañares Baudet
Red List Authority Focal Point: Manuel V. Marrero Gómez
Number of members: 9

Madagascar Plant Specialist Group

Activity Report 2009–2012

The Madagascar Plant Specialist Group (MPSG) has been very active during the 2009–2012 period. Its activity as Red List Authority has continued and approximately 2,500 Madagascar plant species were assessed thanks to funding from the Marisla Foundation and collaboration with Missouri Botanic Garden. These assessments have been submitted to The IUCN Red List Unit, but so far The IUCN Red List published in November 2012 contains only 477 species. Also, during the "Wild Plants for Food and Medicine" project, which was conducted together with Botanic Gardens Conservation International, an almost exhaustive database of food and medicinal plants was set up with an indication of their distribution, use and conservation status. Following those two projects, MPSG edited three books:

– In 2010, the catalogue of threatened plants of Madagascar dealing with 251 species with images and distributions of each plant.
– In 2011, the Red List of 2,000 species composed of Critically Endangered, Endangered and Vulnerable endemic vascular plants of Madagascar in 2011.
– Also in 2011, an illustrated guide to 30 medicinal and food plants of Madagascar.

Catalogue of Threatened Plants of Madagascar

Guide to the Medicinal Plants of Madagascar

Red List of Endemic Plants of Madagascar

Success stories

- MPSG organized and hosted the 19th AETFAT (Association for the study of tropical Africa flora taxonomy) congress in Antananarivo in April 2010. All participants (about 450 coming from all parts of the world) agreed that it was one of the best organized congresses of AETFAT.
- MPSG has strongly collaborated with the Madagascar CITES Secretariat, and in 2011, 20 species of precious wood (11 *Dalbergia* and nine *Diospyros*) were integrated in CITES Appendix III, thus contributing to the management and conservation of highly threatened species.
- MPSG has also discovered a new site location for a very rare and threatened orchid, *Sobennikoffia poissoniana.*

Challenges

- The challenges that the MPSG have to address are, among others:
- to introduce in CITES Appendix II all precious wood species that are in some cases still illegally exploited;
- to include Madagascar threatened succulent species on CITES Appendix II.

Future Goals

- To assess the conservation status of all endemic species.
- To hold a CAMP program on threatened and useful plants.
- To develop a National Strategy for Plant Conservation.

Shizolaeana charlottae

Xylooaena perrieri

Facts

Chair: Charlotte Rajeriarison
Red List Authority Focal Point: Bakolimalala Rakouth
Number of members: 45

Marine Turtle Specialist Group

Activity Report 2009–2012

The Marine Turtle Specialist Group (MTSG) is an active network of more than 230 members in 80 countries and territories. The MTSG's primary focus in 2009–2012 has been to harness the power of its global network to effectively document and assess the biogeography and status of each marine turtle species, and thereby guide strategic investment of resources in marine turtle research and conservation.

These efforts included the compilation of global biogeographic data on all seven marine turtle species by the MTSG-supported State of the World's Sea Turtles (SWOT) program. Notably, in 2009–2012 the SWOT Program:

- Published and disseminated three new volumes of *SWOT Report* (vols. IV–VII), plus translated editions in Spanish and French of previous reports;
- Continued development, management, and dissemination of its online, global database housed within Duke University's OBIS-SEAMAP;
- Developed the first-ever "minimum data standards" for sea turtle nesting beach monitoring;
- Provided global sea turtle data to numerous researchers for analyzes;
- Provided small grants to more than 15 research and conservation projects around the world; and much more.

The MTSG also devoted significant effort toward improved assessment of marine turtle status at geographic scales relevant to conservation planning. As part of the MTSG's decade-long "Burning Issues" initiative, the group published two landmark scientific papers in the journal *PLoS ONE*. The first (Wallace *et al.* 2010) defined 58 marine turtle subpopulations ("Regional Management Units"), and the second (Wallace *et al.* 2011) ranked each subpopulation's "risk" and "threat" to create a conservation priorities portfolio. Together, these publications will form the basis of future IUCN Red List Assessments and will guide future investments in marine turtle research and conservation.

Success stories

- Finalized global maps of sea turtle distribution through support to State of the World's Sea Turtles (SWOT) program.
- Described and published sub-populations for all marine turtle species, recognizing 58 distinct regional management units among the seven species.
- Published paper on "Global Priorities for Marine Turtle Conservation," providing new guidance to marine turtle research and conservation efforts.
- Conducted successful media campaign around "Global Priorities" paper, reaching millions of people.
- Published Red List Assessment of the Hawaiian subpopulation of green turtles (*Chelonia mydas*), with a status of Least Concern that highlights the success of decades of research and conservation.

Challenges

- Continuing lack of capacity and representation in western Africa and parts of Southeast Asia.
- Addressing pervasive and complex issues such as plastic pollution and artisanal fisheries bycatch.

Future Goals

- To complete IUCN Red List assessments of all 58 marine turtle subpopulations and reassess all seven species at the global scale.
- To add in-water distribution data to the SWOT database and identify important areas for marine turtles.
- To develop minimum data standards for in-water studies.
- To build additional capacity in under-represented regions.

Facts

Co-chairs: Roderic Mast and Nicolas Pilcher
Red List Authority Focal Point: Milani Chaloupka
Number of members: 231
Website: http://iucn-mtsg.org/

Hatchling Green Turtle (*Chelonia mydas*) heading to sea on Shell Beach, Guyana. © Roderic Mast

Mascarene Plant Specialist Group

2011 Update

– Red Listing of the ebonies of the Mascarenes as part of the assessment for the Western Indian Ocean Islands.
– Field surveys rediscovered plants from seven native or endemic species thought to have gone extinct over a century or two ago. New individuals of Critically Endangered species discovered (e.g. *Pandanus pseudomontanus* from two to 68 plants, and *Elaeocarpus bojeri* from three to 10 plants).
– First successful propagation of two other species known from less than 10 plants.

Success stories

- **Mascarenes**: Successful completion of the first inter-island species management plans for shared species (Four *Plans Directeur de Conservation*).
- **Mauritius:** Ecosystem approach to conservation led to "reappearance" of two species previously thought to be extinct (*Biol Invasions* 13: 2641–2646).
- Supported seed banking of nearly 55% of threatened native Mauritian species.

Challenges

- Region still has some of most threatened flora on Earth.
- Much progress required to foster collaboration between stakeholders of plant conservation in the region.
- A general decline in Government support for conservation is apparent on one of the islands.

Future Goals

- Influence choice of new protected areas in Mauritius.
- Assist in implementation and achievement of targets of the Global Strategy for Plant Conservation.
- Increase collaboration on plant conservation issues between Reunion and Mauritius and intra-island.
- Call for increased international help for protection and *in situ* conservation of Mascarenes plants.

Facts
Chair: F. B. Vincent Florens
Red List Authority Focal Point: Claudia Baider
Number of members: 26

Medicinal Plant Specialist Group

Activity Report 2009–2012

The **FairWild Foundation** was created from a partnership launched at the 4th IUCN World Conservation Congress, endorsed by IUCN, WWF, and TRAFFIC, to manage the FairWild Standard and its implementation in support of sustainable wild collection of plants and other commercially important wild-collected taxa. The Medicinal Plant Specialist Group (MPSG) retains a strong interest, on behalf of IUCN, in supporting the FairWild Standard. Members are involved in its management and implementation through: participation on the board of trustees, development and implementation of a risk analysis tool, application of risk analysis and other elements of the FairWild Standard to international policy and management (e.g., CBD Aichi Targets, Global Strategy for Plant Conservation targets and tools, guidance on CITES non-detriment findings), and refinements of resource assessment guidance to address the different needs of low and high risk species.

Revised global **"Guidelines on the Conservation of Medicinal Plants"** remained an MPSG priority 2009–2012. Many MPSG members have been involved either in developing the initial 1993 "Guidelines" or in the revision process ongoing since 2003, or both. Progress towards a final text agreed amongst the four author organizations (WHO, IUCN, WWF, and TRAFFIC) was achieved at a meeting of global experts in Toyama, Japan, in November 2011.

The Global Checklist of Medicinal Plants (GCLMP), expanded from 15,000 to 28,000 taxa since 2009, has enabled MPSG to contribute to IUCN Red List assessments and other Species Survival Commission conservation priorities by identifying medicinal plant species included in previous, current, and planned IUCN Red List assessments, and strengthening our base of knowledge for reporting on the global and regional status of medicinal plant conservation as part of the Biodiversity Indicators Partnership (BIP) and in IUCN and IUCN Members' reporting on progress towards achieving global, regional, and national conservation targets.

Saving Our Future – the Medicinal Plant, Crop Wild Relatives, and Global Tree Specialist Groups have developed a global project focusing on these species important to human survival as a priority recognized by IUCN's Species Survival Commission and its Plant Conservation Sub-Committee. Funding and implementation of this project will continue as a priority into the next quadrennium.

Facts

Chair: Danna J. Leaman
Red List Authority Focal Point: Danna J. Leaman
Number of members: 90
Website: http://mpsg.org

Success stories

- Implementation of the FairWild Standard in third-party certification; voluntary codes of practice; and national regulation of sustainable wild collection of medicinal and other wild-collected plants.
- Risk analysis tool for wild-collection of plants developed and implemented by MPSG members as a part of the FairWild certification scheme.
- Global Checklist of Medicinal Plants expanded to include more than 28,000 taxa with documented sources on use.
- Completion of 100 IUCN Red List assessments of European medicinal plant species; an additional 200 assessments underway.
- On-line publication of our newsletter, *Medicinal Plant Conservation*. http://mpsg.org

Challenges

- Collaboration on conservation and sustainable use amongst wide-ranging interests in medicinal plants, especially health, industry, agricultural production, and traditional use.
- Ongoing management and support for a large expert membership and collaboration with numerous partner organizations.

Future Goals

- Implement "Saving our Future" projects in priority source regions for medicinal plants.
- Publish updated status of medicinal plant conservation as an indicator of biodiversity used for food and medicine.
- Publish revised "Guidelines on Conservation of Medicinal Plants" (WHO, IUCN, WWF and TRAFFIC).
- Expand risk analysis methodology to include fungi, lichen, and algae in collaboration with these IUCN SSC expert networks and the Sustainable Use and Livelihoods Specialist Group.

Wild collection of *Origanum syriacum* in Lebanon. © Danna J. Leaman

Mediterranean Island Plant Specialist Group

MIPSG
GSPIM

2011 Update

– Red Listing of 30 of the most threatened endemic plants.
– Co-authors of "Important Plant Areas of the south and east Mediterranean region – Priority sites for conservation" with Plantlife and WWF.
– Specialist Group meeting in Menorca (Workshop Project LIFE Reneix).
– Preparation of plant micro-reserves projects in Crete, Sicily and Cyprus.
– Identifying Plant Hotspots in the Natura 2000 network in Greece.
– Advocating for plant conservation issues at governmental and regional level in several Mediterranean countries.

Facts

Chair: Bertrand de Montmollin
Red List Authority Focal Point: Bertrand de Montmollin
Number of members: 36

Success stories

- *Calendula maritima* is listed as Critically Endangered on The IUCN Red List. This bright yellow flower is found in only five small sites in East Sicily, growing on the decaying remnants of nitrogen-rich sea grass that is washed ashore. Last year, this species was chosen as the official symbol of the province of Trapani and *in situ* and *ex situ* conservation measures have been implemented with the support of Institut Klorane.

Challenges

- Implementation of field conservation projects for Critically Endangered Mediterranean plants.
- Education and raising awareness of public and stakeholders at national and local levels.
- Better coordination with the many public and private organizations working for conservation in the Mediterranean.

Future Goals

Implementation of the five objectives and the 16 targets of the Global Strategy for Plant Conservation, with focus on:

- *Target 5*: at least 75% of the most important areas for plant diversity protected and managed.
- *Target 7*: at least 75% of threatened plant species conserved *in situ.*
- Extension of the Mediterranean Island Plant Specialist Group to a Mediterranean Plant Specialist Group covering the whole Mediterranean terrestrial ecosystem.

Mollusc Specialist Group

Activity Report 2009–2012

- Completion of Pan-African Project on Freshwater Molluscs, 23% of freshwater species threatened.
- Completion of European Project on Status of Non-Marine Molluscs, 43% of Freshwater species threatened, 20% land-snails threatened.
- Completion of Eastern Himalayas project, 1% threatened, 36% Data Deficient (DD).
- Indoburma project midpoint 32% threatened, 21% DD.
- Cephalopoda project midpoint more than 30% species done.
- Conference sessions on Threatened Species in Europe, Vitoria, Spain.
- First marine mollusc assessment workshops on Conus species and Reef-building Molluscs.
- Report for EU on updating the protected species lists and emphasizing the need to implement the Water Framework Directive.
- Issues of our Newsletter *Tentacle* (2011/2012) can be downloaded from our website.

Success stories

- Big vote of thanks for Howard Peters who brought together shell dealers with scientists for the Conus workshop – really effective combination!
- Adding nearly 2,000 species assessments in last four years, thanks to: MSG members and contributors; IUCN Freshwater Biodiversity Unit and Red List units for EU, African and Asian project: Nadia, Monika and Ben and the ZSL SRLI team of interns on the Freshwater SRLI and Cephalopoda Assessments.

Challenges

- Trying to document to the levels required by The IUCN Red List.
- Keeping up with Taxonomic changes for IUCN Red List.
- Motivating people to undertake assessments for little or no financial reward.
- Achieving conservation actions for an animal normally considered to be a pest.
- Effective communication strategies for getting data we produce used in EIA's.

Future Goals

- Finalizing assessments for Oceania, Indo-Burma, Cephalopoda, New Zealand, and Arabian Peninsula.
- New assessment projects in South America and Japan.
- Moving onto conservation actions in EU, Africa and Asia.
- Find funding to survey for Data Deficient species.
- Working out how to use the legislation in Europe to benefit Freshwater Molluscs.
- A programme of small conservation projects to aid CR range restricted species.

Facts

Chair: Mary Seddon
Number of members: 78
Website: http://www.hawaii.edu/cowielab/

Mushroom, Bracket Fungi, and Puffball Specialist Group

Activity Report 2009–2012

The Mushroom, Bracket Fungi, and Puffball Specialist Group was established in Fall 2009. The efforts of the Specialist Group have focused on increasing the voice of fungi in conservation discussions and action and on providing tools for mycologists to use to document the conservation status of fungi. To this end, members of the Specialist Group have participated in a number of symposia and workshops at national and international conferences. Major accomplishments since establishment include: the initiation of a Latin American Mycological Association Fungal Conservation Committee; the foundation of new International Society for Fungal Conservation through efforts of members of this and the other Fungal Specialist Groups; and the initiation of a North American Mycoflora within which members of this Specialist Group are playing key roles.

Several papers were published over the period including "Applying IUCN Red Listing criteria for assessing and reporting on the conservation status of fungal species" in *Fungal Ecology 4*: 147–162 (2011). Most recently, a global fungal IUCN Red List initiative has been proposed to add significantly to the number of fungal species evaluated and submitted for inclusion in The IUCN Red List and to raise awareness and action for fungal conservation.

Success stories

- Latin American Mycological Association established a Fungal Conservation Committee to facilitate work throughout the region.
- Increased discussions and programming focused on conservation at Latin American, North American, and European Mycological Congresses.
- International Society for Fungal Conservation established.

Challenges

- Building awareness and acceptance that fungi can be, and need to be, included in conservation conversations and action.
- Increasing knowledge on the biology of these fungi to better monitor and assess their conservation status and to develop management plans.

Future Goals

- Continue to raise awareness–aimed at mycologists and other biologists, land managers and policy makers.
- Facilitate discussions among mycologists to focus research on topics that inform conservation assessment and management.
- Add species to The IUCN Red List. Initial target species have been identified; now need to convene a working group to undertake the global assessments.

Facts
Chair: Gregory M. Mueller
Red List Authority Focal Point: Gregory M. Mueller
Number of members: 14

Greg Mueller in the field.

New World Marsupial Specialist Group

Activity Report 2009–2012

Update of the taxonomy and distribution of the New World Marsupials. Several papers published by members of the group, were useful for the update about the distribution, systematic and ecology of several species. At this stage, it is crucial for us to know the taxonomic identity as well as the areas and environment occupied by different cryptic species in several genera (e.g. Thylamys, Marmosa, Monodelphis). In this sense, all new taxonomic arrangements and new described species were included in the last update of The IUCN Red List.

Success stories

- We identified and geo-referenced more than 500 localities for marsupials in Argentina, which allowed for the determination of marsupial conservation priority areas, taking into account the area occupied; the threat to the habitat; taxonomic singularity; inclusion in protected areas and potential areas of occurrence. This analysis will be extended to the rest of the Neotropics.

Challenges

- Generation of an action plan focused on endemic and taxonomically singular species.
- Include in the conservation efforts of Latin American countries (several with endemic marsupial species or environments), the consideration of the marsupial fauna when planning protected areas.

Future Goals

- Our future goals include the formulation of an Action Plan for the New World Marsupials.
- Continuing with the taxonomic update of the New World Marsupials, we also aim for the ecological characterization of several species, which lack relevant data for conservation strategies (evaluated as Data Deficient in The IUCN Red List).

Facts
Chair: David Flores
Number of members: 19

Orchid Specialist Group

Activity Report 2009–2012

In 2009–2012, several meetings of the Orchid Specialist Group (OSG) were held in association with conferences which members were attending, notably in the UK, Ecuador, the Czech Republic, Australia and Singapore. The geographical spread of these meetings allowed different groups of members to attend at least one meeting.

OSG was involved in organizing the Fourth International Orchid Conservation Congress in the Czech Republic in 2011, and preparations are underway for the Fifth Congress to be held on La Réunion in December 2013.

The OSG webpages have been moved to the IUCN website and have been refreshed (http://www.iucn.org/orchid). Following the Fourth Congress, the OSG Newsletter was revived and four issues have been produced which are all available from the OSG webpages.

Red List assessment work has increased once more, with the publication of assessments (mostly European regional assessments) of over 150 orchids, of which 44 were global and therefore included on The IUCN Red List. This represents a 20% increase in the number of orchid species assessed at the global level.

The East Asian and South East Asian Regional Groups have joined forces as the Asian Regional Group and have organized several conferences and meetings during the current quadrennium. The Indian Subcontinent Group has also organized conferences. Group members have fed information into policy areas including CITES, CBD and Global Strategy for Plant Conservation.

Success stories

- One hundred and fifty-three European regional Red List assessments for orchids of which 44 were added to The IUCN Red List in late 2011 – a 20% increase in global assessments.

Challenges

- How can we increase the rate of global assessments incorporated into The IUCN Red List to reflect work already done at national and regional levels?
- How can work in some of the regional teams be reinvigorated?
- Deforestation, climate change and illegal collecting are thought to be the major threats to orchids.

Future Goals

- Increase the number of orchid assessments on The IUCN Red List.
- Increase coordination of dissemination of information about activities of group members – we will be amazed at how much is going on!
- Investigate means of facilitating research in support of conservation.
- Continue contributing to CBD targets and other agreed goals to support orchid conservation.

Facts

Chair: Mike Fay
Red List Authority Focal Point: Hassan Rankou
Number of members: 130
Website: http://iucn.org.orchid

Otter Specialist Group

Activity Report 2009–2012

We mourn the passing of Jim Conroy in April 2011, previous Chair of the Otter Specialist Group (OSG). His leadership and enthusiasm for otter conservation will be sorely missed by all of us.

Our recent accomplishments include:

– Updated IUCN Red List entries.
– Examination of illegal trade in otters – an ongoing task.
– Updating the current status and distribution of otter species, particularly in Africa, South Asia and South America – more work needed!
– Established funds to support student projects and OSG overhead costs.
– Completion of proceedings of previous two colloquia.
– Organized training workshops on otter re-introduction in Europe and Asian Otter Conservation in Cambodia and Vietnam – more planned in 2013.
– First Latin American Otter Workshop for Conservation and Research, June 2012.

Success stories

- We are proud of working as an SSC Specialist Group since 1974! We encourage an active open forum to exchange ideas, views, and information among our members and collaborators worldwide.
- XIth International Otter Colloquium in Pavia, Italy – attended by 116 members and students from 28 countries.
- Regular publication of our journal *IUCN/SCC Otter Specialist Group Bulletin.*

Challenges

- The conservation of the four Asian otter species is the top priority of the OSG since 2008. It created the *Asian Otter Task Force.* Its first objective is to find and train the next generation otter researchers and conservationists in Asia. The second is to increase the effective protection of Asian otters through local programs. Both objectives require funding which remains elusive.

Future Goals

- Focus our efforts on the conservation of the four Asian otter species and foster collaborative partnerships in the region.
- Determine the impacts of illegal trade in Southeast Asia, a joint project with TRAFFIC-Southeast Asia.
- Examine the threat of climate change on otters, especially in mountains and coastal areas.
- Seek funding to support otter research in poorly known areas and habitats in Asia and Latin America.
- Promote the expansion of OSG regional task forces to look at specific issues and develop targeted action plans.

Facts

Chair: Dr Nicole Duplaix
Deputy Chair: Dr Arno Gutleb
Red List Authority Focal Point: Dr Syed Hussain
Number of members: 238
Website: http://www.otterspecialistgroup.org/

Palm Specialist Group

Activity Report 2009–2012

The Palm Specialist Group was reconstituted for the 2009–2012 quadrennium with 40 members representing 18 countries. Members of the Specialist Group have convened in open discussions of palm conservation at two meetings of the European Network of Palm Scientist in 2009 and 2012.

Although a global conservation assessment of all ca. 2,500 palms is yet to be initiated and funded, important achievements have been made in this respect. For example, a complete assessment of the entire endemic palm flora of Madagascar has been completed. Currently, 192 endemic palms occur in Madagascar. More than 72% of Madagascar's endemic palms are threatened with extinction, in contrast to the global figure of 20% estimated by the Sampled Red List Index for Plants, and 28% of these are Critically Endangered (CR). These results will be published on The IUCN Red List in autumn 2012 and are being used to guide targeted action on the ground. A regional assessment for all of Paraguay's 23 palm species was completed, 30% of species are threatened, one of them Critically Endangered. Numerous preliminary assessments for palms were published through ongoing research of the Palm Specialist Group and its network (e.g. in taxonomic monographs).

Taxonomic research remains a vital strength of the group, which underpins the quality of its conservation work. Many new species were discovered and described, almost all of which are threatened. Most dramatic among these was the discovery of a fan palm so large that it is visible from satellite imagery, *Tahina spectabilis*. This palm, which is reduced to approximately 25 adults in the wild, is now the focus of concerted conservation efforts, including *ex situ* collection establishment and conservation genetics. Conservation genetic studies of three other highly endangered palms were also completed (*Lemurophoenix halleuxii*, *Lepidorrhachis mooreana*, *Voanioala gerardii*) and published.

With legumes and grasses, palms are among the most important plant groups to humans, facing particularly intense pressure as a result. In response to this, a consortium of palm experts in north-west South America was established and funded through the European Union to study and promote sustainability of wild palm harvest. This project continues until the end of 2013.

Finally, the Palm Specialist Group has taken every opportunity to promote its work and the plight of species in its care, for example through the intense media interest in the discovery of *Tahina spectabilis* and support IUCN campaigns, such as *Amazing Species*.

Facts

Chair: William J. Baker
Red List Authority Focal Point: William J. Baker
Number of members: 41
Website: Palm Specialist Group

Success stories

- *Tahina spectabilis*, a gigantic fan palm from west Madagascar described as new to science in 2008 and with approximately 25 surviving adults, secured *ex situ* through legal commercialization of seed and benefits shared with local villagers who now protect the site.
- Complete IUCN conservation assessments of all 192 endemic Madagascan palms.

Challenges

- Lack of resources to support palm conservation activities, such as the Global Palm Assessment or on-the-ground actions.
- Palms are under pressure from targeted extraction because they provide vital services (e.g. food, shelter) to humans.
- Development of best practices and community management plans are required to curb these threats.

Future Goals

- An online global palm flora.
- A Global Palm Assessment.
- Regional assessments in Bolivia, Thailand and Venezuela.
- Implement targeted conservation projects on the ground (e.g. *Medemia argun* in Egypt and Sudan, threatened species in the Masoala peninsula and central plateau, Madagascar).

