



The Study of the Faunal Diversity In Galle District - Southern, Sri Lanka

Final Report



November 2008

Wildlife Conservation Society - Galle

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Wildlife Conservation society – Galle
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Sri Lanka

TABLE OF CONTENTS

	PAGE No.
ACKNOWLEDGEMENT	ii
RESEARCH TEAM	ii
EXECUTIVE SUMMARY	iii
1. Introduction	01
2. Geographical and climatic features.....	01
3. Geology of Galle District.....	02
4. Major Ecological features	02
5. Scope of the Project	02
6. Specific Objectives of the study	03
7. Methodology	03
7.1 Selection of sampling sites and sampling frequency	03
7.2 Survey Methodology.....	04
7.3 Species, identification, and classification.....	05
8. Fauna of Galle District.....	05
8.1 Species composition of fauna.....	05
8.2 Freshwater Fish.....	07
8.3 Amphibians.....	07
8.4 Reptiles.....	08
8.5 Birds.....	08
8.6 Mammals.....	09
8.7 Butterflies.....	09
8.8 Dragonflies.....	09
8.9 Land snails.....	09
8.10 Freshwater Crabs.....	10
9. Highlights of the Survey.....	10
10. Issues and threats to forest Habitats in Galle District.....	12
10.1 Encroachment and Habitat Destruction.....	12
10.2 Poaching.....	12
10.3 Impact of Alien Invasive Species.....	13
10.4 Illegal Brewing of Alcohol.....	13
10.5 Lack of knowledge on the rain forest habitats.....	13
10.6 Illegal Gemming.....	13
10.7 Release of captive bred freshwater fish species in to the wild.....	13
10.8 Garbage dumping in to the rainforest habitats.....	13
11. Recommendations.....	14
12. Constrains of study.....	14
LIST OF ANNEXES	
Annex I : Checklist of Fauna recorded in Galle District.....	15
Annex II : Photo catalogue of fauna recorded in the survey.....	27
References	41

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Research Team

The task would not have been accomplished if not for the efforts of the dedicated research team comprising of the following members

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Executive Summary

This Faunal assessment of the Galle District was carried out in order to get at the current status of fauna in order to conserve them in a sustainable and scientific manner. A field assessment extending to a period of six months was carried out in selected representative sampling sites in the Galle district. Furthermore, a literature survey was also carried out prior to the field sampling to identify the sampling gaps and critical areas for sampling.

The Major vegetation types that were sampled during this survey were lowland tropical rain forests habitats. Wetland habitats such as Koggala, Wakwella and Maduganga were also sampled as they represent some unique combination of fauna in the Galle district. Rumassala hillock in Galle was also sampled as it is one of the unique natural habitats in Galle. Lowland rain forest habitats namely Kottawa-Kombala, Kottawa, Nakiyadeniya, Haycock, Kanneliya, Beraliya-Elpitiya and the Sinharaja east (Area that falls in the Galle district), lowland forests were sampled in this exercise.

All the vertebrate faunal groups and a few invertebrate groups were assessed in this survey. The Land Snails, Dragonflies, Butterflies and Freshwater crabs are the only invertebrate groups that were sampled in this exercise, and 339 species of vertebrate fauna belonging to 107 families were recorded. This includes 95 endemics and 62 nationally threatened species. Of the invertebrate fauna 208 species belonging to 24 families were recorded. There were 59 endemic and 26 nationally threatened species among them.

The highlight of this survey was record of five unidentified amphibian species and three freshwater fish species from the forest habitats of Galle district. The record of Ormiston's Oakblue (*Arhopala ormistoni*) from the Kanneliya forest was the other significant discovery during this survey. This is the only record since its first record in the year 1917. These findings clearly indicate the importance of assessment and conservation needs of the lowland rain forest habitats in the Galle district.

Major threats for the natural habitats of the Galle district were identified as habitat fragmentations and degradations through encroachments, poaching, illegal brewing of alcohol in the forests, spread of alien invasive species, lack of knowledge of the rain forest habitats, Illegal Gemming, release of captive bred freshwater fish species in to the wild and garbage dumping in to the rain forest habitats. All of these threats are directly related to the expansion of population and townships around the natural areas. Combination of national policy on conservation of wet zone forests, increasing public awareness and strict law enforcement can ensure the existence of the rain forest ecosystem and their inhabitants in the wet zone of Sri Lanka.

1. Introduction

The fauna and flora of Sri Lanka and the Western Ghats Mountain range that borders the western sea coast of the Indian peninsular is said have an outstandingly similar climate, geological features, a similar history of evolution and a strikingly similar biodiversity (Mittermeier et.al 2000). This Western Ghats range of mountains and Sri Lanka considered together has lost more than 70% of its original habitat due to human and other activities but still contains a unique endemism of flora and fauna and still contains the required minimum of the 0.5% of Earth's vascular plant species to qualify as a Global Biodiversity Hotspot.

In Sri Lanka the said unique biodiversity is found to be confined to the South Western wet zone stretching up to the south western side of the central massif covering the peak wilderness and the Horton Plains. Of this south western hill forest of Sri Lanka the remaining natural ecosystem along the Gin Ganga (River) from its origins in the Gongala hills in the Rakwana – Deniyaya mountain range through the southern forests of the Singharaja forest cluster with the Hiniduma and the Kanneliya cluster extending to the Hikkaduwa marine sanctuary situated at the confluence of the Gin Ganga with the Indian Ocean is recommended as a model river basin landscape-seascape conservation area in this biodiversity hotspot (Gunathilake et.al 2005).

The south western wet zone of Sri Lanka falls in the administrative districts of Ratnapura, Kalutara, Galle and Matara. Galle district covers the major land portion and this study is confined to the Galle district. The earliest known biodiversity research work conducted in this area is said to be the Nation Conservation Review Programme (NCR Data) conducted by the Forest Department with the collaboration of International Union for Conservation of Nature (IUCN) in the early 1980. This was a programme covering the whole island which revealed a vast hidden knowledge on our biodiversity and endemic species. However, this was not a comprehensive survey and the findings lead to the need for detailed investigations in identified locations. The Important Bird Area Surveys in Sri Lanka conducted by the Field Ornithology Group in the Colombo University funded by the of the Ministry of Environment and Forestry in the year 2000 has studied the avifaunal diversity in the two districts. Various other programmes have been conducted in isolated patches in the Galle district on amphibians, reptiles, snails, dragonflies etc. Furthermore, due the spike of taxonomic research, especially in the lowland wet zone forests, many new species are being discovered. Hence, these findings call for the immediate requirement for conservation and protection of these valuable lowland forest habitats.

This report comprises the biodiversity status profile of Galle District. as a part of the study on the Faunal Diversity in Galle & Matara Districts of Southern province Sri Lanka by the Wildlife Conservation Society - Galle.

2. Geographical and climatic features of Galle District

Southern Sri Lanka is administratively divided in to three districts, Galle, Matara and Hambantota and is unique by having all the three major climatic zones within the single province. (Figure 1) The Galle district lies in the south-western part of Sri Lanka in the southern province of Sri Lanka, about 120 kilometres from Colombo. Total extent of the district is 1617 sq.km with 18 divisional secretariat administrative divisions. Galle district's terrain consists of steeper hills towards the northern part and low hills and undulating plains in southern coastal part of the district. Main River that originates from Galle district is Gin River which forms a Gin River basin (National Atlas, 1997).

The wet zone of Sri Lanka receives its major precipitation from the South-West monsoon (March-August) and the Galle district gets an annual rain fall between 2000-2500mm. Annual mean temperature of Galle district range from 25-27 °C. Combination of climate, topography and geologic history have resulted in species-rich natural environmental conditions in the Galle district. This wet region with the central forested massif was untouched in the history of

the country providing numerous water ways to the dry zone where Sri Lanka's Hydraulic Civilization developed to world fame.

3. Geology of Galle District

Geology of Gall district underlain by Highland Complex consists of metasediments and orthogneisses. Highland Complex is a Precambrian age crystalline rocks that are part of very ancient and stable part of earth's crust (Arjuna's Atlas, 1997).

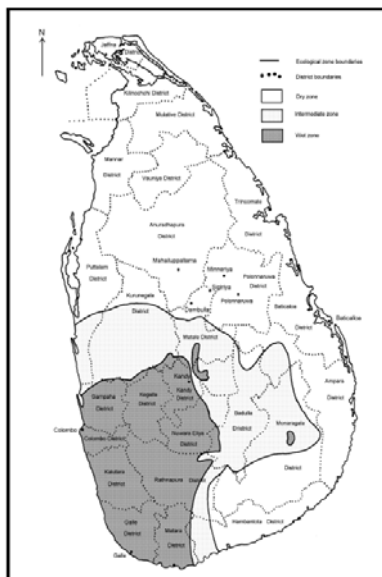


Figure 1: Map of climatic zones of Sri Lanka

4. Major Ecological features

Lowland rain forest is the major ecological feature that is found in the Galle district. Although much of the original extent of the rain forest areas has been reduced, 18,910 acres of this rain forest is existing in the Galle district covering about 11% of the Galle district's land area (Arjuna's Atlas, 1997). Tropical Lowland rain forests are commonly found at elevations below 1000 m above msl. These forests receive an annual rainfall of 2500-5000 mm, free of long dry spells, and are evergreen with no significant seasonal changes. A clear stratification can be observed in these forests. There is a continuous canopy at approximately 30 m above ground level with a few specific trees emerging above the canopy layer. Beneath this layer is an interrupted sub-canopy at around 15 m. A fourth layer of shrubs is located beneath the sub-canopy. Herbaceous plants, ferns and a whole range of seedlings comprise the ground layer.

Many plant communities are found here such as the *Dipterocarpus* community (*Dipterocarpus zeylanicus* and *Dipterocarpus hispidus*), *Mesua-Doona* community, and *Vitex-Dillenia-Anisophyllea* community. Conservation of these tropical forests is crucial as much of Sri Lanka's endemic flora and fauna are found in this valuable ecosystem.

5. Scope of the Project

This survey in Galle District refers to the collection of core information of the faunal diversity in the rain forest habitats of the Galle district to facilitate better management of the lowland forest habitats, including the development of an information base that would be extremely useful in the preparation of management plans for scientific management of these forests.

Due to the time and financial constraints, this survey was restricted to focus only on faunal diversity of selected forest habitats in the Galle district. No flora or habitat information was

collected as this study focused only on fauna. Small mammals were not sampled since small mammal traps were not provided by the relevant authorities to us as agreed. Land snails, butterflies, freshwater crabs and dragonflies are the only invertebrate groups that were surveyed during this task. Identification of unique and endangered animal species was also documented in this study.

The present study focused on field level information pertaining to fauna, which is expected to facilitate future planning for wildlife management through appropriate analysis and synthesis of the species inventories. Hence, this is an important study for protected area (PA) management planning in the wet zone of Sri Lanka.

6. Specific Objectives of the study

The present study focussed on the following specific objectives:

- Collection of preliminary data on the existing fauna of the Galle district through a very comprehensive literary survey
- Selection of critical forest habitats for rapid biodiversity sampling
- Preparation of compendium of diversity of fauna and identify species richness of fauna in Galle district.
- Identification of major threats to the forest habitats in the Galle district

7. Methodology

The standardised, scientifically-based sampling methods were used to ensure maximum efficiency in obtaining biological information of the fauna. Aspects such as availability of financial resources, time period, and accessibility to the sampling sites were also taken into consideration, when selecting suitable survey techniques. A literature survey on past work related to ecology of the Galle district was also undertaken to identify specific information gaps.

7.1 Selection of sampling sites and sampling frequency

Sampling sites were selected after considering factors such as geological factors, habitat representativeness, and the total extent. Although a total area of forests in the Galle district covers 19710 ha, there are only 8 forests that exceed more than 500ha. They are namely, Kottawa-Kombala, Kottawa, Nakiyadeniya, Haycock, Kanneliya, Sinharaja east (section falls in the Galle district), and Beraliya-Elpitiya lowland forests. These forests were surveyed in this exercise. Rumassala, Wakwella, Koggala and Maduganga sites were surveyed as they represent unique natural habitats. In order to determine the spatial variation and distribution pattern of fauna in both aquatic and terrestrial habitats, survey was carried out for five months. Each site was surveyed at different times of the day to avoid the time bias when recording fauna. Nocturnal samplings were also made in all sampling sites during each sampling session to record amphibian, reptile and bat species. Audio recording of unusual calls of amphibian species were also conducted to verify their identification. This audio recording will be very helpful in the future as few unidentified amphibian species were found during this exercise. The field sampling was preceded by a two day reconnaissance survey to finalize the sampling methodology and sampling areas for this study.

