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NEWSLETTER OF THE
BALFOUR-BROWNE CLUB



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October 2018

Tunguskagyru *planu* wa a Permian whirligig described by Evgan Yan *et alia* (2018) from Russia. The reconstructed scene demonstrates its gyrid credentials and habit

IRELAND 8-11 JUNE 2018

Who remembers Eyjafjallajökull? In 2010 That volcano almost scuppered the Club meeting in the Burren as international flights were so disrupted. We left the Club sweltering at 20° C on 28 May 2010 only to find that it was more like 29° C when we came back in 2018. This greatly reduced the amount of habitat available to us in County Kerry. The blanket bog was tinder-dry and many loughs and rivers were well below their usual drawdown zones. Twenty-four people assembled at Killorglin, representing seven countries, with a welcome increase in the female complement. Killorglin is on the Ring of Kerry and is renowned for the Puck Fair, with its goat mascot below which the group photographs were delivered.



Will Watson getting the Ierse Kevers trophy from Robert Angus. Photograph Annie Ross

Everyone met up for the Friday night, when we held the Club Dinner in the Sol y Sombra Tapas Restaurant, a conversion of the St James Church of Ireland, with us taking over the upper floor. This had been heralded as the best tapas restaurant in Ireland (even the world) and it lived up to its reputation, amplified by the intense Iberian heat of an Irish evening. Our speakers managed to deliver their points despite the rumpus downstairs. Kevin Scheers had brought the Ierse Trophy from Belgium newly adorned with a jumping frog and the trophy was awarded to Will Watson for his triumphal performance with *Taktota Jabilaya* in Morocco the previous month (see **Latissimus 41** 3). Brian Nelson, our principal organiser, had been warned that he wasn't going to get it, and he seemed to hide his disappointment fairly well. [Brian, if you saw the video you will see that the bar has been raised. Nothing short of swimming stark naked through a mosquito-infested Arctic lake will suffice for the next award.] On that topic Anders Nilsson then explained what was planned for the Arctic trip in June 2019. Outside we were met by sobering rain, the first to fall for many days in the area,

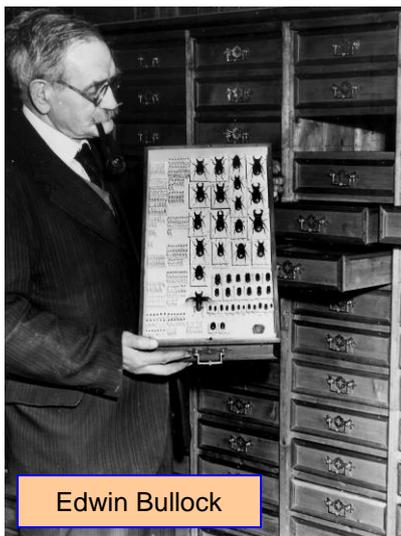
and fortunately over by the following morning.

The traditional "morning milling around" ceremony took place at the finely appointed Laune Bridge House, adorned with evidence of occupation by a Dutch coleopterist. Wisely or wrongly our carload elected [I was the driver] to travel far in the hope of detecting good sites for others – or perhaps to persuade them to stay in and around the Killarney National Park. The latter won the vote as it soon became clear that water beetle habitats were not at their best. Valencia Island yielded *Ochthebius lejolisii* Mulsant & Rey in a rockpool, and Lough Currane was notable for the abundance of *Gyrinus aeratus* Stephens and the presence of *G. distinctus* Aubé. We did enjoy stunning views though, particularly the rock strata of Coomcallee beyond Lough Isknagahany, which had a water temperature of 27° C.