Tahina spectabilis.

Pangolin Specialist Group

Activity Report 2009–2012

The IUCN SSC Pangolin Specialist Group was re-formed in February 2012 in recognition of pervasive threats to pangolins in Africa and Asia but little understanding of their conservation needs. The group aims to enhance understanding about the eight extant species of pangolin, the threats they face and how these threats can be mitigated. The group's mission is to:

"*Be a global voice for pangolins by working to advance knowledge and understanding of pangolins worldwide, their conservation, natural history and ecology and to catalyze action to meet these needs.*"

Following re-establishment, members of the Pangolin Specialist Group have met twice as at September 2012 and agreed on a number of immediate and mid-to-long term initiatives pursuant to the group's mission.

These initiatives range from reassessing the conservation status of pangolins on The IUCN Red List of Threatened Species™, to developing good practice husbandry guidelines and undertaking peer-reviewed research into the dynamics of illegal hunting for illicit international trade, the principal threat to pangolins in Asia and increasingly in Africa.

The Pangolin Specialist Group website is also currently in development and should be published in autumn 2012.

Success stories

- Re-establishment of the IUCN SSC Pangolin Specialist Group in February 2012.
- Development of a Pangolin Specialist Group website (to be published in autumn 2012).
- Initiation of a Pangolin Specialist Group photo library.
- Development of a Pangolin Specialist Group literature library.

Challenges

Pangolins are a little known and little understood group of mammals. Our principal challenges as the Pangolin Specialist Group are to:

- raise awareness of pangolins, the need for their conservation and the Pangolin Specialist Group as an IUCN scientific advisory body; and
- catalyze and facilitate research on pangolins, the threats they face and their conservation needs.

Future Goals

- Determine the status and conservation needs of pangolins both in Africa and Asia.
- Develop conservation strategies for pangolins worldwide.
- Undertake IUCN Red List reassessments by 2015.
- Conduct peer-reviewed research on demand for, the trade in and the utilization of pangolin derivatives in addition to research on pangolin ecology and biology.
- Publish good practice guidelines for husbandry, rehabilitation and release.

Male Sunda pangolin (*Manis javanica*). © Dan Challender, photo taken at the Carnivore and Pangolin Conservation Programme, Vietnam

Female Sunda Pangolin (*Manis javanica*) following rescue from illegal trade in Vietnam. © Dan Challender, photo taken at the Carnivore and Pangolin Conservation Programme, Vietnam

Facts

Co-chairs: Prof. Jonathan Baillie and Daniel W.S. Challender
Red List Authority Focal Point: Carly Waterman
Number of members: 58

Peccary Specialist Group

2011 Update

– The Peccary Sub-group became an independent Peccary Specialist Group.
– Two new chairs were nominated.
– Over 30 researchers compiled and published the White-lipped Peccary wide-range status assessment.
– Contributions to the newsletter SUIFORM SOUNDINGS, including useful updates and research articles.
– Updated the Peccary Red List assessment for all three Neotropical species.
– The updated collared Peccary Red List species assessment was uploaded onto the IUCN home page.

Success stories

- Several group members coauthored the Tayassuidae chapter in *The Handbook of the Mammals of the World* Volume 2, which is now published.
- Group members reviewed evidence of a newly described peccary species. However, our genetic and morphological analyzes rejected that claim.

Challenges

- Expanding the Specialist Group to include more colleagues from Latin America.
- Due to large species ranges, obtaining assessment data is very challenging.
- Accurately assessing the effects of rapid human development and population increases.

Future Goals

- Enhance group's activity and fund-raise.
- Media outreach and raising public awareness.
- Promote collaboration with policy makers and other SSC groups.
- Coordinate research efforts to increase understanding of peccary biology and conservation and the effects of climate change.
- Construct a comprehensive Species Conservation Planning.
- Support CBD targets by identifying and reducing human's negative impacts in the Neotropics.

Facts

Co-chairs: Mariana Altrichter and Harald Beck
Red List Authority Focal Point: Mariana Altrichter
Number of members: 40
Website: Peccary Specialist Group

Pelican Specialist Group

Activity Report 2009–2012

Only a few activities are to be reported for the period 2009–2011. A minimum of contact however was maintained between members of the group and a few recruitments took place. To our knowledge less than 15 publications on pelicans (all five species of Old World pelicans) appeared within the quadrennium, by several members of the group and other researchers.

On May 2012 the 1st Workshop on pelican research and conservation in south-east Europe convened in Prespa, Greece. It was attended by 16 pelican experts from nine countries who met for the first time. Very important information was exchanged and a statement was produced regarding the threats to the two pelican species of that region and future prospects. Following the meeting a Google Group titled PELECANUS GROUP was created to facilitate networking and information exchange with 33 members so far.

Dalmatian Pelican (*Pelecanus crispus*) with young on nest, Greece.
© Giorgos Catsadorakis

Success stories

- The impressive 10 fold increase of the Prespa mixed Dalmatian Pelican (*Pelecanus crispus*) and Great White Pelican (*Pelecanus onocrotalus*) colony in Greece over the last 25 years, following implementation of focused conservation measures.
- Succeeded in obtaining a clear picture of breeding population sizes for the Dalmatian Pelican in almost all countries of south-east Europe.
- During the last three years, three new breeding colonies have appeared in areas where the species nested in the past. It seems that at least in Greece the Dalmatian Pelican is expanding.

Challenges

- To recruit more members, especially from Africa, Asia and Australia.
- To increase the degree of data and information exchange between members especially for less known species such as the Spot-billed Pelican (*Pelecanus philippensis*), Pink-backed Pelican (*Pelecanus rufescens*) and Australian Pelican (*Pelecanus conspicillatus*).
- To reverse declining trends in many small colonies of Dalmatian Pelicans.
- To increase the knowledge of the ecology and recent population status and trends of all five Old World pelican species especially at less known sites.

Future Goals

- To at least triple the number of group members by 2014, bringing together more pelican specialists and establishing closer exchange of information between people working in Asia, Europe and Africa for the same or different pelican species.
- To recruit and to be in regular contact with pelican researchers in Russia, Kazakhstan and neighbouring countries by 2015 and to have compiled updated information about pelican numbers in those countries.
- To set up a large international project for the conservation of the Dalmatian Pelican in south-east Europe by 2014.
- To set up a large international project with collaboration between south-eastern European countries, Turkey and Israel, which will address the issue of starved Great White Pelicans attacking fish-culture ponds in Israel.

Facts

Chair: Giorgos Catsadorakis
Number of members: 23
Website: Pelican Specialist Group

Pinniped Specialist Group

2011 Update

– "THREATS" were a key theme in 2011. The Pinniped Specialist Group (PSG) and friends prepared a review paper that is in press in Marine Mammal Science assessing primary and secondary threats to pinnipeds (Kovacs *et al*. 2012).
– PSG worked actively with the IUCN's Species of the Day campaign.
– PSG worked actively with IUCN in their climate change campaign.
– The PSG hosted an Endangered Pinnipeds Workshop in Tampa, Florida, in late November 2011.
– PSG membership was modified to improve international coverage.

Success stories

- The Endangered Pinnipeds Workshop was a huge success that increased awareness regarding pinniped conservation issues within the scientific marine mammalogy community.
- New breeding colonies of Mediterranean monk seals have been discovered in two countries and beach breeding has been re-established in at least one locale!

Challenges

- The biggest challenges faced by the PSG are financing work on Red Listed (and Data Deficient species) and getting compliance from signatories on international conservation agreements.
- The biggest conservation challenges for pinnipeds are; climate change, fisheries interactions and over exploitation (and illegal harvests).

Future Goals

- PSG is currently planning an "awareness campaign" that will reach the public, working scientists and policy makers regarding endangered pinnipeds.
- PSG will lead a Plenary Session at the SMM meetings in 2013.
- PSG is writing an Action Plan to help target needed research on pinnipeds.
- PSG will update accounts for all sub-species within 2012.

Facts

Chair: Dr Kit M. Kovacs
Red List Authority Focal Point: Dr Kit M. Kovacs
Number of members: 15

Southern Elephant Seal (*Mirounga leonine*).
IUCN Photo Library © Imène Meliane

Polar Bear Specialist Group

2011 Update

– Spawned from the negotiations towards a finalized agreement on the conservation of polar bears, signed in 1973.
– Agreement has been a major force in facilitating the implementation of sound management practices and sustainable harvest regimes of polar bears worldwide.
– The group has successfully followed up parts of the agreement for the conservation of polar bears in the period 1973–2009, a period when the Parties to the Agreement were inactive.

Success stories

- The group has dealt with issues related to harvest quotas in declining and threatened subpopulations of polar bears.
- Serves formally as scientific advisers to the Parties to the 1973 Agreement on the conservation of polar bears, and attended as such at the MoP in Iqaluit in October 2011.

Challenges

- To mitigate the conflict between traditional Inuit knowledge and science as basis for quotas in areas where there is harvest.
- To help conserve the species in light of the imminent threats to critical habitat by climate warming through compilation and a clear and strong communication of the latest knowledge.

Future Goals

- To continue to compile and communicate "best available science" to the benefit of circumpolar polar bear conservation.
- Serve the Parties to the 1973 Agreement the best way possible as independent scientific advisers, with the intention to fulfil the intentions of the Agreement.

Facts
Chair: Dag Vongraven
Red List Authority Focal Point: Professor Øystein Wiig
Number of members: 25
Website: http://pbsg.npolar.no/en/

Primate Specialist Group

Activity Report 2009–2012

The IUCN Red List. In 2005, 41% of the lemurs were classified as Data Deficient but by 2012 all 103 lemur taxa have been reassessed and 91% are now classified as threatened. In 2010–2011, the Primate Specialist Group (PSG) reassessed *Eulemur macaco*, *E. flavifrons*, *Mirza zaza* and made the first assessment of *Rhinopithecus strykeri*. A revised conservation action plan for lemurs was outlined during the reassessment workshop earlier this year.

Section on Great Apes (SGA). Members participated in conservation workshops for the Eastern Chimpanzee (2009), Nigeria-Cameroon Chimpanzee (2010), Bonobo (2011), Grauer's Gorilla (2011), and Western Chimpanzee in Sierra Leone (PHVA with CBSG, 2011). Action plans have been published for Eastern Chimpanzee, Nigeria-Cameroon Chimpanzee, and for Indonesian orangutans (2009). The Ape Populations, Environments, and Surveys (APES) database, developed by the Max Planck Institute to standardize and archive survey data, is now a component of the APES Portal, an Arcus-sponsored collaboration between UNEP/WCMC, MPI, JGI, ESRI, and the SGA. Three more issues of the *Best Practice Guidelines* series – survey methods, human-great ape conflict, and great ape tourism – have been published, with versions in English, French, and Bahasa Indonesia.

Publications. Regional coordinators for Brazil and the Guianas, working with the Brazilian government, published an action plan for muriquis (*Brachyteles*) in 2011. In collaboration with FFI, regional coordinators published a report: *The Conservation Status of Gibbons in Vietnam.* PSG published the newsletters *Lemur News* (4 issues), *Asian Primates Journal* (3) and *Neotropical Primates* (5), and the journal *Primate Conservation* (3). Underway is *The Handbook of the Mammals of the World, Vol. 3: Primates*, to be published by Lynx Edicions, Barcelona.

25 Most Endangered Primates. With CI and the International Primatological Society (IPS), the sixth listing (2010–2012) was drawn up during the XXIII IPS Congress in Kyoto, August 2010.

Funding. The Margot Marsh Biodiversity Foundation and Primate Action Fund continue to provide conservation and research grants, the latter is administered by Conservation International.

We acknowledge the invaluable support of Conservation International; Bristol Zoo Gardens; Arcus Foundation; Mohamed bin Zayed Species Conservation Fund; US Fish and Wildlife Service; Virgin Unite; and Ambatovy Minerals S.A. John F. Oates (coordinator for W Africa) and Joerg Ganzhorn (Madagascar) retired – their dedication and contributions to the PSG have been immense and extraordinary.

Success Stories

- The APES Portal will launch in August 2012 <http://apesportal.eva.mpg.de/>.
- Organized conservation workshop for bonobos (*Pan paniscus*) in Democratic Republic of Congo.
- *Lemur Field Guide* (3rd ed.) and the *Field Guide and Natural History of the Primates of West Africa* (J.F. Oates) and accompanying pocket guides.
- Assessment of the status of 103 lemurs at an IUCN Red List workshop held in Antananarivo, Madagascar, in July 2012.

Challenges

- Continuing destruction of tropical rain forests, habitat for 90% of all primates.
- Hunting, inadequate law enforcement – especially serious in Central and West Africa and Southeast Asia, and increasingly a major cause of rapid declines in primate populations in other areas such as Madagascar.
- Funding at scale. We have the expertise, the personnel and the knowledge but lack funding to do what needs to be done. At least more funding is needed to be able to deploy our group to all the priority sites, beginning with those for the Top 25 Most Endangered Primates.

Future Goals

- As has been the case since the earliest days of the PSG, our goal continues to be to maintain the current diversity of the Order Primates. We have not lost a single species or subspecies in the past century, an enviable record since all other groups of mammals with more than 30 species have lost at least one.
- This ties in clearly with CBD Target 12, and in order to continue to maintain primate diversity, we will also need to play a major role in Target 11, increasing protected area coverage in the highest priority areas for biodiversity in general and primates in particular.

Facts

Chair: Russell A. Mittermeier
Deputy Chair: Anthony B. Rylands
Red List Authority Focal Points: Christoph Schwitzer and Sanjay Molur, Liz Williamson (great apes)
Number of members: 405
Website: http://www.primate-sg.org/

Rust and Smut Specialist Group

Activity Report 2009–2012

The main goals of the group are as follows:
i) the organization of global conservation of so-called "microscopic fungi", placed in basidiomycetes; and
ii) an estimation of the conservation status of the species.

The Chair of the Specialist Group took part in the work of the first meeting of the fungal Specialist Groups, "Fungal Conservation – Science, Infrastructure and Politics." A special international meeting under the auspices of IUCN, 26–30 October 2009, Whitby, North Yorkshire, UK, where he gave two presentations: "Introducing the IUCN Species Survival Commission Rusts and Smuts Specialist Group," and, "Estimating the threat status of smut fungi." Prof. C.M. Denchev was an editor of the proceedings of that meeting.

During the period the following important articles and papers have been published:

- Various difficulties in assessing the status of smut and rust fungi were discussed; some of them described in "Estimating the threat status of smut fungi" in *Mycologia Balcanica* 7: 9–15 (2010).
- The conservation status of 40 smut fungi was estimated and published in *IMI Descriptions of Fungi and Bacteria* (Denchev and Minter 2008, 2010, 2011) and other research articles.
- The first contemporary catalogue of the smut fungi in Africa was published: Vánky *et al*. (2011). "Smut fungi in Africa – a checklist". *Mycologia Balcanica* 8: 1–77.
- A new monograph about the smut fungi in China was published: "Tilletiales, Urocystidales, Entorrhizales, Doassansiales, Entyloma-tales, Georgefischeriales". In *Flora Fungorum Sinicorum*, vol. 39 (Guo L. 2011).
- Helfer *et al*. (2011). "A call for a renewed and pan-European strategic effort on the taxonomy of rust fungi *(Uredinales)". Mycologia Balcanica* 8: 79–81).

Success stories

- Publication of "*Smut fungi in Africa – a checklist*" (Vánky *et al*. 2011) with information about taxonomy and distribution of the smut fungi in Africa and adjacent islands (427 species in 47 genera). It reflects the great, but incompletely known, biodiversity of Africa.

Challenges

- Building awareness that microscopic fungi also need to be included in conservation documents and actions.
- Promote research in rust and smut conservation biology.

Future Goals

- Conservation biology of rust and smut fungi.
- Preparation of a preliminary, global checklist of threatened rusts and smut fungi.

Smut fungus (*Sphacelotheca koordersiana*).

Facts

Chair: Cvetomir M. Denchev
Red List Authority Focal Point: Cvetomir M. Denchev
Number of members: 8

Salmonid Specialist Group

Activity Report 2009–2012

We completed draft, range-wide status assessments for three taimen species in Asia; Siberian Taimen (*Hucho taimen*); Sichuan Taimen (*Hucho bleekeri*), and Korean Taimen (*Hucho ishikawae*) in 2012. Assessments of all five species in *Hucho* and *Parahucho* are now up to date on The IUCN Red List.

The state of our understanding of these species is still poor, but there is clear evidence now that multiple threats exist and the species assessed are all threatened.

An international workshop was held in Auckland, New Zealand in December 2011 bringing together many of the leading experts on these fishes.

The Salmonid Specialist Group (SSG) and Wild Salmon Center are providing leadership in an important new international initiative to conserve these enigmatic species.

An important publication describing our 2011 amendment to the original range-wide assessment of Sockeye or Red Salmon *Oncorhynchus nerka* appeared in a high-impact, peer-reviewed journal in 2012, the Public Library of Science ONE (http://dx.plos.org/10.1371/journal.pone.0034065). This assessment required years of international collaboration and cooperation to complete and represents an important milestone for the SSG.

While the species as a whole is not endangered, many individual populations are at risk and require directed conservation actions.

An informative website was created to convey status and trends of this species, and highlight the key recommendations for conservation actions to conserve threatened populations throughout their range in the North Pacific (http://www.stateofthesalmon.org/iucn/).

Success stories

- Along with our key Russian partners, we helped establish a new protected area (PA) in the Russian Far East (Koppi River Reserve, in Khabarovsk). The PA contains habitat for Sakhalin taimen (CR) and Siberian tiger (EN).

Challenges

- Addressing claims that The IUCN Red List criteria do not apply to anadromous salmon.
- Strengthening criteria used in sustainable seafood certifications.
- Understanding the impact of hatcheries (sea ranching practices) on wild salmon.
- Understanding impacts from climate change on subarctic and arctic ecosystems.

Future Goals

- Initiate new field programs to fill key information gaps on taimen in Russia, Japan and Mongolia.
- Complete multi-authored manuscript on the biology and status of all five species of taimen.
- Support the establishment of protected areas for salmonids, and promote best practices for recreational and commercial salmon fisheries.
- Seek support to continue IUCN Red List assessments for salmonids.

Facts

Chair: Peter S. Rand
Red List Authority Focal Point: Steven Weiss
Number of members: 15
Website: http://www.stateofthesalmon.org/iucn/

Sea Snake Specialist Group

Activity Report 2009–2012

The Sea Snake Specialist Group (SSSG) and Red List Authority were established during a workshop held in Brisbane, Australia in 2009 where the first IUCN Red List Assessments of all sea snake species were conducted. Since its inception, the SSSG had expanded its membership, advanced knowledge of sea snake taxonomy, distribution, ecology and conservation status, and engaged relevant industry and government agencies.

The first IUCN Red List assessments for all 70 sea snake species (Hydrophiinae) and all 40 mud snake species (Homalopsidae) were published in 2010. Key results have been included in three major publications.

Two Australian endemics identified as Critically Endangered (CR) on The IUCN Red List were successfully nominated as Critically Endangered under Australia's Environment Protection and Biodiversity Act. In 2010 intensive surveys were conducted to monitor the status of populations but neither species was found. One species was successfully nominated for inclusion in the Top 100 Species Breaking Point Initiative.

In March 2012, a major survey of Australia's North West Shelf sea snakes was conducted, resulting in detailed distribution and abundance data for several species.

Two new sea snake species were described from Australia in 2012 and assessments of conservation status for these species were commenced.

Five new SSSG members were recruited in 2011–2012, including from under-represented sea snake range countries, e.g. United Arab Emirates and Pakistan.

Information concerning the status of sea snakes on Australia's Great Barrier Reef was provided to the Great Barrier Reef Marine Park Authority in 2012 and will be used to inform assessments of several coastal developments.

A study investigating the impact of seismic surveys on sea snakes in Australia's North West Shelf – funded by the Australia Pacific Science Foundation – commenced July 2012.

Success stories

- The first IUCN Red List assessments for all 70 sea snake species (Hydrophiinae) and all 40 mud snake species (Homalopsidae) were published in 2010.
- Two Australian endemic species listed as CR under IUCN have also been listed as CR under Australia's EPBC Act and dedicated research is investigating reasons for their declines.
- Critically Endangered Australian endemic species are to be included in the Breaking Point Initiative.

Challenges

- The biggest challenge to sea snake conservation is lack of basic data about sea snake biology, taxonomy and ecology and the threatening processes impacting them.
- The SSSG is a relatively new group and members have only met once – at The IUCN Red List Assessment Workshop where we formed. We live all around the globe so it is taking time to get momentum going.

Future Goals

- Get back online with a website connecting SSSG members in 14 countries.
- Raise the public profile of sea snake conservation by engaging interested members of the public via social networking sites and press releases.
- Re-establish annual publication of SSSG newsletter.
- Complete IUCN Red List Assessments for newly described species.
- Nominate newly described Australian species for listing under Australia's Environment Protection Biodiversity Act.
- Lobby for the inclusion of sea snakes in protocols for environmental impact assessments for seismic surveys and other coastal developments, including mining, in Australia, at the initial referral stage by proponents and in recommendations by regulators.
- Support studies of basic ecology, distribution, conservation status and threatening processes for sea snakes, especially in under-surveyed range countries in South Asia and the Middle East.

Facts

Co-chairs: Vimoksalehi Lukoschek and Kate Sanders
Red List Authority Focal Point: Amanda Lane
Number of members: 35

Shark Specialist Group

Activity Report 2009–2012

Over the past four years, the Shark Specialist Group (SSG) has broadened impact through increased communication and influence.

The SSG have assessed all known chondrichthyans using The IUCN Red List Categories and Criteria, and plan to start reassessing all 1,083 species by 2020 to create a Shark Red List Index in support of AICHI Target 6 reporting. This will begin in Europe, by revisiting the Red List assessments of 126 species in the North East Atlantic region and the Mediterranean Sea. Based on the plethora of new species descriptions, the SSG has published 63 assessments during this quadrennium – most notably the Giant Manta Ray (*Manta birostris*) and Reef Manta Ray (*Manta alfredi*) (both Vulnerable). The Giant Manta was subsequently listed on Appendices I and II of the Convention on Migratory Species.

While all chondrichthyans have now been assessed, the next stage is to highlight those species most urgently requiring increased fisheries assessment and management (Vulnerable and Endangered) or strict protection (Critically Endangered). For the former, there is a regular presence of SSG members, notably Deputy Chair Sonja Fordham, at Regional Fisheries Management Organizations in the Atlantic and Western Pacific. The SSG's influential "Shark Fins in Europe" report, in collaboration with the European Elasmobranch Association, has led to a proposal for a "fins attached" rule, which is currently before EU parliament. For the Critically Endangered species we are developing Species Conservation Strategies – with sawfishes as our first case study. We carried out a global sawfish conservation strategy workshop in May 2012 and held a side event highlighting concerns and solutions at the UN Food and Agriculture Organization (FAO) Committee on Fisheries meeting in Rome, June 2012.

We have also recognized the rising importance of social media for communicating our progress and findings, and have created influential Facebook (3,381 followers), Twitter (559 followers), and YouTube (1,000+ views) accounts to widen the impact and influence of the SSG.

Success stories

- Global Red Listing of 1,083 sharks, skates, rays and chimaeras is complete.
- Creation of the IUCN Resolution on Shark Finning.
- Creation of the first chondrichthyan Species Conservation Strategy for Sawfishes.
- 2012 Publication of North and Central American and Caribbean Status report.
- Ten species listed on CITES Appendices.
- Eight species listed on CMS Appendices.
- Nineteen FAO Shark Plans in place.

Challenges

- Myth that shark conservation is in-place, implemented and enforced.
- Unsustainable fishing and the threatened status of skates, rays and less charismatic sharks is often overlooked by fisheries management organizations.
- Chondrichthyans have vast ranges spanning many jurisdictions and areas beyond national boundaries.
- Finding the key points for management intervention for threatened species with high regional variation in status and protection.
- To sustain funding for SSG activities.
- To increase the knowledge-base for Data Deficient species.