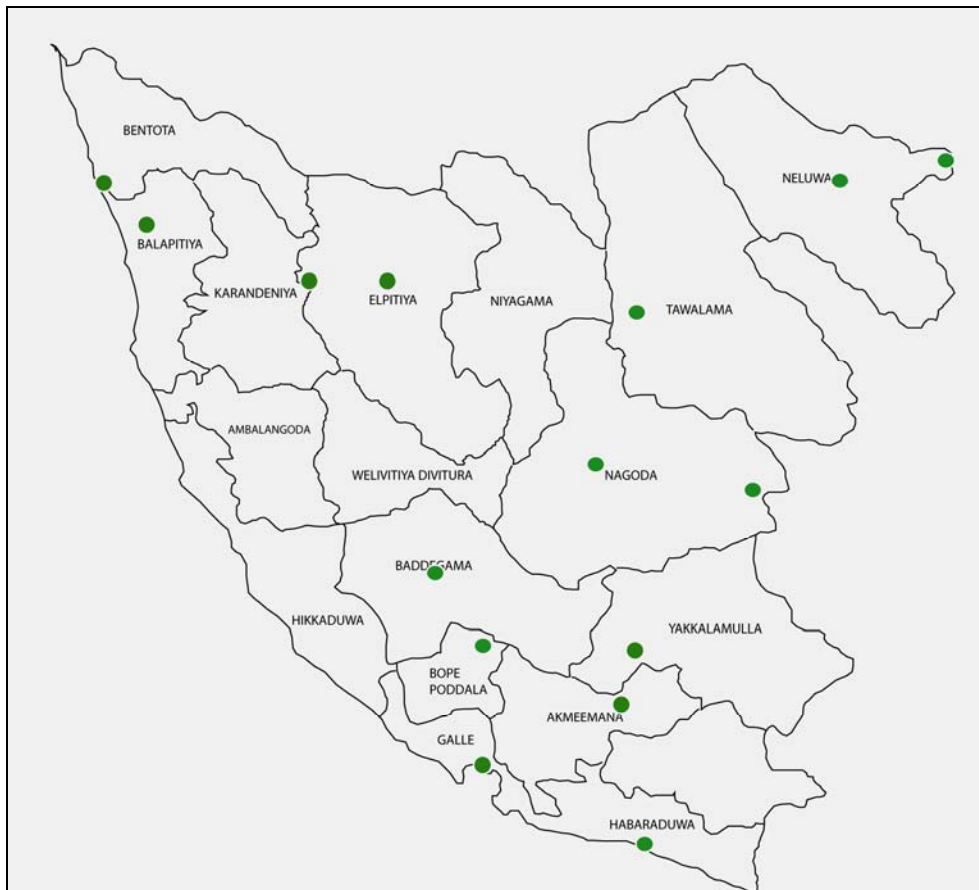


Figure 2: Sampling locations of the faunal assessment of the Galle District.

7.2 Survey Methodology

All groups of vertebrates (freshwater fish, amphibians, reptiles, birds and large mammals) and selected invertebrate groups (butterflies, dragonflies, freshwater crabs and land snails) were identified and documented. Standard scientific sampling techniques were used to survey the different groups of fauna in the project area (Table 1). All efforts were made to document the animals without causing them harm. Opportunistic observations of all the faunal groups were also recorded during the sampling period. In the event of a doubt to confirm identification of a species in the field, a maximum of two samples were collected to verify the identity under laboratory conditions.

Table 1: Summary of faunal sampling techniques

Group/ taxa	Method	Technique
Fish	Direct	Cast-netting, snorkelling & Dip nets
Amphibians	Direct	2mX2m Plots within 100mX5m line transect
Reptiles	Direct	2mX2m Plots within 100mX5m line transect
Birds	Direct and indirect	100mX5m Line Transects
Large Mammals	Direct and indirect	Transects (tracks, footprints faecal matter, feeding signs, & calls etc.)
Butterflies	Direct	Transects; Bait attraction
Dragonflies	Direct	Transect; Banks of the aquatic habitats
Land snails	Direct	Transect
Freshwater crabs	Direct	Transect; Tree hole inspection, turning of logs and rocks

7.3 Species identification, classification and nomenclature

The fauna species were identified and classified using the recently published scientific literature available in Sri Lanka. In addition, some doubtful species specimens that were collected during the current exercise were referred to the relevant authorities for identification. Some of the key references that were used to identify fauna are given in Table 2 below.

Table 2: Some key references used for species identification

Group	Source
Freshwater Fish	Pethiyagoda, R. (1991), Sampath Goonatlake (2007)
Amphibians	Manamendra-Arachchi, K , Pethiyagoda, R (2005 & 2006)
Reptiles	Deraniyagala, P. E. P. (1953), De Silva (1990), De Silva (1996)
Birds	Harrison, J & Worfolk, T (1999), Rasmussen, P.C & Anderton, J.C (2005)
Mammals	Phillips, W. W. A. (1980), Corbet, G.B & Hill, J.E (1992)
Butterflies	D' Abrera, B (1998), Jhon & Judy Banks (1999), Rajika Gamage (2008), W. Ormiston (1924) (reprint 2003)
Dragonflies	Terrance de Fonseka (2000), Matjaz Bedjanic, Karen Conniff, & Gehan de Silva Wijeratne (2007)
Land snails	Dinazarde Raheem & Fred Naggs (2006)
Freshwater crabs	Mohomed M. Bahir & Peter Ng (2005) , Mohomed M. Bahir (1999)

8. Fauna of Galle District

Documentation of fauna in the Galle district is vital as most of the faunal species restricted to ever fragmenting rain forest habitats. Furthermore, most of the species that are recorded in the lowland rainforest habitats are endemic to Sri Lanka. Following chapter highlights the information related to the fauna inhabiting in the natural habitats of the Galle district

8.1 Species composition of fauna

A total of 547 faunal species belonging to 132 families were recorded within the Galle district during the survey period. There were 147 endemic and 89 nationally threatened species among them. When considering the proportional representation, birds were the most abundant vertebrate group whereas freshwater crabs were the least abundant taxonomic groups.

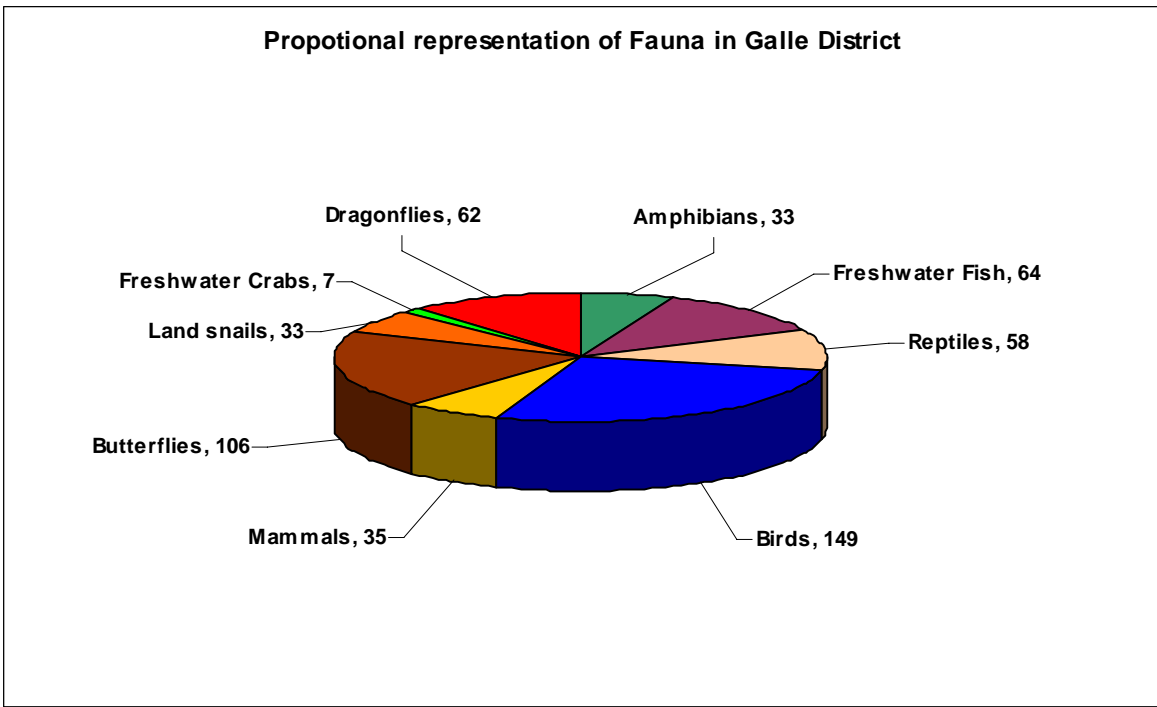


Figure 3: Proportional representation of fauna in Galle District

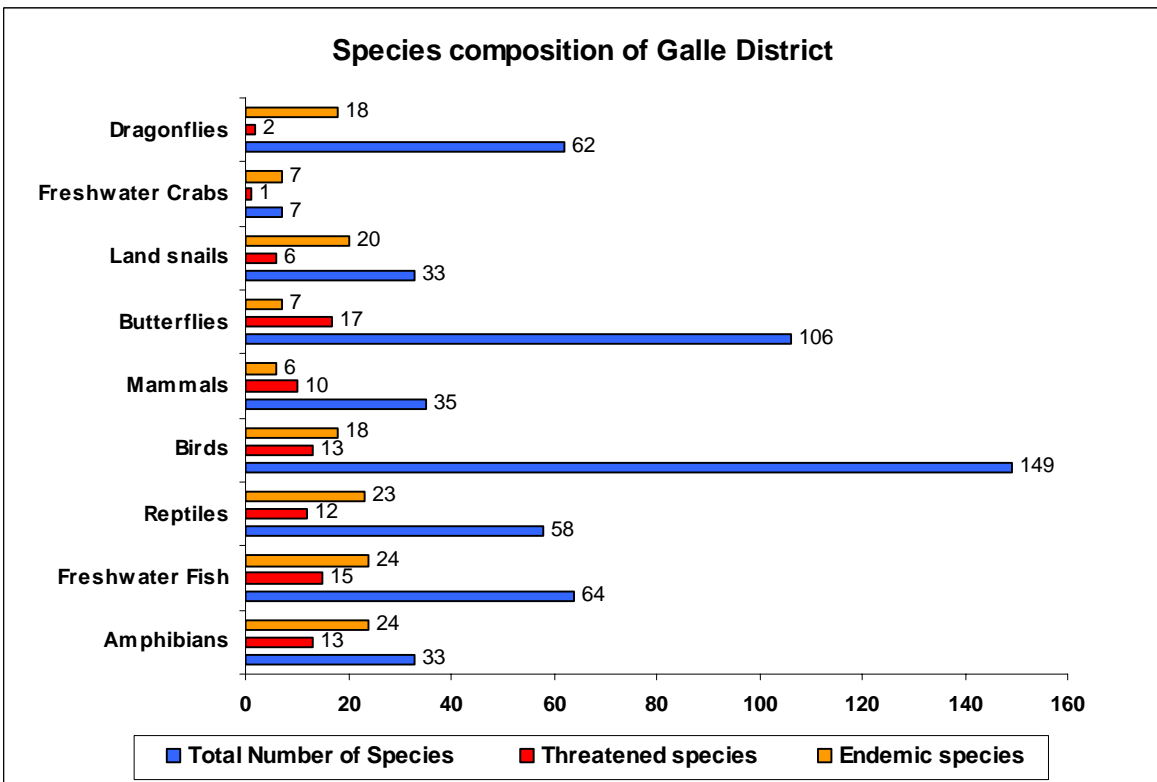


Figure 4: Species composition of fauna in Galle District

8.2 Freshwater Fish

Total of 64 species of freshwater fishes belonging to 24 families were recorded from the aquatic habitats of Galle district. These habitats include natural and manmade systems. Of the total species recorded, 59 were indigenous and four were exotic while 15 of indigenous species listed as threatened (IUCN Sri Lanka, 2007). The number of indigenous species is approximately 75 % of the island's indigenous freshwater fish fauna. This is a significant proportion when considering the current forest cover in the Galle district. The majority of the fish fauna recorded in the stream habitats inside the rainforests and some were recorded in the marshy habitats.

A total of 24 endemic fish species were recorded from the Galle district during this survey. Sinhala Barb (*Puntius sinhala*) & Striped Rasbora (*Rasbora deniconius*) were the most widely distributed fish species in the Galle district. Critically endangered Barred Danio (*Devario pathirana*) was recorded only from Kanneliya Forest Reserve. Exotic species such as Tilapia (*Oreochromis mossambicus*), and Guppy (*Gambusia affinis*) were sampled in several locations in Galle district. However, they were not found in the streams inside the rain forest habitats. Introduced fish species; the Giant Gouramy (*Osphronemus goramy*) was found in one stream near Nakiyadeniya.

Detail surveying of freshwater fish in the streams of rainforest habitat revealed that three potentially new species of freshwater fish species inhabit in the Galle district and they belong to the Genus *Devario* and *Lepidocephalichthys*. Further taxonomic and molecular studies are in progress to publish scientific papers on these species (Photo catalogue figures: 7, 8 & 9).

8.3 Amphibians

Thirty three (33) species of amphibians belonging to four (4) families were recorded from the Galle district. They represent about 30 % of the island's amphibian fauna and consist of 24 endemic species and 13 nationally threatened species (IUCN Sri Lanka, 2007). Most of the amphibian species that were recorded during this survey belong to Genus *Philautus* and they are strictly rain forest species. Critically endangered and extremely rare Whistling Scrub Frog (*Philautus nemus*) was found during this survey in its type locality, in the Haycock forest (Photo catalogue figure: 21). This finding is very significant as this species was described with only one specimen collected from Haycock forest. Record of the Golden Shrub Frog (*Philautus auratus*) from Kottwa & Kanneliya was important as it was the first record out of its type location. A record of five (5) unidentified amphibian species was noteworthy in this exercise and taxonomic and molecular studies are progressing to confirm whether they are new species to the science. (Photo catalogue figures 11, 12, 13, 14 & 15). The most common amphibian species that were recorded in the Galle district was the Common paddy field frog (*Fejervarya limnocharis*) and Common Shrub Frog (*Philautus popularis*).