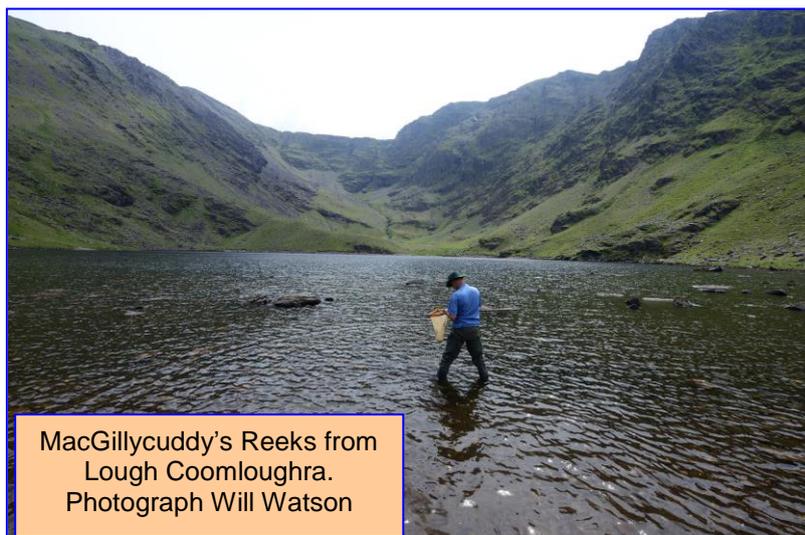


Laune Bridge House. Photograph Will Watson

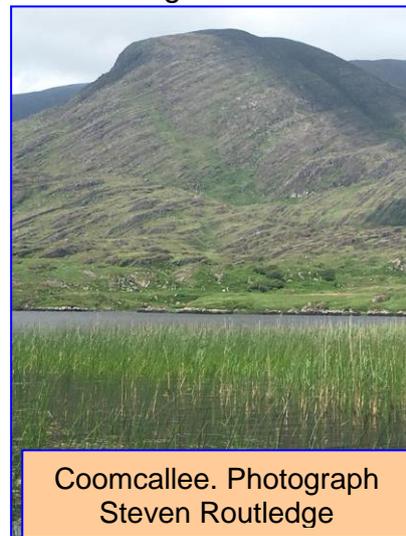
ADDRESSES The addresses of authors of articles and reviewed works are mainly given at the end of this issue of **Latissimus**. The address for other correspondence is: Professor G N Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK – latissimus/at/btinternet.com



Edwin Bullock

MacGillycuddy's Reeks from
Lough Coomloughra.
Photograph Will Watson

This meeting might have been named in honour of Edwin Bullock (1879-1965). Born in London he spent the last fifty years of his life in Ireland and collected insects in the Muckross Estate area on every day when the weather permitted. He ran a hotel at Flesk View House, Muckross along the lines of Fawltly Towers (see Beirne 1985), "invariably perplexed and hurt" when guests left after a day. He recorded all too many beetles not seen since then: *Bidessus minutissimus* (Germar), *Hydraena minutissima* Stephens, *H. pulchella* Germar, *H. pygmaea* Waterhouse, *Donacia sparganii* Ahrens, *Longitarsus nigerrimus* (Gyllenhal), and *Bagous limosus* (Gyllenhal). The story goes that the burgeoning population of Killarney resulted in sewerage overwhelming the River Flesk

Most us with the goat.
Photograph Annie RossCoomcallee. Photograph
Steven Routledge

where it enters Lough Leane, one of Bullock's favourite sites, certainly endangering two of the *Hydraena*. Fortunately one of Bullock's beetles, *Plateumaris bradata* (Scopoli), was refound at Dinish during our meeting and where he had last seen it in 1933.

MacGillycuddy's Reeks were climbed by the more adventurous but the cirque lakes proved unproductive. Kevin Scheers and Johannes Bergsten fared better later on the lough-studded area of the Caha Mountains in West Cork with *Boreonectes*, the precise name of which is no longer in doubt following "the treatment" by Robert Angus.

Anon. 2010 Kilfenora 2010. *Latissimus* 28 14-16.

Beirne, B.P. 1985. *Irish entomology: the first hundred years*. Irish Naturalists' Journal, Special Entomological Supplement. Belfast: Irish Naturalists' Committee.

KOLEOPTEROLOGISCHE RUNDSCHAU 88

Just for once this issue has not much on Palaearctic water beetles but there are still some important papers.

NEW CALEDONIAN HYDATICUS

Hydaticus manuei is newly described and fully illustrated as a member of the *H. sexguttatus* group.