Future Goals

- Determine if shark management practices have reduced extinction risk.
- Develop regional and global Shark Red List indicators. Develop Species Conservation Strategies for mobulid rays; guitarfishes; hammerheads; and reef, freshwater, deepwater and oceanic pelagic chondrichthyans.
- Create and implement effective management and conservation measures for broadly distributed species spanning numerous jurisdictions.
- Publish global summary of IUCN Red List Status and the shortfall in conservation of chondrichthyans.
- Reassess all chondrichthyans by 2020, beginning with Europe species in 2013.


Sawfish. © David Wachenfeld

Facts

Co-chairs: Nicholas Dulvy and Andrés Domingo
Red List Authority Focal Point: Nicholas Dulvy
Programme Officer: Lucy Harrison
Number of members: 155
Website: http://www.iucnssg.org/

Sirenia Specialist Group

IUCN SSC Sirenia Specialist Group

2011 Update

- International Sirenian Workshop at 19th Biennial Meeting of the Society of Marine Mammalogy.
- Increase in the number of range states that have signed the CMS Dugong MOU to 20.
- Publication of first scholarly synthesis of information on the ecology and conservation all four species.*
- Regional management plan for Caribbean manatees published 2010.
- West African Manatee (*Trichechus senegalensis*) recognized as greatest conservation challenge because most range states are least-developed countries.
- Brazil and Mexico updated their national manatee action planes in 2011.

Success stories

- Evidence that Florida Manatee population is increasing and is likely eligible for downlisting.
- Re-zoning of the Great Barrier Reef World Heritage Area in Australia in a manner that provided significant protection to dugongs.
- Establishment of Protected Areas in Mesoamerican countries to protect manatees.

Challenges

- Most sirenian range states are developing countries.
- Lack of political will to deliver effective conservation outcomes.
- Likely adverse impacts of human population increase and climate change on sub-tropical and tropical coastal and riverine habitats.

Future Goals

- Effective conservation of all four species of sirenians throughout their ranges, especially in developing range states.
- Increased knowledge of the distribution and relative abundance of the West African Manatee and the Amazonian Manatee.
- Revaluation of the conservation status of all four species.
- Regional listing of all major dugong subpopulations.
- Regional workshop to coordinate more effective conservation action of the Amazonian Manatee.

* Marsh, H., O'Shea, T.J. and Reynolds, J.E. III. (2011). *The ecology and conservation of sirenia: dugongs and manatees*. Cambridge University Press.

Facts

Co-chairs: Helene Marsh, Benjamin Morales
Red List Authority Focal Point: Cynthia Taylor
Number of members: 16
Website: http://www.locus-nq.net/iucnssg/

Florida Manatee (*Trichecus manatus latirostris*). © Keith Ramos/USWS

Small Carnivore Specialist Group

Activity Report 2009–2012

The IUCN SSC Small Carnivore Specialist Group (SCSG) has achieved a number of accomplishments during the last quadrennium. Numerous members are actively involved in the conduct of small carnivore research and conservation projects around the globe. Collectively, we coorganized the Borneo Carnivore Symposium, which emphasized the distribution and conservation status of 15 small carnivore species on Borneo, and we continue to work with coorganizers (i.e. IUCN SCC Cat and Otter Specialist Groups, Liebniz Institute for Zoo and Wildlife Research, and Malaysian Government) on outputs from this conference which we hope will ultimately result in a tri-national conservation strategy for carnivores. We also coorganized a symposium on small carnivores in Meso-America at the Meso-American Conservation and Biodiversity Congress in Mexico, as well as two carnivore symposia at the Colombian Zoological Congress. As an output from this symposium, SCSG members are currently collating small carnivore distribution records from museums and camera traps from Mexico to Colombia to better understand species' distributions and habitat associations in this region.

Structurally, we have selected a Taxonomic Working Group of SCSG members charged with reviewing current species taxonomy of small carnivores to provide us with a recommended list of species. This group is assisting the SCSG Red List Authority in developing a prioritized list of species requiring either updated or new IUCN Red List accounts.

We are continuing to increase membership in under-represented regions of the world and have made substantial progress in Meso and South America and have also initiated efforts in Africa. We continue to publish our journal, *Small Carnivore Conservation*, twice annually, which has become entirely peer-reviewed and increased markedly in number of submissions. We have also initiated periodic, regionally-themed issues of *Small Carnivore Conservation* to emphasize under-represented species. We have completely updated and revized our website, and now have all issues of our journal available online.

Success stories

- Our collaboration in compiling more than 4,000 carnivore records from across Borneo to develop models for use in island-wide conservation planning.
- Our journal, *Small Carnivore Conservation*, has doubled in size and is now entirely peer-reviewed.
- Increasing our active membership from across Latin America.

Challenges

- Furthering our understanding of small carnivore distributions, abundance and conservation needs (CBD Goal A).
- Securing participation and interest in small carnivore conservation relative to more charismatic species.

Future Goals

- Continue providing assistance and encouragement of additional on-the-ground conservation actions to benefit small carnivore conservation (CBD Goals A, B, C).
- Expand recruitment, membership, and involvement in Africa.
- Secure long-term funding to enhance SCSG infrastructure and journal production.

Red Panda (*Ailurus fulgens*). IUCN Photo Library © Sue Mainka

Facts

Chair: Jerry Belant
Red List Authority Focal Point: Will Duckworth
Number of members: 110
Website: Small Carnivore Specialist Group

Small Mammal Specialist Group

Activity Report 2009–2012

Formed at the beginning of 2011, the Small Mammal Specialist Group (SMSG) continues to work to develop its structure and membership to achieve its main scientific and conservation goals. A preliminary Steering Committee was formed to lead this development and currently consists of the Co-chairs, the Red List Authority (RLA) Focal Point, Dr Sam Turvey (Zoological Society of London) acting as Conservation Coordinator and Dr Kris Helgen of the Smithsonian Institution as Taxonomy Coordinator.

Given that the SMSG's remit covers more than 2,700 species, we prioritized regions of the world and species groups that need most conservation and research attention, around which we can focus membership recruitment. We have conducted a global scale analysis of small mammal distributions and threat to identify spatial conservation priorities for the group, which we are currently writing up for publication. This work, combined with drawing on existing conservation prioritization schemes, has enabled the SMSG to identify three conservation and scientific goals:

1. Enabling the conservation of Key Species – globally threatened and evolutionary distinct small mammals as identified by ZSL's EDGE of Existence programme. We are collaborating with this initiative to work towards promoting conservation for 25 species.
2. Enabling conservation for small mammals in Key Sites – sites supporting the global population of Endangered or Critically Endangered small mammals as identified by the Alliance for Zero Extinction prioritization scheme.
3. Promoting conservation and research of small mammals in Key Regions – areas of the world which support globally important aggregations of threatened, or data deficient small mammals. In a pilot phase of work under this goal, we have recruited a Caribbean Coordinator to start promoting work on more than 10 hutia and solenodon species.

We have also started working with the Global Mammal Assessment team at the Sapienza University in Rome to prioritize IUCN Red Listing of small mammals, particularly those species in the Least Concern category which are mostly likely to have changed category since 2008. Finally, thanks to support from ZSL and the Durrell Wildlife Conservation Trust, we will soon launch the SMSG website which will act as a portal to in-depth information on the ecology, taxonomy, status and conservation needs of small mammals.

Facts

Co-chairs: Don Wilson and Richard Young
Red List Authority Focal Point: Giovanni Amori
Number of members: 40

Success stories

- We are collaborating with ZSL's EDGE of Existence programme to promote conservation for 25 globally threatened and evolutionary distinct small mammal species.
- We are working with ZSL to develop the SMSG website which will soon be launched. The site will act as a portal to in-depth information on the ecology, taxonomy, status and conservation needs of small mammals.
- We have recruited a Regional Coordinator for the Caribbean and secured funding to support regional membership recruitment and field skills training.

Challenges

- How to structure, grow and resource the SMSG in a way that balances the need to ensure sufficient expertise is built with the efficiencies gained by remaining modestly sized?
- With over 2,700 species, the small mammals face a wide variety of threats. But a pervasive challenge is a lack of understanding of and conservation attention on this poorly known group.

Future Goals

- Develop a 2012–2014 strategy for the SMSG, including a plan to reassess 2,700 species and assess newly described species for the mammal Red List update planned for 2015.
- Further expand the Steering Committee to become more geographically representative and engage partner organizations to bring in expertise on key themes.
- Initiate a project to promote development of Species Conservation Strategies for key species and sites.
- Launch an initiative to promote the collection of photos of poorly-known small mammal species for which no images of living individuals exist.

Hispaniolan hutia (*Plagiodontia aedium*).

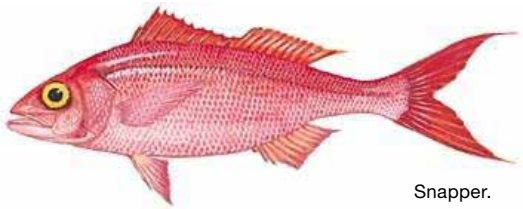
Snapper, Seabream and Grunt Specialist Group

Activity Report 2009–2012

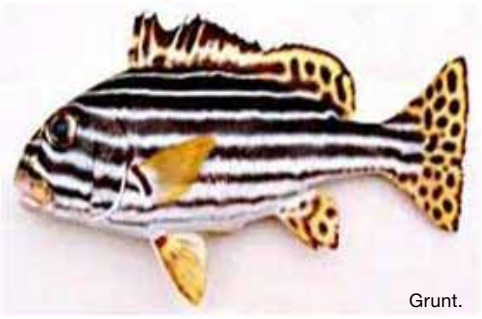
By the middle of the period, 143 species of sparids and centracanthids had been assessed and added to The IUCN Red List. Then in 2011 the SSC Steering Committee elevated the former Red List Authority (RLA) to become a full Specialist Group covering nine reef and estuarine families with over 500 species.

In 2012, the fully fledged Snapper, Seabream and Grunt Specialist Group (SSGSG) set out to establish nine regional workgroups: Southwest Pacific (incl. Australia and New Zealand); Northwest Pacific; West Pacific (incl. Coral Triangle); East Africa and Red Sea; South Asia; East Atlantic and Mediterranean; Southwest Atlantic; East Pacific; and Northwest Atlantic.

– In 2011, the RLA conducted assessments of 122 species of Western Atlantic lutjanids, sparids, haemulids and centracanthids. These assessments are undergoing review.
– Early planning is underway to do an assessment of all SSG species in West Africa.
– Demographic evaluations are underway of IUCN Red List threatened species criteria for broadcast spawning reef fish species that evolved to have 50-year life spans when unexploited.
– The SSGSG developed proposals to work with researchers and non-traditional partners to penetrate science-based findings into management actions, including climate adaptation planning and the marine targets of the Convention on Biological Diversity.



Snapper.



Grunt.

Facts

Co-chairs: Barry Russell and Ken Lindeman
Red List Authority Focal Point: Barry Russell
Number of members: 60

Success stories

- All lutjanids, haemulids, and sparids from the Eastern Tropical Pacific have been assessed with a journal article published in 2012 as part of an IUCN Red List review of many regional families (>1,000 spp.).
- All known sparid and centracanthid species have been assessed with a manuscript summarizing IUCN Red List findings in preparation.
- Spawning aggregation protection is being advanced by SSGSG members on US regional management panels.
- A major scoping trip was made to India by Dr Russell to develop contacts and aid future assessments.
- Work with IUCN European Office on Regional Red List assessment of European SSG species.

Challenges

- Approximately 540 species occur around the globe in nine families.
- Growth of recruitment-overfishing is occurring on many of the larger species: long-term data is sparse.
- High ecological complexity; species can occur in deep reef through freshwater habitats. Many species ontogenetically shift across multiple habitats.
- Some key species form spawning aggregations.
- Management infrastructure is often highly limited.

Future Goals

- Complete phylogenetic reviews of all families.
- Complete IUCN Red List assessments of approximately 350 remaining species.
- At regional scale, determine needed actions for the most threatened species and systems (e.g. fishery regulations, habitat protection, reserves, alternative livelihoods, etc).
- Integration of efforts with IUCN WCPA initiatives, including GPAM the Global Partnership for Professionalizing Protected Area Management.
- Recruit members from under-represented regions.
- Improve planning for climate adaptation via regional workshops and in-country training where needed.

Seabream.

South American Camelid Specialist Group

2011 Update

- Participated at the XXVIII Vicuña Convention Ordinary Meeting and provided technical advice for the XV Technical Meeting.
- Coorganized a workshop for the creation of a regional strategy for guanaco management in Patagonia.
- Implemented a project in collaboration with WCS on priorities for Guanaco Conservation in Latin America.
- Participated in a workshop on CITES and CBNRM.
- Provided technical advice to national, provincial and local fauna authorities in Argentina.
- Collaborated with local producers on establishment of equitable distribution of benefits derived from vicuña and guanaco shearing.
- Scientific work of our members was made available through a web page and newsletter.

Success stories

- GECS had a very important role in the recovery of vicuña from its near extinction and the creation of the Vicuña Convention (1979).
- Organized a technical meeting that resulted in the demise of pacovicuña breeding projects.
- Contributed towards the end of captive use initiatives.
- Contributed to the prevention of a law proposal that threatened vicuña and guanaco conservation.

Challenges

- To achieve wild camelid sustainable use initiatives which promote species conservation while providing genuine economic incentives for local people.
- To contribute towards the conservation of unexploited populations.
- Conservation challenges: poaching and illegal trade; habitat fragmentation and climate change.

Future Goals

- To assess conservation status of vicuñas and guanacos at population level.
- GECS animal welfare protocols to be implemented in all captures.
- Create vicuña and guanaco national and regional management plans.
- Help restore, maintain or reduce the decline of populations.
- Protect traditional knowledge, innovations and practices.
- Ensure fair and equitable sharing of benefits from the use of vicuñas and guanacos.
- Collaborate to establish a transparent market for fibre.

Facts

Chair: Dr Gabriela Lichtenstein
Red List Authority Focal Point: Dr Ricardo Baldi
Number of members: 29
Website: http://www.camelidosgecs.com.ar/

South Asian Invertebrate Specialist Group

Activity Report 2009–2012

Established in 2010, the group covers Afghanistan, Bangladesh, Bhutan, India, Pakistan, Maldives, Nepal and Sri Lanka. During the period, Specialist Group members have:

– Contributed to the assessment of Eastern Himalayas freshwater invertebrates: molluscs and Odonates.
– Contributed to the assessment of Western Ghats freshwater invertebrates: molluscs and Odonates.
– Represented Invertebrate Conservation Sub-Committee and South Asian Invertebrate Specialist Group (SAISG) at the Global Entomology Congress, Thailand, February 2011.
– Liaised with other Specialist Groups in promoting the work of SAISG.
– Designed education plans for invertebrate pollinator conservation.

Success stories

- Assessed 803 freshwater invertebrates (Odonates: 541; Molluscs: 262) of Western Ghats and Eastern Himalaya.
- Generated funding for education and awareness of the threatened freshwater biodiversity of Western Ghats.
- Developed directory of pollinator researchers.
- Freshwater biodiversity network for south Asia.
- Organized the 3rd Asian Lepidoptera Conservation Symposium and Training Programme 2010.

Challenges

- Promoting concept of invertebrate conservation at political, layman level.
- Influence political will towards invertebrate conservation.
- Update of species and habitat information.
- Quality of information.
- Fund-raising.

Future Goals

- Assess all butterflies, millipedes and selected spiders of South Asia by 2016.
- Develop education materials for freshwater biodiversity of Western Ghats and to promote conservation at local level.
- Organize training on pollinators conservation research and pollinator education.
- Strengthen subnetwork: Freshwater Invertebrates.
- Organize a conference on freshwater invertebrates of South Asia.
- Start an E-newsletter providing an update of invertebrate conservation.

Facts

Co-chairs: Dr B.A. Daniel and Dr Ather Rafi
Red List Authority Focal Point: Sanjay Molur
Number of members: 26

Poecilotheria hanumavilasumica. © Manju

Southern Africa Plant Specialist Group

2011 Update

– Launched South Africa's first Red List website, which is currently for plants but will be expanded to other taxonomic groups.
– National website http://redlist.sanbi.org includes conservation assessments using the IUCN Categories and Criteria for all of South Africa's 20,689 recorded indigenous vascular plant taxa. Species accounts include distribution, habitat information and a justification for the listing of a species as threatened or Least Concern.
– Distribution maps are included for 7,228 taxa and images are available for over 3,000 taxa.
– The South African Plant Red List was used to determine which species need to be listed on the Threatened and Protected Species List on South Africa's Biodiversity Act.

Gladiolus stefaniae. C. Paterson-Jones

Success stories

- Sharing lessons and training with Brazil to complete assessments of a large flora. Memorandum of Agreement with Brazil's IUCN Red List Authority developed.
- Presented lessons learnt from assessing a megaflora at the Global Strategy for Plant Conservation Conference (Missouri, USA, 2011).
- Submitted paper on how to complete comprehensive assessments of megaflora.

Challenges

- Work during 2011 focused only on South Africa.
- Other Southern African countries do not currently have resources to conduct Red Listing or related plant conservation work.

Future Goals

- Raising funds to conduct assessments of Mozambican plants especially those occurring in regional hot spots of endemism e.g. Maputo Pondoland region in Southern Mozambique.
- Organizing a six-month exchange for Southern African Portuguese-speaking country botanists to learn about conducting IUCN Red List assessments. African botanists will be hosted by Brazil's Centre for Flora Conservation and the Rio Botanic Gardens.

Facts

Chair: Domitilla Raimondo
Red List Authority Focal Point: Lize von Staden
Number of members: 33

Stork, Ibis and Spoonbill Specialist Group

2011 Update

– Promotion of the conservation of Black-faced Spoonbill and Oriental Crested Ibis.
– Black Stork colour-ringing programme in place.
– Inform stakeholders and decision-makers on the status and trends of storks, ibises and spoonbills.
– Identifying status of large-scale, transboundary initiatives for migratory species.

Success stories

- Regional census on Black Stork, White Stork, Oriental Crested Ibis, Black-faced Spoonbill.
- Oriental Crested Ibis population increased from five to 1,500+ in the wild and in captivity. It has been re-introduced to China, Japan and there are good prospects for Korea.
- Numbers of Black-faced Spoonbills increased from 200–1,500+.
- Oriental White Storks have been re-introduced to Japan.

Challenges

- Setting up communication tools for the group members.
- Boosting the dynamics of the group.
- Finding support for endangered populations in remote areas.
- Continuous loss of rainforests and wetlands in Southeast Asia.

Future Goals

- Support and develop species action plans for endangered species.
- Increase sharing of efforts to protect key habitats with other Specialist Groups and other conservation organizations.
- Increase communication among researchers and conservationists working on storks, ibises and spoonbills.

Facts
Co-chairs: Malcolm C. Coulter and Wim Van den Bossche
Number of members: 42
Website: Stork, Ibis and Spoonbill Specialist Group

Sturgeon Specialist Group

2011 Update

- Collaboration with CITES, World Sturgeon Conservation Society (WSCS) and Caspian Environment Program (CEP).
- Collaboration in sturgeon working group to draft stock assessment methodology.
- Holding Workshop on DNA barcoding.
- Close collaboration with Freshwater Specialist Group.
- The results of our work helped the Sturgeon range state to follow the main principles to sturgeon stock assessment and Conservation.

Success stories

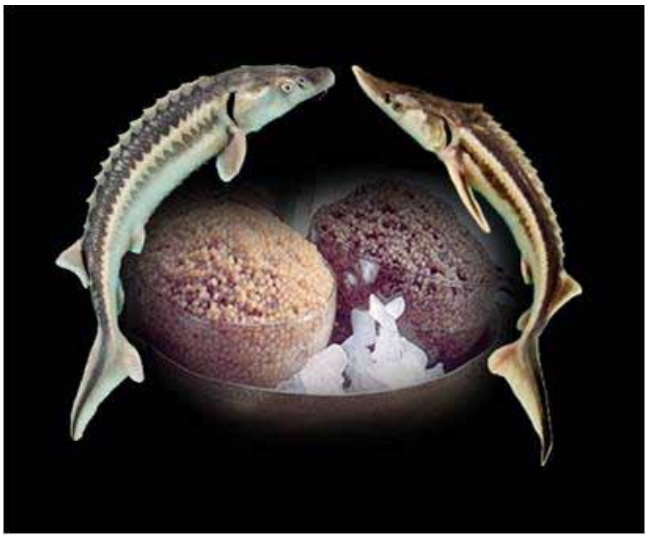
- Completion of sturgeon IUCN Red List assessment.
- Providing scientific consultation to CITES on the sustainable management and conservation of sturgeon Species.
- Close collaboration with the World Sturgeon Conservation Society to organize sturgeon symposia and workshops.

Challenges

- Decreasing sturgeon stocks mostly in Eurasia.
- Lack of regional collaboration between countries.
- Lack of conservation action plan for species at the regional or basin level.
- Increasing public awareness for Eurasian Critically Endangered sturgeon species.

Future Goals

- Develop Action Plan for Eurasian Sturgeon species.
- Joint effort with CITES for amendment of Res. Conf. 12.7 on Sturgeon and Paddlefish Conservation.
- Strengthen the website and take on more active members.
- Develop pilot project to show the effective tools of joint working and local resident involvement.
- Organizing a regional base meeting and exchange the views on success stories.



Facts

Chair: Dr Mohammad Pourkazemi
Deputy Chairs: Dr Dennis L. Scarmecchia (North America) and Dr Michail Chebanov (Eurasia)
Number of members: 62
Website: Sturgeon Specialist Group

Swan Specialist Group

2011 Update

– Draft of Action Plan for the NW European Population of Bewick's Swan (*Cygnus columbianus*) was tabled at the AEWA-meeting in November (Norway).
– Compilation of data from the International Waterbird Census (IWC) in 2010.
– Monitoring key sites for breeding, migrating and wintering swans.
– Several works on the biology of swans have been published or are in preparation; related to movement, energetics, genetics, etc.
– The 22nd Trumpeter Swan Society Congress took place in Montana (USA) in October.

Success stories

- Raising awareness of the decline and producing an Action plan for the north-west European Bewick's Swan.
- Work of the Trumpeter Swan Society for the conservation of the Trumpeter Swan (*Cygnus buccinators*).

Challenges

- The impact of oil and gas industry on the breeding sites of swans in the Arctic.
- Impact of wind farms (present and future) on the flyways of European swans.
- Problems of drought caused by a change in water schemes related to dam building in Asia.

Future Goals

- Planning of the 5th International Swan Symposium in 2014.
- Implementation of the NW European Bewick's Swan Action Plan.
- Contribute in management and monitoring of key sites for swans.
- Initiate more research on swan biology.

Facts
Co-chairs: John Oyvind Albertsen
Number of members: 200
Website: Swan Specialist Group

Bewick Swans (*Cygnus columbianus*). © Duncan Brown (Cradlehall) @Flickr

Tapir Specialist Group

Activity Report 2009–2012

During the past quadrennium, the Tapir Specialist Group (TSG) continued to make steady progress in developing National Action Plans for Tapirs in each tapir range country in South and Central America and Southeast Asia. The plans for Argentina, Colombia, Ecuador, Honduras and Peru were published. French Guiana, Guatemala, Indonesia, and Venezuela are making progress on the development of their plans. In Brazil, the TSG has been working with the Federal Environmental Agency and the Chico Mendes Institute for Biodiversity Conservation (ICMBio) on the initial stages of the development of the Brazilian Plan, to be finalized in 2013. TSG members and regional committees are working tirelessly towards implementing the priority actions and goals developed for each plan.

In October 2011, the TSG held, in partnership with the Malaysian Department of Wildlife and National Parks (DWNP), the Fifth International Tapir Symposium. The symposium was held in Kuala Lumpur, Malaysia, and was a major success. Several zoological institutions in North America and Europe, as well as private donors, provided institutional and, or financial support for the conference. Approximately 100 participants were in attendance.

