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LATISSIMUS

NEWSLETTER OF THE BALFOUR-BROWNE CLUB

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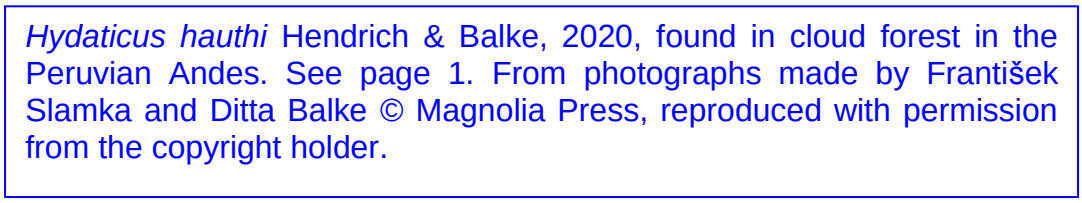


Hydaticus hauthi Hendrich & Balke, 2020, found in cloud forest in the Peruvian Andes. See page 1. From photographs made by František Slamka and Ditta Balke © Magnolia Press, reproduced with permission from the copyright holder.

ADDRESSES The addresses of authors of articles and reviewed works are given at the end of this issue of ***Latissimus***. The address for other correspondence is: Professor G N Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK – latissimus@btinternet.com

IGNACIO RIBERA 1963-2020

This issue of ***Latissimus*** is earlier than usual. It not only reflects the loss of a great friend of the Club but it marks the changes associated with the virus pandemic. We have no meetings to report and not even any in sight, though we must hope that our meetings have been postponed, not just cancelled.

PERUVIAN *HYDATICUS*

This is the 150th known *Hydaticus*, described from 1550 m above sea level in a fairly isolated part of the Andes, surrounded by Amazonian lowlands. It is unusual in that the upper side is almost entirely black (see the front cover). Another unusual feature is that the "local collector" is not named. A revised key to Neotropical *Hydaticus* (*Prodaticus*) is provided – but see page 39.

HENDRICH L & BALKE M 2020. *Hydaticus* (*Prodaticus*) *hauthi* sp. nov., a new diving beetle from the cloud forest in the Cordillera Ela Sira, Peru (Coleoptera: Dytiscidae). *Zootaxa* **4743** 419-4126.

ALPINE RESERVOIRS

The biodiversity of eight small reservoirs in the Swiss Alps was compared with that of 39 natural or newly excavated ponds. The reservoirs were no different from natural ponds in surface area, conductivity, trophic level, and lack of vegetation. There was no evidence of pollution from ski resort run-off. Dragonfly diversity was lower than for natural ponds but beetle diversity was about the same. Ten species of beetle were found in reservoirs as against 26 in ponds. All were listed as of Least Concern in the Swiss Red List. Two, *Hydroporus foveolatus* Heer and *Boreonectes griseostriatus* (De Geer) are known to be boreo-alpine. The correspondent is Beat Oertli.

A pond and reservoir side-by-side in the Swiss Alps. Photograph courtesy of Beat Oertli.

FAIT P, DEMIERRE E, ILG C & OERTLI B 2020. Small mountain reservoirs in the Alps: new habitats for alpine freshwater biodiversity? *Aquatic Conservation* doi 10.1002/aqc.3306 14 pp.

GYRINID LIFE-CYCLE & NEW PARASITOID

The egg, larva and pupa of *Gyrinus rozei* are described from northern Brazil. Pupae collected in the field in their cocoons produced a chalcid wasp, *Melanosmicra* Ashmead, previously with its host unknown. The paper usefully lists other parasite records in the Gyrinidae. The first was a pteromalid, *Cyrtogaster* Walker, attacking a *Dineutus*. Other pteromalids associated with Gyrinidae are *Gyrinophagus* Ruschka and *Dineuticola* Boucek, and ichneumonids *Gausocentrus gyrini* Ashmead and *Hemiteles hungerfordi* Cushman. Mark Shaw (pers. comm. to GNF) has noted Old World records of parasitisation. The ichneumonid *Bathythrix rugulosa* (Thomson) was reared from a *Gyrinus* cocoon in Shropshire, England (Schwarz & Shaw, 2010). The *Bathythrix* larva would be an endoparasitoid. The Universal Chalcidoidea Database is online and it lists whirligig associations.

COLPANI D, BENETTI C J, HAMADA N, ANDRADE-SOUZA V, SCHOENINGER K & MICHAT M C 2020. Description of the immature stages of the Neotropical whirligig beetle *Gyrinus* (*Neogyrinus*) *rozei* Ochs, 1953 (Coleoptera: Gyrinidae) and first report of the parasitoid wasp *Melanosmicra* sp. (Hymenoptera: Chalcidae) on a *Gyrinus* species. *Zootaxa* **4732** 99-116.

SCHWARZ M & SHAW M R 2010. Western Palaearctic Crypinae (Hymenoptera: Ichneumonidae) in the National Museums of Scotland, with nomenclatural changes, taxonomic notes, rearing records and special reference to the British check list. Part 4. Tribe Phygadeuonitini, subtribes Mastrina, Ethelurgina, Endascia (excluding *Endasys*), Bathythrichina and Cremnodina. *Entomologist's Gazette* **61** 187-206.

DRAGONFLIES FAIL TO CATCH WHIRLIGIGS

An interesting item of non-news – a hawking dragonfly failed to make an impression on a flotilla of about 25 *Gyrinus marinus* Gyllenhal. It used the steep dive approach and it didn't work!

DENTON J 2020. Brown hawker *Aeshna grandis* (L.) (Odonata: Aeshnidae) attacking surface-dwelling prey. *British Journal of Entomology & Natural History* **33** 76.

PAPUAN *LIMBODESSUS*

The four species of *Limbodessus* known from New Guinea are illustrated, showing the great range of size, with the new species just over 2 mm, as well as the variations in shape and colour. The new species is assigned to *Limbodessus* Guignot mainly on the basis of the peculiar apical lobe to the paramere. We don't know who collected the specimens but André Skale donated them for study and was appropriately rewarded.

HENDRICH L, SURBAKT S & BALKE M 2020. *Limbodessus skalei* sp. nov., a new diving beetle species from the west Papuan Archipelago (Coleoptera: Dytiscidae, Bidessini). *Zootaxa* **4763** 587-592.

NINO SANFILIPPO'S COLLECTION

The Natural History Museum in Genoa holds the collection of Nino (short for Antonino) Sanfilippo (1922-1994). The Palearctic Hydradephaga are catalogued here, with material ranging from the Azores to Japan and Pakistan. Entries are annotated with discussion about recent changes in nomenclature, etc. The photograph is from the archives of the Museum.

ROCCHI S & POGGI R 2020. La collezione Nino Sanfilippo di coleotteri idroadefagi della Regione Paleartica, conservata nel Museo Civico di Storia Naturale "Giacomo Doria" di Genova. I. Ditiscidi (Coleoptera, Dytiscidae). *Annali del Museo Civico di Storia Naturale "G. Doria"* **112** 167-222.

RIVER HELME IN THURINGIA

Water beetles were sampled between 155 and 400 m above sea level in this river in North-west Thuringia. Thirty-two species were recorded, including *Brychius elevatus* (Panzer), *Helophorus arvernicus* Mulsant, *Hydraena excisa* Kiesenwetter, *Ochthebius bicolon* Germar, *Elmis aenea* (Müller), *E. maugetii* Latreille, and *Limnius perrisi* (Dufour). Two species found had been listed as regionally extinct in the 2011 Thuringian Red List. These were *Elmis obscura* (Müller), last reported in 1873, and *Esolus parallelepipedus* (Müller), frequent in the Helme and known in other sites in Thuringia in 2012 and 2013. The paper includes illustrations of the elmids found.

KLEINSTEUBER W 2019. Beitrag zur Wasserkäferfauna der Helme in Thüringen (Insecta: Coleoptera aquatica). *Mitteilungen des Thüringer Entomologen-verbandes e. V*. **26** 72-77.

DYTISCUS DIMIDIATUS METAMORPHOSIS

The opportunity arose to watch pupation and development of the adult when rearing *D. dimidiatus* Bergsträsser. This is shown in a sequence of 26 photographs. The actual pupation takes 45 minutes when the beetle sheds its larval skin. The eclosion of a pupa also takes 45 minutes during which its stretches its unfolding elytra and wings as the skin tears across the back. After eclosion it takes eight hours from being white to go yellow, and a further eleven hours to take on typical adult colouring.

HENDRIKS P 2020. Verpopping van de veengeelgerande waterroofkever (Coleoptera: Dytiscidae: *Dytiscus dimidiatus*). *Entomologische Berichten* **80** 59-67.

CENTRAL EUROPEAN DIVERSITY DOWN

Hydradephaga were surveyed in southern Germany in 1991-1995, 2007/8 and 2017/18. Eight-one species were found with an annual decline of about 1% and abundance at 20%. Community composition also changed over time partly reflecting natural succession processes. Moorland beetles suffered a distinct decline. Lower abundances and fewer species could be linked to site with a conductivity of 600 µS/cm. The correspondent is Jürgen Schmidl.

ROTH N, ZODER S, ZAMAN A A, THORN S & SCHMIDL J 2020. Long-term monitoring reveals decreasing water beetle diversity, loss of specialists and community shifts over the past 28 years. *Insect Conservation and Diversity doi*: 10.111/icad.12411 140-150.

TAIWANESE *COELOSTOMA*

Seven species are recognised from Taiwan including the newly described *C.* (*Lachnocoelostoma*) *taiwanense*. Another species, *C. vagum* d'Orchymont, is left out of this list until some vouchers can be found. The corresponding author is Fang-Shuo Hu.

LIU H-C, HU F-S & FIKÁČEK M 2020. Review of the genus *Coelostoma* of Taiwan with description of a new species (Coleoptera: Hydrophilidae). *Acta Entomologica Musei Nationalis Pragae* **60** 155-162.

***AGABUS GUTTATUS* IN POLAND**

This rediscovery is from west central Poland.