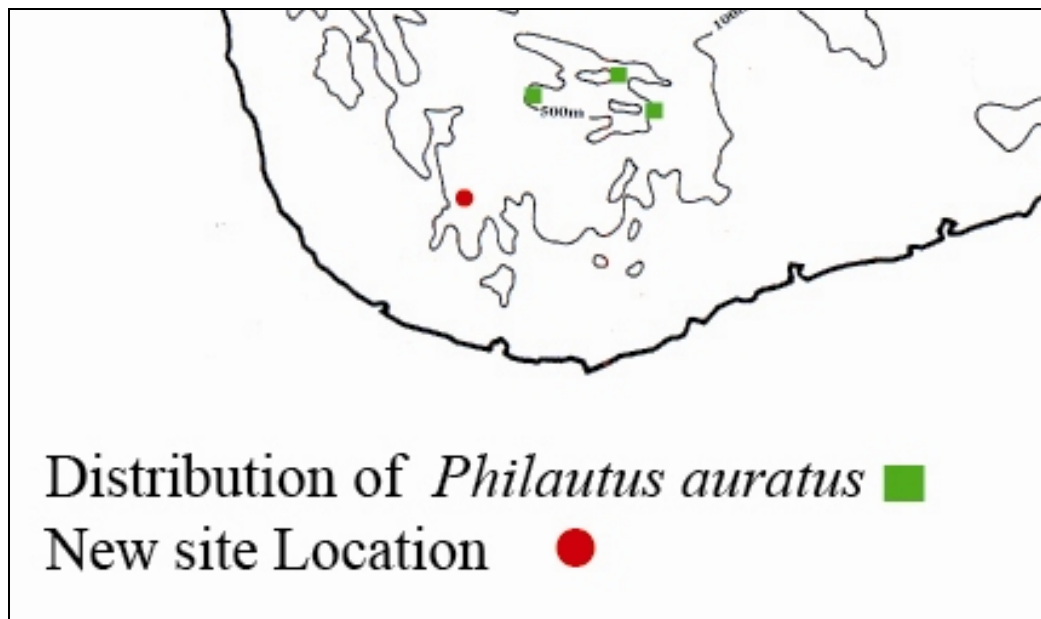


Figure 5: Map of the range extension of Golden Shrub Frog (*Philautus auratus*)

8.4 Reptiles

Total of fifty eight (58) species of reptiles belonging to 14 families were recorded from the Galle district, which included 23 endemic and 12 nationally threatened species (IUCN Sri Lanka, 2007). One of Sri Lanka's largest reptiles, the Mugger Crocodile (*Crocodylus palustris*) and Python (*Python molurus*) were also recorded from natural habitats of Galle district. Record of Mugger Crocodile nest from Koggala is noteworthy observation in this survey. (Photo catalogue figure: 24) Following table shows the diversity of reptiles during this survey.

Table 3: Summary of reptile species recorded during this survey.

Taxon	No. of families	No. of Genera	No. of Species	No. of Endemic
Crocodiles	1	1	1	0
Tortoises	2	2	2	0
Turtles	1	2	2	0
Snakes	6	24	34	13
Agamid Lizards	1	4	6	4
Monitor Lizards	1	1	2	0
Skinks	1	2	5	4
Geckos	1	4	6	2

8.5 Birds

Total of 149 species of birds belonging to 43 families were recorded, which included 18 endemic and 13 nationally threatened species. There were 10 species of migratory winter visitors. Lowland wet zone forests are home for many endemic species of birds. Record of critically endangered Blue Eared Kingfisher (*Alcedo meninting*) from Kottawa-Kombala (Hiyare) is very significant since there are very few records of this bird from Sri Lanka. Endemic Black Crested Bulbul (*Pycnonotus melanicterus*) is the most widespread bird species that was encountered in all the sampling sites.

8.6 Mammals

Thirty five (35) species of mammals belonging to 22 families were recorded from the natural habitats of Galle district. This included 6 endemic and 10 threatened species (IUCN Sri Lanka, 2007). Among the threatened species, endangered Hog Deer (*Axis porcinus*) recorded from several locations in Elpitiya area. Threatened species of Loris (*Loris tardigradus*) and Golden Palm Civet (*Paradoxurus zeylonensis*) were recorded during the night samplings of the survey. Vulnerable Purple Faced Leaf Monkey (*Semnopithecus vetulus*) and Giant squirrel (*Ratufa macroura*) were fairly common in the outskirts of the wet zone forest habitats of Galle district. False Vampire Bat (*Megaderma lyra*) and Long-eared Vampire Bat (*Megaderma spasma*) bat species were present in the rock caves in the rain forests of Kanneliya. (Photo catalogue figure 17)

8.7 Butterflies

Among the invertebrates, butterflies were the charismatic insects that were sampled. Out of 244 species of butterflies recorded in Sri Lanka, 106 species belonging to 5 families were recorded during this survey. This represents about 43% of the island's butterfly fauna. There were seven (7) endemic and 17 nationally threatened species among them (IUCN Sri Lanka, 2007). Documentation of Ormiston's Oakblue (*Arhopala ormistoni*) from Kanneliya was very significant as it is the first record since 1917 (D'abrera, 1998). (Photo catalogue figure 10) Critically endangered Ceylon Banded Awl (*Hasora badra*) butterfly species was recorded at Kanneliya and Rumassala it is a range extension of its distribution. Rare Brown Onyx (*Horaga albimacula*) and endangered Southern Duffer (*Discophora lepida*) were also recorded from Kanneliya & Kottawa-Kombala forests respectively. Endangered Silver Streak Blue (*Iraota timoleon*) and a newly recorded Orange Migrant (*Catopsilia scylla*) were also recorded from Rumassala area during this survey. White four-ring (*Ypthima ceylonica*), Gladeye Bushbrown (*Nissanga patina*), Glassy Tiger (*Parantica agiea*) and Common Crow (*Euploea core*) were the most commonly encountered species during the field sampling.

8.8 Dragonflies

Out of 120 species of dragonflies recorded in Sri Lanka, 62 species belonging to 12 families were recorded during this survey. This represents about 52% of the island's dragonfly fauna. Out of 62 species recorded from Galle district, 54 of them found in Kottawa-Kombala (Hiyare) forest Reserve. There were eighteen (18) endemic and two (2) nationally threatened species among them (IUCN Sri Lanka, 2007). *Elattonneura caesia* and *Macrogomphus lankensis* are the only nationally threatened species found in this survey. Un-described damselfly species belongs to genus *Drepanosticta* was recorded at Kanneliya & Hiyare in this survey and further analysis are on going to conform this finding.

8.9 Land snails

Total of thirty three (33) species of land snails belonging to 7 families were recorded from the Galle district, which included 20 endemic and 6 nationally threatened species (IUCN Sri Lanka, 2007). Newly described and critically endangered *Ratnadvipia karu* was recorded in the forest habitats of Galle district (Photo catalogue figures: 25). *Acavus haemastoma* was the most common land snail species that was encountered in most of the sampling locations in the Galle district. Five exotic species of land snails namely *Allopeas gracile*, *Lissachatina fulica*, *Mariaella dussumieri*, *Laevicaulias altae*, and *Gulella bicolor* were recorded in most of the sampling locations.

8.10 Freshwater Crabs

Total of seven (7) species of freshwater crabs were recorded from the Galle district, which included 7 endemic and 1 nationally threatened species (IUCN Sri Lanka, 2007). Endangered *Pastilla ruhuna* was the only threatened species recorded in this survey. *Ceylonthelphusa kandambyi* was common species in many forest habitats of the Galle district.

9. Highlights of the survey

- Extensive sampling of fish in the wetland habitats of Galle district revealed that there are three (3) potentially new freshwater fish species belongs to genus *Devario* and *Lepidocephalichthys* (Photo catalogue figures: 7,8 & 9). These species could be new to the science. Detail literature survey on freshwater fish taxonomy and personal communications with the freshwater fish experts have also conformed this finding. Further taxonomic and molecular work on these species is on going to prepare the scientific publications in the near future.
- Detail sampling and keen observations in the rainforest habitats of Galle district have resulted in record of five (5) potentially new species of amphibians to the science. This includes, perhaps the smallest amphibian species recorded in Sri Lanka. Further taxonomic and molecular work on these species is on going to prepare the scientific publications in the near future (Photo catalogue figures: 11,12,13,14 &15).
- A record of the Ormiston's Oakblue (*Arhopala ormistoni*) after 90 years from Kanneliya forest reserve was one of the highlights during the field sampling. This species was last recorded in 1917 and has had no conformed record since then. Research team of WCS was also able to make a photographic record of this species as well (Photo catalogue figure: 10). Furthermore, rare Brown onyx (*Horaga albimacula*) and Ceylon Banded Awl (*Hasora badra*) butterfly species were also recorded at Sihharaja and Kanneliya respectively during this survey.
- Golden Shrub Frog (*Philautus auratus*) was recorded from Kottawa & Kanneliya and it is profound as it was the first record out of its type locality of Rakwana hills. Hollow-snouted Shrub Frog (*Philautus cavirostris*) was located from Hiyare and it the lowest altitude record of this species.

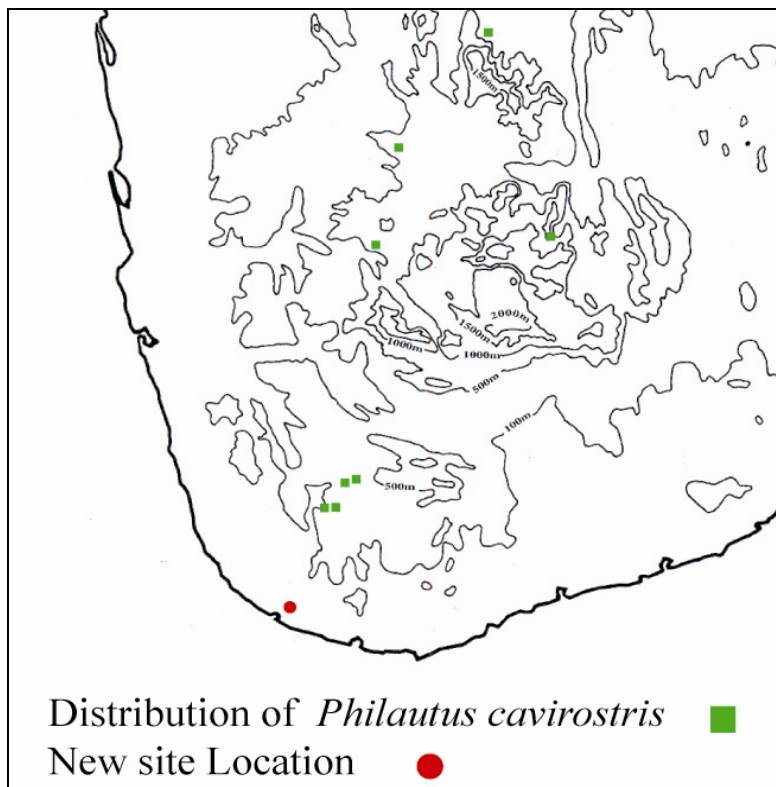


Figure 6: Record of Hollow-snouted Shrub Frog (*Philautus cavirostris*) located from Hiyare and it the lowest altitude record of this species

- New site records of Wilpita Rasbora (*Rasbora wilpita*) from Hiyare, Kottawa, & Elpitiya and these records are extending its current distribution range.
- New site record of Ornate Narrow-mouthed frog (*Microhyla ornate*) and is the first record in the lowland wet zone of Sri Lanka (Photo catalogue figure: 18).

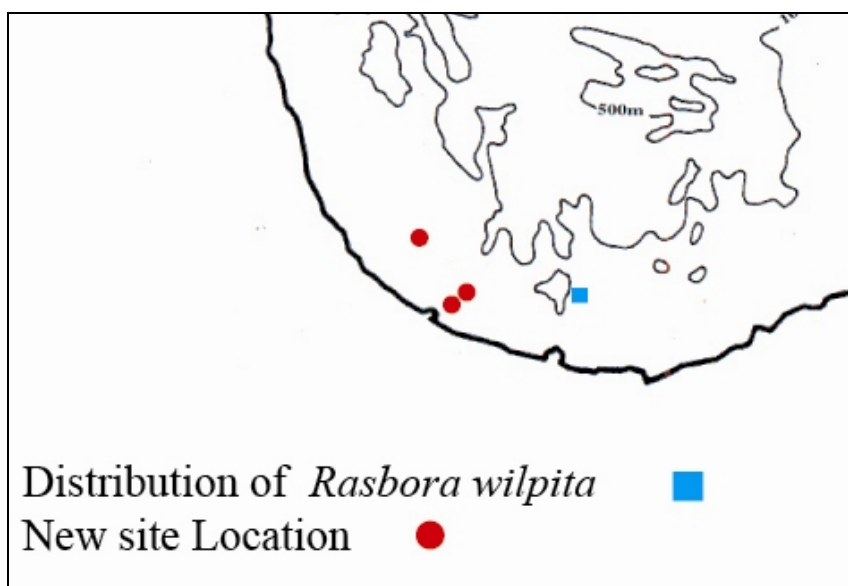


Figure 7: Map of the range extension of *Rasbora wilpita*

- Many issues and distribution information related to endangered mammal Hog Deer (*Axis porcinus*) have been observed and recorded during this exercise.
- Amphibian malformation in the several sites of the rainforests has been recorded in during this survey. Further research and conservation action needed to find the causes for this problem (Photo catalogue figure: 16).
- First record of female dragonfly species of *Mortonagrion ceylonicum* in the Hiyare rain forest.
- Un-described damselfly species belongs to genus *Drepanosticta* was recorded at Kanneliya & Hiyare in this survey.
- Life cycle of Damselfly species *Libellago adami* was first recorded in this survey and this is the first record of Laval stage and successful breeding of *Libellago* genus in Sri Lanka.
- Breeding behaviour of Leaf Dwelling Shurb Frog (*Philautus folicola*) was recorded during this study and it is the only species that has a litter nesting behaviour in Sri Lanka. This is the very first documentation of litter nesting behaviour of an amphibian species in Sri Lanka.
- *Ceylonthelphusa scansor* was located from Hiyare forest and it the lowest altitude record of this species.

10. Issues and Threats to Forest Habitats in the Galle district

The wet zone forest habitats can be considered as one of the major ecosystem types to conserve the endemic biodiversity of Sri Lanka. Much of the lowland forest habitats are surrounded with the ever increasing human habitations and townships. Therefore, rain forest habitats are under threat due to the expansion of human habitations around them. Combination of national policy on conservation of wet zone forests, increasing public awareness and strict law enforcement can ensure the existence of the rain forest ecosystem and their inhabitants in the wet zone of Sri Lanka.

10.1 Encroachment and habitat destruction

As many of the forest habitats are surrounding with human habitations, expansion of tea can be identified as a major cause to the forest fragmentations in the wet zone (Photo catalogue figure: 26) Input of agrochemicals in this tea plantations are also polluting stream habitats in the Galle District. Sensitive taxonomic groups such as amphibians, land snails, freshwater crabs, and dragonflies have directly been affected by the forest fragmentations and agrochemical inputs due to the expansion of the tea plantations. Expansion of cinnamon plantations in the Ambalangoda, Balapitiya and Elpitiya area is reducing marshy habitats and this action is threatening the survival of small population of endangered Hog Deer (*Axis porcinus*).