The TSG has fully implemented its 2009–2011 Strategic Plan developed during the Fourth International Tapir Symposium held in Mexico in 2008. TSG Strategic Plans are developed during the Tapir Symposium every three years and include lists of priority actions and goals that "guide and drive" the work of the group over the subsequent three years, creating and detailing specific tasks for each of the TSG´s different committees, taskforces and working groups. These plans focus on the functioning and short-term activities of the TSG itself. Long-term issues regarding the conservation of the four tapir species have been addressed by the Species and National Action Plans.

The TSG has completely redesigned its website and the TSG presence on social media vehicles such as Facebook, Twitter and YouTube has been growing by the day. The TSG Facebook profiles (fan page and members page), created in 2009, have recruited over 3,000 fans and members, a large number of people who are now receiving regular information about tapirs and their conservation issues.

Success stories

- Successful staging of the Fifth International Tapir Symposium in Kuala Lumpur, Malaysia, in October 2011. This was the first time the Tapir Symposium was held in a Malayan tapir range country.
- Signing of a MOU with the Ministry of the Environment of Honduras for the implementation of their National Action Plan for Tapir Conservation. The TSG is now working to sign MOUs with other Ministries of Environment in other tapir range countries.
- During the past four years, tapirs have had significant exposure in the media and the tapir conservation cause has received a lot of attention from the general public, particularly in Brazil.

Challenges

- The biggest challenge of the TSG has been getting the attention of the relevant governmental agencies and the general public on the urgency of the tapir conservation cause.
- The biggest conservation challenge for tapirs has been securing their survival outside protected areas throughout their distributions in South and Central America and Southeast Asia.

Future Goals

- Increase of the TSG representation in all range countries in South and Central America and Southeast Asia.
- Implementation of Species Action Plans and National Action Plans for Tapir Conservation.
- Full implementation of the TSG Strategic Plan 2012–2014.
- Establishment of a tapir non-profit in the United States to help with raising funds for the TSG tapir conservation efforts.
- Complete revamp of the TSG Conservation Fund (TSGCF), increasing the TSG donor basis and running annual funding cycles.
- Update of the TSG Field Veterinary Manual, TSG Protocols for Genetic Studies, and TSG Guidelines for Re-introductions and Translocations.

Lowland tapir (*Tapirus terrestris*). © Zupanc

Facts

Chair: Patrícia Medici, PhD
Red List Authority Focal Point: Alan Shoemaker
Number of members: 120
Website: http://www.tapirs.org/

Temperate South American Plant Specialist Group

2011 Update

The Specialist Group has been successful in bringing the issue of plant conservation to as many audiences as possible, through conferences, workshops and symposia held during scientific meetings aimed at the academic community, as well as through presentations and activities offered to the general public in NGO's and schools.

The most ambitious endeavour for the Specialist Group has been to attain a preliminary categorization of the regional flora, as a contribution to Targets 2 and 3 of the Global Strategy for Plant Conservation. Members of the Specialist Group have contributed with their own data and through consultation with colleagues.

Success stories

- The preliminary evaluation of threat for more than 1,980 plant species endemic to Argentina was carried out by members of the Specialist Group with the assistance of numerous botanists and conservationists of the country. The list was adopted as the official reference for plant conservation by the Argentine Federal Government. The database can be visited at www.lista-planear.org.

Challenges

- To redefine the constitution of the Group, in order to achieve a more balanced representation of each of the political units included in it.
- To obtain the financial resources that would permit us to carry out a more instrumental action plan for the Specialist Group.

Future Goals

- To prepare preliminary lists of endangered vascular plant species for every country in the region.
- To obtain official recognition of the preliminary lists as a starting point towards a full categorization according to The IUCN Red List Criteria.

Tweedia aucaensis, an extremely restricted endemism of the southern Andes, whose threat category must be defined according to the IUCN criteria.

Facts

Chair: Carlos B. Villamil
Red List Authority Focal Point: María E. de Villalobos
Number of members: 21

Threatened Waterfowl Specialist Group

Activity Report 2009–2012

Formed in 1990, the Threatened Waterfowl Specialist Group (TWSG) is coordinated from the Wildfowl and Trust (WWT), Slimbridge, UK, as part of the IUCN SSC/Wetlands International Waterbird Network. The TWSG focuses on action planning and on the ground action for threatened waterfowl.

This triennium we finalized an AEWA action plan for the globally Endangered Red-breasted Goose (*Branta ruficollis*), which was adopted at the AEWA Meeting of Parties in May 2012. We also held a Scaly-sided Merganser (*Mergus squamatus*) action planning workshop in Vladivostok, Russia, in April 2010. The workshop was attended by 21 representatives from Russia, China, Democratic People's Republic of Korea, Republic of Korea, Taiwan, Province of China, and by the Chief Executive of the East Asian Australasian Flyway Partnership. An action plan is under production.

An emergency mission to save the Critically Endangered Madagascar Pochard (*Aythya innotata*) was mounted in 2009. Three clutches of eggs were collected from the single remaining site for the species resulting in 24 birds being reared for a conservation breeding and re-introduction programme. They first bred in 2011, producing 18 ducklings. A total of 35 Madagascar Pochard are now held in captivity, twice the number remaining in the wild. Potential re-introduction sites are currently being identified.

Non-native North American Ruddy Ducks (*Oxyura jamaicensis*) are the greatest long-term threat to the Endangered White-headed Duck (*Oxyura leucocephala*). In 2010 the TWSG reviewed the status of Ruddy Ducks in the Western Palaearctic and updated the international eradication plan on behalf of the Berne Convention. The new plan aims to eradicate the alien population by 2015.

The LIFE+ Project 'Safe Ground for Redbreasts', led by the Bulgarian Society for the Protection of Birds, aims to conserve and increase the wintering population of Red-breasted Goose, the most threatened goose species globally, by addressing he threats faced by this species, including agricultural changes, hunting and development pressures.

Facts

Chair: Dr Baz Hughes (WWT)
Regional Coordinator for Africa, Eurasia and Middle-East: Dr Andy Green
Regional Coordinator for North America: Dr Tom Rothe
Regional Assistant Coordinator for Oceania: Dr Murray Williams
Number of members: 992
Website: Threatened Waterfowl Specialist Group

Success stories

- Producing 12 action plans for seven threatened species since 1990.
- Initiating a EUR 2.7M LIFE+ project for Red-breasted Geese.
- Saving the Madagascar Pochard from extinction.
- Convincing the UK government to eradicate Ruddy Ducks to address the threat to the White-headed Duck.

Challenges

- Building capacity building and local community involvement into species action planning.
- Providing sustainable funding for action plan implementation.

Future Goals

- Continued focus on on-the-ground action.
- Produce and implement Scaly-sided Merganser action plan.
- Reverse the Red-breasted Goose decline.
- Successfully re-introduce Madagascar Pochard.
- Eradicate (wild and captive) Ruddy Ducks from Europe.


© Gerardo Garcia

Tortoise and Freshwater Turtle Specialist Group

Activity Report 2009–2012

During the period the Turtle and Freshwater Turtle Specialist Group (TFTSG) has:

1. Identified and documented threats for most of the 330 species of tortoises and freshwater turtles worldwide, including many new and updated IUCN Red List assessments.
2. Organized focused IUCN Workshops for Red Listing and Conservation Action Plans for threatened turtles and tortoises; with special focus since 2007 on Madagascar, Mexico, India, Australia, and the Mediterranean, with South America and Asia workshops in 2010–11.
3. Catalyzed conservation action needed for Critically Endangered turtles and tortoises worldwide, including funding support through the Turtle Conservation Fund for priority conservation action.
4. Produced and published the third iteration of the Top 25+ Turtles in Trouble assessment by the newly-formed Turtle Conservation Coalition, a partnership venture between TFTSG, TCF, TSA, CI, Turtle Conservancy, Wildlife Conservation Society, and San Diego Zoo Global.
5. Provided scientific support for the Turtle Survival Alliance, including coorganizing the Annual Symposium on Conservation and Biology of Turtles and Tortoises.
6. Provided consultation to CITES and the US Fish and Wildlife Service regarding international and US domestic turtle trade and the effects on turtle populations of enacted regulatory actions and unregulated commercial trade.
7. Produced the monograph project on *Conservation Biology of Freshwater Turtles and Tortoises* in conjunction with Chelonian Research Foundation, including an authoritative annual checklist of all turtles of the world by the Turtle Taxonomy Working Group of the TFTSG.

Success stories

- Implemented a broad-based conservation strategy to respond to the Asian Turtle Crisis, including integral involvement in CITES processes.
- Established the Turtle Survival Alliance (TSA), a former IUCN Task Force of the TFTSG, now a successful independent NGO focused on management and prevention of turtle extinctions through captive breeding programs.
- Established the Turtle Conservation Fund (TCF), a partnership initiative of the TFTSG, the TSA, Conservation International (CI), and the European Association of Zoos and Aquaria, which funds high priority conservation projects on Critically Endangered freshwater turtles and tortoises.

Challenges

- To generate enough funding support to continue to implement our core activity, IUCN Red Listing and to translate IUCN Red List assessments into comprehensive conservation strategies. Action to be implemented in partnership with our TFTSG membership, governments and intergovernmental agencies, and NGO partners.
- To reverse the alarming trend that, because turtles are ecosystem components highly vulnerable to exploitation, with extremely slow recovery potential, they have rapidly become one of the most severely threatened large global groups of vertebrates, with ca. 50% of their 330 species threatened with extinction.

Future Goals

- To complete The IUCN Red List assessments of all species of freshwater turtles and tortoises and to publish them all on The IUCN Red List.
- To continue to monitor, document and publish on the evolving threats, status and survival prospects of turtles and tortoises globally, and to make appropriate science-based recommendations for their conservation, including needed management measures and legislative protection.
- To continue to evaluate species threatened by international and domestic trade, and to recommend appropriate measures including possible inclusion on the CITES Appendices and support for the CITES non-detriment finding process, and to continue to engage with the US Fish and Wildlife Service and State Wildlife Agencies to appropriately regulate commercial turtle trade in the USA.
- To continue to develop, facilitate and implement effective shared strategies and collaborative partnerships and to catalyze conservationists and organizations to collaboratively and effectively address priority turtle conservation needs to prevent any further turtle extinctions worldwide.

Facts

Chair and Red List Authority Focal Point: Peter Paul van Dijk
Retiring Chair: Anders G.J. Rhodin
Number of members: 280
Website: http://www.iucn-tftsg.org/

Tuna and Billfish Specialist Group

Activity Report 2009–2012

Four IUCN Red List workshops in Lima, Taiwan, Brasilia, and Ft. Lauderdale, Florida, assessed 64 species in four families of epipelagic marine fishes: Scombridae (tunas and mackerels), Istiophoridae (billfishes), Xiphiidae (swordfish), and Coryphaenidae (dolphin fishes). Results were published in *Science* as a Policy Forum: "*High value and long life—Double jeopardy for tunas and* billfishes" (2011, vol. 333:291–292).

Previous IUCN Red List workshops on marine species concluded that all species of sea turtles, and a large proportion of marine mammals, sharks, rays, and groupers, fall into one of the threatened categories. However, two-thirds of the highly valuable and heavily fished species of tunas and billfishes fall into the category of Least Concern and only 17% are in one of the three threatened categories: Critically Endangered (2%), Endangered (2%), and Vulnerable (5%), or the next lower threat category, Near Threatened (8%). Most of the species in threatened categories have the highest value, are the largest, and have the longest generation time.

Evaluating the threat status of commercial species has revealed several problems in using The IUCN Red List Criteria. It is considered "normal" by many fishery biologists for a virgin stock to be fished down to 50% of its original spawning stock biomass in the first few years of a new fishery. If measured relatively soon after a fishery begins (within three generation lengths), this "ski jump" picture might lead to an evaluation of Critically Endangered under IUCN Red List Criteria.

Populations of many species level off after the initial reduction so they may be able to be managed sustainably, although at a much lower level than in the original situation, and be rated Least Concern.

Success stories

- Fishery scientists and conservation biologists cooperated for the final publication in *Science*.
- This is the first assessment of a commercially important marine group of fishes using The IUCN Red List Categories and Criteria.

Challenges

- Keep fishery scientists and conservationists involved despite their differing views of the dangers of species extinction.
- Persuade Regional Fishery Management Agencies (RFMOs) that catch quotas, closed areas, and other measures need to be employed and enforced to protect stocks of species in threatened and Near Threatened categories.

Future Goals

- Continually evaluate the status of stocks of species rated as threatened, Near Threatened, or Data Deficient.

Facts

Chair: Bruce B. Collette
Red List Authority Focal Point: Bruce B. Collette
Number of members: 20

Viper Specialist Group

Activity Report 2009–2012

In 2010 we formed the Viper Specialist Group as a global network of experts working for the conservation of one of our planet's most misunderstood and persecuted groups of animals. We started the organization by designating a group of officers including a Chair, Deputy Chair, Red List Authority Focal Point and Program Manager. We also developed a steering committee consisting of 40 biologists from around the world.

Our steering committee met in fall 2011 via an internet conference to begin the process of developing a strategy for the group and overall viper conservation. In August 2012 we are holding our first in-person meeting at which time we will open the group to a broader membership. In our first two years; we started developing a strategic plan; initiated multiple focal initiatives and developed communication materials, including a Facebook page. We are currently completing a website and a newsletter that will go out to the membership. We also participated in IUCN Red List assessments in China, India, and Central America and assisted with others.

Finally, we have developed focal initiatives on Eastern Diamondback Rattlesnakes (*Crotalus adamanteus*) and Timber Rattlesnakes (*Crotalus horridus*). With *C. adamanteus* we have initiated multiple research projects and convened a group of experts to develop a range wide conservation action plan. With *C. horridus* we have on-the-ground projects in multiple parts of the range and the results from these studies are going directly into conservation planning documents used by agencies. As our membership grows this summer, we plan to develop additional focal initiatives in other parts of the world. We also plan to continue our efforts working on IUCN Red List assessments and developing regional conservation action plans for vipers.

Success stories

- Our conservation planning efforts for rattlesnakes in Wyoming and Colorado are being developed and used by the US Department of the Interior Bureau of Land Management to direct energy development projects to avoid impacts to snakes.
- We have given education programs to over 1,000 people on the importance and status of vipers and seen very positive attitude changes.
- We are completing our second year of field research on Timber Rattlesnake movements and habitat selection, the results from the project will be directly used by partner organizations and agencies to prioritize land protection projects.
- We have assisted with multiple IUCN Red List assessments.
- We have brought together a group of experts to develop a range wide Conservation Action Plan for Eastern Diamondback Rattlesnakes.

Challenges

- It has been a significant challenge starting a Specialist Group with little initial funding support. However, we are beginning to pick up momentum.
- A general challenge for our group is that we are working on the conservation of one of the most feared groups of animals in the world.

Future Goals

- Hold our first in-person meeting in 2012.
- Develop a structure that includes membership, advisory committee, and officer levels.
- Expand our involvement in IUCN Red List assessments.
- Expand the website and develop a Facebook page.
- Expand our focal initiatives to include more projects outside of the USA.
- Work more closely with policy makers at all levels of government.

Facts

Chair: Dr Christopher L. Jenkins
Red List Authority Focal Point: Javan Bauder
Number of members: 40

Yellow-blotched Palm Pit Viper (*Bothriechis aurifer*). © Pete Oxford

Rattlesnake (*Crotalus adamanteus*). © Pete Oxford

Vulture Specialist Group

Activity Report 2009–2012

The IUCN SSC Vulture Specialist Group (VSG) was formally established in April 2011 and aims to advocate and create awareness of the plight of these birds and help coordinate conservation activities to their benefit.

The VSG currently has 75 members spread over five continents and focuses on both Old and New World vulture species. In addition to the two co-chairs, regional representatives from Europe and Africa have been appointed to serve on the Steering Committee of the VSG. The journal *Vulture News* is the official mouthpiece of the VSG and is currently edited by Campbell Murn.

The VSG hosted the Pan-African Vulture Summit (PAVS), held at Ilkeliani Camp in the Masai Mara, Kenya from 16–20 April 2012 which saw more than 40 vulture research and conservation specialists from across the continent convening to discuss the challenge of vulture conservation in Africa. This resulted in the drafting of a Pan-African Conservation Strategy which is arguably the first coordinated attempt to review and pull together the actions required on this scale and a top priority behind the establishment of the Group. This initiative will be developed further at the Pan-African Ornithological Congress in Tanzania in October 2012 by the African Steering Committee elected and appointed at PAVS.

In Asia, the VSG endorses the activities of the Saving Asia's Vultures (SAVE) a consortium of 10 organizations established in February 2011, which met again in Haryana, India in November 2011. A highly significant meeting was held in New Delhi, India in May 2012, coordinated by IUCN and the Indian Government, where the governments of India, Pakistan, Nepal and Bangladesh joined with many of the SAVE Partner organizations and the Vulture Specialists Group co-chairs. There were two very important outputs from the meeting: a powerful Regional Declaration highlighting the actions required was signed by all four countries, and the foundations were laid for a major regional Global Environment Facility (GEF) vultures funding proposal.

The VSG also supports the International Vulture Awareness Day which was established in 2009 and has become an annual event aiming to promote awareness and to educate the public about the plight of vultures and the need to conserve them and their habitats. The event was observed in 52 countries and by 144 organizations globally in 2011.

Facts

Co-chairs: André Botha and Chris Bowden

Number of members: 65

Success stories

- The Group has established a strong membership representing coverage of a considerable part of the range of Old and New World vultures with representation on five continents.
- The first Pan-African Vulture Summit is being held in Kenya in April 2012.

Challenges

- Vultures worldwide are under threat from a range of factors, mostly induced by anthropogenic factors that have led to large-scale declines in populations, particularly in Asia where three Gyps species are faced with extinction due to impact of veterinary use of the non-steroidal anti-inflammatory drug (NSAID), diclofenac.
- In Africa, populations of several species have declined or been extirpated in parts of their historical range over the last 30 years and are often only found in protected areas. In addition to large-scale transformation of natural habitat resulting in reduced availability of food and breeding sites, factors such as direct persecution, poisoning, collisions with and electrocution by electricity infrastructure and the trade in vultures, either as live birds or for their body parts, have been responsible for this.

Future Goals

- The Vulture Specialist Group will aim to advocate and create greater awareness of the plight of these birds and coordinate effective conservation activities to their benefit.

© André Botha

Wild Pig Specialist Group

2011 Update

– First batch releases of captive-bred pygmy hogs (*Porcula salvania*) in second re-introduction site (i.e. Orang National Park, north-west Assam).
– Re-introduction projects for a range of Critically Endangered West Visayan endemic species – including the Visayan Warty Pigs of both Negros Island (*Sus cebifrons negrinus*) and Panay Island formally approved and initiated.
– Continued development of a conservation breeding and recovery programme for Javan Warty Pig (*S. v. verrucosus*) which is listed as Endangered on The IUCN Red List.
– Distribution surveys and comparative ecological studies of Desert Warthogs (*Phacochoerus aethiopicus delameri*) and Common Warthogs (*P. africanus*) sustained and expanded in areas of sympatry in north-east Africa.
– Development of new protected area models in highest biodiversity conservation regions of the Philippines and elsewhere, which are strongly focused on longer-term and financial sustainable management mechanisms local communities and other key (LGU and NGO) stakeholders.

Success stories

- Continued survival, successful breeding and range expansions recorded amongst released first, second and third generation captive-bred Pygmy Hogs (*Porcula salvania*) in Suklaphanta Wildlife Sanctuary (north-west Assam).
- Preliminary studies reveal greater levels of genetic diversity amongst Philippine pigs than formerly supposed.
- Successful re-organization of the "Pigs, Peccaries and Hippo Specialist Group" into three separate groups, enabling more regionally-based collaborations with other agencies (including other taxon-based Specialist Groups) and sustaining production of the (former PPHSG) newsletter, *Suiform Soundings*, serving all three Specialist Groups.

Challenges

- Realistically ensure sustainment of practical and effective conservation objectives and outcomes, which are almost always long-term, if not indefinite.
- Enable effective monitoring of released and re-introduced wild pigs; wherein external tags are mostly unsuitable and first trials of implanted tags (in pygmy hogs) proved hugely disappointing.
- Meet well-intended, but none-the-less stifling and often counter-productive, bureaucratic or legislative requirements designed for other purposes.
- Secure adequate study specimens to enable essential systematic studies.

Future Goals

- Update, publish and implement original (i.e. 1993) Action Plan and, hence, salient conservation management interventions and, or, recommendations per all most threatened taxa.
- Facilitate applied systematic studies aimed at clarifying identities and relationships of various known or likely most threatened taxa, including at least one new species (and several new subspecies) of Philippine (and other?) wild pigs.
- Identify vacant, and realistically protectable, habitats for re-introduced stocks of several most threatened species.

Facts

Chair: William Oliver
Vice-chair and Regional Coordinator for South and Southeast Asia: Erik Meijaard
Vice-chair for Africa and the Middle-East: Tom Butynski
Regional Coordinator for Africa and the Middle-East: Yvonne de Jonge
Red List Authority Focal Point: Kristen Leus
Website: http://data.iucn.org/themes/ssc/sgs/pphsg/home.htm

Wolf Specialist Group

Activity Report 2009–2012

The WSG functions via correspondence among its worldwide membership and occasional international symposia, with members in their individual positions adhering to the principles of the Group's "Manifesto on Wolf Conservation" in their professional capacities. Thus, in 2011, individual members have:

– Helped develop a revised Mexican Wolf Recovery Plan.
– Critiqued the Wyoming Wolf Management Plan.
– Critiqued both the USFWS wolf delisting proposal for Wyoming and for the Great Lakes area.
– Published several scientific articles on wolf conservation.
– Promoted public education about wolves via the International Wolf Center magazine, museum and website (www.wolf.org).

This work addresses CBD targets 3 and 4.

Success stories

- Wolf Recovery in the Northern Rocky Mountains, USA and sustainable wolf management returned to Idaho and Montana.
- Wolf Recovery in the United States Great Lakes States and final decision on removal from federal Endangered Species List.
- Re-introduction of Mexican wolves by Mexican government.

Challenges

- Funding for meetings.
- Recommending and implementing sustainable management that satisfies two opposing extreme public views of wolves.
- Developing non-lethal methods of preventing depredation on livestock.

Future Goals

- Improving public education about wolves.
- Promoting wider distribution of wolves in key areas of the United States, Mexico, and Eurasia.
- Developing non-lethal methods of preventing depredation on livestock.
- International Wolf Symposium.

Facts

Co-chairs: L. David Mech and Luigi Boitani
Red List Authority Focal Point: Mike Hoffmann
Number of members: 17
Website: http://wolfspecialistgroup.org/

Grey wolf (*Canis lupus*). © John & Karen Hollingsworth/USFWS

Woodcock and Snipe Specialist Group

Activity Report 2009–2012

The main event of the 2009–2012 period was the organization of the 7th Woodcock and Snipe Workshop in Saint-Petersburg, Russia, May 2011. This meeting was organized by the Office National de la Chasse et de la Faune Sauvage with the financial help of the Embassy of France in Russia and the Russian Association of Hunters and Fishermen.

About 50 members of the Woodcock and Snipe Specialist Group participated in the Workshop in order to review the knowledge on these game species. Twelve countries were represented: Germany, Denmark, United Kingdom, Portugal, Russia, Romania, Ukraine, Lithuania, Switzerland, Estonia, Hungary and France. Due to the venue location, the Russian biologists formed a third of participants. In total, 22 communications were presented and the proportion between Woodcock and Snipe was well balanced. Several topics were taken up; distribution, migration, morphology, genetics, monitoring and hunting management.

The Woodcock and Snipe Specialist Group (WSSG) was also asked by national organizations for their expertise on Eurasian Woodcock (*Scolopax rusticola*) hunting regulation changes in Norway and Switzerland and by the European Commission about the opportunity of a European management plan for Jack Snipe (*Lymnocryptes minimus*).

Animation of the WSSG was ensured by the publication of an annual Newsletter and by the on-line availability of the whole WSSG Newsletters collection.

Success stories

- Development of abundance prediction models to ensure Eurasian Woodcock sustainable use.
- Setting of a national Eurasian Woodcock annual bag limit per hunter in France.
- Taking Eurasian Woodcock bag regulation measures in France and Russia following a strong drought in European Russia in summer 2010.