BUCZYŃSKI P & WENDZONKA J 2020. *Agabus guttatus guttatus* (Paykull, 1798) (Coleoptera: Dytiscidae) stwierdzony pierwszy raz od 100 lat na Nizinie Wielkopolsko-Kujawskiej. {[*Agabus guttatus guttatus* (Paykull, 1798) (Coleoptera: Dytiscidae) rediscovered after 100 years in the Wielkopolsko-Kujawska Lowland] *Wiadomości Entomologiczne* **39** 3-4.

LABOULBENIALES ON *OCHTHEBIUS*

Several new species of Laboulbeniales are described from beetles including *Hydrophilomyces deflexus* and *H. riberae* on *Ochthebius nanus* Stephens in Spain. *H. deflexus* was found between the hind coxae and *H. riberae* on the ventrites and below the elytral margins. Carles Hernando was the collector.

SANTAMARIA S, CUESTA-SEGURA A D & GUARDIA L 2020 (in press). New and remarkable species of Laboulbeniales (Ascomycota) from Spain. *Nova Hedwigia*, in press.

***METHLES* IN SARDINIA**

Methles cribratellus is newly recorded for Sardinia in one of its typical habitats, *Typha* on black mud! With it were *Hydaticus leander* (Rossi), *Ilybius meridionalis* Aubé and *Liopterus atriceps* (Sharp). Photograph courtesy of the authors.

HENDRICH L & BALKE M 2020. Ein weiterer Fund des Schwimmkäfers *Methles cribratellus* (Fairmaire, 1880) von Sardinien. *Nachrichtblatt der Bayerischen Entomologen* **69** 16-19.

LAKE POSTREZHSKOYE, BELARUS

This is a dystrophic lake in the Berezinsky Biosphere Reserve. It doesn't seem to have been visited during the Club meeting there in 2013. Beetles dominate the list with 31 species including *Agabus biguttulus* (Thomson), *Hydroporus dorsalis* (Fab.), *H. elongatulus* Sturm, *Clemnius decoratus* (Gyllenhal) and *Limnebius parvulus* (Herbst).

RYNDEVICH S K, LUKASHUK A O, NATAROV V M & TOKARCHUK O V 2018. Water and amphibious insects (Insecta: Odonata, Ephemeroptera, Trichoptera, Hemiptera, Coleoptera) of Lake Postrezhskoye (Berezinsky Biosphere Reserve, Belarus) as an intact ecosystem. *Management of Specially Protected Natural Territories of Belarus. Collection of scientific papers*. **13** 79-89. [In Russian with English abstract]

S'ALBUFERA, MALLORCA

Forty-nine species are recorded from the Parc Natural de s'Albufera. At about 1700 ha this is the largest wetland area in the Balearics. There are abandoned canals, reedbeds and lagoons largely protected from the sea by dunes. Records go back to at least 1915 but most of this work is based on surveys in 2011-15. Species include

Laccophilus poecilus Klug, *Bidessus pumilus* (Aubé) *Eretes griseus* Fab., *Helophorus illustris* Sharp, *Enochrus segmentinotatus* (Kuwert), *Cercyon subsulcatus* Rey, *Ochthebius deletus* Rey, *Botriophorus atomus* Mulsant & Rey, and *Contacyphon lindbergi* (Nyholm). Water abstraction and intensive agriculture around its periphery pose major problems for ecosystem recovery. Nick Riddiford has supplied an aerial photograph and a shot of some of the volunteers working for TAIB, The Albufera International Biodiversity group.

RIDDIFORD N J & FOSTER G N 2020. The aquatic beetles (Coleoptera) of the Parc Natural de d'Albufera de Mallorca, Balearic Islands. *Bolleti – Societat d'Història Natural de las Balears* **63** 9-22.

EDINBURGH BOTANIC GARDEN

The pond in the Royal Botanic Garden was excavated some time before 1870, and there are 19th Century records from the RBG for *Hydroporus tessellatus* (Drapiez), *Hygrotus versicolor* (Schaller), *Ochthebius exsculptus* Germar and *Bagous alismatis* (Marsham). In the present day the pond's hydrology has been modelled so as to predict retention rates during "extreme" (as we used to call them in Britain before February 2020) rainfall events. For example the pond might be expected to delay discharge by six minutes for a storm event of 15 minutes duration with a peak rate of rainfall of 227 mm per hour, or nine minutes including the surrounding rain garden. As one might expect that the flora of a botanic garden has been comprehensively surveyed: here we have, for example, 21 species of bryophyte and a promise to check old plant labels for more exotic flowering plants. The fauna is a bit more limited, the following beetles having been seen – *Haliplus flavicollis* Sturm, *H. sibiricus* Motschulsky, *Helophorus aequalis* Thomson, *H. brevipalpis* Bedel and *Elmis aenea* (Müller). The correspondent is Steve Birkinshaw.

KRIVTSOV V, BIRKINSHAW S, ARTHUR S, KNOTT D, MONFRIES R, WILSON K, CHRISTIE D, CHAMBERLAIN D, BROWNLESS P, KELLY D, BUCKMAN J, FORBES H & MONTEIRO Y 2020. *Philosophical Transactions of the Royal Society A* **378** 1-19.

HYDROPHILIDAE – PALEARCTIC CATALOGUE ONLINE

Marek Przewoźny has updated this catalogue. Go online to www.waterbeetles.eu and click on 2020. The catalogues there not only save money on printed paper but also a lot of shelf space! A boon!

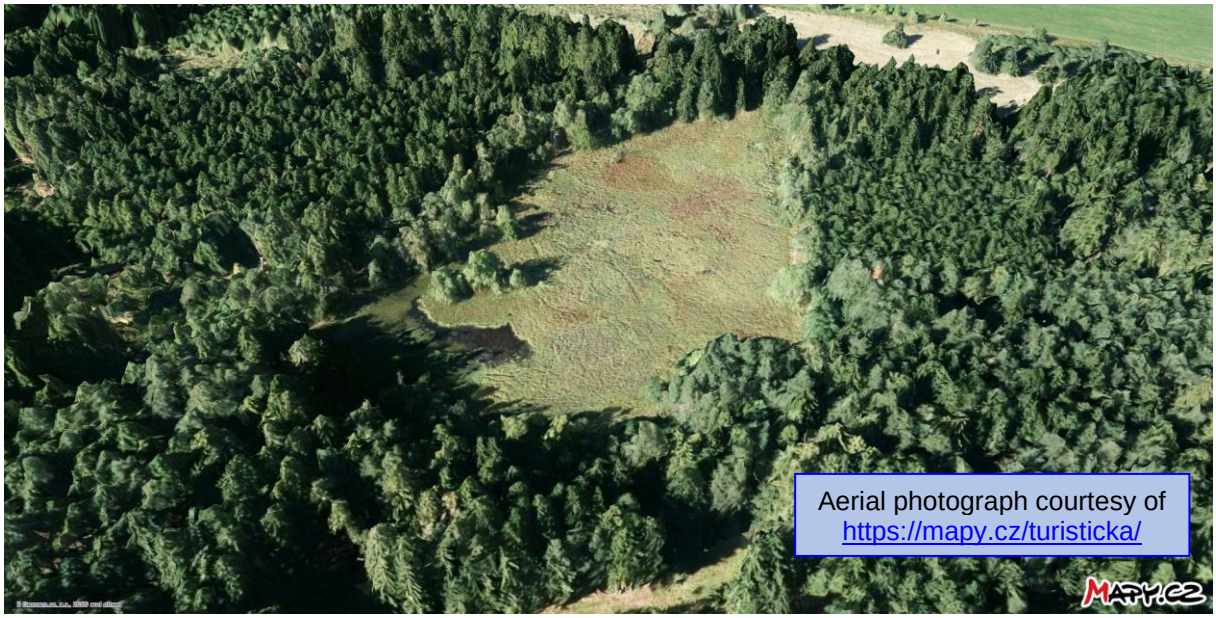
PRZEWOŹNY M 2020. *Catalogue of Palearctic Hydrophiloidea* (*Coleoptera*). Internet version 2020-01-01.

RUSSIAN BIOINDICATORS OVER 40 YEARS

The title is great. Are the results exciting? Are beetles involved? Well, we are not really sure as the supplementary data just comprised strings of figures. Perhaps no water beetles were harmed in this study of "zoobenthos"? You think they might have named one bioindicator species.

OVASKAINEN O, WEIGEL B, POTYUTKO O & BUYVOLOV Y 2019. Long-term shifts in water quality show scale-dependent bioindicator responses across Russia – insights from 40-year long bioindicator monitoring program. *Ecological Indicators* **98** 476-482.

CZECH NATURE RESERVE



A year-long survey of this clearing in a western Bohemian forest with a naturally eutrophic lake (bottom left in image) yielded 317 species of beetle. These included *Haliplus fulvus* (Fab.), *Graphoderus zonatus* (Hoppe), and *Contacyphon kongsbergensis* Münster.

OUDA M 2020. Fauna brouků (Coleoptera) přírodní památky Velikonoční rybnék. *Západočeské entomologické listy* **11** 5-14.

ZANZIBAR (ЗАНЗИБАР) HYDROPHILOIDEA

There are a series of papers in this issue from Sergey Ryndevich dating to 2017-18; something went wrong with the post earlier. These preliminary findings report the following genera:- *Spercheus* Kugelann, *Allocoterus* Kraatz, *Regimbartia* Zaitzev, *Paracymus* Thomson, *Sternolophus* Solier, *Enochrus* Thomson, *Helochares* Mulsant, *Coelostoma* Brullé, *Cercyon* Leach, *Pachysternum* Motschulsky, and *Sphaeridium* Fab.