10.2 Poaching

Poaching is occasionally a problem in the borders of the forest habitats of Galle District. Sambar (*Cervus unicolor*), endangered Hog Deer (*Axis porcinus*), Mouse Deer (*Moschiola meminna*) and Porcupine (*Hystrix indica*) are common victims of the poaching activities in the peripheral areas.

10.3 Impact of invasive species

Invasive species such as Hawari-nuga (*Alstomnia macrophylla*), Diyapara (*Dillenia suffruticosa*) and Wel-aththa (*Annona glabra*) were found extensively in the peripheral areas of the rainforest habitats and in the marshy lands. Range extension of alien freshwater species such as Gappy (*Gambusia affinis*) and Tilapiya (*Oreochromis mossambicus*) in the streams of the Galle district is threatening many endangered and endemic freshwater fish species that inhabit in the streams of the Galle District.

10.4 Illegal brewing of alcohol

Illegal brewing of alcohol in the forest areas near the streams and wetland habitats are common in most of the forest habitats in the Galle District. As this illegal industry is extensively using water in the process of making alcohol, they are threatening important wet zone wetland habitats. Dumping of waste materials directly to the wetland habitats is causing serious threat to the freshwater fish, amphibians, and other freshwater dwelling species as well. (Photo catalogue figure: 28)

10.5 Lack of knowledge on the rain forest habitats

Communities around the rain forest habitats have very little knowledge about species diversity of the rain forest and the microhabitat variations. Consequently, their environmental awareness and sensitivity towards the rain forest habitats are very low. Illegal clearance of land for tea cultivations and other human activities around the forest habitats contributes to accelerated loss of biodiversity due to habitat reduction and degradation. Buffer zone settlers are truly unaware of the uniqueness of the wet zone biodiversity and lack of general environmental consciousness.

10.6 Illegal Gemming

Illegal gemming activities in the Elpitiya and Hiyare areas are threatening freshwater fish species such as Labuca ruhune and Wilpita Rasbora (*Rasbora wilpita*) due to the extensive habitat destructions. Change of the water regimes and water pollution from the gemming activities are rapidly changing the micro climate conditions in the freshwater habitats.

10.7 Release of captive bred freshwater fish species in to the wild

There have been few occasions that the releasement of captive bred Barred Danio (*Devario pathirana*) in to the wild locations by National Zoological Gardens where this species is usually not found. Technically, it is not appropriate to release captive bred populations in to new locations without extensive research and pilot program. Unscientific such releasement will change the genetic make up of the original populations and diseases jump from captive fish populations could wipe out the other freshwater fish species as well.

10.8 Garbage dumping in to the rainforest habitats

Garbage dumping in to the Kottwa forest was observed during this assessment. Household and commercial garbage was disposed in the Kottawa forest reserve. This dumping was observed in the stream habitats and some of those streams are home for many endemic and threatened species that are inhabited in the rain forests (Photo catalogue figure: 27)

11. Recommendations

- Further research on taxonomy and conservation is extremely important as there are many unique findings from this faunal diversity assessment. These findings and further taxonomic research will help us to increase our knowledge on rainforest species and bring public attention to the conservation on ever fragmenting rainforest habitats in the south-western part of Sri Lanka.
- Potentially new two species of freshwater fish were recorded from Kottawa & Hiyare forests. Kottawa & Hiyare forests are fragmented and small in extent. It is vital to conserve these fragmented forests as they harbour many endemic species.
- Conservation and management measures should be taken to conserve the endangered Hog Deer (*Axis porcinus*). Natural habitats of Hog Deer (*Axis porcinus*) in the Ambalangoda, Elpitiya and Balapitiya area are being replaced by many commercial plantations namely cinnamon and tea. Many accounts of injuries and deaths of Hog deer are on the rise as their population are surrounded with townships.
- Further research and detail survey is recommended to find the cause of malformation of amphibians in the rainforest habitats.
- Haycock forest is very unique when considering its faunal diversity due to its altitude gradient. However, many encroachments and illegal activities have been observed during this survey. Conservation of Haycock is important as it is the only location of critically endangered amphibian species the Whistling Scrub Frog (*Philautus nemus*) and potentially another new species of amphibian discovered in the current survey.
- Out of 84 freshwater fish species recorded in Sri Lanka, 54 species have been recorded (70% of Sri Lanka's freshwater fish species) in the Galle district. Most of these fish species were recorded in the adjoining habitats of rainforests. These wetland habitats are threatened by the expansion of tea and palm oil plantations. Conservation measures should be taken to conserve such critical freshwater fish habitats.
- Random release of captive bred fish species in to the wild should be tightly regulated and such releasements should also be closely monitored by the authorities. Releasements of captive bred species should not be allowed without prior approval from the authorities.
- Garbage dumping in to the Kottawa forest reserve should be stopped immediately and legal actions should also be taken against this action.

12. Constrains of the study

- Lack of small mammal trapping equipments and the non availability of mist nets hindered the small mammal and bat sampling.
- Geo-referenced maps of samplings and species records were not prepared due to budget restrictions.
- Budget restriction has reduced the scope of the project, however in-kind contributions from WCS-Galle were increased to compensate.
- Lack of statistical analysis of data since replications of sampling were not conducted adequately due to the time and resource constrains.

Checklist of Faunal Species recorded during the survey

Sampling site codes- Kottawa Kombala – KK, Kottawa – KO, Kanneliya – KN, Nakiyadeniya – NK, Beraliya-Elpitiya – BE, Rumassala – RU, Haycock – HY, Sinharaja – SN, Maduganga – MA, Koggala – KG, Wakwella – WK)

Endemic Species - *

Threatened Status

Critically Endangered – CR, Endangered – EN, Vulnerable - VU

DRAGONFLIES

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SN	MA	KG	WK
FAMILY: CALOPTERYGIDAE													
<i>Neurobasis chinensis chinensis</i>	Oriental Green-wing				/	/	/		/				
<i>Vestalis apicalis nigrescens</i> *	Black-tipped Flashwing		/	/	/	/	/		/	/			
FAMILY CHLOROCYPHIDAE													
<i>Libellago adami</i> *	Adam's Gem		/	/	/	/	/			/			/
<i>Libellago finalis</i> *	Ultima Gem			/	/	/	/						
FAMILY EUPHAEIDAE													
<i>Euphaea splendens</i> *	Shining Gossamerwing		/		/	/	/		/	/			
FAMILY LESTIDAE													
<i>Lestes elatus</i>	White-tipped Spreadwing		/								/	/	/
<i>Lestes praemorsus decipiens</i>	Scalloped Spreadwing												/
FAMILY: COENAGRIONIDAE													
<i>Agriocnemis pygmaea</i>	Wandering Wisp		/	/	/	/	/	/			/	/	/
<i>Mortonagrion ceylonicum</i> *	Sri Lanka Midget		/										
<i>Onychargia atrocyana</i>	Marsh Dancer		/	/	/	/	/						/
<i>Ischnura aurora aurora</i>	Dawn Bluetail		/	/	/	/	/			/	/	/	/
<i>Ischnura senegalensis</i>	Common Bluetail		/	/	/	/	/		/	/	/	/	/
<i>Ceriagrion cerinorubellum</i>	Painted Waxtail		/	/	/	/	/			/		/	/
<i>Ceriagrion coromandelianum</i>	Yellow Waxtail		/								/	/	
<i>Pseudagrion malabaricum</i>	Malabar Sprite											/	
<i>Pseudagrion microcephalum</i>	Blue Sprite		/								/	/	/
<i>Pseudagrion rubriceps ceylonicum</i> *	Sri Lanka Orange-faced Sprite		/	/	/	/	/	/	/		/	/	/
<i>Archibasis sp. nov.</i> *					/	/				/			
FAMILY: PLATYCNEMIDIDAE													
<i>Copera marginipes</i>	Yellow Featherleg		/	/	/	/	/				/	/	/
FAMILY: PLATYSTICTIDAE													
<i>Drepanosticta lankanensis</i> *	Drooping Shadowdamsel		/	/	/	/	/			/			
<i>Drepanosticta Montana</i> *	Dark Knob-tipped Shadowdamsel												
<i>Drepanosticta nietneri</i> *	Nietner's Shadowdamsel		/	/	/	/	/						
<i>Drepanosticta sp. nov. A</i> *			/		/	/							
<i>Platysticta apicalis</i> *	Dark Forestdamsel				/	/							
<i>Platysticta maculata</i> *	Blurry Forestdamsel		/	/	/	/	/						
FAMILY: PROTONEURIDAE													
<i>Elattonaura bigemmata</i> *	Two-spotted Threadtail		/		/	/				/			
<i>Elattonaura caesia</i> *	Jungle Threadtail	EN	/	/	/	/	/			/			
<i>Elattonaura centralis</i> *	Dark-glittering Threadtail		/	/	/	/	/		/	/		/	
<i>Prodasineura sita</i> *	Stripe-headed Threadtail		/	/	/	/	/			/	/	/	/
SUB-ORDER ANISOPTERA													
FAMILY: AESHNIDAE													
<i>Anax immaculifrons</i>	Fiery Emperor		/									/	
<i>Anax indicus</i>	Elephant Emperor		/									/	/
<i>Gynacantha dravida</i>	Indian Duskhawker										/	/	/
FAMILY: GOMPHIDAE													
<i>Heliogomphus walli</i> *	Wall's Grappletail		/	/	/	/	/						
<i>Macrogomphus lankanensis</i> *	Sri Lanka Forktail	VU	/	/	/	/	/				/		
<i>Ictinogomphus rapax</i>	Rapacious Flangetail		/								/	/	/

FAMILY: CORDULIIDAE													
<i>Epophthalmia vittata cyanocephala</i> *	Blue-eyed Pondcruiser		/										/
FAMILY: LIBELLULIDAE													
<i>Brachydiplax sobrina</i>	Sombre Lieutenant		/	/	/	/	/						/
<i>Lathrecista asiatica asiatica</i>	Pruinosed Bloodtail		/			/		/					/
<i>Orthetrum chrysis</i>	Spine-tufted Skimmer		/	/	/	/	/	/					/
<i>Orthetrum glaucum</i>	Asian Skimmer				/	/							
<i>Orthetrum luzonicum</i>	Marsh Skimmer		/	/	/	/	/						/
<i>Orthetrum pruinosum neglectum</i>	Pink Skimmer		/	/	/	/	/						/
<i>Orthetrum sabina Sabina</i>	Green Skimmer		/	/	/	/	/						/
<i>Orthetrum triangulare triangulare</i>	Triangle Skimmer		/		/	/							
<i>Potamarcha congener</i>	Blue Pursuer		/	/	/	/	/						/
<i>Acisoma panorpoides panorpoide</i>	Asian Pintail		/	/	/	/	/						/
<i>Brachythemis contaminata</i>	Asian Groundling		/										/
<i>Crocothemis servilla servilla</i>	Oriental Scarlet		/		/	/							/
<i>Diplacodes nebulosa</i>	Black-tipped Percher		/	/	/	/	/						/
<i>Diplacodes trivialis</i>	Blue Percher		/				/						/
<i>Indothemis limbata sita</i>	Restless Demon		/										/
<i>Neurothemis tullia tullia</i>	Pied Parasol		/	/	/	/	/						/
<i>Trithemis aurora</i>	Crimson Dropwing		/		/	/							/
<i>Trithemis festiva</i>	Indigo Dropwing		/										
<i>Trithemis pallidinervis</i>	Dancing Dropwing		/	/	/	/	/						/
<i>Rhyothemis triangularis</i>	Sapphire Flutterer		/	/	/	/	/						
<i>Rhyothemis variegata variegata</i>	Variiegated Flutterer		/	/	/	/	/						/
<i>Pantala flavescens</i>	Wandering Glider		/	/	/	/	/						/
<i>Tramea limbata</i>	Sociable Glider		/	/	/	/	/						/
<i>Tholymis tillarga</i>	Foggy-winged Twister		/	/	/	/	/						/
<i>Urothemis signata signata</i>	Scarlet Basker		/			/		/					/
<i>Zygonyx iris ceylonicum</i> *	Sri Lanka Cascader				/	/							

BUTTERFLIES

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
FAMILY: PAPILPONIDAE													
<i>Troides darsius</i> *	The Ceylon Birdwing		/	/	/	/	/	/	/	/			
<i>Pachliopta hector</i>	The Crimson Rose		/	/	/	/	/	/	/	/	/	/	/
<i>Pachliopta jophon</i> *	The Ceylon Rose	EN	/	/	/	/	/		/	/			
<i>Pachliopta aritolocheiae ceylonica</i>	The Common Rose		/	/	/	/	/	/	/	/	/	/	/
<i>Papilio crino</i>	Banded Peacock		/	/	/	/	/	/	/	/			
<i>Papilio demoleus</i>	Lime Butterfly		/	/	/	/	/	/	/	/	/	/	/
<i>Papilio helenus mooreanus</i>	Red Helen				/	/			/	/			
<i>Papilio polytes romulus</i>	Common Mormon		/	/	/	/	/	/	/	/	/	/	/
<i>Papilio polymnester parinda</i>	Blue Mormon		/	/	/	/	/	/	/	/	/	/	/
<i>Chilasa clytia lankeswara</i>	Mime		/	/	/	/	/	/	/	/	/	/	/
<i>Graphium sarpedon teredon</i>	Bluebottle		/	/	/	/	/	/	/	/			
<i>Graphium doson doson</i>	Common Jay				/	/	/		/	/			
<i>Graphium Agamemnon menides</i>	Tailed Jay		/	/	/	/	/	/	/	/	/	/	/
<i>Pathysa antiphates celonicus</i>	Fivebar Swordtail	EN			/	/			/				
FAMILY: PIERIDAE													
<i>Leptosia nina nina</i>	Psyche		/	/	/	/	/	/	/	/	/	/	/
<i>Delias eucharis</i>	Jezebel		/	/	/	/	/	/	/	/	/	/	/
<i>Appias gelene</i>	Lesser Albatross		/	/	/	/			/	/			
<i>Catopsilia pyranthe minna</i>	Mottled Immigrant		/	/	/	/	/	/	/	/	/	/	/
<i>Catopcilia pomana</i>	Lemon Migrant		/	/	/	/	/	/	/	/	/	/	/
<i>Eurema hecabe simulate</i>	Common Grass Yellow		/	/	/	/	/	/	/	/	/	/	/
<i>Eurema blanda silhetana</i>	Three-spot Grass Yellow		/	/	/	/	/	/	/	/	/	/	/
<i>Eurema ormistoni</i>	One-spot Grass Yellow	EN	/		/								
	Orange migrant		/	/				/			/	/	/
FAMILY: NYMPHALIDAE													