Challenges

- Improving knowledge on the conservation status of African, South American and Asian woodcock and snipe species.
- Maintaining suitable habitats for Snipe species all over the World (facing wetland loss) and for Woodcock species in Asia (facing deforestation).

Future Goals

- Organizing a monitoring of Common Snipe populations in European Russia.
- Obtaining precise information on woodcock and snipe hunting bags in Europe.

Facts

Chair: Yves Ferrand

Number of members: 55

Eurasian Woodcock (*Scolopax rusticola*). © F. Conort/ONCFS

Bird Red List Authority

Activity Report 2009-2012

- The latest four-yearly comprehensive IUCN Red List update was completed and released in June 2012, including reassessment of all 10,064 recognised bird species with extensive update of factsheets for threatened and Near Threatened species based on hundreds of new published and unpublished sources, and consultation with hundreds of species experts. The 2012 update provides the latest datapoint for the bird Red List Index.
- All bird data have been transferred into the online IUCN Species Information Service, with BirdLife co-managing the database and leading on numerous significant improvements in functionality and usability.
- A full spatial dataset of species distributions has been released for the first time, with range maps completed for all bird species and displayed online, with shapefiles also available to download.
- Bird IUCN Red List data has fed into cutting edge analyses of progress towards biodiversity targets, invasive species, the impact of conservation on the world's vertebrates, indicators of recent global biodiversity declines, and threat from Amazonian deforestation.
- The Bird Red List Index has been adopted as a measure to report on indicators for a number of key policy mechanisms including UN Millennium Development Goals, Convention on Biological Diversity, and Ramsar Convention on Wetlands and Convention on Migratory Species.

Success stories

- IUCN Red List assessments carried out by BirdLife define the list of Critically Endangered and Endangered birds and the actions needed for them. These provide the scientific basis of BirdLife's Preventing Extinctions Programme, which is taking action for over 60 Critically Endangered (CR) and Endangered (EN) species through appointing Species Guardians to implement the action, supported by Species Champions to provide the resources.
- Over 11,000 Important Bird Areas – key sites for conservation of the world's birds – identified globally, and being monitored and conserved by the BirdLife Partnership and others.

Challenges

- Climate change presents an increasingly important threat that requires concerted policy action to tackle.
- Birds are perceived as well-funded, but require urgent resources for their conservation.

Future Goals

- Continue to reassess all bird species every four years.
- Take action for as many CR and EN species as possible, supported by broader scale policy work to improve the conservation status of all bird species.
- Safeguard the world's Important Bird Areas.
- Release the first volume of a new taxonomic checklist for birds (in association with Lynx Edicions).
- Estimate the costs of downlisting all the world's birds to non-threatened status.

Facts

Chair: Stuart Butchart
Number of members: 65 (plus 2,297 contributors to the latest IUCN Red List assessments for birds)

Hooded Grebe (*Podiceps gallardoi*). © S. Imberti

Caucasus Plant Red List Authority

2011 Update

The project *Coordination and Development of Plant Red List Assessments for the Caucasus Biodiversity Hotspot* resulted in the first comprehensive list of plants endemic to the Caucasus region (approximately 2,950 species and subspecies) with IUCN Red List assessments for around 1,200 taxa. *"The Red List of Endemic Plants of the Caucasus Region"* is being prepared for publication in 2012 at Missouri Botanical Garden Press. Assessments of approximately 800 taxa were submitted to The IUCN Red List Unit.

Conservation assessment of plants endemic to the Caucasus hotspots, supports Target 2 of the CBD Global Strategy for Plant Conservation.

Success stories

- Publication of "*The Red List of Endemic Plants of the Caucasus Region*" that will contain a comprehensive overview of the distribution and conservation status of the endemic plant species of the Caucasus region (species occurring in one to three countries of the Hotspot) based on current knowledge.
- Plant Conservation Strategy for the Caucasus will also be published.

Challenges

- Infrastructure and land development throughout the region is the major challenge to the threatened Caucasus endemic plant taxa not yet protected at species or habitat level.

Future Goals

- Gap analysis with respect to the threatened taxa presence on the protected areas and continuation of the process of identification of Important Plant Areas started in Armenia and Georgia are planned for 2012.
- IPA process responds to Target 5 of the Global Strategy for Plant Conservation.

Facts

Focal Point: Prof. Dr George Nakhutsrishvili
Number of members: 43

Iris iberica Hoffm. © Sh. Sikharulidze

Central Africa Plant Red List Authority

2011 Update

Onana, J.M. and Cheek, M. (2011). *Red Data book of the flowering Plants of Cameroon: IUCN Global Red List Assessments.*

Central Africa Red Data Book for plants was produced this year. Eight hundred and fifteen species are listed as threatened under IUCN Categories and Criteria, most assessed for the first time. Numerous species occur beyond Cameroon and so the assessments are also relevant to Nigeria, Gabon, and as far as Guinea and east to Congo and Rwanda-Burundi.

Success stories

- Elaboration of the first Red Data book for plants for Central Africa.

Challenges

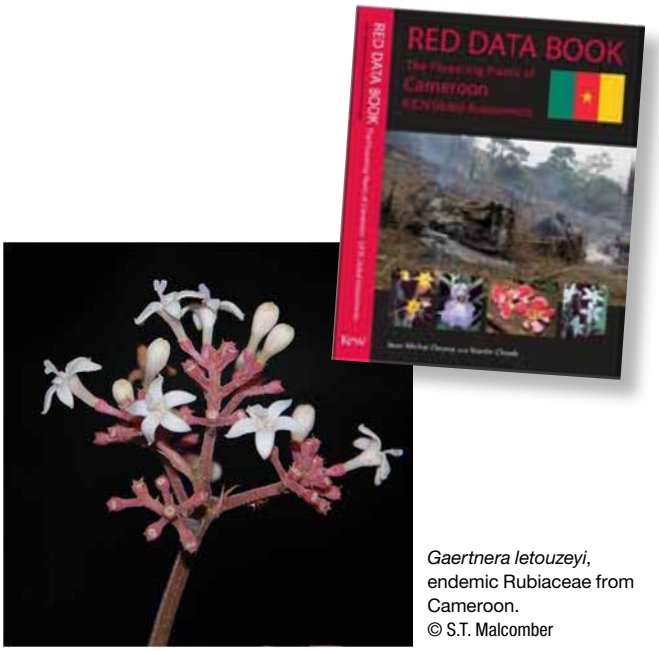
- Scarcity of funds to conduct Red List assessment workshops.
- RLA members are very busy and have little time to dedicate to IUCN Red Listing.
- Data Deficiency for most of the plant species in the region.
- Lack of funds to collect additional research on targeted species.

Future Goals

- Red Listing of coastal species in Central Africa: training, evaluation, and environmental impact assessments. The project will work with governments to promote the usage of Red Listed species in EIA work. As a result, endangered species will be recognised and protected during development, using the highest level scientific analysis available.

Facts

Focal Point: David Kenfack, PhD
Number of members: 16



Gaertnera letouzeyi, endemic Rubiaceae from Cameroon.
© S.T. Malcomber

East African Plant Red List Authority

2011 Update

– IUCN Red Listing workshop in October 2011, at which over 200 taxa were assessed under IUCN Categories and Criteria.
– Funding secured through Mohamed bin Zayed (MBZ) Fund for workshop in 2012.

Success stories

- Since inception we have held five workshops and assessed over 1,000 taxa from the EArc and EACF hotspot of Kenya and Tanzania. We have developed a process that all members are comfortable with and we are now beginning to include taxa from the rest of Eastern Africa.

Challenges

- Funding.
- Increasing world and host government's concern for threatened plants to the same level as that for megafauna.

Future Goals

Expand the group.

- Find secure funding both for workshops and field activities.
- Improve The IUCN Red List system so as to minimize the delay between assessments and listing.
- Increase awareness in the region on threatened plants.
- Ensure that this leads to action and policy changes within member countries e.g., the inclusion of ALL threatened species on the schedules of the new Kenyan Wildlife Act.

Facts

Chair: Quentin Luke
Number of members: 15

Hawkfish and Sandperch Red List Authority

2011 Update

– Review of species in the Cirrhitidae (hawkfishes) and Pinguipedidae (sandperches) families to determine gaps in taxonomic, bio-geographic and taxonomic knowledge.
– Surveys (field and literature) of geographic and ecological distributions of most species of hawkfishes and shallow-water dwelling sandperches.
– Delivery of a paper on climate change effects and reef fishes, including coral-dwelling hawkfishes, at a special symposium held at the 22nd Pacific Science Congress, Kuala Lumpur.
– Outputs of both the review and survey efforts will, with the addition of exploitation and climate change data, be used in determinations of conservation status and threats that can illustrate threats to and corresponding effects upon reef systems as a whole.

Success stories

- Contribution of chapters to a new book series on Western Indian Ocean fishes that will increase knowledge of biodiversity and conservation status of hawkfishes and sandperches.
- Contribution towards understanding of phylogenetic and phylogeographic relationships of hawkfishes that will set basis for a full-scale assessment of family.

Challenges

- Scarcity of data on poorly known hawkfish and sandperch species, particularly deeper-dwelling sandperches.
- Scarcity of data on fisheries of hawkfishes and sandperches exploitation.
- Limited understanding of conservation threats posed to some species by ocean warming and acidification.

Future Goals

- Collection of fishery data (commercial, ornamental, and incidental commercial and sport fishing) to understand levels of exploitation.
- Increase understanding of changes in habitat and adaptation to those changes as a consequence of climate change effects that affect viability of hawkfishes and sandperches in reef systems.
- IUCN Red List Assessment of all hawkfish species.
- IUCN Red List Assessment of most shallow water sandperch species.

Facts
Chair: Dr Terry J. Donaldson
Number of members: 5

North American Plant Red List Authority

2011 Update

– In 2011 we co-hosted an IUCN Red Listing workshop for assessing south-eastern USA and Caribbean cacti. This activity succeeded in producing and reviewing IUCN Red List assessments for 108 cactus species.
– Assessed the vulnerability to climate change of 117 species of south-western USA cacti.
– Cactus assessments are influencing government decisions on species to use in seed banking and restoration efforts, as well as where to site alternative energy projects in desert regions.

Success stories

- NatureServe and partners have assessed nearly all North American plants for conservation status, and these assessments have been incorporated into numerous US and Canadian government agency policies.
- A report by NatureServe, "*Hidden in Plain Sight*", is inspiring the addition of plants to US State Wildlife Action Plans.

Challenges

- Many government agencies undervalue plants in their conservation initiatives.
- Small distributions, habitat loss, climate change, and invasive species are the greatest threats to North American plants.
- IUCN has limited capacity to provide SIS support for non-priority species groups.

Future Goals

- Update older NatureServe conservation status assessments and convert as many as possible to IUCN Red List format. NatureServe has used its status assessment methodology to evaluate 32,000 North American plants. The methodology is largely interoperable with The IUCN Red List.
- Increase the detail of distribution maps available for North American plants.
- Contribute NatureServe assessments to global compilation in support of Target 2 of the Global Strategy for Plant Conservation.

Facts
Chair: Bruce E. Young

Pediocactus bradyi, a threatened North American cactus. © J. Spence

Sciaenidae Red List Authority

Activity Report 2009–2012

The Sciaenidae Red List Authority conducted the first "IUCN Global and Regional Sciaenidae Workshop", 9–13 November 2009, Manaus, Brazil. Over 50 specialists and facilitators from 25 countries completed 270 species (95%) of total sciaenid species. The Brazilian regional Sciaenidae Assessment included 34 marine and 18 freshwater species that have been completed and revised.

We also expanded the goal of the IUCN SSC Sciaenidae Red List Authority by establishing a Global Sciaenidae Conservation Network (GSCN) to further research and education efforts on Sciaenidae conservation. The National Museum of Marine Biology and Aquarium (NMMBA) in Taiwan has offered a base to host the GSCN; provide working space; curate the worldwide collection of Sciaenidae; and establish a comprehensive database for sustainable research purposes. NMMBA also invited Dr N.L. Chao as research associate to coordinate the GSCN program. A milestone local workshop on GSCN is organized by NMMBA, 28–30 September 2012, to lay a base on logistics, funding and actions on biological conservation of Sciaenidae.

To finalize the first global assessment of Sciaenidae, priorities include a thorough review of the Indo-Pacific and West African Sciaenidae species assessed during the 2009 workshop. A few well-known species of North American Sciaenidae were not formally assessed and still need completing.

In 2012, Dr Min Liu was appointed as Co-focal Point of the Sciaenidae Red List Authority, and participated in the IUCN SSC Chair's meeting in Abu Dhabi.

Field trips and fish specimens collected by members have enriched the sciaenid collection at the NMMBA, which now has 150 species, 400 lots of tissue samples and 200 lots otoliths. The Brazilian Regional Sciaenidae RLA includes 52 species (24 marine, 18 freshwater); another 10 varieties of species lack of proper description. Population trends of small non-target species and catches from artisanal fisheries are difficult to estimate. Good taxonomy is essential to IUCN Red List Assessments and new methodologies need to be developed for more accurate estimates of population trends.

Acknowledgements: Forestry Bureau (CoA) -Taiwan International Conservation Fund, Taipei; GMSA (Global Marine Species Assessment), Norfolk, USA; ICMBio (Instituto Chico Mendes de Coservação da Biodiversidade), Ministério do Meio Ambiente, Braíslia; Bio-Amazonia Conservation International, Baltimore, USA; Field work supported by: Dr C.G. Zhang and Dr Y.H. Zhao, Institute of Zoology, Sinica Academica, China; Dr B. Ferreira, Universidade Federal de Pernambuco, Tamandaré, Brazil; Dr H. Espinosa, Universidad Nacional Autonomo de México; Dr C.W. Chang and Dr S.C. Ho, National Museum of Marine Biology and Aquarium; Dr N.V. Quan, Institute of fisheries, Haiphong Vietnam; Dr S. Janekitkarn, Bangkok, Thailand.

Facts

Co-focal Points: Ning Labbish Chao and Min Liu
Number of members: 55

Success stories

- Globally, 270 of 284 sciaenid fishes (95%) have been assessed under IUCN Red List Assessment criteria of which 99 species are included in The IUCN Red List of Threatened Species™.
- The regional assessment of Brazilian Sciaenidae, including 52 valid species (34 marine; 18 freshwater), has been thoroughly revised for final publication.
- A Global Sciaenidae specimen collection at NMMBA now includes around 150 species and around 400 tissue and otolith samples of 100 species are readily available to global users.
- A regional workshop on Chinese sciaenid conservation and GSCN platform is planned 28–30 September 2012 at the National Museum of Marine Biology & Aquarium (NMMBA), Taiwan.

Challenges

- Population status based on fishery statistics of many species is hard to obtain, especially as a large number of species are harvested by artisan fisheries from local communities and as bycatch of coastal fisheries.
- Restrictions from local governments often make information and specimen collecting or exchange difficult.

Future Goals

- The Global Sciaenidae Conservation Network (GSCN), hosted by NMMBA, Taiwan will serve as an information clearing house for public interest.
- Complete a global Sciaenidae specimen collection, including tissue samples, otoliths, sound tracks and references.
- Support for national Red List Assessment of Sciaenidae; organize regional workshops; and prepare the second global Sciaenidae IUCN Red List reassessment.

N.L. Chao holding a *Micripogonias* n. sp. from Lago Budi, Chile.

Seagrass Red List Authority

2011 Update

– Completion of IUCN Red List assessments of all the world's seagrass species.
– Publication of a paper presenting the seagrass IUCN Red List process and results: Short, F.T., *et al.* 2011. Extinction Risk Assessment of the World's Seagrass Species. *Biological Conservation* 144: 1961–1971.
– Worked with other members of the Marine Conservation Sub-Committee (MCSC) to create a review and publication of joint species risks due to the Gulf of Mexico oil spill; Campagna, C., *et al*. 2011. Gulf of Mexico oil blowout increases risks to globally threatened species. *BioScience* 61:393–397.
– Incorporation of seagrass IUCN Red List results in a major publication; Hoffmann, M., *et al*. 2010. The Impact of Conservation on the Status of the World's Vertebrates. *Science* 330:1503–1509.

Success stories

- For the first time, all the world's 72 seagrass species have been systematically reviewed by expert panels for extinction risk assessment and posted on The IUCN Red List data base.
- The awareness of seagrass as an important species group and crucial marine habitat has been elevated.

Challenges

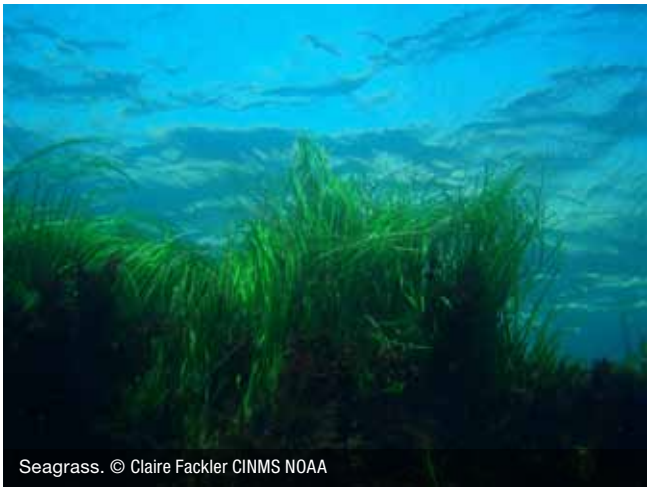
- Seagrass species are in the midst of being genetically assessed and our understanding of various species groups is in flux as a result.
- Human impacts in coastal watersheds worldwide affect seagrass health and extent and severely stress several of our most threatened species.

Future Goals

- Complete mapping of seagrass habitat by species worldwide.
- Investigate current status of most threatened seagrass species.
- Undertake a genetic analysis of several questioned species.
- Identify the role of various seagrass species in countering ocean acidification.
- Investigate the role of seagrass species in supporting animal diversity and food security.
- Increase protection of seagrass habitats particularly areas of high biodiversity and threatened and endangered species.

Facts

Chair: Frederick T. Short
Number of members: 28



Seagrass. © Claire Fackler CINMS NOAA

Seahorse, Pipefish and Stickleback Red List Authority

Activity Report 2009–2012

This quadrennium saw steady progress without spectacular gains for the Seahorse, Pipefish and Stickleback Red List Authority (RLA). We assessed 54 species, of which two-thirds were assessed for the first time. The majority of newly assessed species were pipefish, which helped boost this previously under-represented group. Most of the reassessed species remained in the same threat category as before, except for three seahorses which were moved from Data Deficient to Vulnerable.

The majority of assessed species belonged to the largest family in the group, the Syngnathidae, and included both pipefishes and seahorses. Overall, seahorses (*Hippocampus* spp) are the best represented taxon on The IUCN Red List, and so the RLA is focusing on increasing representation from other families in the future.

Members of the RLA participated in two very successful international symposia in 2011; one on the topic of Syngnathid biology and one on Husbandry, Management and Conservation of Syngnathids. The Syngnathid Forum, a Facebook group, has been setup with the aim of providing a platform for the small yet dispersed syngnathid research community to continue to keep in touch.

Members of the RLA were also very active in conservation endeavours for Syngnathids and close relatives. These were wide ranging and included a review of CITES trade data by Project Seahorse and a paper by the Chair and co-authors on the conservation and management of seahorses and other Syngnathidae for the Journal of Fish Biology This and other key papers and reports on this taxon can be found at http://seahorse.fisheries.ubc.ca/research.

Success stories

- Chair involved in first IUCN Red Listing of marine fish species, and in revising the criteria during the ensuing discussion.
- All seahorses had been assessed, until more species were described.
- IUCN Red List training at the first Syngnathid (seahorse, pipefish and seadragon) Biology International Symposium.
- Held Husbandry, Management and Conservation of Syngnathids Symposium.

Challenges

- RLA covers around 275 species but very few professionals know these taxa and even fewer are engaged in conservation.
- Two-thirds of species have not yet been assessed and half of the assessed species are Data Deficient.
- Taxonomy of the group remains problematic.

Future Goals

- Develop a one-stop web resource for seahorse identification.
- Expand IUCN Red Listing training and formalise RLA membership.
- Begin focusing on taxonomic groups within our RLA that are under-represented on The IUCN Red List.

Facts

Chair: Dr Amanda Vincent
Programme Officer: Stefan Wiswedel
Number of members: 15 plus many more contributors
Website: http://seahorse.fisheries.ubc.ca/

Two Common Seahorses (*Hippocampus kuda*). Photo taken in Negros, Philippines. © Balnis Bettina/GuyLian Seahorses of the World 2010

Snake and Lizard Red List Authority

Activity Report 2009–2012

The Snake and Lizard Red List Authority was established in 2011 because increased donor interest in supporting major workshops for IUCN's parallel Global Reptile Assessment required the development of a stand-alone Red List Authority, exclusively focused on the review and preparation for submission of IUCN Red List accounts for the majority of reptile species not covered by existing reptile Specialist Groups.

This Red List Authority has already approved for submission almost 900 reptile IUCN Red List accounts (approximately 10% of the species within the Red List Authority's remit), the majority of which have now been published. These include all species endemic to Madagascar, the snakes of China and Southeast Asia and the reptiles of the Arabian Peninsula. Reviews are ongoing for the reptiles of southern India, West Africa and Oceania.

We are also in the process of organizing assessment projects for several small territories, and for updating existing assessment projects as new information becomes available or taxonomic changes occur. Already completed projects include the endemic reptiles of the Comoros archipelago and from Socotra. Ongoing projects include assessments of the reptiles of the Mascarene Islands (Mauritius, Réunion and their satellite islands), and of recently-described species from the Philippines.

The absence of a global taxonomic standard for reptiles is a major challenge for The IUCN Red List, and the Red List Authority is in the process of developing a standardised IUCN taxonomy for this group, as well as coordinating the development of species lists used in assessment workshops. This process will be facilitated by the planned regionalization of the Red List Authority; regional focal points will be tasked with supporting projects in, and managing updates to, assessments in their own regions (focal points already identified for the USA, Brazil and Indonesia).

Success stories

- Review and submission of 865 accounts to The IUCN Red List in 2011 and 2012, 755 of which have now been published.
- These include major Global Reptile Assessment projects on the reptiles of Madagascar, the snakes of China and Southeast Asia, and the reptiles of the Arabian Peninsula.
- Organization and completion of IUCN Red List assessments for the endemic reptiles of the Comoros archipelago.

Challenges

- Developing a standardised taxonomic scheme for the world's 8,000–9,000 species of lizards and snakes, a group without a consensus global taxonomy, whilst ensuring consistency with existing IUCN Red List entries.
- Ensuring the incorporation of new discoveries and taxonomic changes into The IUCN Red List following Global Reptile Assessment workshops.

Future Goals

- Continue to support Global Reptile Assessments through peer-review and submission of IUCN Red List accounts.
- Identify and restructure the Red List Authority around suitable regional focal points, facilitating updates and reassessments in light of taxonomic changes and new information.

Mexican parrot snake (*Leptophis mexicanus*), Palo Verde National Park, Costa Rica, 2012. © Philip Bowles

Facts

Chair: Philip Bowles
Number of members: 16

Terrestrial and Freshwater Invertebrate Red List Authority

2011 Update

– Development of priorities for terrestrial and freshwater invertebrate IUCN Red Listing.
– Establishment of a network of specialists willing to review assessments.

Success stories

- Development of a priority list.
- Support for the establishment of new invertebrate Specialist Groups.

Challenges

- The sheer number of species covered by the Red List Authority.
- The limited number of specialists active in invertebrate IUCN Red List assessment.
- Suspicion of The IUCN Red List process in the wider invertebrate biology community.
- Lack of resources for Terrestrial and Freshwater Invertebrate Red List Authority (TIRLA) activities.

Future Goals

- The primary aim of the TIRLA is to increase the number of assessed invertebrates.
- A major step in achieving the primary aim will be to reduce the number of species covered by TIRLA though the creation of new Specialist Groups.