RYNDEVICH S K 2017. Preliminary results of studying Hydrophiloidea (Coleoptera: Hydrophiloidea: Spercheidae, Hydrophilidae) in Zanzibar Islands. *Digest of articles for an international scientific and practical conference dedicated to the memory of Professor Konstantin Mikhailovsky Yelsky, Grodno, March 15-17, 2017* 191-192. [all in Russian]

EURASIAN HYDROPHILID NOTES

Cercyon bifenestratus Küster is newly recorded from China in Xinjiang. Records are given for *C. analis* (Paykull), *C. cultriformis* Wu & Pu, *C. lencoranus* Kuwert, and *C. strandi* Roubal, *Coelostoma orbiculare* Fab., *Enochrus fuscipennis* Thomson, *Hydrobius rottenbergii* Gerhardt, the true *Megasternum concinnum* (Marsham), *M. immaculatum* (Stephens), and *M. prometheus* Shatrovskiy. A syntype is designated for *C. nigriceps* (Marsham, 1802), a specimen in the Motschulsky collection in the Zoological Museum of Moscow State University.

RYNDEVICH S K 2017. New faunistic records of hydrophilid beetles (Coleoptera: Hydrophiloidea: Hydrophilidae) from Eurasia. *Bulletin of the Baranovichi State University*, Series Biological Sciences. Agricultural Sciences **5** 65-70. [in English with Russian abstract]

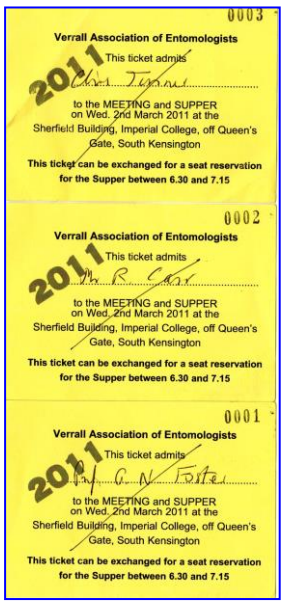
KALININGRAD LIGHT TRAPPING

In 2018 10,719 beetles in 173 species were light-trapped in the Curonian Spit. Despite the terrain, mainly dunes and pine forest, an impressive number of water beetles were caught – *Haliplus ruficollis* (De Geer), *Ilybius ater* (De Geer), *I. fuliginosus* (Fab.), *I. guttiger* (Gyllenhal), *I. quadriguttatus* (Lacordaire), *Rhantus frontalis* (Marsham), *R. suturalis* (MacLeay), *Nartus grapii* (Gyllenhal), *Colymbetes fuscus* (L.), *Dytiscus dimidiatus* Bergsträsser, *Hydaticus seminiger* (De Geer), *H. transversalis* (Pontoppidan), *Hydroporus angustatus* Sturm, *H. dorsalis* (Fab.) – not sure which species, *H. obscurus* Sturm, *H. palustris* (L.), *Hydroglyphus geminus* (Fab.), *Hygrotus impressopunctatus* (Schaller), *H. inaequalis* (Fab.), *H. parallellogrammus* (Ahrens), *H. polonicus* (Aubé), *Laccophilus minutus* (L.), *Helophorus brevipalpis* Bedel, *H. strigifrons* Thomson, *Hydrochus elongatus* (Schaller), *Berosus spinosus* (von Steven), *Laccobius minutus* (L.), *Hydrobius fuscipes* (L.), *Hydrochara caraboides* (L.), *Hydrophilus aterrimus* Eschscholtz, *Anacaena lutescens* (Stephens), *Cymbiodyta marginella* (Fab.), *Enochrus bicolor* (Fab.), *E. coarctatus* (Gredler), *E. melanocephalus* (Olivier), *E. quadripunctatus* (Herbst), *E. testaceus* (Fab.), 9 species of *Cercyon*, *Cryptopleurum subtile* Sharp, *Hydraena palustris* Erichson, *Ochthebius minimus* (Fab.), two *Contacyphon*, *Augyles hispidulus* (Kiesenwetter), *Heterocerus fenestratus* (Thunberg), and *H. fusculus* Kiesenwetter. The catches were dominated by hydrophilids, staphylinids and heterocerids. *H. polonicus* and *B. spinosus* are newly recorded from Kaliningrad.

ALEKSEEV V I & SHAPOVAL A P 2019. Beetles (Insecta, Coleoptera), sampled with use of light trap on the Curonian Spit: the materials of the sixth season. *Acta Biologica Sibirica* **5** (2) 68-82.

VERRALL DAY 2020

Some of us mourned the passing of Commendatore Antonio Carluccio in 2017 at the age of 80. He could often be seen in one of his chain of restaurants, *Carluccio's*, the one roughly opposite South Kensington Tube Station. Sadly, that one and all the others are currently in administration as a result of the coronavirus outbreak.



Verrall Day is usually scheduled as the first Wednesday in March, with a dinner commemorating the entomologist George Verrall (1848-1911). Some Balfour-Browne Club members have been in attendance at the Verrall Supper for more than fifty years, originally in a Lyon's Corner House and then mainly in the premises of Imperial College, culminating in Verrall's Centenary in 2011. That year was also marked by our first managing to get all three of the first tickets issued. A clash with a dinner set up for Boris Johnson, then Mayor of London, meant that later suppers were moved to the Rembrandt, a posh hotel opposite the Victoria & Albert Museum. Poshness apart, the slowness of service and the acoustics provided the last straw in 2018,

because it was only when some of us got up to leave that we found that the speeches were still going on at the other end of the room! So, in 2019 we gathered for our own "Verrall" in the happy din of a Carluccio's in full swing. It seemed somehow appropriate that the disposal of some butterfly books belonging to the Balfour-Browne Club Library supported this venture [Jack Balfour-Browne is on record for saying "if there is any difficulty, just sell a book!"]. Even now though there is a guilty feeling about quitting the Verrall proper, tempered by the absence of terrestrial coleopterists from the main event. In 2020 no books were sold and we re-enacted in Carluccio's a "tradition" of 2000 in Poitiers when Professor Balfour-Browne's pond net magically extracted the funds to pay for dinner – see ***Latissimus* 13** 21. Assuming we survive into 2021 where will we be on the first Wednesday of March? And will we still have late night recitals?

MEGAPORUS LARVAE

Megaporus is a dytiscid genus within the Sternopriscina found in Australia, New Guinea and New Caledonia. The most striking feature of these larvae is their very long siphon.

ALARIE Y, MICHAT M C & WATTS C H S 2020. Larval morphology of *Megaporus* Brinck, 1843 (Coleoptera: Dytiscidae): descriptions of *M. hamatus* (Clark, 1862) and *M*. *gardnerii* (Clark, 1862) and phylogenetic considerations. *The Coleopterists Bulletin* **74** 139-160.

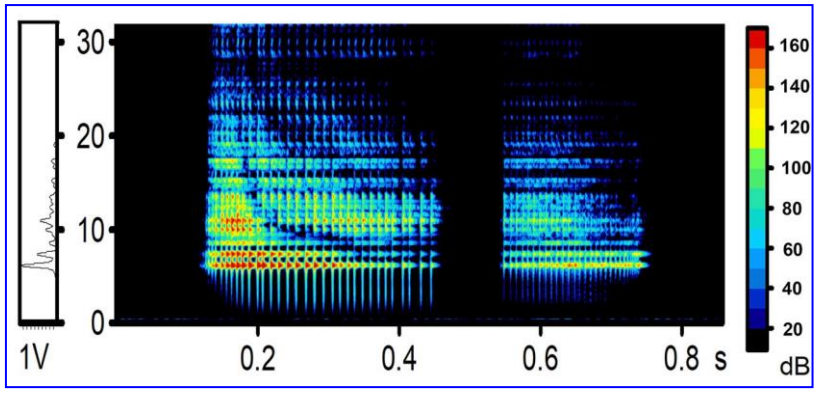
BELARUS & UKRAINE: NEW RECORDS

Hydrobius rottenbergii Gerhardt is newly recorded from Ukraine. Other Ukrainian records are provided for *Colymbetes semenowi* (Jakovlev) and *Enochrus halophilus* (Bedel). Modern records for Belarus are for *Enochrus bicolor* (Fab.) and *Limnoxenus niger* (Gmelin).

RYNDEVICH S K 2017. Contribution to fauna of Hydrophilidae and Dytiscidae (Insecta: Coleoptera) of Belarus and Ukraine. *Actual problems in zoology in Belarus: collection of articles from XI Conference dedicated to the 10th anniversary of the foundation of the Scientific and Production Association, Belarus, Minsk, November 1-3, 2017* **2** 16-19.

CHIRP CHIRP FOR THE SQUEAK BEETLE

The plectra and pars stridens of the stridulatory apparatus were examined in both sexes of the squeak beetle, and only the partes stridens differed slightly between the sexes, probably enough for sound production being part of intersex communication,



as well as an antipredator device. The call is in two parts, probably relating to the forward and backward strokes of the 7th ventrite against the partes stridens. The correspondent is David Bilton.

BLAIR J & BILTON D T 2020. The call of the squeak beetle: bioacoustics of *Hygrobia hermanni* (Fabricius, 1775) revisited (Coleoptera: Hygrobiidae). *Aquatic Insects* doi.org/10.1080/01650424.2020.1726963 14 pp.

CHOROLOGY EXPLAINED

Range names are discussed with particular reference to Hydrophiloidea.

RYNDEVICH S K 2017. Principles of construction of range names and typology of range of insects on the example of superfamily Hydrophiloidea (Insect: Coleoptera). *Results and prospects of entomological development in Eastern Europe. Digest of papers II International Scientific and Applied Conference, 6-8 September, Minsk* 351-365. [in Russian with English summary]

HELSINKI – BLUE INFRASTRUCTURE

Using activity traps in the Helsinki Metropolitan Area Wenfei Liao found that urbanisation reduced the number of species of dytiscid but not their abundance. Dytiscids preferred ponds with gently sloping edges and there were 80% more species and 79% greater abundance in ponds without fish, but medium to large-sized species were better able to coexist with fish. The diversity of ponds in an urban setting is to be encouraged, preferably with some having no fish. Blue infrastructure of urban areas is just as important as green infrastructure. A total of 39 species was identified from 525 individuals caught. Interesting species recorded include *Ilybius angustior* (Gyllenhal), *I. crassus* Thomson, *I. subtilis* (Erichson), *I. wasastjernae* (Sahlberg), *Colymbetes paykulli* Erichson, *Dytiscus circumcinctus* Ahrens, three species of *Graphoderus*, and *Hydroporus notatus* Sturm.