Idea isonia *	Tree Nymph				/	/			/	/			
<i>Ideopsis similes exprompta</i>	Blue Glassy Tiger		/	/	/	/	/	/	/	/			
<i>Tirumala limniace leopardus</i>	Blue Tiger				/			/					
<i>Parantica aglea</i>	Glassy Tiger		/	/	/	/	/	/	/	/	/	/	/
<i>Danaus chrysippus</i>	Plain Tiger		/	/	/	/	/	/	/	/	/	/	/
<i>Danasus genutia</i>	Common Tiger		/	/	/	/	/	/	/	/	/	/	/
<i>Euploea core asela</i>	Common Indian Crow		/	/	/	/	/	/	/	/	/	/	/
<i>Euploea sylvester</i>	Double-banded Crow		/	/	/	/	/	/	/	/	/	/	/
<i>Euploea phaenareta</i>	Great Crow		/	/	/	/	/	/	/	/			/
<i>Eulopea klugii sinhala</i>	Brown King Crow							/			/	/	/
<i>Ariadne ariaadne minorata</i>	Angled Caster		/	/				/					
<i>Ariadne merione taprobana</i>	Common Caster							/					
<i>Cupha erymanthis placida</i>	Rustic		/	/	/	/	/	/	/	/			
<i>Phalanta phalantha</i>	Common Leopard		/	/	/	/	/	/	/	/	/	/	/
<i>Cirrochroa this lanka</i>	Tamil Yeoman		/	/	/	/	/	/	/	/			
<i>Cethosia nietner nietner</i>	Ceylon Lace Wing		/	/	/	/	/	/	/	/			
<i>Junonia iphita pluvialalis</i>	Chocolate Soldier		/	/	/	/	/	/	/	/	/	/	/
Kallima philarchus *	Blue Oakleaf	VU		/	/	/	/	/	/	/			
<i>Doleschallia bisaltidae</i>	Autumn Leaf	EN						/		/			
<i>Pantoporia horodonia sinuate</i>	Common Lascar									/			
<i>Nepits hylas varmona</i>	Common Sailor		/	/	/	/	/	/	/	/	/	/	/
<i>Neptis jumbah nalanda</i>	Chestnut-streaked Sailor		/	/	/	/	/	/	/	/			
<i>Limenitis procris calidasa</i>	Commander		/	/	/	/	/	/	/	/			
<i>Parthenos sylvia cyaneus</i>	Clipper		/	/	/	/	/	/	/	/			
<i>Dophla evelina evelina</i>	Red Spot Duke		/	/	/	/	/	/	/	/			
<i>Euthalia lubentina psittacus</i>	Gaudy Baron	EN	/	/	/	/	/	/	/	/			
<i>Euthalia aconthea vasanta</i>	Baron		/	/	/	/	/	/	/	/	/	/	/
<i>Charaxes psaphon</i>	Tawny Rajah		/		/	/	/		/	/			
<i>Acraea violae</i>	Tawny Coster		/	/				/				/	/
<i>Discophora lepida</i>	Southern Duffer	EN	/	/	/	/	/	/	/	/			
<i>Junonia atlites</i>	Gray Pansy		/	/	/	/	/	/	/	/	/	/	/
<i>Unonia almanac almanec</i>	Peacock Pansy		/	/	/	/	/	/	/	/	/	/	/
<i>Vanessa indica nubicola</i>	Indian red Admiral		/	/	/	/	/	/	/	/			
<i>Abisara echerius prunosa</i>	Plum Judy		/	/	/	/	/	/	/	/			
<i>Melanitis ledac ismene</i>	Common Evening Brown		/	/	/	/	/	/	/	/	/	/	/
<i>Orsotriaena medusmandata</i>	Nigger		/	/	/	/	/	/	/	/	/	/	/
<i>Mycalesis mineus polydecta</i>	Dark-brand Bushbrown				/					/			
<i>Mycalesis perseus typhlus</i>	Common Bushbrown		/	/	/	/	/	/	/	/	/	/	/
Mycalesis rama*	Cingalese Bushbrown	EN			/	/				/			
<i>Nissanga patina patina</i>	Gladeye Bushbrown		/	/	/	/	/	/	/	/	/		/
<i>Ypthima ceylonica ceylonica</i>	White Four-ring		/	/	/	/	/	/	/	/	/	/	/
<i>Elymnias hypermnestra fraternal</i>	Common Palmfly		/	/	/	/	/	/	/	/	/	/	/
FAMILY: LYCENIDAE													
<i>Spalgis epeus epeus</i>	Apefly		/	/	/	/	/	/	/	/			/
<i>Curetis thetis thetis</i>	Indian Sunbeam							/					
<i>Arhopalaamantes amantes</i>	Large Oakblue		/	/	/	/	/	/	/	/			
Arhopala ormistoni *	Ormiston's Oakblue				/								
<i>Iraota timolean nicevillei</i>	Silverstreak Blue	EN						/					
<i>Arhopala pseudocentaurus pirama</i>	Centure Oakblue		/	/	/	/	/	/	/	/			
<i>Zesius chrysomallus</i>	Redspot		/	/	/	/	/	/	/	/			
<i>Loxura atymnus arcuata</i>	Yamfly		/	/	/	/	/	/	/	/			
<i>Rathinda amor</i>	Monkey-puzzle		/	/	/	/	/	/	/	/			
<i>Horaga albimacula viola</i>	Brown Onyx									/			
<i>Spindasis schistacea schistacea</i>	Plumbeous Silverline							/					
<i>Cheritra freja pseudojafra</i>	Common Imperial	EN								/			
<i>Tajuria cippus loginus</i>	Peacock Royal		/	/	/	/	/	/	/	/			
<i>Deudoris epijarbas lycaenina</i>	Cornelian	VU	/	/	/	/	/	/	/	/			
<i>Jamides bochus bochus</i>	Dark Cerulean		/	/	/	/	/	/	/	/	/	/	/
Jamides coruscans*	Ceylon Cerulean	EN	/	/	/	/	/	/	/	/			
<i>Jamides alecto melichius</i>	Metallic Cerulean		/	/	/	/	/	/	/	/			
<i>Jamides celeno tissama</i>	Common Cerulian		/	/	/	/	/	/	/	/			/
<i>Castalius rosimon</i>	Common Pierrot		/	/	/	/	/	/	/	/			/

<i>Discolampa ethion ethion</i>	Banded Blue Pierrot		/	/	/	/	/	/	/	/	/	/			
<i>Caletadecidia decidia</i>	Angled Pierrot		/	/	/	/	/	/	/	/	/	/			
<i>Zizeeria kasandra</i>	Dark Grass Blue		/	/	/	/	/	/	/	/	/	/			/
<i>Zizina otis decreta</i>	Lesser Grass Blue		/	/	/	/	/	/	/	/	/	/		/	/
<i>Zizula hylax</i>	Tiny Grass blue		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Everes lacturnus parrhasius</i>	Indian Cupid		/	/	/	/	/	/	/	/	/	/		/	/
<i>Chilades pandava lanka</i>	Plains Cupid		/	/	/	/	/	/	/	/	/	/			
<i>Chilades parrhasius</i>	Small Cupid	VU	/	/	/	/	/	/	/	/	/	/			
<i>Actyolepis puspa felderi</i>	Common Hedgblue		/	/	/	/	/	/	/	/	/	/			
<i>Megisba maalaya</i>	Malayan		/	/	/	/	/	/	/	/	/	/			
<i>Hypolycaena nilgirica</i>	Nilgiritit	VU	/		/							/			
<i>Binadahara plocides morei</i>	The Plane	EN	/		/	/						/			
FAMILY: HESPERIIDAE															
<i>Hasora badra</i>	Ceylon Banded Awl	CR			/										
<i>Tagiades japedus obscurus</i>	Cylon Snow Flat				/							/			
<i>Tagiades litigiosa ceylonica</i>	Water Snow Flat	VU	/	/	/				/		/				
<i>Ampittia dioscoride singa</i>	Bush Hopper		/	/	/			/	/		/		/	/	/
<i>Iambrix salsala luteipalpus</i>	Chestnut Bob		/	/				/	/	/			/	/	/
<i>Notocrypta paralysos alysia</i>	Common Banded Demon		/	/	/	/									
<i>Spalia galba</i>	Indian Skipper		/	/	/			/		/		/		/	/
<i>Taractropera maeivius</i>	Common Grass Dart		/	/	/			/			/		/	/	/
<i>Oriens goloides</i>	Common Dartlet		/	/	/										/
<i>Potanthus pseudomaesa</i>	Common Dart		/	/				/							/

FRESHWATER CRABS

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
<i>Oziothelphusa cylonensis</i> *	No English Name		/	/									
<i>Ceylonthelphusa scansor</i> *	"		/		/		/		/	/			
<i>Ceylonthelphusa kandambyi</i> *	"		/		/	/	/						
<i>Ceylonthelphusa sentosa</i> *	"			/			/						
<i>Perbrinkia nana</i> *	"			/			/						
<i>Mahatha ornatipes</i> *	"		/	/	/	/	/						/
<i>Pastilla ruhune</i> *	"	EN		/									/

LANDS SNAILS

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
FAMILY: ACAVIDAE													
<i>Acavus haemastoma</i> *	No English Name		/	/	/	/	/	/	/	/	/	/	/
<i>Acavus phoenix</i> *	"		/		/	/	/		/	/			
<i>Acavus superbus</i> *	"		/	/	/	/	/		/	/			
<i>Oligaspira poleii</i> *	"		/	/	/	/	/		/	/			
FAMILY: CAMEANIDAE													
<i>Beddomea albizonata</i> *	"		/	/	/	/	/		/	/			
<i>Beddomea trifasciata</i> *	"		/		/	/			/				
FAMILY: CYCLOPHORIDAE													
<i>Cyclophorus involvulus</i>	"									/			
<i>Cyclophorus menkeanus</i> *	"		/	/	/	/			/	/			
<i>Aulopoma itieri</i> *	"				/	/			/	/			
<i>Theobaldius parma</i> *	"				/	/			/	/			
<i>Theobaldius layardi</i> *	"		/	/	/	/	/		/	/			
<i>Thebaldius sp</i>	"				/								
<i>Leptopoma semiclausum</i> *	"		/		/	/			/	/			
FAMILY: ARIOPHANTIDAE													
<i>Ratnadvipia irradians</i> *	"		/	/	/	/	/		/	/			
<i>Ratnadvipia karu</i> *	"	CR	/	/	/	/	/		/	/			

<i>Cryptozona bistrialis</i>	..								/				/	
<i>Cryptozona chenui</i>*	..		/	/	/	/	/		/	/				
<i>Euplecta travancorica</i>	..		/	/	/	/			/	/				
<i>Euplecta emiliyana</i>*	..		/		/	/			/					
<i>Euplecta hyphasma</i>*	..	EN	/											
<i>Satiella Sp.</i>*	..		/	/	/	/	/		/	/				
FAMILY: GLESSULIDAE														
<i>Glessula ceylanica</i>*	..		/	/	/	/	/		/	/				
FAMILY: CORILLIDAE														
<i>Corilla adamsi</i>*	..	VU	/	/	/	/			/	/				
<i>Corilla carabinata</i>*	..	EN	/	/	/	/	/	/	/	/	/		/	/
FAMILY: PUPINIDAE														
<i>Tortulosa aurea</i>*	..				/				/					
<i>Tortulosa prestoni</i>*	..				/	/				/				
<i>Tortulosa haemastoma</i>*	..	EN			/									
<i>Tortulosa pyramidata</i>*	..	EN	/	/	/	/	/		/	/				

Exotic Species														
<i>Allopeas gracile</i>	..			/					/					/
<i>Lissachatina fulica</i>	..		/	/	/	/			/				/	/
<i>Mariaella dussumieri</i>	..		/	/	/				/			/	/	/
<i>Laevicaulias altae</i>	..		/	/	/				/			/	/	/
<i>Gulella bicolor</i>	..				/									