Facts

Red List Authority Focal Point: Justin Gerlach
Number of members: 71

Conservation Breeding Specialist Group

Activity Report 2009-2012

Using expert facilitation and the application of science-based tools, the Conservation Breeding Specialist Group (CBSG) works collaboratively to save endangered species by providing species conservation planning expertise to governments, Specialist Groups, zoos and aquariums, and other wildlife organizations.

During the past quadrennium CBSG engaged in numerous and diverse activities that promote effective species conservation:

- Conducted 110 workshops, including Population and Habitat Viability Assessments, species conservation planning workshops, trainings, and tool development meetings.
- Produced 37 documents including conservation plans, workshop reports, and published articles.
- Participated on the Species Conservation Planning (SCP) Task Force to develop improved SCP processes and tools, with continued work as part of the SCP Tools Sub-Group.
- Assessed and initiated use of virtual collaboration tools for species planning activities.
- Supported further development of Disease Risk Assessment and disease modelling tools to address wildlife disease issues.
- Initiated the application of single and multi-species models to assess invasive exotic and feral domestic species and their impact on the viability of threatened native species.
- Promoted species conservation planning that integrates *in situ* and *ex situ* management approaches for improved conservation benefit (One Plan Approach).
- Coordinated revision of IUCN guidelines for the use of *ex situ* management for species conservation.
- Expanded modelling tools for population viability analysis and population management, including software tools to aid in developing management strategies for meta-populations across the wild-intensive management continuum.
- Brought international zoo and aquarium partners together to address the sustainability of intensively managed populations for conservation.
- Led activities that addressed issues important to *ex situ* population viability, including mate choice, reproductive success, species prioritization, and genome resource banking.
- Collaborated with WAZA and regional zoo associations to promote global *ex situ* population management. Conducted training activities in Asia to promote integrated species conservation planning, reduce human-wildlife conflict, and build *ex situ* population management capacity.

Facts

Chair: Dr Onnie Byers
Number of members: 352
Website: http://www.cbsg.org/cbsg/

Success stories

- Maintaining over 30 years of sustained support and increasing productivity.
- Providing conservation planning processes and tools for use by SSC and others.
- Collaboration with taxonomic Specialist Groups including Primate, Cat, Wild Cattle, Antelope, Small Carnivore and others.
- Instigating the Disease Risk Assessment initiative – the first formal collaboration between four disciplinary Specialist Groups: Wildlife Health Specialist Group, Invasive Species Specialist Group, Re-introduction Specialist Group and CBSG.

Challenges

- Integrating and maximizing the effectiveness of CBSG's most valuable resource – our nine Regional Networks.
- Increasing collaborative activities within the SSC and with other Commissions, in keeping with IUCN's "One Programme Approach".
- Dedicating time to communicate our experiences and results with the SSC community.

Future Goals

- Assisting taxonomic Specialist Groups with their SCP needs as requested.
- Promoting and implementing a One Plan Approach to species conservation planning, explicitly integrating intensively managed populations with their wild counterparts.
- Broadening our network to include experts (including taxonomic Specialist Group experts) from across the wild-intensive population management continuum.
- Advancing SSC's contribution to achieving CBD targets 12 and 19 through our species conservation planning work and achieving target 9 through projects for species threatened by invasives, as test cases for CBSG meta-model tools.

Invasive Species Specialist Group

Activity Report 2009-2012

The Invasive Species Specialist Group (ISSG) was established in 1994 and is dedicated to raising awareness of invasive alien species (IAS) issues. The three core activity areas of the ISSG are policy and technical advice, information exchange and networking. The ISSG has provided technical and scientific advice to the IUCN Global Species Programme and The IUCN Red List, IUCN members, governments' agencies, conservation practitioners, and supported the implementation of multilateral environmental agreements.

ISSG has actively networked with many other SSC Specialist Groups, such as the Re-introduction Specialist Group on the revision of the Guidelines on Conservation Translocations, and the Wildlife Health Specialist Group on the ongoing development of the IUCN Guide to Wildlife Disease Risk Analysis.

ISSG has actively participated and contributed to IUCN positions at the CBD CoP in Nagoya, SBSTTA 15 and 16, and is participating with the Liaison Group on IAS within CBD. ISSG members have been active in the development of an IUCN policy paper on IAS for the Rio+20 Summit and the upcoming COP11.

In Europe, the ISSG has regularly contributed to the development and implementation of measures related to IAS, working with major institutions and key stakeholders, including the European Commission, the European Environment Agency (EEA) and the Bern Convention (collaborating in the development of several codes of conduct and guidelines focused on major pathways of introduction).

The ISSG has developed and enhanced its information resources including the Global Invasive Species Database (GISD), and Island Biodiversity and Invasive Species Database (IBIS); contributed to other initiatives such as the development of DAISIE (Delivering Alien Invasive Species Inventories for Europe), as well as the establishment of the new East and South European Network on IAS (ESENIAS).

ISSG produces the newsletter *Aliens-The Invasive Species Bulletin*; operates an active list service called Aliens-L with over 1,200 members, as well as an information support service known as Aliens-Referral.

Success stories

- ISSG is recognized as a premier provider of global IAS data and information: its resources, including the GISD and the recently developed IBIS, are recognized as two of several IUCN flagship knowledge products particularly relevant to the work of IPBES.
- ISSG has provided continued support to the European Commission (EC) on its work in the development of a dedicated legislative instrument on IAS. The EC has committed to present a draft Directive by the end of 2012.
- ISSG with the IUCN and Invasive Species Initiative signed a MOC with the CBD during SBSTTA-15 committing support to achieve progress towards Aichi Target 9.

Challenges

- Encourage and mainstream IAS issues so they are addressed in an ecosystem context.
- Increase of public awareness on the multifaceted impacts of IAS.
- Development of global regulatory approaches to prevent and mitigate impacts of biological invasions, including a global early warning and rapid response system.

Future Goals

- Improve the functionality of the ISSG online resources and enhance inter-operability with The IUCN Red List, and other relevant global databases.
- Develop the Global Register of Introduced and Invasive Species (GRIIS) as a flagship tool for early warning and rapid response.
- Develop the Compendium of Pathways of Spread of Invasive Species as a decision support tool.
- Continued support to the EU in developing the European legislation on IAS and other relevant organizations such as the WTO, FAO, OIE.
- Catalyze the development of effective IAS Learning Networks especially in island regions.

American bullfrog (*Rana catesbeiana*). © R. Scalera

Facts

Chair: Piero Genovesi
Programme Officer: Riccardo Scalera
Manager Information Services: Shyama Pagad
Number of members: 196
Website: http://www.issg.org/

Large Carnivore Initiative for Europe Specialist Group

Activity Report 2009-2012

In 2008 the Large Carnivore Initiative for Europe Specialist Group (LCIE) presented to a meeting of all European countries convened by the European Commission, the "Guidelines for population level management plans", an innovative approach to large carnivore management based on the recognition that most carnivore populations in Europe are transboundary. In the following years the Guidelines have been formally adopted by the European Commission and the Bern Convention. Based on the guidelines, the LCIE has subsequently commented on the controversial management of wolves in Sweden and has taken position on the debate about the issue of favourable conservation status. The LCIE is committed to support the implementation of the guidelines across Europe and especially in Scandinavia and the Alps.

In May 2010, we held our general meeting in Turin and Cuneo, Italy, and contributed to a wolf symposium organized by the Regione Piemonte and focused on methods to prevent and mitigate carnivore-livestock conflicts. The proceedings of the symposium are published and freely available on Hystrix – The Italian Journal of Mammalogy (Vol. 23 (1), 2012).

We have recently (2012) updated the information on large carnivore conservation status, numbers, distribution, trends, threats and conservation measures for each European country and we are redesigning our website (Species Online Information System – SPOIS) to allow easier access to the data and align the data to The IUCN Red List database. In the 2012 LCIE general meeting (Saanen, Switzerland, May 2012) we discussed our strategic plans for the coming quadrennium and the collaboration with the European Commission remains our priority. LCIE and IUCN are one of the key stakeholders convened by the European Commission with the aim of agreeing upon and signing a common vision for large carnivores management approaches in Europe. The LCIE is expected to provide scientific input to the committee and represent IUCN interests and positions at European scale.

Success stories

- Successful networking of large carnivore experts from across Europe.
- Bringing the best available science and experience into the policy arena for national governments, the European Union and Council of Europe.
- Developing good practice guidelines for a range of management issues and promoting population-based management plans.

Challenges

- The greatest challenge for the group is to secure funding for core activities.
- One major challenge is adapting pan-European legislation to diverse situations. Some populations are critically small and are in need of urgent conservation action, while others are very large and need to be managed for sustainability.

Future Goals

- Identify priority carnivore conservation issues in Europe.
- Continue to advocate for the implementation of best practice guidelines.
- Update status reports for European carnivores.
- Help EU countries to move from national toward population-based transboundary management plans.

Facts

Chair: Luigi Boitani
Number of members: 25
Website: www.lcie.org

Re-introduction Specialist Group

Activity Report 2009-2012

The group embarked on a project to update the existing Re-introduction Specialist Group (RSG) Re-introduction Guidelines which were drafted in 1995 and printed and distributed in 1998. There is a task force developing these new guidelines for Conservation Translocations in conjunction with the Invasive Species Specialist Group.

The guidelines have now reached an advanced stage and are in the final stages of being finalized. The guidelines will be titled: *IUCN Species Survival Commission Guidelines for Reintroductions and Other Conservation Translocations*. These guidelines will eventually become official IUCN Policy.

The RSG is also working on developing guidelines for amphibian re-introductions and translocations and it is hoped these guidelines will benefit amphibian re-introduction practitioners worldwide when ready.

RSG members co-convened a very successful symposium entitled: "Conservation Translocations: from Re-introduction to Assisted Colonization" at the 25th International Conference on Conservation Biology held in Auckland in December 2011.

The RSG in conjunction with the World Pheasant Association (WPA) also developed *Guidelines for the Re-introduction of Galliformes for Conservation Purposes* which were published as an Occasional Paper of the IUCN Species Survival Commission No. 41 in 2009.

Success stories

- The group has published three issues of *Global Re-introduction Perspectives* in 2008, 2010 and 2011. They can be downloaded at: www.iucnsscrsg.org/rsg_book.php.
- In late 2011 (publication date Feb 2012) the edited volume: *Re-introduction Biology: Integrating Science and Management* was published by RSG members. See: www.wiley.com/buy/978-1-4443-6156-8.

Challenges

- We are a disciplinary group whilst the majority of groups are taxon-based so this interaction is a major challenge.
- Being a voluntary network, some sections of the group – taxon or geographical – may be less active than others.
- Maintaining and keeping a large membership base motivated and productive.

Future Goals

- Increased interaction with membership and the various sections of the group.
- Ensure the new and updated guidelines are distributed widely and ensure adequate feedback is obtained on their use to improve any future versions.
- Our North American and Caribbean Section has a new Chair and is working on improving this region as it has a large number of re-introduction projects.
- Improve interaction between the RSG and other IUCN SSC Specialist Groups.

Facts

Chair: Frederic Launay
Programme Officer: Pritpal Soorae
Number of members: 200
Website: http://www.iucnsscrsg.org/

IUCN SSC Re-introduction Specialist Group publications.

Sustainable Use and Livelihoods Specialist Group

Activity Report 2009-2012

The Sustainable Use and Livelihoods Specialist Group (SULi) was launched in early 2012 with the appointment of a new Chair. This group is a collaborative initiative of the SSC with the Commission on Environmental, Economic and Social Policy (CEESP), bringing together both species focused expertise and expertise on the socio-economic dimensions of use of wild resources. It builds on the longstanding work of the Sustainable Use Specialist Group, with a new emphasis on the contribution of use to community livelihoods.

Major activities of the group this year include:
- Establishing communication channels for the network, including the quarterly newsletter SULiNews, website, listserv, and discussion forum.
- Working with the Caprinae Specialist Group to coordinate the development of SSC Guidelines on Trophy Hunting as a Conservation Tool for Creating Conservation Incentives.
- Starting work to draft a Charter on Fungi and Biodiversity for adoption by the Bern Convention, following previous SUSG work on similar charters for Hunting and Angling.
- Developing inputs on wild meat ("bushmeat") management, sustainable use, and customary use for the Convention on Biological Diversity.
- Developing a workshop and other events for the World Conservation Congress, to encourage networking, debate and input from the IUCN family on future directions for work on sustainable use.
- Developing a governance structure for SULi.
- Building links and relationships with other parts of IUCN working on sustainable use and livelihoods, including other Specialist Groups, TRAFFIC, regional and global programs, and IUCN members.

Success stories
- Re-establishing a focal point on IUCN's work on sustainable use.
- Building group communications and identity through establishment of SULiNews and other tools.
- Contribution to SSC Guidelines on Trophy Hunting as a Conservation Tool.

Challenges
- Sustainable use is fundamental to biodiversity conservation and to livelihoods, economies and cultures worldwide, making the topic enormously broad and multi-faceted, with links to a huge range of other areas.
- As consumption grows and population pressures increase, much use is increasingly unsustainable, jeopardising both biodiversity and the livelihoods that depend on it.
- The potential for use of wild plants, animals and fungi to motivate and enable communities and other stakeholders to invest in organization, research and management for resource conservation is still often overlooked in conservation approaches.
- The needs, rights and knowledge of local communities in using wild resources are often marginalised in both conservation and mainstream development approaches.

Future Goals
- Develop a working definition of sustainability in the context of sustainable use.
- Build awareness and understanding of when and how use of wild resources provides effective incentives for conservation.
- Develop understanding of the role of sustainable use in community livelihoods and empowerment.
- Develop understanding of the relevance of sustainable use and community-based natural resource management to meeting global challenges such as food security and vulnerability and adaptation to climate change.
- Develop tools and thinking on achieving sustainability in resource use, such as guidance on adaptive management on used resources.
- Build the SULi constituency, particularly in Asia and other under-represented regions.

A woman in Kiat Ngong village, Xe Pian National Biodiversity Conservation Area, Lao PDR. IUCN Photo Library © Phaivanh Phiapalath

Facts
Chair: Rosie Cooney
Number of members: 640
Website: SULi

Wildlife Health Specialist Group

Activity Report 2009-2012

The Wildlife Health Specialist Group (WHSG) has had a fruitful and productive quadrennium. The group was named the wildlife health authority to the United Nations Environment Programme, filling an important gap in the One Health movement and expanding representation of the wildlife and environmental pillars of health. This provided us with a launching ground for opportunities to promote wildlife conservation and health synergies to a wide audience in support of IUCN efforts.

The WHSG has capitalized on this momentum through active assistance in obtaining timely wildlife health information, as well as establishing a health and biodiversity-promoting collaboration with several intergovernmental agencies including; African Union – Interafrican Bureau for Animal Resources (AU-IBAR), United Nations Environmental Program – Convention on Migratory Species (UNEP-CMS), World Health Organization (WHO), The Convention on Biological Diversity (CBD), OIE – World Organization for Animal Health, and the World Bank.

Gains have been made in global professional capacity building around wildlife health, especially in a conservation context. These include support to a professional training initiative WILD (Wildlife Investigation for Livestock Disease and Public Health) in Asia and Africa. Trainees are now networked through electronic means on *WildHealth Net* facilitated by the WHSG, to support an integrated approach to wildlife across various sectors. The WHSG presented on disease surveillance, wildlife disease risk analysis and One Health approaches at the SSC Chairs Meeting, and has a new website www.iucn-whsg.org.

The WHSG has also engaged in the development of a technical manual on wildlife disease risk analysis (DRA), and has led the development of standalone policy guidelines around the importance of integrating wildlife DRA into planning frameworks.

In addition to the WHSG's global activities, the 300+ expert network has grown stronger in professional and regional representation. Our diverse membership has proven to be an excellent resource for addressing a wide array of wildlife health issues including: species-specific die-offs; disease events; health surveillance programs; infrastructure for wildlife health facilities; and economies of One Health. At the same time, the WHSG Chairs and Coordinators have increased interaction with the membership, supporting members' efforts through provision of resources, grant opportunity notifications, and promotion of greater member-to-member interaction.

The WHSG continues to seek opportunities to incorporate wildlife health surveillance and disease prevention and control approaches into conservation efforts, especially as the threat of disease grows as a concern to species survival.

Success stories

- Developed a Manual on Wildlife Disease Risk Analysis (DRA) jointly with the Conservation Breeding, Re-introduction and Invasive Species Specialist Groups and led the creation of an associated policy guide.
- Established *WildHealth Net* linked to One Health trainings under RESPOND project in Africa.
- Formalized collaborative relationships with the OIE's Working Group on Wildlife Diseases.
- Supported membership on critical conservation issues e.g. Ethiopian Wolf vaccination.

Challenges

- Lack of wildlife health capacity, especially in resource-limited regions.
- Disease spread in wildlife, livestock and humans.
- Economies of wildlife health systems.

Future Goals

- Support and enhance wildlife health capacity globally by offering value-added resources and promoting greater interaction among members.
- Increase collaboration with other IUCN and One Health groups.
- Serve as the wildlife health authority for policy and One Health stakeholders.
- Develop materials that justify value of wildlife health efforts and encourage sound decision-making.

Facts

Co-chairs: Billy Karesh and Richard Kock
Global Coordinators: Catherine Machalaba and Lisa Starr, with the support of 10 Regional Coordinators
Number of members: 304
Website: http://www.iucn-whsg.org/

WHSG member and South Asia Regional Coordinator Dr Pradeep Malik involved in a tiger relocation effort in India (2011).

Climate Change Task Force

2011 Update

– The Task Force started in December 2011 with the two Chairs accepting positions who are in the process of creating a steering committee for the taskforce which will meet in March 2012 to determine a long-term work plan.
– IUCN's Climate Change Unit is working on an ongoing literature review investigating evidence of the various mechanisms by which climate change is impacting on species.
– The Climate Change Unit and Task Force is also contributing to the IUCN Guidelines on Re-introduction.

Success stories

- Climate Change Unit development of a bespoke climate change vulnerability assessment framework.
- Successful application of this framework to the world's birds, amphibians and corals.
- Ongoing applications of this framework to human-utilised East African species, and a range of new taxa in West Africa.

Challenges

- While the Taskforce has only recently been established, we see that a key challenge is to ensure coordination of climate change responses between SSC Specialist Groups, SSC Partner Organizations and other IUCN program areas.

Future Goals

- Design a strategy to help the SSC respond to climate change impacts.
- Develop the ongoing work on species' vulnerability to climate change into IUCN guidelines to inform conservation actions.
- Develop an IUCN Best Practices on Species Vulnerability Assessment and Adaptation for use by the IUCN membership.
- Keep under constant review the overall IUCN Program of Work on climate change, with a view to ensuring that biodiversity concerns remain central.

Facts

Co-chairs: Dr James Watson and Professor Stephen Williams
Number of members: 15

Polar Bear (*Ursus maritimus*). © James Watson

SSC/CEM Systemic Pesticides Task Force

Activity Report 2009–2012

A Task Force meeting took place in Cambridge in 2012, with the following aims:

- The organization of "Ecological Risks of Systemic Insecticides for Biodiversity and Ecosystem Services – an integrated worldwide assessment".
- Learn and discuss new developments in the sector.
- Propose alternatives if needed.

- We have been able start global review projects which will lead to four major publications in the world's leading scientific journals thanks to support from the Triodos Foundation and other organizations.

- A poster presentation was made at the World Conservation Congress in Jeju in September 2012.

Success stories

- Various soil, water and plant samples were taken and sent to the CNRS in France to assess neonicotinoid pollution.
- A sufficient amount of funding was secured to start the integrated assessment.
- Our strong collaboration with the University of Utrecht.

Challenges

- Neonicotinoid pesticides are one of the most widely used and fastest growing classes of pesticides worldwide.
- Neonics are unprecedentedly toxic to beneficial insects such as pollinators. Thirty-five percent of the world's food production depends on pollinators.

Future Goals

- Identifying additional financial support for the Task Force.
- Follow-up through a planned workshop in Padua.
- Ecological Risks of Systemic Insecticides for Biodiversity and Ecosystem Services – an integrated worldwide assessment.
- Publication of three related papers in other journals.
- A worldwide information campaign and identification of alternative pesticides for changing policies and preventing inadequate risk assessments in the future.

Facts

Co-chairs: Dr Maarten Bijleveld and Dr Pierre Goeldlin
Number of members: 35

WCPA-SSC Biodiversity and Protected Areas Task Force

Activity Report 2009–2012

SSC and the World Commission on Protected Areas (WCPA) formed this task force jointly in 2009 with two initial objectives:

– **To examine how well protected areas conserve biodiversity, and what the relationship is between this and a range of independent variables** (e.g., the IUCN management categories; protected area size). The Task Force has completed a peer reviewed literature summary of the existing studies around biodiversity outcomes and protected areas; assembled a database populations time series found in protected areas world-wide; and has identified a set of predictor variables that cover the management, geography, ecology, economic and social elements for protected areas. These have been used to develop an initial model to test which of the predictor variables most significantly determine the trend in biodiversity outcomes for protected areas.

– **To consolidate the criteria for identifying areas of global significance for biodiversity through a wide consultation process**. Numerous approaches have been developed by IUCN members to identify areas of global significance for biodiversity which can be conceptually grouped as "key biodiversity areas" (KBAs). The aim of this process is to develop a pragmatic and scientifically robust methodology agreed by a wide range of stakeholders outside and inside the conservation community. The standard will become one of IUCN's flagship knowledge products (the final name might change from "KBAs"). More information.

Success stories

- Established collaboration with ZSL, WWF, WCMC and BIOPAMA to maintain population data in and out of protected areas; PhD case studies in Universities of Queensland and Copenhagen.
- Completed a peer reviewed literature summary of the existing data around biodiversity outcomes and protected areas.
- Assembled a global data base of 5,000 populations' time-series found on protected areas world-wide, including birds, mammals, fish, reptiles, amphibians; and analysed these time-series for the trend in population; and a set of 40 predictor variables that cover the management, geography, ecology, economic, and social elements for each protected area having one or more population time-series.
- Developed an initial model to study which of the predictor variables most significantly determines the trend in biodiversity outcomes for protected areas.
- For consolidation of standards for identifying significant sites, support from MAVA Foundation, EAD, Rio Tinto and Shell to appoint a full time programme officer, develop option papers, organize workshops and convene working groups.
- Involved key stakeholders and institutions, putting the best available practice and science together, to develop a new IUCN globally agreed standard for key biodiversity areas (Presence in regional forums, face-to-face discussions, and organization of workshops and meetings).
- Started the consultation process with a workshop in Auckland, New Zealand in December 2011 at the Society for Conservation Biology's Annual Meeting, and a second in Portland, Oregon in April 2012 at *'Biodiversity without Boundaries'.*
- Organized a high Level Objectives Workshop: *'Consolidating criteria to identify sites of global significance for biodiversity conservation'* (June 5–8 June 2012). Sixty-six participants representing 19 countries and 52 organizations including conservation organizations, government agencies, academics, private and financial sectors, and also representatives from four IUCN commissions came together to reach consensus on the consolidation of the standards.

Challenges

- Bridging cultural differences between the species and the protected area conservation communities.
- Reducing concerns about IUCN data sharing and branding.
- Fund-raising for developing and maintaining methods, standards and data systems.

Future Goals

- Task Force: Lead Congress motion on developing the interfaces between IUCN Knowledge Products on species (e.g. The IUCN Red List of Threatened Species™) and protected areas (e.g. WDPA) and run a workshop on each Task Force objective.
- Complete the initial modelling and report the results in the refereed literature.
- Conduct supplementary analysis for different regions of the world.
- Work to support IUCN's BIOPAMA project by assembling biodiversity outcomes for use in Africa, the Caribbean and the Pacific.
- Continue regional consultations, convene technical working groups, and finalization of the new IUCN standard.
- Publication and dissemination of the IUCN standard to identify areas of global significance for biodiversity.
- Put in place the required governance processes to implement the IUCN standard.

Facts

Co-chairs: Thomas Brooks and Stephen Woodley
Number of members: 220
Website: www.iucn.org/biodiversity_and_protected_areas_taskforce

Freshwater Conservation Sub-Committee

Activity Report 2009–2012

Human activities have severely affected the condition of freshwater ecosystems worldwide, through increasing threats from dams, water withdrawals, pollution, invasive species, over-harvesting and aquaculture. Consequently, their capacity to support biodiversity has been highly degraded at a global level, with many freshwater species facing rapid population declines or extinction, at rates much higher than those of terrestrial and marine ecosystems.