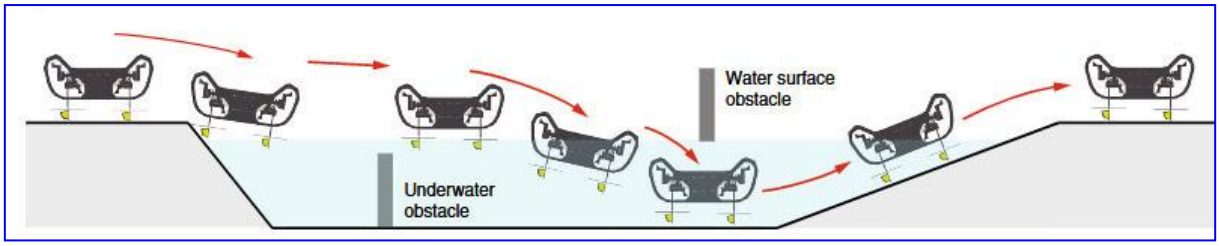
Wenfei assures us that not all Helsinki ponds look as idyllic as this one at Annala in the Old Town.

LAIO W, VENN S & NIEMALÄ J 2020. Environmental determinants of diving beetle assemblages (Coleoptera: Dytiscidae) in an urban landscape. *Biodiversity and Conservation* doi.org/10.1007/s10531-202-01977-9

WATER BEETLERS IN LOCKDOWN?

Those water beetles who survive the 2020 Coronavirus-19 Pandemic will presumably not only have put their house into decorative order but also their collection and their data as well. It has been suggested that there will be a baby boom afterwards, and one might also expect a scientific paper boom. Any other ideas?

Modelling Professor Whittlesey's paper on modelling water beetle swimming has already been reviewed (***Latissimus* 31** 17). More recent interest has been around developing microbots. For example Yufeng Chen *et al*. (2018) produced one weighing 1.6 grams that was amphibious walking on and under water and regaining



dry land. (image courtesy of SpringerNature). In addition to features of all bots this one had a pad on each foot that could set up a local electric field to reduce surface tension. Perhaps we should all be making our own beetles out of Technic LEGO®?

CHEN Y, DOSHI N, GOLDBERG B, WANG H & WOOD R J 2018. Controllable water surface to underwater transition through electrowetting in a hybrid terrestrial-aquatic microbot. *Nature Communications* **9** 1-11.

Microscope work Mike Samworth, Secretary to the Postal Microscopical Society, has taken the time to look at the microscope collection of the late Douglas T. Richardson. Here, for example, are the legs of *Agabus guttatus* (Paykull) (© Mike Samworth). Rather than just leaving a beetle on a card take it to bits so as to appreciate its fine structure!

Read the Classics and spot the beetle connections. Some coleopterists are well known in the literature. Take the Moluccan trader Stein in Joseph Conrad's *Lord Jim* – Stein is generally thought to be based on Alfred Russell Wallace – there is a weak link with David Sharp in that one of Conrad's closest friends was Don Roberto, whose father was Sharp's sole patient for sixteen years. "He [Stein] was also a naturalist of some distinction, or perhaps I should say a learned collector. Entomology was his special study. His collection of Buprestidae and Longicorns - beetles all - horrible miniature monsters, looking malevolent in death and immobility, and his cabinet of butterflies, beautiful and hovering under the glass of cases on lifeless wings, had spread his fame far over the earth." And then there is George Eliot's *Middlemarch*, in which appeared Farebrother, minister to Tertius Lydgate, a scientific doctor. Farebrother claimed from Lydgate the fulfilment of a promise to come and see him. "I can't let you off, you know, because I have some beetles to show you. We collectors feel an interest in every new man till he has seen all we have to show him." Eliot was the pen name of Mary Ann Evans, a friend of the philosopher Herbert Spencer (he gave Darwin 'survival of the fittest') and who was in turn a friend of David Sharp. That reference to beetle collecting must have stemmed from some dealings with Sharp. Thanks go to Rob Close for drawing attention to the *Middlemarch* link.

LET THE HOLY DIVER LEAD THE QUEST FOR WATER **Anders N. Nilsson**

It is not unusual to find children's books dealing with insects. Normally the insects are being represented by butterflies or aculeate wasps like bees or ants. Beetles tend to be a lot scarcer and water beetles rare to say the least. I therefore would like to present an example of a story in which a diving beetle contributes to save the life of the two Russian children Karik and Valya as well as their mentor Professor Enotoff.

It all happens in the classic Russian children's book *The extraordinary adventures of Karik and Valya*, written by Yan Larri and first published in Russian in 1937, first serialised in the journal *Kostjor* and later in the same year as a separate book. There is an English translation from 1945. Whereas the Russian original was illustrated with black and white rather surrealistic photomontage, the British edition had original drawings by Grace Lodge, a few of them in colour.

The book was later translated into many different European languages including a good number of editions in Russia. In 1987 it was also filmed for Russian television using back-projection and other photographic tricks, but without animation.

As the story goes the Professor has produced a substance that shrinks live animals and when the two kids swallow it they become assmall as lice. They fly on the back of an odonate to a pond outside town, followed by the Professor who shrinks himself in order to find and save the kids. Before being shrunk he has marked with a red flag on a pole a box with a substance that will return normal size when eaten. He finds the children and then they start their long and winding road back to the box. They encounter many different insects and spiders, and their bug interactions are used to provide the reader with knowledge about bugs' life.

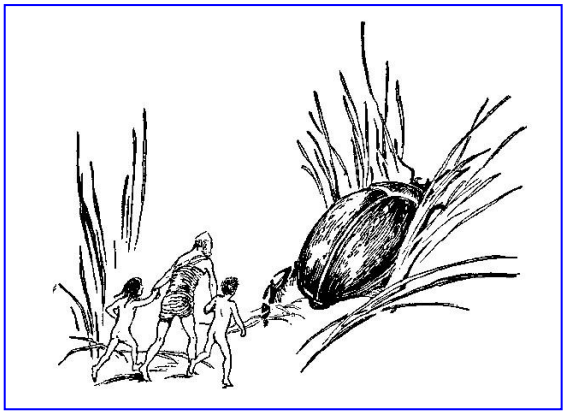
Most of the adventures of the trio are related to not being eaten by bugs, but our tiny humans also require food and water to survive. Water is at time abundant and dangerous when rain drops are huge and trickles flood the landscape. But walking in dry surroundings during a warm day may also result in desiccation. This is where a diving beetle becomes the saviour, starting on page 79 of the British edition:

———————————————————————————————————

"Wa-ater!" groaned the children.

Swaying from side to side the Professor stood up. They must move on. But which way? In which direction would they find water. He leant against a tree and with his head stuck forward upon his chest he stared gloomily at the ground. Suddenly right beside him an earthy hillock started to move. Stones fell from its top to the ground around. Then suddenly the hillock split open. Long feelers stuck up into the air and from within the hillock a huge head appeared and then a dark body with a yellow edge slid out of the ground.

“Saved!” shouted the Professor. The children raised their heads from the ground.
“Get up! Here’s the water!” he continued.
Having grasped the last word, the children both struggled up.
“Give us a drink!”
“In a minute or two you’ll have a whole river but now we must accompany a very good friend of mine who is going to the water.”
The Professor waved his hand to where at one side there stood the monster with the yellow streak cleaning the dust and dirt from its body. It was like a beetle of some sort, only this beetle was the size of a motor-bus.
“What is this?” whispered Karik.
“*Dytiscus*, the water beetle! It will lead us to the water!” said the Professor.



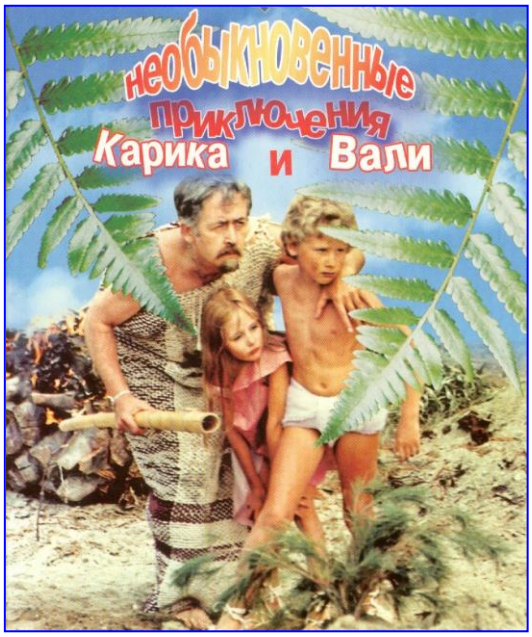
The water beetle stretched out its whiskers, turned to the right and confidently went ahead crashing its way through the grassy trees. The travellers ran behind it. They had all become more cheerful. Karik’s eyes were glistening.
“But how does the water beetle know where the water is?” he croaked.
“Very simple, considering it lives and hunts in water. It could hardly get on without knowing.”
“Where did it come from?”
“Out of the earth.”
“But why?” marvelled Valya.
“Well, it is such an amazing creature, is this water beetle.”
As they followed in the wake of the beetle the Professor went on:
“They reproduce themselves by means of eggs which they stick to water plants. In a month or so the eggs hatch and larvae come out like caterpillars, but with the temperaments of tigers. These courageous and greedy larvae will attack pretty well any inhabitant of the water even fish, which are many times their size. When the larvae are full grown they creep out of the water and finding a peaceful, comfortable spot they bury themselves in the earth. Here they turn first of all into a chrysalis and then into a large ordinary beetle. The beetle comes out of the ground — you yourselves saw this happen — and sets out on a career of piracy in its proper realm — in water.”
“But how does it know where the water is?”
“Well, how do birds know which is south when they fly away from us in the Autumn to winter in a warm climate?”
The Professor was talking without stopping. He knew well that a journey seems much shorter to those who travel talking. “This beetle,” he continued, “is perhaps one of the most remarkable creatures in the world. You can come across it in any water butt. When you next see one look at it closely. Think, my dears, it charges over the water like a speed boat, dives like a diving duck, is able to sit at the bottom of a pond longer than a human diver, travels under the water as well as any submarine, flies through the air like an aeroplane and walks on dry land like a human.
You do not meet a creature like that everyday. Once I was — ”
“Water!” screamed Valya.
Without waiting to hear what the Professor had to say both children rushed ahead.