WEWALKA G & JÄCH M A 2018. A new species of *Hydaticus* Leach, 1817 from New Caledonia (Coleoptera: Dytiscidae). *KR* **88** 1-8.

CHINESE HALIPLIDAE

The number of Chinese species has gone down to 27 from 29 in the last catalogue because of synonymies in the subgenus *Liaphlus* based on recognition of the variability in the left paramere in *Haliplus abbreviatus* Wehncke.

LIANG Z, LIA F & van VONDEL B J 2018. Actualized checklist of Chinese Haliplidae, with new provincial records (Coleoptera: Haliplidae). *KR* **88** 9-16.

ANGIOCHTHEBIUS

The species in this new subgenus come from Argentina and Chile, and correspond to the *Gymnochthebius plesiotypus* group of Phil Perkins.

JÄCH M A & RIBERA I 2018. *Angiochthebius* subgen. n., a new subgenus of *Ochthebius* Leach, 1815 from the southern Neotropical Region. *KR* **88** 17-22.

AGRAPHYDRUS IN THE SUBCONTINENT

Harry G. Champion (or Champion the Wonderhorse, as he was known in the lower circles in the Natural History Museum, London) was a forestry officer in India and collected the first *Agraphydrus* between 1912 and 1932. Forty-six species are now known, 36 of them newly described. Six of the seven species known from Sri Lanka are endemic there. This giant paper is copiously illustrated and features drawings of the extent of pubescence on all the femora, rather like in *Anacaena*.

KOMAREK A 2018. Taxonomic revision of *Agraphydrus* Régimbart, 1903 II. The Indian Subcontinent (Coleoptera: Hydrophilidae: Acidocerinae). *KR* **88** 103-204.

AUSTRIAN DONACIA

Donacia malinovskyi Ahrens and *D. tomentosa* Ahrens are amongst the chrysomelids recorded in this paper.

GEISER E 2018. Additions to the checklist of the Chrysomelidae (excluding Bruchinae) of Austria (II) (Coleoptera: Chrysomelidae). *KR* **88** 211-215.

HEINRICH SCHÖNMANN 1948-2017

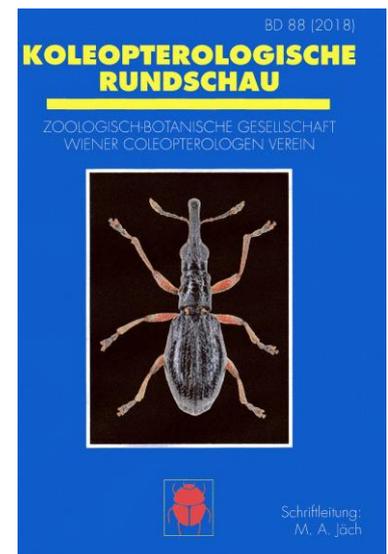
This appreciation of Heinrich Schönmann's work includes a list of the beetles he described as new, 49 species of the hydrophilid genus *Pelthydrus* d'Orchymont.

JÄCH M A 2018. In memoriam Heinrich A. Schönmann (1948-2017). *KR* **88** 281-292

ITALIAN SPRINGS – ONE ELMID

Twenty-six taxa were recorded in two lowland springs in the Ticino valley. These included *Macronychus quadrituberculatus* Müller and some scirtid larvae. The author for correspondence is Daniele Paganelli.

SCONFIETTI R, PESCI I & PAGANELLI D 2018. Terrace springs: habitat haven for macrobenthic fauna in the lower plain of the River Ticino (Lombardy, Northern Italy). *Natural History Sciences, Atti della Società Italiana di scienze naturali e del Museo civico di storia naturale di Milano* **5** 19-26.