In spite of this situation, the SSC Steering Committee had a general consensus with regards to the fact that many freshwater species conservation issues were falling through the cracks, and thus created in 2010 the Freshwater Conservation Sub-Committee (FCSC), to fully address the freshwater biodiversity crisis. Because it is a relatively new initiative, most of the work in these two past years has been related to planning. In this respect, as a result of a Strategic Planning Meeting held at the University of Queretaro in Mexico, 21–22 June 2011, as well as the Chairs meeting held earlier this year (2012) in Abu Dhabi, where we were able to receive feedback from most of the freshwater species related IUCN SSC Specialist Groups, we defined our mission as "making the case for freshwater biodiversity conservation worldwide", and we also identified as our main activities:

– Coordinate freshwater species conservation activities through SSC, to highlight emerging patterns and ensure that issues do not fall through the cracks.
– Make SSC recommendations based on this coordination.
– Be a representative of freshwater species conservation issues for SSC.

Success stories

- In such a short time we have managed to formally incorporate the issue of freshwater species conservation in several SSC workgroups.
- Priority setting for species conservation group led by Jon Paul and Kathrin Rodriguez.
- Bycatch group in collaboration with the MCSC and ICSC.
- WCPA-SSC Joint Task Force on Biodiversity and Protected Areas.
- We have also linked with other freshwater initiatives such as GEO-BON by participating in the GEO-CIEHLYC Water Cycle Capacity Building Workshop, 28 November – 2 December 2011, held in Cartagena, Colombia.

Challenges

- To become a collaborative organization that is recognized as an authority in issues related to freshwater biodiversity conservation.
- To achieve a significant improvement in the conservation status of freshwater biodiversity at a global level, by means of providing and sharing information for better decision-making.

Future Goals

- Involvement with key stakeholders.
- Establish an advisory group related to the CBD targets.
- Development of an adaptive communication strategy.
- Publish our strategic plan.
- Development of a funding strategy.
- Develop a collaborative network with Specialist Groups related to freshwater species and issues.

Freshwater Conservation Sub-Committee members, SSC Chairs meeting, Abu Dhabi.

Facts

Chair: Topiltzin Contreras-MacBeath
Number of members: 15

Astyanax aeneus.

Invertebrate Conservation Sub-Committee

2011 Activity Report

– Formation of the new Bumblebee Specialist Group, under-chairing of Paul Williams and Sarina Jepson to address the global bumblebee decline.
– Full prioritization of invertebrate groups for conservation focus, spearheaded by Justin Gerlach, under the support of Terrestrial and Freshwater Invertebrate Red List Authority.
– Development of a globally applicable strategy for invertebrate conservation using a set of operational scales from species to landscape.
– The Butterfly Specialist Group, Dragonfly Specialist Group, Freshwater Crab and Crayfish Specialist Group, Grasshopper Specialist Group, Mollusc Specialist Group and South Asian Invertebrate Specialist Group have made great progress in influencing policy.

Success stories

- African Freshwater Assessment and conservation management recommendations for Dragonflies, Molluscs, and Freshwater Crabs and Crayfish.
- Completion of assessments of European Saproxylic beetles, and of Dragonflies.
- Great restoration success stories in southern Africa and Seychelles.

Challenges

- Finding time and funds to undertake reassessments.
- Convincing all walks of life as to the importance of invertebrates for maintaining the world intact as we know it.
- Assessing and conserving such a diversity of taxa – but there are ways forward using both landscape and species approaches.

Future Goals

- Continued global assessment of various invertebrate taxa, including dragonflies.
- Prioritization and encouragement of new Specialist Groups, with Hoverflies now a priority.
- Development of methods for prioritization of taxa to be used in area assessments for their biodiversity worth.
- Further assessment of the functional value of invertebrates in various contexts so as to align with the 2020 targets on maintenance of ecosystem services while maintaining ecological integrity.

Facts
Chair: Michael Samways
Number of members: 12

Two-tailed Pasha (*Charaxes jasius*). © Jan Willem Steffelaar @Flickr

Marine Conservation Sub-Committee

Activity Report 2009–2012

Created in 2006, the Marine Conservation Sub-Committee (MCSC) is responsible for advising and assisting the SSC to deliver on its marine conservation responsibilities, including identifying emerging issues for marine conservation. It brings together SSC members, IUCN Secretariat Staff, members and partners to advise IUCN and build collaboration among these different groups. The MCSC provides a forum for debating global and regional marine conservation issues and exploring SSC's role in possible solutions.

The MCSC is charged with three functions:
– Coordinate and integrate work across marine components of IUCN and SSC.
– Tackle specific issues not covered by other marine components of IUCN and SSC, by identifying suitable forums, or by facilitating connections and synergies. The MCSC acts as a focal point and conduit for marine issues.
– Provide advice to IUCN marine projects (e.g., Global Marine Species Assessment – GMSA).

Priority issues are: species trade and exploitation; species assessments; bycatch; climate change; protected areas; wildlife spectacles (e.g., spawning aggregations); and High Seas.

We are based in Hong Kong and Argentina, and work globally through MCSC members, experts and IUCN staff, who bring specific skills and experience.

Black Grouper (*Mycteroperca bonaci*). IUCN Photo Library © William Goodwin

Facts

Co-chairs: Yvonne Sadovy and Claudio Campagna
Number of members: 13

Success stories

- The MCSC advanced a report on incidental catch of invertebrates in fisheries. Most species caught and discarded are invertebrates. From hundreds of species affected, only 19 are listed in The IUCN Red List.
- The MCSC raises awareness of marine conservation issues. It has a Newsletter and produced communication products such as a scientific publication on the impact of the Gulf of Mexico oil spill on marine species (*Gulf of Mexico oil blowout increases risks to globally threatened species*. Bioscience 61: 393–397) and the book *Adrift: Tales of Ocean Fragility* (IUCN Gland, Switzerland. 136 Pp). This book highlights the range of pressures on marine life via a suite of intriguing "spokes-species".

Challenges

- Lack of overall awareness and documentation of threats to most marine taxa, most notably invertebrates and fishes, from both directed and incidental catch and from other anthropogenic activities.
- Over-exploitation and lack of effective management for marine species.

Future Goals

- Develop a bycatch initiative to highlight the heavy impact of this threat on marine taxa and the need for documentation.
- Facilitate access to species information for marine protected area initiatives.
- Promote conservation outcomes from fish IUCN Red List assessments.
- Red List species existing in exceptional environments (e.g., seamounts).
- Encourage documentation of trade data in IUCN Red List assessments for exploited marine species.
- Map data sets to show trade and enforcement bottle-necks.
- Promote protection of marine wildlife spectacles.
- Increase representation of IUCN in fishery forums (e.g., Regional Fisheries Management Organizations; RFMOs).
- Develop 12 compelling marine species stories on how we deplete species ("bycatch"), how critical species are in cultural events, and on the role of species in ecosystem services.
- "*20 seconds of truth in marine conservation*": statements by experts in a web video clip format.

Plant Conservation Sub-Committee

2011 Update

– Prioritization of plant IUCN Red List Assessments (assists Target 2 of the GSPC/CBD and the MDG).
– Stimulated a review of the minimum data requirements for IUCN Red List assessments (GSPC Target 2).
– Coordinated inputs from plant groups into the mapping standards process.
– Participated in meetings to implement the Global Strategy for Plant Conservation (CBD priority).
– Participated in the SOS working group to increase awareness of future opportunities for including plant groups.
– Promoted funding proposal – Useful Wild Plant Species.
– Coordinated plant inputs into IUCN SSC initiatives (scientific collecting guidelines, re-introductions, management plans).

Success stories

- Establishment of a Red List Authority for Brazilian plants, one of the richest areas in the world for plants.
- Re-establishment of a Carnivorous Plant Specialist Group.
- Approval of revised 10-year targets for the GSPC (2010).
- SSC approval for a plant conservation award in honour of David Given.
- Significant increase in plant IUCN Red Listing.

Challenges

- Dispersed plant network with limited resources.
- Low response rates from plant network to IUCN issues.
- Difficulties in raising funds for plant conservation priorities.

Future Goals

- Continue to improve profile of plants in IUCN SSC.
- Promote IUCN Red Listing of priority taxa such as legumes.
- Strengthen links with partnership leading the implementation of the GSPC.
- Strengthen the link to Specialist Groups to increase participation in IUCN SSC.
- Continue strategic review of plant IUCN Red Lists.

Cactus forest on the shores of Lake Elementaita. IUCN Photo Library © Geoffroy Mauvais

Alstroemeria magnifica. IUCN Photo Library © Sue Mainka

Facts
Chair: Prof. John Donaldson
Number of members: 15

Red List Committee

2011 Update

- Made progress in preparing a Strategic Plan for The IUCN Red List, "to provide information and analyses on the status, trends and threats to species to inform and catalyze action for biodiversity conservation."
- The Red List Technical Working Group (RLTWG) initiated a review of the minimum supporting documentation requirements for species on The IUCN Red List.
- Discussions with GEF on how to make The IUCN Red List more relevant to GEF, primarily at national level.
- A public event at the US National Zoo on Public Policy and The IUCN Red List was attended by 150 participants from key IUCN Red List partners and users.
- Agreed new Terms and Conditions of Use for Red List data and co-development of a policy for commercial use of data.

Eastern Lowland Gorilla (*Gorilla beringei graueri*). IUCN Photo Library © Intu Boedhihartono

Success stories

- The IUCN Red List remains firmly embedded as a key indicator for measuring progress towards achievement of the Convention on Biological Diversity Aichi Biodiversity Targets.
- The number of species on The IUCN Red List continues to grow at a fairly rapid rate and has now reached approximately 63,837 species.

Challenges

- Need to more effectively link national Red Lists with the global IUCN Red List (being addressed by the National Red List Working Group).
- Need to accelerate assessments to meet growing demands for species-based information.
- Require partnerships to translate information into other languages.

Future Goals

- Finalize The IUCN Red List Strategy for 2012–2020.
- Maintain and enhance the quality of IUCN Red List data, expand taxonomic coverage, and do reassessments for monitoring trends in risk of extinction (Red List Index).
- Develop taxonomic standards for The IUCN Red List.
- Propose functional advancements to the Species Information Service.
- Promote use of The IUCN Red List to support policy and action.
- Support national efforts for IUCN Red List to inform NBSAPs.

Facts

Chair: Jeff McNeely
Number of members: 23

Species Conservation Planning Sub-Committee

Activity Report 2009–2012

The Species Conservation Planning Sub-Committee (SCPSC) came into existence in mid 2010 and we held full meetings of the Sub-Committee in England in April 2011 and in Abu Dhabi in February 2012. Our main activity has been to promote SSC's Handbook "*Strategic Planning for Species Conservation*", the product of an SSC Task Force that reported in 2008.

We have done this through having committee members either participate in species planning events, as facilitators, or in advisory roles to help design planning events. We have tried to spread our interests and inputs as widely as possible, but so far have been most effective in planning events that had already been envisaged. Design and fund-raising usually means a long period between concept and actual planning.

The meeting of SSC Chairs in Abu Dhabi was an opportunity to brief each of the other SSC Sub-Committees on SCPSC interests and the potential for collaboration, resulting in one person from each of these four Sub-Committees becoming a member of SCPSC. To gain experience in encouraging a Specialist Group to embark on planning for its key species, we supported a short activity whereby a SCPSC member worked with a selected Specialist Group, mentoring it towards initiating planning. The sample group was the Freshwater Crab and Crayfish Specialist Group, with their priority species from the USA and Singapore.

At the request of the IUCN SSC Steering Committee, we developed a simple mechanism through which a species plan, whether originating from a Specialist Group or elsewhere, could be assessed for conformation with the principles of the SSC planning handbook. We hope that endorsement will be further leverage in having plans accepted and implemented.

Through funding availed to SCPSC from the Environment Agency Abu Dhabi via the SSC Chair's Office, we have been able to support several planning events (see Success Stories). We hope that this funding will continue as its beneficiaries attest to the value of even small but demonstrable IUCN financial support in further fund-raising efforts.

Facts
Chair: Mark R. Stanley Price
Number of members: 12

Success stories

- Committee members participated in planning for many species including: the Bactrian Camel (*Camelus ferus*) in Mongolia; the Trinidad Piping-guan (*Pipile pipile*); the Djibouti Francolin (*Francolinus ochropectus*); the Ethiopian Wolf (*Canis simensis*); the Eastern Bongo (*Tragelaphus eurycerus* ssp. *isaaci*) in Kenya; the Pygmy Hippopotamus (*Choeropsis liberiensis*); and the Golden Mantella frog (*Mantella aurantiaca*).
- Stimulated development of planning and, or provided small resources for planning for; Wild Asian Buffalo (*Bubalus arnee*); Brown Howler Monkey (*Alouatta guariba*); a Golden Mantella frog plan review; and sawfish species.
- Played a major role in designing and participating in Djibouti's first national effort in planning for terrestrial biodiversity.
- Worked with the IUCN SSC Shark Specialist Group to design a survey leading to first planning meeting for all seven species of sawfish. Global conservation strategy due early 2013.
- Mechanism for SSC endorsement of sound species plans approved by Steering Committee.
- Technical input to successful application by IUCN Mediterranean office for capacity building for species planning in three Maghreb countries.

Challenges

- Promoting the benefits of species planning within Specialist Groups, and that it is a natural next step after IUCN Red Listing.
- Develop planning tools so species planning costs less.
- Encourage planning for neglected taxa and regions.
- Ensure plans include realistic prescriptions for responsible implementation, and that reviews of impact are done.
- Finding appropriate expertise for assisting in design or running planning events for all taxa and all parts of the world.
- Continue collaboration with the Conservation Breeding Specialist Group in development of tools, expansion of expertise etc.

Future Goals

- Use and test SSC planning approach on diverse taxa and wide geographical reach.
- Enlarge membership with persons genuinely interested in species planning issues.
- Assess experiences from a wide range of planning to develop version two of SSC planning handbook.
- Assist more Specialist Groups to embark on priority species planning.
- Explore general determinants of successful species planning under all conditions.

Standards and Petition Sub-Committee

2011 Update

In 2011 the Standards and Petition Sub-Committee released a new version of IUCN Red List guidelines, which clarified a number of technical issues, and substantially updated the guidance for calculating generation lengths.

The Sub-Committee also;
- Evaluated IUCN Red List training materials.
- Reviewed IUCN Red List assessments at the request of The IUCN Red List Unit.
- Provided advice and guidance to various groups on specific matters related to the application of IUCN Red List Categories and Criteria.
- Responded to published proposal for an alternative to The IUCN Red List system.
- Responded to published misconception about using IUCN rules with uncertain data.
- Started collating list of misconceptions about Red Listing.

Success stories
- Developed and periodically updated *Guidelines for Using The IUCN Red List Categories and Criteria*, contributing to the rigor, consistency and credibility of The IUCN Red List.
- Responded to World Conservation Congress resolution on guidelines for listing species as threatened with extinction due to climate change.
- Workshop on extinctions.

Challenges
- Need new methods, approaches, and tools to enforce the use of The IUCN Red List guidelines.
- Some of the challenging issues (e.g., assessing potential impacts of climate change; relationship between spatial or habitat measures and population size) cannot be settled without further fundamental research.

Future Goals
- Develop methods and guidance for quantifying data uncertainties, in order to better use the existing methods for uncertainty propagation.
- Develop methods for calculating The IUCN Red List Index with uncertain data.
- Prepare a comprehensive list and discussion of common misconceptions about The IUCN Red List.
- Develop and implement methods for inferring extinctions, for more consistent use of the Extinct (EX) category and the Critically Endangered (Possibly Extinct) (PE) tag.

Facts
Chair: Jerry Belant
Red List Authority Focal Point: Will Duckworth
Number of members: 110

African Penguin (*Spheniscus demersus*) on Robben Island, South Africa. IUCN Photo Library © Caroline Edgar

SSC Supporters

Thank you

The work of the ICUN Species Survival Commission and IUCN Global Species programme is generously supported by a number of individuals and organizations. In addition to those already mentioned in this special quadrennium issue of *Species*, the IUCN SSC Specialist Groups, Red List Authorities and Sub-Committees would like to thank all of their sponsors and supporters including:

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Anoline Lizard Specialist Group
Museum of Comparative Zoology at Harvard University.

Anteater, Sloth and Armadillo Specialist Group
San Antonio Zoological Society.

Asian Elephant Specialist Group
CITES Monitoring the Illegal Killing of Elephants (MIKE) Program; International Elephant Foundation (IEF); Elephant Care International (ECI); Elephant Family; Singapore Zoo; USFWS Asian Elephant Conservation Fund (AsECF); Wildlife Conservation Society (WCS); and WWF.

Asian Rhino Specialist Group
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Asian Wild Cattle Specialist Group
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Bison Specialist Group
European Bison Friends Society, which is sponsored through Polish institutions and Wildlife Conservation Society.

Cactus and Succulent Plant Specialist Group
CONABIO; CONANP; Conservation International; Chester Zoo and the Desert Botanical Garden; INE; Jardin Exotique de Monaco; UNAM; and University of Sheffield.

Canid Specialist Group
Wildlife Conservation Research Unit at the University of Oxford (our host); and the Born Free Foundation.

Crane Specialist Group
Trust for Mutual Understanding; Lufthansa Airlines; Peter Jay Sharp Foundation; East Asian – Australasian Flyway Partnership; International Crane Foundation; Dohmen Family Foundation; Fifth Age of Man Foundation; Disney Worldwide Conservation Fund; United Nations Environment Programme; US Fish and Wildlife Service; and Windway Foundation.

Duck Specialist Group
Federation des Associations de Chasse et Conservation de la Faune Sauvage de l'UE (FACE); and Tour du Valat.

Equid Specialist Group
Ecohealth Alliance (formerly Wildlife Trust); Saint Louis Zoological Park; Sea World and Busch Gardens Conservation Fund; Gilman International Conservation Program; Basel Zoo; Liberec Zoo; and Plock Zoo.

Freshwater Fish Specialist Group
Chester Zoo; and the North of England Zoological Society.

Freshwater Plant Specialist Group
BioFresh; and the Centre for Ecology and Hydrology (CEH).

Galliforme Specialist Group
H. James Goodhart CBE, as a private individual from UK who supports the GSG.

Hawaii Plant Specialist Group
US Forest Service

Hippo Specialist Group
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Madagascar Plant Specialist Group
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Orchid Specialist Group
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Otter Specialist Group
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Palm Specialist Group
The Kew Foundation; and Threatened Plants Appeal.

Primate Specialist Group
Conservation International; Bristol Zoo Gardens; Arcus Foundation; Mohamed bin Zayed Species Conservation Fund; US Fish and Wildlife Service; Virgin Unite; and Ambatovy Minerals S.A. John F. Oates (coordinator for West Africa) and Joerg Ganzhorn (Madagascar) retired.

Salmon Specialist Group
National Geographic Conservation Trust; Ocean Park Conservation Fund; US Fish and Wildlife Service Wildlife Without Borders Program; Oji Paper Company; US Forest Service International Program; Mohammed bin Zayed Conservation Fund; and the Taiwan Forestry Bureau.

Shark Specialist Group
National Oceanic and Atmospheric Administration; Save our Seas Foundation; Mohamed bin Zayed Species Conservation Fund; IUCN SSC Species Conservation Planning Sub-Committee; Chester Zoo; North of England Fauna and Flora International; Flying Sharks; Global Ocean; Pew Environment Group; Simon Fraser University; and the Canada Research Chairs Program.

Small Carnivore Specialist Group
Columbus Zoo; Conservation International; Greenville Zoo; Houston Zoo; Mississippi State University; Newquay Zoo; Smithsonian Institution.

South Asian Invertebrate Specialist Group
Zoological Society of London (Invertebrates); Conservation Breeding Specialist Group (CBSG); Chester Zoo, UK; Colombus Zoo, USA; Critical Ecosystem Partnership Fund; Mohammed bin Zayed Conservation Fund; Kadoorie Farm and Botanic Garden (KFBG), Hong Kong; The Woodward Family, Hong Kong; and Bharathiar University, Coimbatore, India.

Wildlife Health Specialist Group
The generous support of the American people through the United States Agency for International Development (USAID) Emerging Pandemic Threats PREDICT and RESPOND programs; EcoHealth Alliance; and Royal Veterinary College.

Sciaenidae Red List Authority
Forestry Bureau (CoA) -Taiwan International Conservation Fund, Taipei; GMSA (Global Marine Species Assessment), Norfolk, USA; ICMBio (Instituto Chico Mendes de Coservação da Biodiversidade), Ministério do Meio Ambiente, Braíslia; Bio-Amazonia Conservation International, Baltimore, USA. Field work supported by: Dr C.G. Zhang and Dr Y.H. Zhao, Institute of Zoology, Sinica Academica, China; Dr B. Ferreira, Universidade Federal de Pernambuco, Tamandaré, Brazil; Dr H. Espinosa, Universidad Nacional Autonomo de México; Dr C.W. Chang and Dr S.C. Ho, National Museum of Marine Biology and Aquarium; Dr N.V. Quan, Institute of fisheries, Haiphong Vietnam; Dr S. Janekitkarn, Bangkok, Thailand.

Freshwater Conservation Sub-Committee
North England Zoological Society; Fundación Gonzalo Río Arronte IAP; CONCYTEQ; Universidad Autónoma del Estado de Morelos; and Universidad Autónoma de Querétaro.

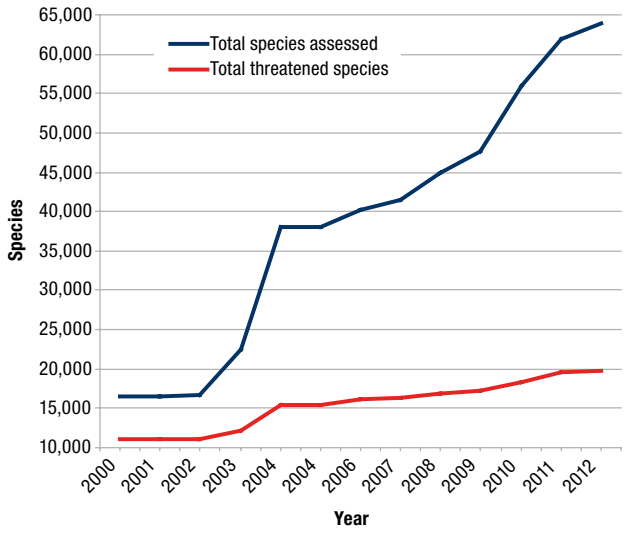
IUCN Global Species Programme Quadrennium Report

IUCN Red List Unit

Since October 2008 there have been nine updates to *The IUCN Red List of Threatened Species*™. With each update the list grows larger as newly described species and species from less well-known taxonomic groups are assessed for the first time. In October 2008 the status of 44,838 of the world's species had been assessed (16,928 listed as threatened) and that figure at the end of June 2012 stands at 663,837 species (19,817 of which are threatened) (Figure 1). IUCN and its partners are working to expand the number of taxonomic groups that have full and complete IUCN Red List assessments in order to improve our knowledge of the status of the world's biodiversity.

In addition to the increasing taxonomic coverage of The IUCN Red List, more than 22,000 species have been reassessed over the last four years demonstrating the value of The IUCN Red List as a tool to monitor the status of biodiversity. The genuine changes in status are used to calculate The IUCN Red List Index (RLI) for comprehensively assessed taxonomic groups. The RLI is one of the key measures used to monitor progress to meeting Target 12 of the CBD Aitchi Targets. The expanding number of species assessed and the improving quality of information in the assessments ensures that IUCN and its Partners are in strong position to report on progress towards meeting at least 13 of the 20 CBD targets. The information from The IUCN Red List was in fact analyzed and used in two key papers published just before the CBD CoP10 meeting in Nagoya, Japan in October 2010 (Butchart *et al.* 2010 and Hoffmann *et al.* 2010).