Amid green foliage there was now mirrored a blue unruffled expanse of water.
The beetle made for the steep bank of the lake, hurled itself down into the water and vanished. Circles of waves spread across the mirror.
"Water!"
"Water!"
On the bank of the lake there stood a tree with huge blue flowers. Dark leaves cast a dense cool shadow on the ground beneath.

Karik, not waiting, ran down a slope, jumped down and stretching out his arms flung himself in the water like the beetle had done.

———————————————————————————————————————

Larri's story was also used in 1953 for the episode *Le Jardin Fantastique* of the French SF comic *Les Pionniers de l'Espérance* by Roger Lécureux and Raymond Poïvet, and first published in the magazine *Vaillant*. However, the scene with the diving beetle walking towards the water was not included in the comic. But at least a diving beetle can be seen in a drawing of when Tsin-Lu, one of the four space pioneers, is being caught by the water spider's sticky threads. The diving beetle scene was also excluded from the 1987 Russian film version.



What Larri has to say about *Dytiscus* biology in the text cited above all make sense, and as a bonus an interesting question is raised but never answered. I here think of the question of which clues the diving beetle will use to find its way to the water? In the situation described, the water is obviously not within sight so visual clues have to be excluded. Flying water beetles are known to recognize water from the kind of light it reflects, a method of course not possible to apply when walking in dense vegetation. It is often stated in cowboy books that horses and cows have the ability to smell water from a distance, often resulting in thirsty critters stampeding. As insects and mammals are very different kinds of animals, this remains a possibility at most for the diver. Finally, one could think that the ability to make use of the slope of the ground, if present, could turn out to be useful. Plenty of room for experiments to be carried out within this field.

LARRI Y 1937 *Neobyknovennye prikljuchenija Karika i Vali*. Leningrad: Detskaya Literatura. [first serialised in journal *Kostjor*]
LARRI Y 1945 *The extraordinary adventures of Karik and Valya* (translated by J. P. Mandeville and illustrated by Grace Lodge). London: Hutchinson's Books for Young People.
LÉCUREUX R & RAYMOND P 1988 *Les Pionniers de l'Espérance*. **4**, 1953 & 1956. *Le Jardin Fantastique* & *Caluda*. Paris: Futuropolis.
RODCHENKO V 2001 (1987) *Neobyknovennye prikljuchenija Karika i Vali*. DVD. St Petersburg: Lenfilm-Video.

Received April 2020

COLOMBIAN *LIODESSUS*

Another paper with a totally descriptive title right down to latinisation of the Laguna Verde at 3,300 metres asl in the Andes. There are now 32 American species in this genus, twelve of them from the Andes. Photograph courtesy of Brill.

BALKE M, OSPINA-TORRES R, SUAREZ-MEGNA Y & HENDRICH L 2020. *Liodessus lacunaviridis* sp. n. from the high Andes of Colombia (Coleoptera: Dytiscidae: Hydroporinae: Bidessini). *Tijdschrift voor Entomologie* doi 10.1163/22119434-20192084 1-5.

DESMOPACHRIA

D. manco, described from Guyana, is one of the smallest dytiscids at 1.2-1.3 mm long. *D. mortimer* is from Costa Rica and a little larger, 1.7 mm. The accompanying picture might give a clue as to the name Mortimer. Whenever I see the name *Desmopachria* I feel obliged to recognise a fellow johnian, Cardale Babington (1808-1895) WIKIPEDIA will tell you that he was a famous botanist and archaeologist but he took an interest in beetles alongside Charles Darwin when at Cambridge. The paper has illustrations of the male genitalia of 21 species in the *convexa-convexa* and *convexa-signata* species groups.

MILLER K B 2020. Two new species of *Desmopachria* Babington, 1841 in the *D. convexa* species group (Coleoptera, Adephaga, Dytiscidae, Hydroporinae, Hyphydrini). *ZooKeys* **923** 65-77.

GRAPHODERUS BILINEATUS HAPLOTYPES

In Italy *bilineatus* is only confirmed recently from Lake Pratignano. A sample from 2009 of mitochondrial COI DNA was compared with that from specimens obtained from Croatia, Hungary, Italy, and Lithuania. The analysis also included COI sequences from Austria, Germany, the Netherlands, Russia and Sweden obtained by Bram Koese and others previously. The Italian population appears to be based on a unique haplotype, suggesting an extreme bottlenecking process. More work needs to be done, for example checking on French and Swiss material, to establish the most appropriate donor population before embarking on a reintroduction. The correspondent is Alessandro Grapputo.

BOSCARI E, KOESE B, PALAZZINI CERQUETELLA M, FABBRI R & GRAPPUTO A 2020. Analyses of rare collection samples as conservation tool for the last known Italian population of *Graphoderus bilineatus* (Insecta: Coleoptera). *The European Zoological Journal* **2020** 131-137.

EXOCELINA UNDERGROUND

Exocelina is teetering on 200 species with the 198th (or is it the 197th?) being quite a surprise, having the full trappings of subterranean life plus the male antennae being club-like. It occurs in the Cameron Highlands on the Malay Peninsula, bridging the gap between the one species known from China and the rest in New Guinea (141 species), New Caledonia (37), Australia (16), Hawaii and Vanuatu (one each). *E. sugayai* is compared with *E. abdita* Balke *et al*., one of the two subterranean species known from Australia. It appears to hide in gravel bedd when disturbed, and it may well prefer coarser-grained substrata which do not clog the spaces between pebbles. DNA-wise *E. sugayai* is sister to the Chinese *E. shizong* Balke & Bergsten and the New Caledonian *E. nehoue* Balke *et al*.

BALKE M & RIBERA I 2020. A subterranean species of *Exocelina* diving beetle from the Malay Peninsula filling a 4,000 km distribution gap between Melanesia and southern China. *Subterranean Biology* **34** 25-37.

NEW SPECIES OF *CERCYON*

In China two new species of *Cercyon* s. str. are described, *bellus* and *biltoni*. *C. biltoni* gives the impression when viewed from above as having two dark spots near the sides of each elytron though these can be seen joined up when viewed from the side. *C. bellus* was caught at light and *C. biltoni* was found in forest litter and caught in baited pitfall traps. In Russia *C. retius* is described for the subgenus *Clinocercyon* d'Orchymont. It has mainly been found in badger dung. A distinctive feature is the microreticulation of the femora. *C. primoricus* is described from various types of decaying material. A key is provided to the six known species of *Clinocercyon*.

JIA F, LANG Z, RYNDEVICH S K & FIKÁČEK M 2019. Two new species and additional records of *Cercyon* Leach, 1817 from China (Coleoptera: Hydrophilidae). *Zootaxa* **4565** 501-514.

RYNDEVICH S K & PROKIN A A 2017. Two new species of *Cercyon* (*Clinocercycon*) from Russian Far East (Coleoptera: Hydrophilidae). *Zootaxa* **4300** 125-134.

INFRASUBSPECIFIC OR SUBSPECIFIC – A COMMENT ON ARTICLE 45.6 OF THE ICZN CODE

Hans Fery

Nomenclature is boring stuff – for some of us more, for others less and only a few are really happy with it. But we all need a solid basis for what we are talking about. One issue is the formation of names when describing new taxa, another is handling of synonyms and homonyms etc, etc.

The newest version of the Code (ICZN 1999) gives a large number of rules (some newer amendments are added since), recommendations and, additionally, a Glossary. A large majority of the rules are well understandable, but there are several that are disputable and in some cases even the members of the Commission have different interpretations.

Especially problematic can be articles in the Code where terms like "unambiguously" are used and a very special one is article 45.6 which deals with "*Determination of subspecific or infrasubspecific rank of names following a binomen*". This article includes the adverb "unambiguously" twice and starts with a clear statement - "The rank denoted by a species-group name following a binomen is subspecific"; however, already in its third line it allows for an exception, some lines further on an exception to the exception and in its last part (45.6.4.1) an exception to the exception of the exception.

Of particular interest are names which contain additional terms like "variety", "form", "aberration", "morph" or some modification or abbreviations of these terms. And it can be very important to know whether such names are of infrasubspecific rank (and thus unavailable) or of subspecific rank (and thus available). In Hydradephaga such terms were in use mainly in the second part of the 19th and the first part of the 20th centuries, but I also know of two published after 2000.

Lingafelter and Nearns (2013) published a dichotomous key for the determination of subspecific or infrasubspecific rank which can be quite helpful. I believe, however, that some additions and precisions can improve its application. This is why I propose the following modification of their **Key for determining subspecific or infrasubspecific rank of names following a binomen (ICZN Article 45.6):**

1. Name includes no additional term like "variety", "form", "aberration" or "morph", or some modification or abbreviations of these terms. ..... **subspecific**.
- Name includes an additional term of those given above. 2
2. Name includes the term "aberration" or "morph" or a modification or abbreviation of these terms. ..... **infrasubspecific**
- Name does not include the former terms, but the term "variety" or "form" or some modifications or abbreviations of these terms. 3
3. Name was published after 1960. ..... **infrasubspecific**
- Name was published before 1961. 4
4. Name was adopted as valid name of a species or subspecies or treated as senior homonym before 1985 (no matter what the content of the original work is indicating). …. ..... **subspecific**
- Name was not adopted as valid name of a species or subspecies or treated as senior homonym before 1985. 5
5. The work indicates unambiguously that the name is infra-subspecific…….. **infrasubspecific**
- The work does not indicate unambiguously that the name is infra-subspecific……..…**subspecific**

As can be seen, the adverb "unambiguously" is still included and this may cause again some kind of irritation. However, the following examples may help in many cases (see also example 5 in Lingafelter & Nearns): **A new trinominal name is proposed including the term "variety" or "form" and in the same publication another trinominal name is given by using the term "subspecies" – the name proposed as "variety" or "form" is infrasubspecific.**

Although more or less included in the second part of couplet 5 of the key, the following example can help too: **A new trinominal name is proposed including the term "variety" or "form" and the term "subspecies" is not used in the same publication; however, another trinominal name is given by using the term "aberration" or "morph"– since the latter name is clearly infrasubspecific the new name proposed as "variety" or "form" is subspecific.**

It is possible that such rules cannot help in all cases and further contents of the respective original publication may lead to different results. However, isn't it better to have such a "*vade mecum*" than be helpless?