HYDROGLYPHUS HAMULATUS IN THURINGIA

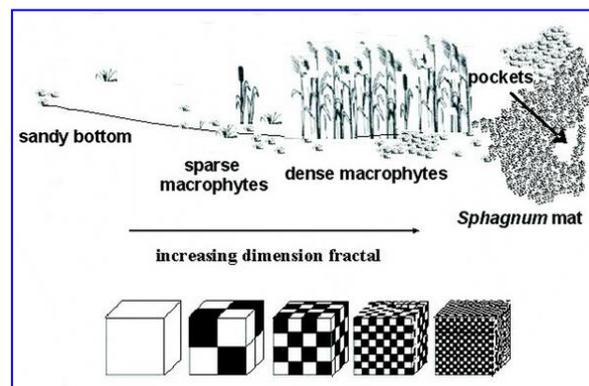
Two days' fieldwork in Thuringia yielded 57 species of water beetle under the guidance of Ronald Bellstedt. The best species was the *hamulatus* found in a quarry pond also known for the occurrence of *Ochthebius nanus* Stephens, but possibly the most interesting site was the shooting range of BdMP (Bund der Militar und Polizeischutzen) at Kriegberg, where one can also drive a tank, as here with Ronald.



FOSTER G & FOSTER S 2018. Erstnachweis von *Hydroglyphus hamulatus* (Gyllenhal, 1813) (Insecta: Coleoptera: Dytiscidae) in Thüringen. *Thüringer Faunistische Abhandlungen* **22** 115-116.

FRACTAL HABITAT STRUCTURE IN POLISH LAKES

This study is based on the way in which acid lakes change as the *Sphagnum* mat grows, with increasing complexity to mosaic-like vegetation structures. This 12-year long study on the succession of water beetles has concerned over 40 lakes. Species richness and abundance increase in parallel to the change in vegetation structures expressed as fractals. There is a negative correlation between body size and abundance and an increase in beetle density is balanced by a change in the size of individual constituents. Thus biomass remains constant regardless of the fractal structure.



PAKULNICKA J & ZAWAL A 2018. Effect of changes in the fractal structure of a littoral zone in the course of lake succession on the abundance, body size sequence and biomass of beetles. *PeerJ* doi 10.7717/peerj.5662 pp. 26.

BEETLES ON DISPLAY, LONDON 2017

Among the beetles on display at 2017 NENHS Meeting were *Berosus affinis* Brullé, *B. signaticollis* (Charpentier), *Hydraena nigrita* Germar, *H. rufipes* Curtis, *Donacia clavipes* Fab., *D. simplex* Fab. and *D. semicuprea* Panzer, all from England. Also on show was *Sphaerius acaroides* Waltl, a first for Ireland in County Fermanagh, and the prize-winning *Phytotelmatrichis osopaddington* Darby and Chaboo, a ptiliid from water-filled hollows in leaves and bracts of ginger plants in Peruvian rainforest. Roger Booth compiled that part of the report dealing with beetles.

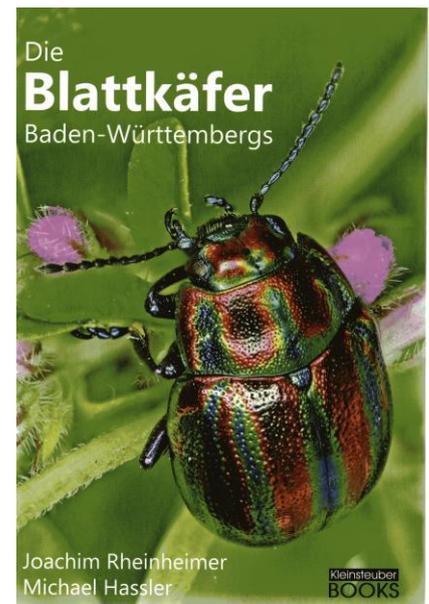
BOOTH R G (ed.) 2018. Coleoptera. pp. 112-117 in: 2017 Annual Exhibition, Conway Hall, Holborn, London – 4 November 2017. *British Journal of Entomology and Natural History* **31** 95-123.

DARBY M D 2018. My favourite invertebrate. Photograph of a Pin Head Beetle. pp. 119-120 in: 2017 Annual Exhibition, Conway Hall, Holborn, London – 4 November 2017. *British Journal of Entomology and Natural History* **31** 95-123.