Figure 1.




IUCN Red List assessor workshop.

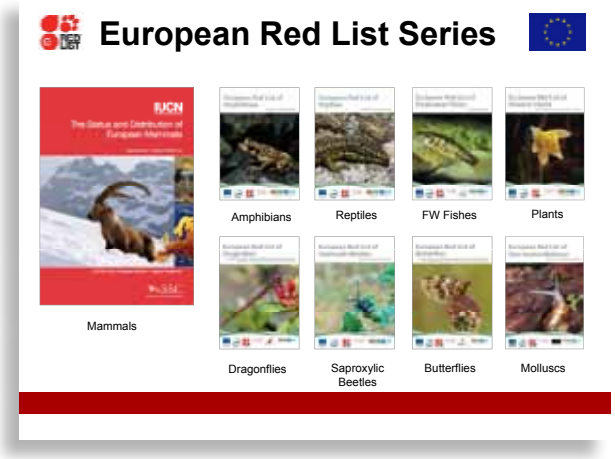
The compilation and production of The IUCN Red List epitomizes the 'One Programme' approach of IUCN as it involves the members of the IUCN Global Species Programme, the Species Survival Commission (SSC), IUCN Members e.g. through the Red List Partnership and Regional and Country offices all working together. A key component to the success of this approach is building capacity within the networks, countries and regions to conduct assessments (Target 19). As a result, IUCN Red List training materials have been developed for use both in workshop-based situations and for online self-learning. Over the past four years, more than 27 training workshops have been held, which have trained more than 600 people from 45 countries.

The spatial data on where species occur is an increasingly important focus area for IUCN as it provides the key mechanism to link up the various knowledge products of IUCN. In 2012 an announcement will be made advising that The IUCN Red List and the World Database on Protected Areas are now linked and work will be continued to develop links to the other emerging knowledge products – the Red List of Ecosystems and Key Biodiversity Areas. Much of the work to improve the visualization of the spatial data and to link these large and complex data sets has been made possible through increasing technical support from companies like Esri and Microsoft.

European Red List project

Since 2008, The European Red List project has resulted in the review of the conservation status of 5,641 European species at the European and EU 27 level since 2008 including:

- Vertebrates: reptiles, amphibians and freshwater fishes.
- Invertebrates: butterflies, dragonflies, freshwater molluscs



and selected species of saproxylic beetles and terrestrial molluscs.

- Selected species of plants: aquatic plants, priority crop wild relatives, and plants listed under policy instruments.

Of all the species assessed, 65% are endemic to Europe and do not occur anywhere else in the world. The results showed that freshwater species are the most threatened groups in Europe with 44% of all molluscs, 37% of fishes and 23% of amphibians threatened. The European Red List project started in 2006 with the European Mammal Assessment, is funded by the European Commission and carried out in cooperation with ROfE and the Species Survival Commission. The work continues with assessments of pollinators, medicinal plants and marine fishes.

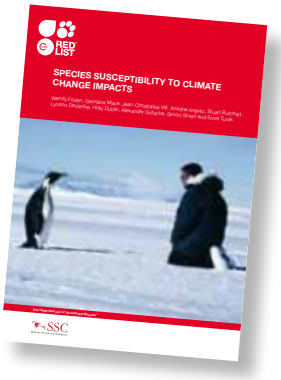
Marine Biodiversity Unit

The Global Species Programme Marine Biodiversity Unit (MBU) is emerging as a key contributor to the world of marine conservation by substantially increasing the number of IUCN Red List Assessments completed for marine species. Beginning in 2006 this unit has collaborated with over 400 volunteer scientists to objectively assess the extinction risk of more than 10,000 marine species, 6,500 of which are now published on The IUCN Red List of Threatened Species. These results are being used to shape marine policy from local to global scales, and are key components in measuring the success of CBD 2020 targets 1, 2, 6 and 12. Taxonomic groups now appearing on The IUCN Red List as a result of

IUCN Red List assessment workshop. © Mia Comeros-Raynal

MBU efforts include all of the worlds' sharks and rays, groupers, reef-building corals, seagrasses, mangroves, tunas, billfishes, angelfishes, butterflyfishes, wrasses, hagfishes and seasnakes. Of all the marine species assessed to date, more than 15% are at elevated risk of extinction. Our results have also been included in 12 scientific publications, five of which have appeared in the prestigious journal, *Science*. This effort has attracted considerable external support, including core support from Tom Haas and the New Hampshire Charitable Foundation.

Climate Change Unit



Among the major activities of the Climate Change Unit is the ongoing development and application of our bespoke assessment framework, designed to identify species facing increased threat of extinction from climatic changes, as well as the specific driving mechanism(s) underlying these threats. Our "biological trait-based" approach represents an improvement upon the more classic "niche-based" modelling approaches, which typically consider only climatic variables. Already applied globally to warm-water corals, birds and amphibians, projects are now underway to apply this framework at a more regional scale – specifically, to human-utilized species of East Africa's Albertine Rift and a range of West African taxa, in the context of protected area resilience.

Additional activities of the unit have included an ongoing literature review to identify climate change-related mechanisms driving changes to species' populations, and the publication of a report highlighting 10 high-profile, "flagship" species believed to be at risk from climate change impacts.

SSC Network Support

The SSC Network Support officers in IUCN's Species Programme have played an invaluable role this quadrennium by supporting the work of the Species Survival Commission (SSC), ensuring that their work is communicated to the broader IUCN network and, in turn, ensuring that the work of the various programmes, commissions and members of IUCN is communicated to the SSC, to help facilitate and leverage their work. Accomplishments include:

1. Helping to organize and facilitate the first ever SSC Chairs meeting in Abu Dhabi in 2008;
2. Highlighting SSC work at the 2008 IUCN Congress;
3. Assisting in IUCN Red List training and assessment workshops (e.g. Congo, India, etc.);
4. Regularly leading the delegation and facilitating

SSC participation and input as a part of the IUCN delegation at CITES meetings;
5. Raising funds to publish the Analyses of the Proposal to Amend the Appendices document with TRAFFIC and participate in the CITES CoP15 meeting in 2010;
6. Contributing to the work of the CBD including work on the Global Strategy for Plant Conservation and supporting SSC work such as on sustainable use for the convention.

Freshwater Biodiversity Unit

Our knowledge on the global status and distribution of freshwater biodiversity has been greatly improved through a 550% increase in coverage of freshwater fishes, molluscs, dragonflies, crabs, crayfish and plants on The IUCN Red List.

Regions comprehensively assessed include Africa, India, Indo-Burma, and Europe. New assessments for more than 12,000 species are available online with distributions mapped at the scale of river and lake catchments suitable for direct input to conservation management on the ground. We demonstrated that there was a significant lack of conservation focus on freshwater ecosystems (published: Conservation Letters), and thus identified priority sites for conservation, Freshwater Key Biodiversity Areas, in all assessed regions using the methodology developed by the FBU (published: Biological Conservation). Freshwater KBAs already inform funding priorities for two major donors.

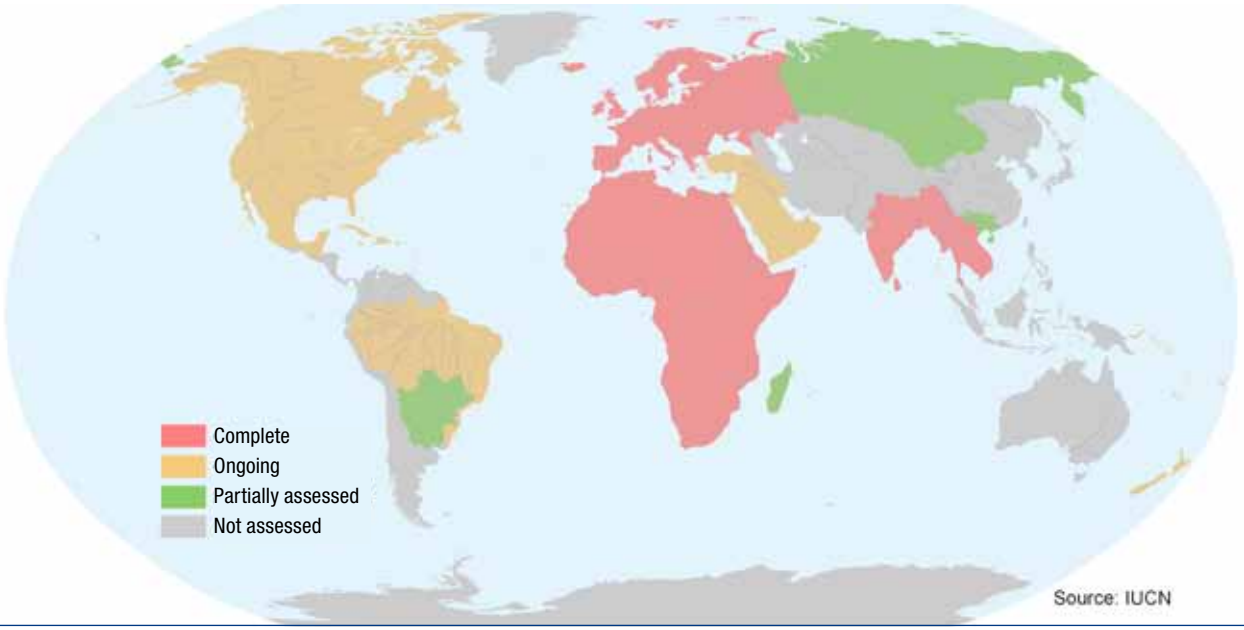
An Integrated Wetland Assessment Toolkit was published integrating information on biodiversity, livelihoods and socio-economics, and has been employed through projects of IUCN and partners.

Invasive Species Initiative

The Invasive Species Initiative has contributed to IUCN's policy and programme interests through the CBD and related conventions throughout the 2008–2012 period – especially in the areas of invasive alien species, the Global Strategy for Plant Conservation and the Global taxonomy Initiative by provision of support, technical information and advice during COP9, 10, 11 (next year); SBSTTA 12, 13, 14, 15; two African regional meetings, and as part of the International Liaison Group which assists the CBD to work with other related conventions and international organizations involving the


Flowering water hyacinth. © Geoffrey Howard

Freshwater Fishes Red List Assessment Progress



regulations of pests, weeds, other biological invasions, and animal and plant diseases. Significant support has also been provided to the Global Invasive Species Programme (GISP), including a series of field projects in the developing world (mainly continental Africa) building capacity to prevent and manage biological invasions and carrying out practical demonstrations of invasive alien species control. More recently this has been directed at regional issues where invasions are monitored, the species identified and management procedures initiated in shared ecosystems such as Lakes Tanganyika and Malawi (with their many endemic species) and the trans-frontier areas of southern Africa.

Biodiversity Assessment Unit

The Biodiversity Assessment Unit (BAU) has been a partnership between IUCN and Conservation International over the past decade with the remit of expanding the taxonomic and geographic content of The IUCN Red List. BAU continues work on the status of the world's ~9,000 reptile species. Working in collaboration with the Sampled Red List Index more than 3,000 reptiles are now on The IUCN Red List, with 900 species under process. The BAU has also focused on developing links with Latin America, with an eye on freshwater biodiversity. This has led to collaboration with leading Brazilian organizations to review the status of Brazil's vertebrate fauna and plants. The first workshop for Brazilian freshwater fishes was undertaken in October 2011. BAU staff continue to support the work of the Global Species Programme (GSP) and the Marine Biodiversity Unit (MBU), and have provided support to several IUCN SSC Specialist Groups (such as the Cacti Specialst Group with all 1,500 species assessed). The Amphibian data from the Global Amphibian Assessment are being updated through the use of a newly developed forum. Data from the assessment process are key to the development of the Red List Index, allowing the measurement of many CBD 2020 Targets.

SOS

SOS (Save Our Species) was launched at the 10th Conference of the Parties to the Convention on Biological Diversity held in Nagoya, Japan in October 2010. The initiative, presented on that occasion by the President of the World Bank (Robert Zoellick), the CEO of the GEF (Monique Barbut) and the Director General of IUCN (Julia Marton-Lefèvre), the partnership's founding members, is a long-term

Phelsuma lineata. © Phillip Bowles

global program to improve the conservation status of globally threatened species and their critical habitats. The initial five years of its implementation will be funded with USD 5 million from the World Bank and USD 4.9 million from the GEF. SOS intends to raise an additional USD 10 million from private sector sources during implementation and has already secured additional funding from Nokia and a funding commitment by the Fond Français pour l'Environnement Mondial (FFEM).

Five pilot grants were disbursed in 2010 for a total amount of USD 625,000 contributing to the conservation of 37 threatened species and their habitats. The first SOS call for proposals was issued in June 2011 receiving hundreds of applications resulting in more than 20 new grants (for almost USD 4 million) being awarded in early 2012 to conservation organizations from around the world. A second call for proposals was issued in mid 2012.

Key Biodiversity Areas

A Joint WCPA-SSC Taskforce has been established to develop an "umbrella" standard to identify sites of global significance for biodiversity, consolidating the numerous approaches implemented to date (such as Important Bird Areas or Alliance for Zero Extinction Sites) under a consistent process. Such a standard will support national and regional processes in identifying important sites within their jurisdiction and will help national government agencies, decision-makers, resources managers, local communities, the private sector, donor agencies, and others to target the implementation of site conservation safeguards. They will also contribute to the fulfillment of the new CBD 2020 Strategic Plan (especially Target 11). More than 40 institutions have been invited to the consultation process and other national organizations will be engaged through regional consultations. Background option papers have been developed on several key technical issues and a first workshop was held during the International Congress for Conservation Biology, in Auckland (New Zealand), where international experts discussed the objectives and main elements to be integrated in such a standard. Further high-level discussions, technical workshops and engagement with end-users are planned.


Mamiri Forest Reserve in Western Ghana. © Johannes Förster

Communications

Over the past quadrennium there has been an increase in the number of press releases on The IUCN Red List and work of the IUCN Global Species Programme (GSP) and the Species Survival Commission (SSC). Media interest continues to be strong. In 2010 the GSP in conjunction with the SSC, launched the Species of the Day initiative to mark the International Year of Biodiversity. The initiative was extremely successful and has now been continued as Amazing Species, with one species profile being published each week. 2010 also saw our first venture into social media with the creation of a Twitter account (amazingspecies) – now with over 9,000 followers. In February 2012 we launched The IUCN Red List Facebook page and now have more than 3,000 followers. The bi-annual Species Magazine was reformatted and a 'new look' Species website profiling the work of the GSP and the SSC was launched in February 2012. In late 2012 we will launch an exciting new component to The IUCN Red List website with the objective of increasing the use of the website by non-specialist users such as the general public and students. Our project to increase the awareness of The IUCN Red List brand by working with Zoos, Aquariums and Botanical Gardens continues. WAZA and EAZA have been involved and more than 30 zoos are now using the logo and scale on their enclosure signage.

Publications summary

2009 Publications

Best practice guidelines for the prevention and mitigation of conflict between humans and great apes
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-037.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-037-Fr.pdf
Bahasa Indonesian: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-037-Id.pdf

Best practice guidelines for surveys and monitoring of great ape populations
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-036.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-036-Fr.pdf
Bahasa Indonesian: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-036-Id.pdf

European Red List of amphibians
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-001.pdf

European Red List of reptiles
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-004.pdf

Guidelines for the *in situ* re-introduction and translocation of African and Asian rhinoceros
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-039.pdf

Guidelines for the re-introduction of Galliformes for conservation purposes
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-041.pdf

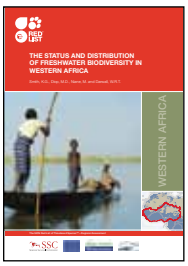
Indo-Pacific bottlenose dolphin assessment workshop report: Solomon Islands case study of *Tursiops aduncus*
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-040.pdf

An integrated wetland assessment toolkit: a guide to good practice
English: http://data.iucn.org/dbtw-wpd/edocs/2009-015.pdf

IUCN Red List index: guidance for national and regional use
English: http://data.iucn.org/dbtw-wpd/edocs/2009-001.pdf

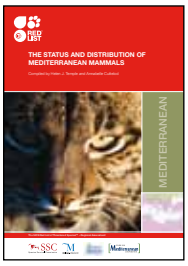
The status and distribution of freshwater biodiversity in southern Africa
English: http://data.iucn.org/dbtw-wpd/edocs/RL-68-003.pdf

The status and distribution of freshwater biodiversity in western Africa
English: http://data.iucn.org/dbtw-wpd/edocs/RL-66-001.pdf



The status and distribution of dragonflies of the Mediterranean basin
English: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-004.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-004-Fr.pdf
Spanish: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-004-Es.pdf

The status and distribution of Mediterranean mammals
English: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-002.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-002-Fr.pdf Spanish: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-002-Es.pdf



Wildlife in a changing world: an analysis of the 2008 IUCN Red List of Threatened Species™
English: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-001.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/RL-2009-001-Fr.pdf

2010 Publications

American bison: status survey and conservation guidelines 2010
English: http://data.iucn.org/dbtw-wpd/edocs/2010-005.pdf

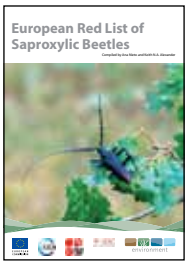
Best practice guidelines for great ape tourism
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-038.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-038-Fr.pdf
Bahasa Indonesian: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-038-Id.pdf

Eastern chimpanzee (*Pan troglodytes schweinfurthii*): status survey and conservation action plan 2010–2020
English: http://data.iucn.org/dbtw-wpd/edocs/2010-023.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/2010-023-Fr.pdf

European Red List of butterflies
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-011.pdf

European Red List of dragonflies
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-010.pdf

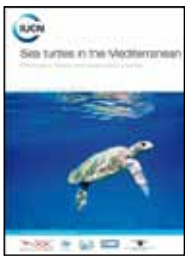
European Red List of saproxylic beetles
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-012.pdf



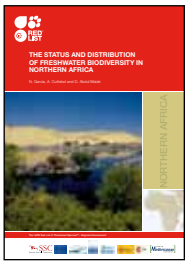
Global re-introduction perspectives: 2010. Additional case-studies from around the globe
English: http://data.iucn.org/dbtw-wpd/edocs/2010-076.pdf

Polar bears: proceedings of the 15th Working Meeting of the IUCN SSC Polar Bear Specialist Group, Copenhagen, Denmark, 29 June–3 July 2009
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-043.pdf

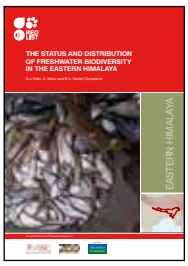
Sea turtles in the Mediterranean: Distribution, threats and conservation priorities
English: http://data.iucn.org/dbtw-wpd/edocs/2010-012.pdf



The status and distribution of freshwater biodiversity in northern Africa
English: http://data.iucn.org/dbtw-wpd/edocs/RL-61-002.pdf



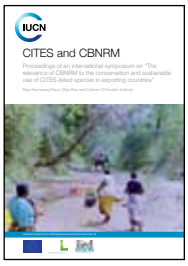
The status and distribution of freshwater biodiversity in the Eastern Himalaya
English: http://data.iucn.org/dbtw-wpd/edocs/RL-2010-001.pdf



2011 Publications

Andros iguana: conservation action plan, 2005–2011
English: http://data.iucn.org/dbtw-wpd/edocs/2011-065.pdf

CITES and CBNRM: proceedings of an international symposium on "The relevance of CBNRM to the conservation and sustainable use of CITES-listed species in exporting countries"
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-046.pdf



The diversity of life in African freshwaters: underwater, under threat: an analysis of the status and distribution of freshwater species throughout mainland Africa
English: http://data.iucn.org/dbtw-wpd/edocs/RL-6-001.pdf

Elephant meat trade in Central Africa: summary report
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045-Fr.pdf

Cameroon case study: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045-001.pdf

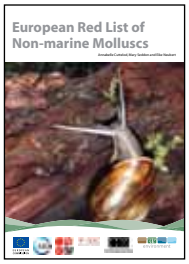
Central African Republic case study: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045-002.pdf

Democratic Republic of Congo case study: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045-003.pdf

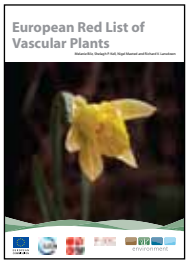
Republic of Congo case study: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-045-004.pdf

European Red List of freshwater fishes
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-015.pdf

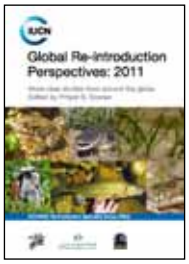
European Red List of non-marine molluscs
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-014.pdf



European Red List of vascular plants
English: http://data.iucn.org/dbtw-wpd/edocs/RL-4-016.pdf



Global re-introduction perspectives: 2011. More case studies from around the globe
English: http://data.iucn.org/dbtw-wpd/edocs/2011-073.pdf



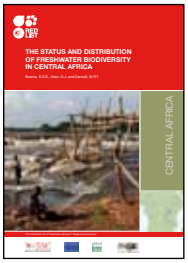
Island Invasives: eradication and management. Proceedings of the International Conference on Island Invasives
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-042.pdf

Overview of the conservation status of the marine fishes of the Mediterranean Sea
English: http://data.iucn.org/dbtw-wpd/edocs/RL-262-001.pdf
French: http://data.iucn.org/dbtw-wpd/edocs/RL-262-001-Fr.pdf

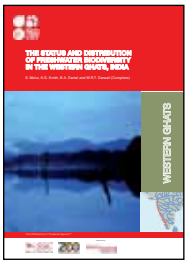
Regional Red List status of carnivores in the Arabian Peninsula
English: http://data.iucn.org/dbtw-wpd/edocs/RL-53-001.pdf

Species on the edge of survival
Available to buy on Amazon

The status and distribution of freshwater biodiversity in central Africa
English: http://data.iucn.org/dbtw-wpd/edocs/RL-67-001.pdf



The status and distribution of freshwater biodiversity in the Western Ghats, India
English: http://data.iucn.org/dbtw-wpd/edocs/RL-540-001.pdf



Sustainability assessment of beluga (*Delphinapterus leucas*) live-capture removals in the Sakhalin-Amur region, Okhotsk Sea, Russia: report of an independent scientific review panel
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-044.pdf

2012 Publications

Advancing the species conservation agenda: an overview of the IUCN SSC Network 2009–2012
English: http://data.iucn.org/dbtw-wpd/edocs/2012-003.pdf

Marine mammals and sea turtles of the Mediterranean and Black Seas
English: http://data.iucn.org/dbtw-wpd/edocs/2012-022.pdf

Turks and Caicos iguana conservation and management plan, 2005–2009
English: http://data.iucn.org/dbtw-wpd/edocs/2012-028.pdf

IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea)
English: http://data.iucn.org/dbtw-wpd/edocs/SSC-OP-047.pdf

Green Violetear (*Colibri thalassinus*). © Ashok Khosla

© Project Seahorse and Andrew Green/Guylian Seahorses of the World 2005

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX

Geographical range

www.iucnredlist.org
seahorse.fisheries.ubc.ca
Help Save Species
www.arkive.org

Amazing Species: Weedy Seadragon

The **Weedy Seadragon**, *Phyllopteryx taeniolatus*, is listed as Near Threatened on the IUCN Red List of Threatened Species™ due to its limited extent of occurrence and the continuing decline of suitable habitat. Named for the weed-like protrusions growing from their bodies, Weedy Seadragons are the only species of their genus. These beautiful creatures are found in waters three to 50 m deep off Australia's south coast and around Tasmania.

Like the closely related seahorses, the male of this species look after the eggs before they hatch. The lack of a dispersive egg phase, coupled with the fact that Weedy Seadragons are weak swimmers, makes them especially susceptible to threats. The major threat to this species is habitat degradation.

Weedy Seadragons are protected in Australia by a number of state as well as national legislations. The Tasmanian Living Marine Resources Management Act of 1995, for example, prohibits the take of all syngnathids , the family of fish which includes seahorses, pipefishes and Weedy and Leafy Seadragons, by non-permit holders in Tasmania.

The production of the IUCN Red List of Threatened Species™ is made possible through the IUCN Red List Partnership.