I want to close with a related issue. Recently, I had to decide whether the name *lugubris* – proposed by Ochs (1929 p 90) as "fa. ♀ *lugubris*" of *Gyretes dorsalis* Brullé, 1837 – has infrasubspecific or subspecific rank. Such "female forms" are not mentioned as such in the Code. It would be absurd if such names had to be treated with subspecific rank, and thus as available names. Fortunately, the Code is here quite precise: in the Glossary can be found under the entry "infrasubspecific entities": "*Specimen(s) within a species differing from other specimens in consequence of intrapopulational variability (e.g. opposite sexes, castes, gynandromorphs and intersexes, aberrant individuals, age and seasonal forms, variants of noninterrupted variability or polymorphism, differing generations).*" And such deviating female forms are no doubt what is called polymorphism. Some of us may ask why female forms like "♀ *conformis* Kunze" of *Dytiscus marginalis* or "♀ *deplanatus* Gyllenhal" of *Hydroporus erythrocephalus* are included in the main part of the *World Catalogue of Dytiscidae* (which lists only available names) – these names were originally published with specific rank, and thus are available forever.

LINGAFELTER S W & NEARNS E H 2013: Elucidating Article 45.6 of the International Code of Zoological Nomenclature: a dichotomous key for the determination of subspecific or infrasubspecific rank. *Zootaxa* **3709** (6) 597–600.

OCHS G 1929. Bestimmungstabelle der Gyrinidengattung *Gyretes* Brullé nebst Neubeschreibungen und kritischen Bemerkungen. *Koleopterologische Rundschau* **15** (2–3) 62–93.

OCHS G 1965: Vierter Beitrag zur Kenntnis der Taumelkäfer des Amazonas-Gebietes (Col., Gyrinidae). *Amazoniana* 1 (1) 36–73.

Received May 2020

Footnote by HF Georg Ochs (1965) was not at all in accord with the new nomenclatural rules (1958/1961) and wrote (my somewhat free translation from German): ".. a large complex of forms [and aberrations etc.; in the meaning of infrasubspecific entities] cannot anymore be named validly [legally]. A specialist, when working on a little investigated group, is thankful for every information about such forms; however, what has no name that cannot be catalogued. The so-called infrasubspecific categories belong to the knowledge of a species as well!"

FAMILY NAMES CHANGES

The original document was kaleidoscopically reviewed in ***Latissimus* 30** 9-11. Changes affecting water beetles seem to be quite slight. Orectochilini Régimbart, 1882 is upstaged by Orectochilini Régimbart, 1880.

BOUCHARD P & BOUSQUET Y 2020. Additions and corrections to “Family-group names in Coleoptera (Insecta)”. *ZooKeys* **922** 65-139.

IGNACIO RIBERA GALÁN 9 MARCH 1963 -15 APRIL 2020

Ignacio Ribera (Nacho for his family and friends) was born the second of six brothers (three boys and three girls). Ever since he was very young his passion was insects, mainly beetles, and particularly those living in water and caves. Very quickly, he started to collect and recognise the species and love Nature. In parallel, he began a biology degree studies at the Barcelona University, finishing it in five years and being awarded as the best student of Biology in the period 1981-1986. At the end of this period, he suffered a major problem with his kidneys, losing both of them. This caused him to need dialysis and to have a series of transplants including one kidney from his father. Obviously, this situation affected his career, but made him stronger and wiser.

After finishing his degree, he sought a research place at the Department of Ecology of the University of Barcelona. Unfortunately, it was not accepted because of prejudices concerning his illness. This provoked him to look for other investigation centres to follow with his passion: studying beetles. Thus, he began his PhD after getting a Spanish government fellowship to work in the CSIC-Barcelona (Laboratorio de Entomologia y Análisis Ambiental), finishing it in 1993. In parallel, he started a strong and crucial collaboration with Pedro Aguilera, who unfortunately died in 2008, and Carles Hernando, friends and field companions since then, always thinking about beetles. A few months later, Andrés Millán, from Murcia University, joined this fantastic and friendly Iberian group.

Leon, 1990 - Ignacio standing near the centre, in blue

Because of a controversial situation at CSIC Barcelona, in 1993 he moved to Scotland and reinforced scientific and friend collaborations with Garth Foster, after meeting him in 1990 in Villamanín, Spain. But Ignacio was also happy looking for other collaborations and started scientific relationship with other recognised entomologists such as Robert Angus, Anders Nilsson, David Bilton, Philippe Ponel, Franck Bameul, Manfred Jäch and many others. The publications list is a good guide as to the number of these collaborators.

A few years later, in 1997, he spent a year at Murcia University trying to get a permanent position at the Spanish university and collaborating with the Aquatic Ecology group. Unfortunately, the Department of Zoology from this university failed to recognise his scientific and human value, probably because of a subjective interest rather than on scientific or academic criteria. A pity because the passage of time has shown that Nacho was one of the best Spanish entomologists we have ever had.

Ignacio returned to Britain and started a productive collaboration with Alfried Vogler from Imperial College, London. After three or four years he got a position in the Museo Nacional de Ciencias Naturales (Madrid, Spain) and later he moved to the Instituto de Biología Evolutiva-CSIC at Barcelona where he worked until the end. He was mainly an evolutionary biologist, but also a strong taxonomist, ecologist, ecophysiologist, macroecologist, and one of the best specialists in many other research topics. He also helped many research groups to develop with his scientific advice, particularly the Aquatic Ecology group from Murcia, where he was co-director of two Doctoral theses.

Nacho triumphant after finding *Hydroporus constantini* Hernando & Fresneda near Burgos in 2004

During all this time he has published an impressive number of papers, books and book chapters in the most important journals of the world. He visited all continents except Antarctica, where there are no beetles, and many countries looking for beetles, mainly those living in water. A lot of amazing anecdotes deserve to be remembered. Only a some of them here. We are sure if Ignacio continued with us he would fall to the ground laughing uncontrollably…….

The Balfour-Browne Club at Catfield Fen, Norfolk, in 2006, with Nacho in the middle of the boat

GNF writes….As Andres indicates here some of us became acquainted with Ignacio at the first of the Club meetings in Cantabria, in June 1990. In July 1991 Ignacio visited Scotland and together with Davy McCracken, Philippe Ponel and Melanie Spirit we spent two days surveying the Borders Mosses. During a trip to Granada in September 1991 we ascended to 3,000 metres in the Sierra Nevada with Ignacio's sister Macucha (Macu). As tourists we were obliged to visit Alhambra, and also the Sierra y Cazorla Park where we were thrown out by the police. As a result of that problem in CSIC Barcelona GNF leapt at the chance to employ him in the Scottish Agricultural College, mainly to analyse data from an agroecological survey and data concerning traits in ground beetles. Ignacio's credentials as an ecologist go back to all that reading whilst undergoing dialysis, plus the benefits of studying under Ramon Margalef (1919-2004), Spain's first professor of ecology. GNF was obliged to ratify Ignacio's visitor status when he achieved 60 mph on the roundabout outside the police station in a car with a cracked windscreen: the police were not too concerned so long as the car had not been stolen. Some staff alongside GNF were not quite sure how to deal with such a seemingly reticent individual, especially when they began to realise how much he knew. "What do you do in Barcelona?" "In the morning we go to the Mediterranean to swim and in the afternoon we ski in the Pyrenees". Probably an old Barna joke, but that sort of thing goes down well. Ignacio's concern when working in Scotland was that he may have burnt his boats in Spain. But he got back to Madrid Museum, where he hosted the Club's meeting in the Sierra Guadarrama in 2007. He pointed out then that now he had the Spanish equivalent of "tenure" he did not need to do anything. The publications file suggests that he had other plans! The modern Palaearctic checklist owes a lot to his genetic analyses in association with several postgraduate students, and his contributions to

biogeography will have a lasting impact. Socially he helped to set up several Club meetings, and he has been greatly missed from recent meetings. Condolences go to his wife Ali Cieslak and son Bernard, also to his parents Andres and Rosalia, brothers Andres and Javi, and sisters Belen, Elisa and, last but never least, Macu.

Carles Hernando writes…..

Morocco During a dinner in early 1997, Ignacio, Carles and Pedro Aguilera began to talk about the possibility of an entomological trip to a geographical area where aquatic beetles were poorly studied. Tropical countries were immediately ruled out owing to Ignacio's illness as he could not take any kind of preventive vaccines, so they decided to go to Morocco, close to Barcelona, where one could go by car without problems and, most importantly, the water beetle fauna was poorly studied, only the north-west part having been moderately studied. The first trip was in April 1997. The country fascinated us and the entomological results were excellent. On the way back, stopping in Murcia, at Andrés Millán, home who was immediately imbued with that enthusiasm, listening to the anecdotes Ignacio, Pedro and Carles explained during a copious Murcian dinner. Thus, in the next trip to Morocco a few months later in July of the same year, Andrés became part of the "Morocco" group. The four friends made many more trips to Morocco, but the second trip to this country would be a good example to explain Ignacio's global vision of Nature and science: In May 1997 an article was published (Benabid & Cuzin 1997) on the special botanical characteristics of the Anti-Atlas mountains. At the southernmost end of these mountains and close to the Atlantic Ocean, authors described a rugged terrain, difficult to access and with a significant population of Dragon Trees never found before by botanists. Individuals of such population were considered to be a distinct subspecies (*Dracaena draco L. ajgal* Benabid & Cuzin). Ignacio thought that if the site had special botanical characteristics, this could also be reflected in the aquatic beetles community, it was enough to consult the beetle catalogues of Morocco to verify that there were no data from that area of Morocco, so two months after the publication of the article we were travelling to the Anti-Atlas, from where we returned with the first data on aquatic beetles in this area and with **five** species new to science!