FRESHWATER FISHES

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK	
FAMILY: ANGUILLIDAE														
<u><i>Anquilla bicolor bicolor</i></u>	Indonesian shortfin eel		/						/	/		/	/	
<u><i>Anquilla nebulosa</i></u>	Mottled eel	VU				/							/	
FAMILY: CYPRINIDAE														
<i>Lubuca ruhune</i> *			/	/	/		/							
<i>Devario malabaricus</i>	Malabar danio		/	/	/	/	/		/	/				
<i>Devario pathirana</i> *	Barred danio	CR			/									
<i>Esomus thermoicos</i> *	Flying barb		/											
<i>Garra ceylonensis</i> *	Stone sucker				/	/			/	/				
<i>Rasboroides atukorali</i>	Horadandiya		/										/	
<i>Rasboroides vaterifloris</i> *	Vateria flower Rasbora	EN	/	/	/	/	/							
<i>Puntius bimaculatus</i>	Redside barb				/	/	/							
<i>Puntius chola</i>	Swamp barb												/	
<i>Puntius kamalika</i> *													/	
<i>Puntius cumingii</i> *	Two spot barb	VU			/	/								
<i>Puntius dorsalis</i>	Long snouted barb		/	/			/						/	
<i>Puntius kelumi</i> *			/	/	/									
<i>Puntius nigrofasciatus</i> *	Black ruby barb	VU	/	/	/	/	/			/				
<i>Puntius pleurtaenia</i>	Side- striped barb	VU			/					/				
<i>Puntius singhala</i>	Sinhala barb		/	/	/	/	/		/	/			/	
<i>Puntius titteya</i> *	Cherry barb	VU	/	/	/	/	/		/	/				
<i>Puntius vittatus</i>	Silver barb		/	/	/	/	/						/	
<i>Rasbora caverii</i>	Common Rasbora		/											
<i>Rasbora daniconius</i>	Striped Rasbora		/	/	/	/	/		/			/	/	
<i>Rasbora wilpita</i> *	Wilpita Rasbora	EN	/	/	/		/							
<i>Tor khudree</i>	Mahseer				/					/				
FAMILY: BALITORIDAE														
<i>Acanthocobitis urophthalmus</i> *	Tiger loach	VU		/										
<i>Schistura notostigma</i> *	Banded mountain loach		/	/	/	/	/							
FAMILY: COBITIDAE														
<i>Lepidocephalichthys jonklaasi</i> *	Jonklaas' s loach	CR		/						/				

<i>Lepidocephalichthys thermalis</i>	Common spiny loach																			
FAMILY: BAGRIDAE																				
<i>Mystus ankutta</i>			/	/																
<i>Mystus vittatus</i>	Striped dwarf catfish		/	/	/	/	/	/								/			/	
FAMILY: SILURIDAE																				
<i>Ompok bimaculatus</i>	Butter catfish		/	/	/	/														
FAMILY: CLARIIDAE																				
<i>Clarias brachysoma</i> *	Walking catfish		/	/	/	/	/	/		/	/	/	/	/		/			/	
FAMILY: HETEROPNEUSTIDAE																				
<i>Heteropneustes fossilis</i>	Stinging catfish		/	/	/	/	/	/		/	/	/	/	/		/			/	
FAMILY: BELONIDAE																				
<i>Xenentodon cancila</i>	Freshwater gar-fish				/															
FAMILY: ORYZIIDAE																				
<i>Oryzias cf. melastigma</i>	Blue eye																	/		
FAMILY: APLOCHEILIDAE																				
<i>Aplocheilus dayi</i> *	Ceylon killifish					/														
<i>Aplocheilus parvus</i>	Dwarf panchax															/	/		/	
<i>Aplocheilus werneri</i> *	Werner's killifish	VU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: POECILIIDAE																				
<i>Gambusia allinis</i>	Mosquito fish									/										/
FAMILY: CICHLIDAE																				
<i>Etroplus maculatus</i>	Orange chromid															/			/	
<i>Etroplus suratensis</i>	Green chromid															/	/		/	
																/			<i>Oreochromis mossambicus</i>	
FAMILY: ELOEOTRIDIDAE																				
<i>Butis butis</i>	Upside down sleeper															/	/	/		
<i>Eleotris fusca</i>	Dusky sleeper			/														/		
FAMILY: ANABANTIDAE																				
<i>Anabas testudineus</i>	Climbing perch		/	/	/	/	/	/								/			/	
FAMILY: BELONTIIDAE																				
<i>Belontia signata</i> *	Ceylonese combtail	VU	/	/	/	/	/	/		/										
<i>Malpulutta kretseri</i> *	Spotted gourami	VU		/			/													
<i>Pseudosphromenus cupanus</i>	Spiketail paradisefish		/	/															/	
<i>Trichogaster pectoralis</i>																			/	
FAMILY: OSPHRONEMIDAE																				
<i>Osphronemus goramy</i>	Giant gourami					/														/
FAMILY: CHANNIDAE																				
<i>Channa ara</i> *	Great snakehead	VU			/										/					
<i>Channa gachua</i>	Brown snakehead															/			/	
<i>Channa orientalis</i> *	Walking snakehead		/	/	/	/	/	/		/					/			/		/
<i>Channa punctata</i>	Spotted snakehead		/	/	/	/	/	/												
<i>Channa striata</i>	Snakehead murrel		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: MASTACEMBELIDAE																				
<i>Mastacembelus armatus</i>	Zig-zag eel		/		/	/														
FAMILY: HEMIRAMPHIDAE																				
<i>Zenarchopterus dispar</i>	Half Beck															/	/			
FAMILY: GOBIIDAE																				
<i>Awaous melanocephalus</i>	Scribbled goby		/	/	/	/	/	/		/					/			/		/
<i>Sicyopus jonklaasi</i> *	Red-tailed goby	EN		/																
<i>Glossogobius giuris</i>	Tank goby		/		/													/		/
<i>Sicyopus jonklaasi</i> *	Lipstick goby	VU			/										/					
FAMILY : MONODACTYLIDAE																				
<i>Mpnpdactylus argenteus</i>	Mono															/				
FAMILY : TOXOTIDAE																				
<i>Toxotes chatareus</i>	Archer fish															/				
FAMILY : SCATOPHAGIDAE																				
<i>Scatophagus argus</i>	Scat															/				

AMPHIBIANS

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SI	MA	KG	WK
Family : BUFONIDAE													
<i>Adinomus kelaartii</i> *	Kelaart's Dwarf Toad	EN		/	/	/			/	/			
<i>Bufo atukoralei</i> *	Atukoralei's Toad		/	/				/					/
<i>Bufo noellerti</i> *	Nollert's Toad	EN			/	/			/	/			
<i>Dutta phrynus</i>	Common Toad		/	/	/	/	/	/	/	/	/	/	/
Family : MICROHYLIDAE													
<i>Kaloula taprobanica</i>	Sri Lankan bullfrog		/	/	/	/		/	/				/
<i>Microhyla ornata</i>	Ornate narrow mouthed frog							/					
<i>Ramanella nagaoi</i> *	Nagao's Ramanella	VU	/		/		/		/				
Family :RANIDAE													
<i>Euphlyctis cyanophlyctis</i>	Indian skipper frog		/	/	/	/	/	/		/	/	/	/
<i>Euphlyctis hexadactylus</i>	Indian green frog		/	/							/	/	/
<i>Frijervarya kirtisinghei</i> *	Kirtisinghe's frog				/				/	/			
<i>Frijervarya limnocharis</i>	Common paddy field frog		/	/	/	/	/	/	/	/	/	/	/
<i>Hoplobatrachus crassus</i>	Jurdon's bullfrog						/					/	/
<i>Lankanectes corrugatus</i> *	Corrugated water frog		/	/	/	/	/		/	/			
<i>Nannophrys ceylonensis</i> *	Sri Lankan rock frog	VU			/	/			/				
<i>Rana aurantiaca</i>	Golden frog	VU	/	/	/	/	/	/	/	/			/
<i>Rana gracilis</i> *	Sri Lankan wood frog		/	/	/	/	/					/	/
<i>Rana temporalis</i> *	Bronzed frog		/		/	/	/		/	/			
<i>Philautus abundus</i> *	Labugama shrub frog				/	/							
<i>Philautus cavirostris</i> *	Hollow-snouted shrub frog	EN	/		/	/			/	/			
<i>Philautus folicola</i> *	Leaf dwelling shrub frog	EN	/	/	/	/	/		/	/			
<i>Philautus hoipolloi</i> *	Anthropogenic shrub frog		/	/	/	/	/		/				
<i>Philautus mittermeieri</i> *	Mittermeir's shrub frog	VU	/	/	/	/							
<i>Philautus nemus</i> *	Whistling shrub frog	CR							/				
<i>Philautus popularis</i> *	Common shrub frog		/	/	/	/	/	/	/	/	/	/	/
<i>Philautus reticulatus</i> *	Reticulated thigh shrub frog	EN	/	/	/	/	/	/	/	/			
<i>Philautus sordidus</i> *	Grubby shrub frog				/	/			/	/			
<i>Philautus stictomerus</i> *	Orange canthal shrub frog		/	/	/	/				/			
<i>Philautus auratus</i> *	Golden Shrub frog	EN		/	/								
<i>Polypedates cruciger</i> *	Common hourglass tree frog		/	/	/	/	/	/	/	/	/	/	/
<i>Polypedates longinasus</i> *	Long-snout tree frog	EN			/								
<i>Polypedates maculatus</i>	Spotted tree frog			/									
Family : ICHTHYOPHIDAE													
<i>Ichthyophis glutinosus</i> *	Ceylon caecilian				/					/			
<i>Ichthyophis pseudangularis</i> *	Lesser Yellow banded caecilian	VU	/	/	/				/	/			

REPTILES

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
FAMILY: Acrochordidae													
<i>Acrochordus granulatus</i>	Water Snake / Cloth Snake	EN									/	/	
FAMILY: Colubridae													
<i>Aheetulla nasuta</i>	Green Vine Snake		/	/	/	/	/	/	/	/	/	/	/
<i>Aheetulla pulverulenta</i>	Brown Vine Snake		/	/	/	/	/		/	/			
<i>Amphiesma stolatum</i>	Buff Striped Keelback		/	/	/	/	/	/	/	/	/	/	/
<i>Aspidura guentheri</i> *	Gunther's Rough-side		/	/	/	/	/		/	/			
<i>Atretium schistosum</i>	Olive Keelback		/	/	/	/	/	/	/	/	/	/	/
<i>Balanophis ceylonensis</i> *	Sri Lankan Blossom Krait	VU			/	/			/	/			
<i>Boiga barnesi</i> *	Barnes's Cat Snake				/	/				/			
<i>Boiga ceylonensis</i>	Sri Lankan Cat Snake		/	/	/	/	/	/	/	/	/	/	/
<i>Boiga forsteri</i>	Forsten's Cat Snake		/	/	/	/	/		/	/			/
<i>Cerberus rynchops</i>	Dog-Faced Water Snake	VU									/	/	
<i>Cercasphis carinatus</i> *	Sri Lankan Wolf Snake	VU	/	/	/	/	/	/	/	/		/	/
<i>Coelognathus Helena</i>	Trinket Snake		/	/	/	/	/	/	/	/	/	/	/
<i>Dendrelaphis bifrenalis</i> *	Boulenger's Bronze-back		/	/	/	/	/		/	/			
<i>Dendrelaphis caudolineolatu</i>	Striped-tailed Bronze-back	VU	/	/	/	/	/		/	/			
<i>Dendrelaphis tristis</i>	Common Bronze-back		/		/								
<i>Dendrelaphis shicori</i>			/	/	/	/	/	/	/	/	/	/	/

<i>Lycodon aulicus</i>	Common Wolf Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Lycodon osmanhilli</i> *	Flowerly Wolf Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Oligodon arnensis</i>	Common Banded Kukri Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Oligodon calamarius</i> *	Templeton's Kukri Snake	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Oligodon sublineatus</i> *	Streaked Kukri Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Ptyas mucosa</i>	Rat Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Sibynophis subpunctatus</i>	Black-headed Snake		/	/	/	/	/	/	/	/	/	/	/	/
<i>Xenochrophis asperrimus</i> *	Sri Lankan Keelback		/	/	/	/	/	/	/	/	/	/	/	/
<i>Xenochrophis piscator</i>	Checkered Keelback		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: Cyliodrophiidae														
<i>Cyliodrophis maculatus</i> *	Sri Lankan Pipe Snake		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: Elapidae														
<i>Bungarus ceylonicus</i> *	Sri Lankan Krait		/	/	/	/	/	/	/	/	/	/	/	/
<i>Naja naja</i>	Indian Cobra		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: Pythonidae														
<i>Python molurus</i>	Rock Python		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: VIPERIDAE														
<i>Daboia russelii russelii</i>	Russell's Viper		/	/	/	/	/	/	/	/	/	/	/	/
<i>Hypnale hypnale</i>	Merrem's Hupm-nosed Pit Viper		/	/	/	/	/	/	/	/	/	/	/	/
<i>Hypnale neap</i> *	Millard's Hupm-nosed Pit Viper		/	/	/	/	/	/	/	/	/	/	/	/
<i>Trimeresurus trionocephalus</i> *	Sri Lankan Green Pit Viper		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: AGAMIDAE														
<i>Calotes calote</i>	Green Forest Lizard		/	/	/	/	/	/	/	/	/	/	/	/
<i>Calotes liolepis</i> *	Whistling Lizard	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Calotes versicolor</i>	Garden lizard		/	/	/	/	/	/	/	/	/	/	/	/
<i>Certophora aspera</i> *	Rough-horned Lizard	EN	/	/	/	/	/	/	/	/	/	/	/	/
<i>Lyriocephalus scutatus</i> *	Hump-nosed Lizard		/	/	/	/	/	/	/	/	/	/	/	/
<i>Otocryptis wiegmanni</i> *	Sri Lankan Kangaroo Lizard		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: GEKKONIDAE														
<i>Hemidactylus brookii</i>	Brooke's House Gecko		/	/	/	/	/	/	/	/	/	/	/	/
<i>Hemidactylus depressus</i> *	Kandian Gecko		/	/	/	/	/	/	/	/	/	/	/	/
<i>Hemidactylus frenatus</i>	Asian House Gecko		/	/	/	/	/	/	/	/	/	/	/	/
<i>Lepidodactylus lugubris</i>	Mourning Gecko	EN	/	/	/	/	/	/	/	/	/	/	/	/
<i>Gehyra mutilata</i>	Four-clawed Gecko		/	/	/	/	/	/	/	/	/	/	/	/
<i>Cnemaspis silvula</i> *			/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: SCINCIDAE														
<i>Lankascincus fallax</i> *	Common Supple Skink		/	/	/	/	/	/	/	/	/	/	/	/
<i>Lankascincus gansi</i> *	Gans,s Lanka Skink		/	/	/	/	/	/	/	/	/	/	/	/
<i>Lankascincus greeri</i> *			/	/	/	/	/	/	/	/	/	/	/	/
<i>Mabuya carinata</i>	Common Skink		/	/	/	/	/	/	/	/	/	/	/	/
<i>Nessia burtonii</i> *			/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: VARANIDAE														
<i>Varanus bengalensis</i>	Land Monitor		/	/	/	/	/	/	/	/	/	/	/	/
<i>Varanus salvator</i>	Water Monitor		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: CROCODYLIDAE														
<i>Crocodyus porosus</i>	Saltwater Crocodylus		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: BATAGURIDAE														
<i>Melanochelys trijuga parkeri</i>	parker's black Turtle		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: TRIONYCHIDAE														
<i>Lissemys punctata</i>	Flapshell Turtle	VU	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY : CHELONIIDAE														
<i>Chelonia mydas</i>	Green Turtle	EN	/	/	/	/	/	/	/	/	/	/	/	/
<i>Lepidochelys olivacea</i>	Olive Ridley Sea Turtle	EN	/	/	/	/	/	/	/	/	/	/	/	/