BENABID A & CUZIN F 1997. Populations de dragonnier (*Dracaena draco* L. subsp*. ajgal* Benabid & Cuzin) au Maroc: valeurs taxinomique, biogéographique et phytosociologique*. Comptes Rendus de l'Académie des Sciences, Series III, Sciences de la Vie* **320** 267-277.

Vienna In March 1998 Ignacio and Carles travelled for the first time to the Natural History Museum at Vienna. In the first years, the trips were always by car, driving from Barcelona, even from London on one occasion. They spent almost two days on the road. Sometimes, they slept in rest areas, inside the car. In others it would have been better to move with a sled because of the accumulated snow! For Ignacio, this museum was one of the most important in the world and the Mecca for water beetles and coleopterologists! Whenever he had the occasion, he commented on the splendid treatment and facilities received by the museum staff and collaborators: Manfred Jäch, Harald Schönmann, Helena Shaverdo, Harald Shildhammer, Ms. Fuchs and so many others ... Immediately these visits to the Vienna Museum became part of a whole tradition, which has lasted over the last twenty-two years. Their last visit was in July 2019, with Ignacio's health somewhat diminished, but capable of enjoying for the last time together the friendship of their Austrian colleagues, the city walks, the coffee bars and the water beetles species in the Museum.

Species described by Ignacio Ribera

COLEOPTERA

Carabidae

1 *Parazuphium aguilerai* Andújar, Hernando & Ribera, 2011 (Morocco)

Dytiscidae

2 *Deronectes fosteri* Aguilera & Ribera, 1996 (Spain)
3 *Graptodytes eremitus* Ribera & Faille, 2010 (Morocco)
4 *Hydroporus bithynicus* Hernando, Aguilera, Castro & Ribera, 2012 (Turkey)
5 *Iberoporus pluto* Ribera & Reboleira, 2019 (Portugal)
6 *Agabus (Gaurodytes) ramblae* Millán & Ribera, 2001 (Spain)
7 *Agabus alexandrae* Ribera, Hernando & Aguilera, 2001 (Morocco)
8 *Ilybius minakawai* Nilsson & Ribera, 2007 (Russia)
9 *Meladema lepidoptera* Bilton & Ribera, 2017 (France, Italy)
10 *Exocelina sugayai* Balke & Ribera, 2020 (Borneo)
11 *Rhantus monteithi* Balke, Wewalka, Alarie & Ribera, 2007 (New Caledonia)
12 *Rhantus pollerbauerae* Balke, Wewalka, Alarie & Ribera, 2007 (New Caledonia)
13 *Rhantus bula* Balke, Wewalka, Alarie & Ribera, 2007 (Fiji)
14 *Rhantus kini* Balke, Wewalka, Alarie & Ribera, 2007 (Fiji)
15 *Microdytes trontelji* Wewalka, Ribera & Balke, 2007 (China)

Aspidytidae

16 *Aspidytes niobe* Ribera, Beutel, Balke & Vogler, 2002 (South Africa)
17 *Aspidytes wrasei* Balke, Ribera & Beutel, 2003 (China)

Leiodidae

18 *Sciaphyes shestakovi* Fresneda, Ribera & Grebennikov 2011 (Russia)
19 *Aphaobius haraldi* Faille, Ribera & Fresneda 2016 (Austria)
20 *Speonemadus brusteli* Fresneda, Faille, Fery & Ribera, 2019 (Morocco)
21 *Speonemadus comasi* Fresneda, Faille, Fery & Ribera, 2019 (Morocco)

Hydraenidae

22 *Hydraena (Hydraena) naja* Ribera, Hernando & Cieslak, 2019 (Oman)
23 *Hydraena (Hydraena) diazi* Trizzino, Jäch & Ribera, 2011 (Spain, France)
24 *Hydraena (Hydraena) fosterorum* Trizzino, Jäch & Ribera, 2011 (Spain)
25 *Hydraena (Hydraena) marcosae* Aguilera, Hernando & Ribera, 1997 (Spain)
26 *Hydraena (Hydraenopsis) pagaluensis* Hernando & Ribera, 2001 (Annobon Island)
27 *Hydraena (Hydraenopsis) bubi* Hernando & Ribera, 2017 (Bioko Island)
28 *Hydraena (Hydraenopsis) grebennikovi* Hernando & Ribera, 2017 (Bioko Island)
29 *Hydraenida guerreroi* Ribera, 2000 (Chile)
30 *Ochthebius (Ochthebius) alhajarensis* Ribera, Hernando & Cieslak, 2019 (Oman)
31 *Ochthebius (Ochthebius) bernard* Ribera, Hernando & Cieslak, 2019 (Oman)
32 *Ochthebius (Ochthebius) caesaraugustae* Jäch, Ribera & Aguilera, 1998 (Spain)
33 *Ochthebius (Asiobates) irenae* Ribera & Millán, 1999 (Spain)
34 *Ochthebius (Enicocerus) aguilerai* Ribera, Castro & Hernando, 2010 (Spain)
35 *Ochthebius (Cobalius) lanthanus* Ribera & Foster, 2018 (Canary Is.)
36 *Ochthebius (Micragasma) minoicus* Hernando, Villastrigo & Ribera 2017 (Crete)

37 *Ochthebius (Aulacochthebius) libertarius* Aguilera, Ribera & Hernando, 1998 (Morocco)
38 *Limnebius alibeii* Hernando, Aguilera & Ribera, 1999 (Morocco)
39 *Limnebius zaerensis* Hernando, Aguilera & Ribera, 2008 (Morocco)
40 *Limnebius aguilerai* Ribera & Millán, 1998 (Morocco)
41 *Limnebius millani* Ribera & Hernando, 1998 (Spain)
42 *Limnebius monfortei* Fresneda & Ribera, 1999 (Spain)
43 *Limnebius ordunyai* Fresneda & Ribera, 1999 (Spain)

Hydrophilidae

44 *Laccobius gloriana* Gentili & Ribera, 1998 (Spain)
45 *Agraphydrus elongatus* Ribera, Hernando & Cieslak, 2019 (Oman)

Hydrochidae

46 *Hydrochus tariqui* Ribera, Hernando & Aguilera, 1999 (Spain)
47 *Hydrochus farsicus* Hidalgo-Galiana, Jäch & Ribera, 2010 (Iran)

Scirtidae

48 *Contacyphon lithophilus* (Hernando, Aguilera & Ribera, 2003) (Morocco)
49 *Hydrocyphon gereckei* Hernando, Aguilera & Ribera, 2004 (Morocco)

Elmidae

50 *Oulimnius jaechi* Hernando, Ribera & Aguilera, 1998 (Morocco)
51 *Limnius stygius* Hernando, Aguilera & Ribera, 2001 (Morocco)

Limnichidae

52 *Limnichus mateui* Hernando & Ribera, 1998 (Gabon)
53 *Limnichomorphus puetzi* Hernando & Ribera, 2004 (Nepal)
54 *Limnichomorphus ciampori* Hernando & Ribera, 2003 (Malaysia)
55 *Geolimnichus endroedyi* Hernando & Ribera, 2004 (South Africa)
56 *Geolimnichus coprophilus* Hernando & Ribera, 2004 (South Africa)
57 *Pelochares fauveli* Hernando & Ribera, 2010 (New Caledonia)
58 *Pelochares sinbad* Hernando & Ribera, 2014 (Oman, UAE)
59 *Pelochares sabaeanus* Hernando & Ribera, 2014 (Yemen)
60 *Phalacrichus max* Ribera & Hernando, 2008 (Peru)
61 *Phalacrichus semicaecus* Hernando & Ribera, 2003
62 *Platypelochares periculosissimus* Ribera & Hernando, 1999 (Vietnam, Myanmar, Thailand & Laos)
63 *Platypelochares petrus* Ribera & Hernando, 1999 (Malaysia)
64 *Platypelochares electricus* Hernando, Szawaryn & Ribera, 2018 (Baltic amber)
65 *Tricholimnichus maior* Hernando & Ribera, 2001 (Malaysia, Borneo)
66 *Tricholimnichus minor* Hernando & Ribera, 2001 (Malaysia, Borneo)
67 *Tricholimnichus sabahesis* Hernando & Ribera, 2001 (Malaysia, Borneo)
68 *Cyclolimnichus jaechi* Hernando & Ribera, 2000 (Kenya)
69 *Cyclolimnichus ovalis* Hernando & Ribera, 2000 (Cameroon)
70 *Cyclolimnichus dentoni* Hernando & Ribera, 2000 (Cameroon)
71 *Caccothryptus occidentalis* Hernando & Ribera, 2017 (India)
72 *Caccothryptus schillhammeri* Hernando & Ribera, 2017 (Myanmar)
73 *Caccothryptus thai* Hernando & Ribera, 2017 (Thailand)
74 *Caccothryptus auratus* Hernando & Ribera, 2014 (Thailand)
75 *Caccothryptus jujianensis* Hernando & Ribera, 2014 (China)

76 *Caccothryptus jaechi* Hernando & Ribera, 2014 (Indonesia, Sulawesi)
77 *Caccothryptus jendeki* Hernando & Ribera, 2014 (India)
78 *Caccothryptus malickyi* Hernando & Ribera, 2014 (Vietnam)
79 *Caccothryptus luzonensis* Hernando & Ribera, 2014 (Philippines)
80 *Caccothryptus nanus* Hernando & Ribera, 2014 (Philippines)
81 *Caccothryptus nepalensis* Hernando & Ribera, 2014 (Nepal)
82 *Caccothryptus schuhi* Hernando & Ribera, 2014 (Indonesia, Java)
83 *Caccothryptus sinensis* Hernando & Ribera, 2014 (China)
84 *Caccothryptus sulawesianus* Hernando & Ribera, 2014 (Indonesia, Sulawesi)
85 *Caccothryptus ticaoensis* Hernando & Ribera, 2014 (Philippines)
86 *Caccothryptus wooldridgei* Hernando & Ribera, 2014 (Indonesia, Sulawesi)
87 *Caccothryptus zetteli* Hernando & Ribera, 2014 (Philippines)
88 *Resachus schuhi* Hernando & Ribera, 2006 (Madagascar)
89 *Byrrhinus helicophallus* Hernando & Ribera, 2014 (Yemen)
90 *Byrrhinus socotrensis* Hernando & Ribera, 2014 (Yemen, Socotra Is.)
91 *Mexico splendens* (Hernando & Ribera, 2003) (Tonga)
92 *Hyphalus crowsoni* Hernando & Ribera, 2000 (Seychelles)
93 *Hyphalus madli* Hernando & Ribera, 2004 (Seychelles)
94 *Palaeoersachus bicarinatus* Pütz, Hernando & Ribera, 2004 (Baltic amber)

Malachiidae

95 *Brachemys* (*Atelestodes*) *minotaurus* Hernando & Ribera, 2019 (Crete)

NEMATOMORPHA

Gordiidae

96 *Gordionus linourgos* Villalobos, Ribera & Downie, 1999 (Scotland, UK)
97 *Gordionus diligens* Villalobos, Ribera & Downie, 1999 (Scotland, UK)

New Family

1 Aspyditidae Ribera, Beutel, Balke & Vogler, 2002

New genera

Dytiscidae

1 *Clarkhydrus* Fery & Ribera, 2018
2 *Hornectes* Fery & Ribera, 2018
3 *Iberonectes* Fery & Ribera, 2018
4 *Larsonectes* Fery & Ribera, 2018
5 *Leconectes* Fery & Ribera, 2018
6 *Mystonectes* Fery & Ribera, 2018
7 *Nectoboreus* Fery & Ribera, 2018
8 *Nectomimus* Fery & Ribera, 2018
9 *Zaitzevhydrus* Fery & Ribera, 2018
10 *Clemnius* Villastrigo, Ribera, Manuel, Millán & Fery, 2017

Aspyditidae

11 *Aspydites* Ribera, Beutel, Balke & Vogler, 2002

Hydraenidae

12 *Angiochthebius* Jäch & Ribera, 2018 (subgenus of *Ochthebius*)

Limnichidae

13 *Tricholimnichus* Hernando & Ribera, 2001
14 *Geolimnichus* Hernando & Ribera, 2004

15 *Palaeoersachus* Pütz, Hernando & Ribera, 2004
16 *Pseudothryptus* Hernando & Ribera, 2005

New subgenera

1 *Cyclopius* Villastrigo, Ribera, Manuel, Millán & Fery, 2017 (subgenus of *Clemnius*)
2 *Leptolambus* Villastrigo, Ribera, Manuel, Millán & Fery, 2017 (subgenus of *Hygrotus*)

Patronymics

COLEOPTERA

Carabidae

1 *Trechus (Trechus) riberai* Faille & Valenzuela, 2019 (Spain)

Dytiscidae

2 *Boreonectes riberae* (Dutton & Angus, 2007) (Turkey)
3 *Deronectes riberai* Fery & Hosseinie, 1998 (Turkey & Iraq)

Hydraenidae

4 *Hydraena (Hydraena) riberai* Jäch, Hernando & Aguilera, 1998 (Morocco)

Staphylinidae

5 *Mayetia amicorum* Hernando, 2005 (Spain, Basc Country) (ex-aequo with other entomologist friends)
6 *Paratyphlus riberai* Hernando, 2015 (Spain, Catalonia)

FUNGI ASCOMYCOTA

Laboulbeniales

7 *Hydrophilomyces riberae* Santamaria, 2020 in press (Spain) (host *Ochthebius nanus* Stephens)

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The CSIC group

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BEUTEL R G, RIBERA I, FIKAČEK M, VASILIKOPOULOS A, MISOF B & BALKE M. 2020. The morphological evolution of the Adephaga (Coleoptera). *Systematic Entomology* **45** 378-395.

…and finally, just as this note was nearing completion a new paper was spotted

FISH F E, DiNENNO N K & TRAIL J 2020. The "dog paddle": stereotypic swimming gait pattern in different dog breeds. *Anatomical Record* **2020** 1-11.

This paper shows that dogs really do dog-paddle, and that they share this trait with, for example, the armadillo, the blue crab, the human, the sea turtle, the woodchuck and…..the squeak beetle. Hence the citing of Ignacio's 1997 paper, which he would have found very funny, especially as that paper was in turn based on analysis of video tracks of sperm!

This obituary can be cited as Millán, A.C., Hernando, C. & Foster, G.N. 2020. Ignacio Ribera 1963-2020. ***Latissimus* 46** 17-36.

FERN WEEVIL IN LOUGH DERG

Azolla filiculoides became established in a small boat harbour in Lough Derg in either 2011 or 2012, but was absent by 2016. The loss was put down to attack by *Stenopelmus rufinasus* Gyllenhal. "H9" refers to County Clare.

MINCHIN D & BAARS J-R 2020. The water fern *Azolla filiculoides* Lam. (Azollaceae): from well-established to disappeared (H9). *The Irish Naturalists' Journal* **37** 14-17.

EASTERN MOROCCO CATALOGUE

This comprehensive catalogue of the beetles of eastern Morocco includes a description of the habitats in the province of Guercif. Water beetles recorded with certainty include 4 Gyrinidae, 4 Haliplidae, 2 Noteridae, 43 Dytiscidae, 12 Helophoridae, 2 Hydrochidae, 21 Hydrophilidae, 32 Hydraenidae, 9 Elmidae, 5 Dryopidae, 1 limnichid, and 5 Heteroceridae. Robert Angus has noted that the *Helophorus obscurus* Mulsant should be referred to *H. algiricus* Motschulsky. Of the weevils, *Bagous argillaceus* Gyllenhal and *B. subruber* Reitter are of interest, both feeding on halophytic plants, and only barely aquatic. The document is dated 2018 and the nomenclature is rather more dated in parts, but it is possible that this catalogue first became available in February 2020.

CHAVANON G 2018. Catalogue des Coléoptères de la région orientale du Maroc (Province de Guercif exceptée). *Travaux de l'Institut Scientifique, Série Zoologie* **57** 1-192. Université Mohammed V de Rabat.

A *DYTISCUS* IN TROUBLE

Richard Brown posted photographs of this *Dytiscus marginalis* L. from his garden pond in Barrhill, Ayrshire, Scotland, found in May 2020. Not only were mites involved but the beetle had a massive protistan colony towards the rear. There was another individual similarly afflicted. Can anyone put a certain name to the mites? And can someone recall a similar case?

Ed.

IBERIAN BARCODES

A review of what's available about freshwater animals in the Iberian barcode library indicates that of the 650 species in 17 families of beetles under consideration 44-45% have some DNA fragments analysed and available in the public domain.

MÚRRIA C, VÄISÄNEN L O S, SOMMA S, WANGENSTEEN O S, ARNEDO M A & PRAT N 2020. Towards an Iberian DNA barcode reference library of freshwater macroinvertebrates and fishes. *Limnetica* **39** 73-92.

A NEW *HYDATICUS* IN PARIS MUSEUM!

This species was found in 1945 by R. Peschet very close to what is now the space centre in French Guiana. A key is provided to Neotropical *Prodaticus* based on one produced recently by the same authors (see page 1).

HENDRICH L & BALKE M 2020. *Hydaticus* (*Prodaticus*) *kourouensis* sp. n., a new diving beetle species from French Guiana (Coleoptera: Dytiscidae). *Aquatic Insects* doi.org/10.1080/01650424.2020.1748201 5 pp.

MONGOLIAN BEETLES

The Mongolian dytiscid fauna is reviewed in the first paper. Eighty species (81% of the 99 species in total) are associated with the river basins discharging into the Arctic Ocean, with 60 species associated inland Central Asia. Twenty-seven species are Palaearctic. This inventory has greatly benefited from 3,517 specimens found in 630 sites. *Oreodytes mongolicus* Brinck and *Agabus kaszabi* Guéorguiev are endemic to Mongolia.

In the second paper, for which Bazartseren Boldgiv is given as the correspondent, 4,193 specimens of 66 diving beetle species were sampled from 146 sites. Altitude and dissolved oxygen had the strongest relationship with community structure. The commonest species were *Nectoporus sanmarkii* (Sahlberg), *Hygrotus impressopunctatus* (Schaller), *Laccophilus biguttatus* Kirby, *Rhantus notaticollis* (Aubé) and *Hygrotus unguicularis* (Crotch).

ENKHNASAN D & BOLDGIV B 2020. Biogeography of predaceous diving beetles (Coleoptera, Dytiscidae) of Mongolia. *ZooKeys* **853** 87-108.

ENKHNASAN D & BOLDGIV B 2020. Community and habitat analysis of predaceous diving beetles (Coleoptera, Dytiscidae) in central and western Mongolia. *Inland Waters* **853** 87-108.

MEETINGS

Our meetings in Scotland and Italy both had to be postponed. Similarly the International Congress of Entomology 19-24 July 2020 in Helsinki, at which had been planned a symposium entitled *Monitoring freshwater biodiversity - taxonomy, systematics and biogeography of water beetles.*

Correction to *Latissimus* 45

On page 25 Jean-Philippe Tamisier was given as the editor of Supplément 5 of the French Catalogue. This should have been the late Marc Tronquet.

TRONQUET M J-P (ed.) 2019. *Catalogue des Coléoptères de France*. Supplément **5**. Perpignan: Association Roussillonnaise d'Entomologie.

Latissimus is the newsletter of the Balfour~Browne Club.

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