BIRDS

Scientific Name	English Name	Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
FAMILY:PHASIACIDAE													
<i>Coturnix chinensis</i>	Blue-breasted Quail		/	/	/	/	/	/	/	/	/	/	/
<i>Galloperdix bicalcarata</i> *	Sri Lanka Spurfowl		/	/	/	/	/	/	/	/	/	/	/
<i>Gallus lafayetii</i> *	Sri Lanka Junglefowl		/	/	/	/	/	/	/	/	/	/	/
<i>Pavo cristatus</i>	Indian Peafowl		/	/	/	/	/	/	/	/	/	/	/
FAMILY:DENDROCYGNIDAE													
<i>Dendrocygna javanica</i>	Lesser Whistling-duck		/	/	/	/	/	/	/	/	/	/	/
FAMILY:PICIDAE													
<i>Picus chlorolophus</i>	Lesser Yellow-naped Woodpecker		/	/	/	/	/	/	/	/	/	/	/
<i>Dinopium benghalense</i>	Black-rumped Flameback		/	/	/	/	/	/	/	/	/	/	/
<i>Chrysocolaptes lucidus</i>	Greater Flameback		/	/	/	/	/	/	/	/	/	/	/
FAMILY:MAGALAIMIDAE													
<i>Megalaima zeylanica</i>	Brown-headed Barbet		/	/	/	/	/	/	/	/	/	/	/
<i>Megalaima flavifrons</i> *	Sri Lanka Yellow-fronted Barbet		/	/	/	/	/	/	/	/	/	/	/
<i>Megalaima rubricapilla</i> *	Crimson-fronted Barbet		/	/	/	/	/	/	/	/	/	/	/
FAMILY:BUCEROTIDAE													
<i>Ocyroceros gingalensis</i> *	Sri Lanka Grey Hornbill		/	/	/	/	/	/	/	/	/	/	/
FAMILY:TROGONIDAE													
<i>Harpactes fasciatus</i>	Malabar Trogon		/	/	/	/	/	/	/	/	/	/	/
FAMILY:CORACIIDAE													
<i>Coracias benghalensis</i>	Indian Roller		/	/	/	/	/	/	/	/	/	/	/
FAMILY:ALCEDINIDAE													
<i>Alcedo atthis</i>	Common Kingfisher		/	/	/	/	/	/	/	/	/	/	/
<i>Alcedo meninting</i>	Blue-eared Kingfisher	CR	/	/	/	/	/	/	/	/	/	/	/
<i>Ceyx erithacus</i>	Oriental Dwarf Kingfisher		/	/	/	/	/	/	/	/	/	/	/
<i>Halcyon capensis</i>	Stork-billed Kingfisher		/	/	/	/	/	/	/	/	/	/	/
<i>Halcyon smyrnensis</i>	White-throated Kingfisher		/	/	/	/	/	/	/	/	/	/	/
FAMILY:CERYLIDAE													
<i>Ceryle rudis</i>	Pied Kingfisher		/	/	/	/	/	/	/	/	/	/	/
FAMILY:MEROPIDAE													
<i>Merops philippinus</i>	Blue-tailed Bee-eater		/	/	/	/	/	/	/	/	/	/	/
<i>Merops leschenaulti</i>	Chestnut-headed Bee-eater		/	/	/	/	/	/	/	/	/	/	/
FAMILY:CUCULIDAE													
<i>Eudynamis scolopacea</i>	Asian Koel		/	/	/	/	/	/	/	/	/	/	/
<i>Phaenicophaeus pyrrhocephalus</i> *	Sri Lanka Red-faced Malkoha	VU	/	/	/	/	/	/	/	/	/	/	/
FAMILY:CENTROPODIDAE													
<i>Centropus sinensis</i>	Greater Coucal		/	/	/	/	/	/	/	/	/	/	/
<i>Centropus chlororhynchus</i> *	Sri Lanka Green-billed Coucal	VU	/	/	/	/	/	/	/	/	/	/	/
FAMILY:PSITTACIDAE													
<i>Loriculus beryllinus</i> *	Sri Lanka Hanging Parakeet		/	/	/	/	/	/	/	/	/	/	/
<i>Psittacula eupatria</i>	Alexandrine Parakeet		/	/	/	/	/	/	/	/	/	/	/
<i>Psittacula krameri</i>	Rose-ringed Parakeet		/	/	/	/	/	/	/	/	/	/	/
<i>Psittacula cyanocephala</i>	Plum-headed Parakeet		/	/	/	/	/	/	/	/	/	/	/
<i>Psittacula calthrapae</i> *	Sri Lanka Layard's Parakeet		/	/	/	/	/	/	/	/	/	/	/
FAMILY:APODIDAE													
<i>Hirundapus giganteus</i>	Brown-backed Needletail		/	/	/	/	/	/	/	/	/	/	/
<i>Apus affinis</i>	House Swift		/	/	/	/	/	/	/	/	/	/	/
FAMILY:HEMIPROCNIDAE													
<i>Hemiprocne coronata</i>	Crested Treeswift		/	/	/	/	/	/	/	/	/	/	/
FAMILY:SRRIGIDAE													
<i>Otus sunia</i>	Oriental Scops Owl		/	/	/	/	/	/	/	/	/	/	/
<i>Otus bakkamoena</i>	Collard Scops Owl		/	/	/	/	/	/	/	/	/	/	/
<i>Otus thilohofmanni</i> *	Serendib Scops Owl	EN	/	/	/	/	/	/	/	/	/	/	/
<i>Bubo nipalensis</i>	Spot-bellied Eagle Owl		/	/	/	/	/	/	/	/	/	/	/
<i>Strix leptogrammica</i>	Brown Wood Owl		/	/	/	/	/	/	/	/	/	/	/
<i>Glaucidium castanonotum</i> *	Sri Lanka Chestnut-backed Owlet	EN	/	/	/	/	/	/	/	/	/	/	/
<i>Ninox scutulata</i>	Brown Hawk Owl		/	/	/	/	/	/	/	/	/	/	/
FAMILY:BATRACHOSTOMIDAE													
<i>Batrachostomus moniliger</i>	Frogmouth		/	/	/	/	/	/	/	/	/	/	/
FAMILY:CAPRIMULGIDAE													
<i>Caprimulgus atripennis</i>	Jerdon's Nightjar		/	/	/	/	/	/	/	/	/	/	/
FAMILY:COLUMBIDAE													
<i>Columba toringtoni</i> *	Sri Lanka Wood Pigeon	VU	/	/	/	/	/	/	/	/	/	/	/
<i>Streptopelia chinensis</i>	Spotted Dove		/	/	/	/	/	/	/	/	/	/	/
<i>Chalcophaps indica</i>	Emerald Dove		/	/	/	/	/	/	/	/	/	/	/
<i>Treron bicincta</i>	Orange-breasted Green-pigeon		/	/	/	/	/	/	/	/	/	/	/
<i>Treron pompadora</i>	Pompador Green-pigeon		/	/	/	/	/	/	/	/	/	/	/
<i>Ducula aenea</i>	Green Imperial Pigeon		/	/	/	/	/	/	/	/	/	/	/
FAMILY:RALLIDAE													
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen		/	/	/	/	/	/	/	/	/	/	/

<i>Porphyrio porphyrio</i>	Purple Swamphen													/	/
FAMILY: JACANIDAE															
<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana		/											/	/
FAMILY: CHARADRIIDAE															
<i>Himantopus himantopus</i>	Black-winged Stilt		/											/	/
<i>Vanellus indicus</i>	Red-wattled Lapwing		/										/	/	/
FAMILY: LARIDAE															
<i>Sterna fuscata</i>	Sooty Tern													/	
<i>Chlidonias hybridus</i>	Whiskered Tern													/	
FAMILY: ACCIPITRIDAE															
<i>Pernis ptilorhynchus</i>	Oriental Honey-buzzard		/	/	/	/	/	/	/	/	/	/	/		
<i>Elanus caeruleus</i>	Black-shouldered Kite		/												
<i>Haliastur indus</i>	Brahminy Kite		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle		/	/										/	/
<i>Spilornis cheela</i>	Crested Serpent Eagle		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Circus melanoleucos</i>	Pied Harrier		/	/										/	
<i>Accipiter badius</i>	Shikra		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Accipiter virgatus</i>	Besra	VU	/												
<i>Ictinaetus malayensis</i>	Black Eagle		/	/						/	/				
<i>Hieraetus kienerii</i>	Rufous-bellied Eagle		/												
<i>Spizaetus cirrhatus</i>	Changeable Hawk Eagle		/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: PODICIPEDIDAE															
<i>Tachybaptus ruficollis</i>	Little Grebe		/											/	/
FAMILY: ANHINGIDAE															
<i>Anhinga melanogaster</i>	Darter		/												
FAMILY: PHALACROCORACIDAE															
<i>Phalacrocorax niger</i>	Little Cormorant		/		/					/	/	/	/	/	/
FAMILY: ARDEIDAE															
<i>Egretta garzetta</i>	Little Egret													/	/
<i>Ardea cinerea</i>	Grey Heron													/	/
<i>Ardea purpurea</i>	Purple Heron		/											/	/
<i>Casmerodius albus</i>	Great Egret		/											/	/
<i>Mesophoyx intermedia</i>	Intermediate Egret		/											/	/
<i>Bubulcus ibis</i>	Cattle Egret		/											/	/
<i>Ardeola grayii</i>	Pond Heron		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Nycticorax nycticorax</i>	Black-crowned Night Heron		/											/	
<i>Ixobrychus sinensis</i>	Yellow Bittern		/											/	
<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern		/											/	/
<i>Dupetor flavicollis</i>	Black Bittern		/	/										/	
FAMILY: THRESKIORNITHIDAE															
<i>Threskiornis melanocephalus</i>	Black-headed Ibis													/	/
FAMILY: CICONIIDAE															
<i>Anastomus oscitans</i>	Asian Openbill													/	/
FAMILY: PITTIDAE															
<i>Pitta brachyura</i>	Indian Pitta		/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: IRENIDAE															
<i>Chloropsis cochinchinensis</i>	Blue-winged Leafbird		/	/	/	/	/	/	/	/	/	/	/		
<i>Chloropsis aurifrons</i>	Golden-fronted Leafbird		/	/	/	/	/	/	/	/	/	/	/		
FAMILY: LANIIDAE															
<i>Lanius cristatus</i>	Brown Shrike		/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: CORVIDAE															
<i>Urocissa ornata</i> *	Sri Lanka Blue Magpie	VU												/	
<i>Corvus splendens</i>	House Crow		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Corvus macrorhynchos</i>	Large-billed Crow		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Artamus leucorhynchus</i>	Ashy Woodswallow		/	/	/	/	/	/	/	/	/	/	/		
<i>Oriolus xanthornus</i>	Black-hooded Oriole		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Coracina macei</i>	Large Cuckooshrike		/		/					/					
<i>Coracina melanoptera</i>	Black-headed Cuckooshrike		/	/	/	/	/	/	/	/	/	/	/		
<i>Pericrocotus cinnamomeus</i>	Small Minivet		/	/	/	/	/	/	/	/	/	/	/		
<i>Pericrocotus flammeus</i>	Scarlet Minivet		/	/	/	/	/	/	/	/	/	/	/		
<i>Hemipus picatus</i>	Bar-winged Flycatcher-shrike		/	/	/	/	/	/	/	/	/	/	/		
<i>Rhipidura aureola</i>	White-browed Fantail		/	/	/	/	/	/	/	/	/	/	/		
<i>Dicrurus leucophaeus</i>	Ashy Drongo		/												
<i>Dicrurus caerulescens</i>	White-bellied Drongo		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Dicrurus lophorinus</i>	Crested Drongo		/	/	/	/	/	/	/	/	/	/	/		
<i>Hypothymis azurea</i>	Black-naped Monarch		/	/	/	/	/	/	/	/	/	/	/		
<i>Terpsiphone paradisi</i>	Asian Paradise-flycatcher		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Aegithina tiphia</i>	Common Iora		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Tephrodornis pondicerianus</i>	Common Woodshrike		/	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: MUSCICAPIDAE															
<i>Zoothera spiloptera</i> *	Sri Lanka Spot-winged Thrush		/	/	/	/	/	/	/	/	/	/	/		
<i>Zoothera dauma</i> *	Scaly Thrush	EN	/	/	/	/	/	/	/	/	/	/	/		
<i>Cyornis tickelliae</i>	Tickell's Blue Flycatcher		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Copsychus saularis</i>	Oriental Magpie Robin		/	/	/	/	/	/	/	/	/	/	/	/	/
<i>Copsychus malabaricus</i>	White-rumped Shama		/												
<i>Saxicoloides fulicata</i>	Indian Robin		/											/	
FAMILY: STURNIDAE															

<i>Acridotheres tristis</i>	Common Myna		/	/	/	/	/	/	/	/	/	/	/	/
<i>Gracula ptilogenys</i> *	Sri Lanka Myna	EN			/					/				
<i>Gracula religiosa</i>	Hill Myna		/	/	/	/	/		/	/				
FAMILY: SITTIDAE														
<i>Sitta frontalis</i>	Velvet-fronted Nuthatch		/	/	/	/	/		/	/				
FAMILY: HIRUNDINIDAE														
<i>Hirundo rustica</i>	Barn Swallow		/	/	/	/	/	/	/	/	/	/	/	/
<i>Hirundo daurica</i>	Red-rumped Swallow		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: PYCONOTIDAE														
<i>Pycnonotus melanicterus</i> *	Black-crested Bulbul		/	/	/	/	/		/	/				
<i>Pycnonotus cafer</i>	Red-vented Bulbul		/	/	/	/	/	/	/	/	/	/	/	/
<i>Pycnonotus luteolus</i>	White-browed Bulbul		/	/	/	/	/	/	/	/	/	/	/	/
<i>Iole indica</i>	Yellow-browed Bulbul		/	/	/	/	/		/	/				
<i>Hypsipetes leucocephalus</i>	Black Bulbul		/	/	/	/	/		/	/				
FAMILY: CISTICOLIDAE														
<i>Prinia socialis</i>	Ashy Prinia												/	
<i>Prinia inornata</i>	Plain Prinia													/
FAMILY: ZOSTEROPIDAE														
<i>Zosterops palpebrosus</i>	Oriental White-eye		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: SYLVIIDAE														
<i>Acrocephalus stentoreus</i>	Clamorous Reed Warbler												/	
<i>Orthotomus sutorius</i>	Common Tailorbird		/	/	/	/	/	/	/	/	/	/	/	/
<i>Phylloscopus trochiloides</i>	Greenish Warbler												/	
<i>Garrulax cinereifrons</i> *	Ashy-headed Laughing –thrush	EN									/			
<i>Pellorneum fuscicapillum</i> *	Sri Lanka Brown-capped Babbler		/	/	/	/	/		/	/				
<i>Pomatorhinus horsfieldii</i>	Scimitar Babbler		/	/	/	/	/		/	/				
<i>Dumetia hyperythra</i>	Tawny-bellied Babbler									/				
<i>Rhopocichla atriceps</i>	Dark-fronted Babbler		/	/	/	/	/		/	/	/			
<i>Turdoides rufescens</i> *	Sri Lanka Orange-billed Babbler	VU								/				
<i>Turdoides affinis</i>	Yellow-billed Babbler		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: NECTARINIIDAE														
<i>Dicaeum vincens</i> *	Sri Lanka Legge's Flowerpecker	VU	/	/	/	/	/		/	/				
<i>Dicaeum erythrorhynchos</i>	Pale-billed Flowerpecker		/	/	/	/	/	/	/	/	/	/	/	/
<i>Nectarina zeylonica</i>	Purple-rumped Sunbird		/	/	/	/	/	/	/	/	/	/	/	/
<i>Nectarina asiatica</i>	Purple Sunbird		/	/	/	/	/	/	/	/	/	/	/	/
<i>Nectarina lotenia</i>	Loten's Sunbird		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: PASSERIDAE														
<i>Passer domesticus</i>	House Sparrow		/	/				/			/	/	/	
<i>Dendronanthus indicus</i>	Forest Wagtail		/	/	/	/	/	/	/	/				/
<i>Motacilla flava</i>	Yellow Wagtail		/		/									
<i>Motacilla cinerea</i>	Grey Wagtail						/							
<i>Anthus rufulus</i>	Paddyfield Pipit												/	/
<i>Ploceus manyar</i>	Streaked Weaver		/											
<i>Ploceus philippinus</i>	Baya Weaver		/											/
<i>Lonchura striata</i>	White-rumped Munia		/	/	/	/	/	/	/	/	/	/	/	/
<i>Lonchura punctulata</i>	Scaly-breasted Munia		/	/	/	/	/	/	/	/	/	/	/	/

MAMMALS

Scientific Name	English Name	Threatened Status	KK	KO	KN	NK	BE	RU	HY	SIN	MA	KG	WK
FAMILY: MANIDAE													
<i>Manis crassicaudata</i>	Pangolin		/	/	/	/	/	/	/	/			/
FAMILY: SORICIDAE													
<i>Suncus murinus</i>	Common musk shrew											/	/
FAMILY: RHINOOPHIDAE													
<i>Rhinolophus beddomei</i>	Great horse-shoe bat		/	/	/		/	/		/			/
<i>Rhinolophus rouxii</i>	Rufous horse-shoe bat		/	/	/		/			/			
FAMILY: PTEROPODIDAE													
<i>Rousettus leschenaulti</i>	Fulvous fruit bat		/	/	/			/					
FAMILY: HIPPOSIDEROSIDAE													
<i>Hipposideros galeritus</i>	Dekhan leaf-nosed bat									/			
<i>Hipposideros ater</i>	bicoloured leaf-nosed bat		/	/				/					
FAMILY: MEGADERMATIDAE													
<i>Megaderma spasma</i>	Long-eared vampire bat				/		/						
<i>Megaderma lyra</i>	False vampire bat		/		/					/			
FAMILY: VESPERTILLIONIDAE													
<i>Kerivoula picta</i>	Painted bat		/										/
FAMILY: LORISIDAE													
<i>Loris tardigradus</i> *	Sri Lanka red slender loris	EN	/	/	/	/	/		/	/			
FAMILY: LEPORIDAE													
<i>Lepus nigricollis</i>	Black-naped hare		/	/	/	/	/			/		/	/
FAMILY: SCURIDAE													

<i>Ratufa macroura</i>	Giant squirrel	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Funambuls layardi</i> *	Sri Lanka flame-striped jungle squirrel	EN	/	/	/	/	/	/	/	/	/	/	/	/
<i>Funambuls palmarum</i>	Palm squirrel		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: HYSTERICIDAE														
<i>Hystrix indica</i>	Porcupine		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: MUSTELIDAE														
<i>Lutra lutra</i>	Otter	EN	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: CANIDAE														
<i>Canis aureus</i>	Jakal		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: VIVERRIDAE														
<i>Paradoxurus hermaphoditus</i>	Palm-cat		/	/	/	/	/	/	/	/	/	/	/	/
<i>Paradoxurus zelonensis</i>	Sri Lanka golden palm-cat	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Viverricula indica</i>	Ring-tailed civet		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: HERPESTINAE														
<i>Herpestes brachyurus</i>	Brown mongoose		/	/	/	/	/	/	/	/	/	/	/	/
<i>Herpest edwardsii</i>	Grey mongoose		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: FELIDAE														
<i>Prionailurus rubiginosus</i>	Rusty-spotted cat	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Prionailurus viverrinus</i>	Fishing cat	VU	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: CERVIDAE														
<i>Axis porcinus</i>	Hog deer	EN	/	/	/	/	/	/	/	/	/	/	/	/
<i>Cervus unicolor</i>	Sambur		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: SUIDAE														
<i>Sus scrofa</i>	Wild boar		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: TRAGULIDAE														
<i>Moschiola meminna</i> *	Mouse-deer		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: MURIDAE														
<i>Bandicota indica</i>	Malabar bandicoot		/	/	/	/	/	/	/	/	/	/	/	/
<i>Mus mayori</i> *	Sri Lanka bicoloured spiny mouse	VU	/	/	/	/	/	/	/	/	/	/	/	/
<i>Mus musculus</i>	Indian house mouse		/	/	/	/	/	/	/	/	/	/	/	/
<i>Rattus rattus</i>	Common rat		/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: COLOBINAE														
<i>Semnopithecus vetulus</i> *	Purple-faced leaf monkey	VU	/	/	/	/	/	/	/	/	/	/	/	/
FAMILY: CERCOPITHECINAE														
<i>Macaca sinica</i> *	Sri Lanka toque monkey		/	/	/	/	/	/	/	/	/	/	/	/

Photo catalogue: Visual aspects of the faunal diversity of Galle District



Figure 1: Lowland tropical rain forests are the major habitat type that were sampled in the survey



Figure 2: Haycock forest is the highest peak in Galle district that shows altitude gradient of fauna diversity. It represents lowland forest and sub-montane forest habitats as well.

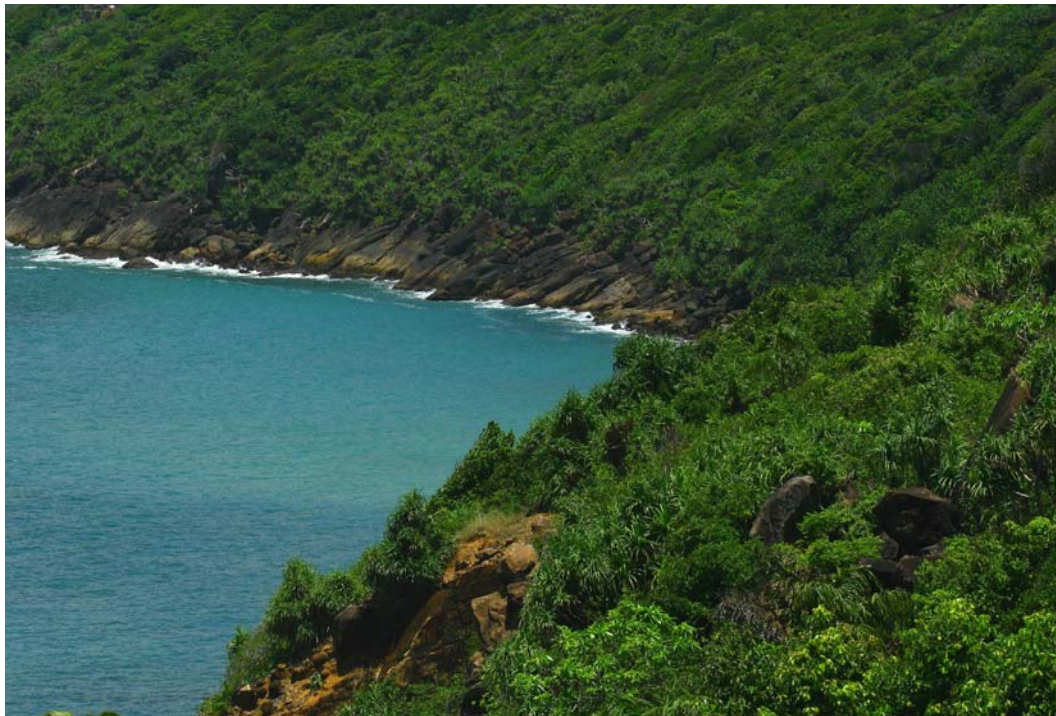


Figure 3: Rumassala sea cliff was sampled during this survey as it shows a very unique habitat variation.



Figure 4: Vateria flower Rasbora (*Rasboroides vaterifloris*) one of the sensitive freshwater species inhabits in the streams adjoining rainforest habitats. Water pollution due to gemming, and use of agrochemicals are threatening many freshwater fish species.



Figure 5: Endangered Wilpita Rasbora (*Rasbora wilpita*) recorded out side of its original range of Wipita in Matara district.



Figure 6: Newly described *Labuca ruhuna* recorded in Elpitiya area and its habitats are under threat from illegal gemming activities.



Figure 7



Figure 8



Figure 9

Three potentially new species of freshwater fish species recorded during the current survey (Figure 7 & 8 belongs to Genus *Devario* and Figure 9 belongs to Genus *Lepidocephalichthys*). Further taxonomic and molecular studies are progressing to publish scientific papers on these species.



Figure 10: Ormiston's Oakblue (*Arhopala ormistoni*) recorded from Kanneliya forest reserve during the field sampling. This species was recorded after 90 years from its last record.



Figure 11: Unidentified amphibian species recorded from Kanneliya Forest Reserve.



Figure 12: Unidentified amphibian species recorded from Haycock Forest Reserve.



Figure 13: Unidentified amphibian species recorded from Hiyare Forest Reserve.



Figure 14: Unidentified amphibian species recorded from Kottawa Forest Reserve.



Figure 15: Unidentified amphibian species recorded from Kottawa-Kombala Forest Reserve (Hiyare). This species could become the smallest amphibian species in Sri Lanka with average length just about 14mm.



Figure 16: Malformation of amphibian species observed in the Kanneliya, Kottwa & Hiyare rainforest habitats of the Galle district



Figure 17: Long Eared Vampire Bat (*Megaderma spasma*) is one of the mammal species recorded from Kanneliya Forest Reserve.



Figure 18: Record of Ornate Narrow-mouthed frog (*Microhyla ornate*) is the first record in the lowland wet zone of Sri Lanka.



Figure 19: Golden Shrub Frog (*Philatus auratus*) recorded in the Kanneliya & Kottawa forests in this survey. This is the first record after its type locality of Sinharaja World Heritage site (Rakwana Hills).



Figure 20: Hollow Snouted Shrub Frog (*Philatus cavirostris*) recorded in the Kottawa Kombala (Hiyare) forests in this survey. Located from Hiyare is the lowest altitude record of this species.



Figure 21: Conservation of Haycock forest is important as it is the only location of critically endangered amphibian species the Whistling Scrub Frog (*Philautus nemus*)



Figure 22: Rare and endangered Southern Duffer (*Discophora lepida*) recorded in Kottwakombala (Hiyare) Forest Reserve



Figure 23: Natural habitats of endangered Hog Deer (*Axis porcinus*) in the Ambalangoda, Elpitiya and Balapitiya area are being replaced by many commercial plantations namely cinnamon and tea.



Figure 24: Female Mugger Crocodile guarding her nest in Koggala sampling site.



Figure 25: *Ratnadvipia karu* is a newly described and critically endangered land snail species that was recorded in the forest habitats of Galle district.



Figure 26: Aerial view of encroachment of tea plantations in the Galle district is a common sight. Expansion of tea plantations and chemical inputs from these plantations are threatening many species in the lowland rain forest habitats.



Figure 27: Garbage dumping in the Kottawa forest reserve



Figure 28: Illegal brewing of alcohol in the forest areas surrounding in the streams and wetland habitats are common in most of the forest habitats in the Galle District. Dumping of waste materials directly to the wetland habitats is common and it is causing serious threat to the freshwater dwelling species.

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