CHRYSOMELIDAE ILLUSTRATED

📖 RHEINHEIMER J & HASSLER M 2018. *Die Blattkäfer Baden-Württembergs*. Karlsruhe: Kleinstüber Books. ISBN 978-3-9818110-2-5. Advertised in mainland Europe at €79.80, and on offer from Pemberley Books at £79.

Some might remember the weevils book from the same authors (see *Latissimus* 30 14), at one time available for under £40. This book takes the standard even higher and no-one should be put off by the price or the language. All species of leaf beetle are beautifully and usefully illustrated. Genitalia are depicted for many genera including *Donacia*, *Galerucella* and *Altica*. One must remember that only the (huge!) fauna of Baden-Württemberg in south-west Germany is covered, so boreal and Atlantic species may be missing. Anyone with a smattering of German will find the text useful too, with interesting coverage of natural enemies, subfossils, and the chemistry of defensive substances as well as the more usual information on habitats, life-cycles and conservation. We are grateful to Ronald Bellstedt for the Club copy.

**FLOWER-INHABITING HYDROPHILIDS**

When Michael Hansen reviewed *Cycreon* d'Orchymont in his treatise on Hydrophilidae he was obliged to remark "Habitat unknown" for the one species known from Sumatra. However, recent studies on the pollinating insect associated with Araceae revealed, in the first paper, an abundance of two subspecies of the newly described *Cycreon floricola*, differing in their distribution on the flowers of different species. They were found to feed on the exudate of the interpistillar staminodes (you'll need a botany textbook!), to mate on the pistillate zone and to stay inside the lower spathe chamber – and that they carried significant amounts of pollen and had some in their guts alongside some unidentified matter. But larvae were not to be found, and the suggestion is that these might be associated with the decaying flowers. The second paper deals with the New Zealand endemic genus *Rygmodes* White, belonging to the subfamily Cylominae, an early divergent group in the same lineage as Sphaeridiinae. The adults visit flowers and feed on pollen, with appropriately modified mouthparts, whereas the larvae are found along the sides of streams and would appear to be ambush-type predators as with most other hydrophilids.

ARRIAGA-VARELA E, WONG S Y, KIREJTSHUK A & FIKÁČEK M 2018. Review of the flower-inhabiting water scavenger beetle genus *Cycreon* (Coleoptera, Hydrophilidae), with descriptions of new species and comments on its biology. *Deutsche Entomologische Zeitschrift* 65 99-115.

MINOSHIMA Y N, SEIDEL M, WOOD J R, LESCHEN R A B, GUNTER N L & FIKÁČEK M 2018. Morphology and biology of the flower-visiting water scavenger beetle genus *Rygmodes* (Coleoptera: Hydrophilidae). *Entomological Science* <https://doi.org/10.1111/ens.12316>

NEW ASIAN BEROSUS

Berosus (*Enoplurus*) *litvinchuki* is described from Tajikistan, Uzbekistan, Kazakhstan and Azerbaijan. It belongs to the *Berosus spinosus* group, which is re-keyed. It is closest to *B. asiaticus* Kuwert.

PROKIN A A 2018. New species of the genus *Berosus* (Coleoptera: Hydrophilidae) from Central Asia and Transcaucasia. *Far Eastern Entomologist* 368 1-10.

NINE INDIAN COPELATUS



The nine species include three newly described ones, *C. deccanensis*, *C. maushomi* (right) and *C. bezdeki* (left). Seven new synonymies later, we have nine species in this west-central Indian state, and the authors have supplied a key to as well as a review of each species. *C. bezdeki* is a typically stylish *Copelatus* whereas *C. maushomi* has the trappings of subterranean life, small eyes, no colour and narrowness: it is named after the monsoon and was probably flushed out of a mountain stream



(120 km NE of Mumbai). Jiří Hájek, who is the author for correspondence, kindly supplied the habitus photographs for use in **Latissimus**.

SHETH S D, GHATE H V & HÁJEK J 2018. *Copelatus* Erichson, 1832 from Maharashtra, India, with description of three new species and notes on other taxa of the genus (Coleoptera: Dytiscidae: Copelatinae). *Zootaxa* **4459** 235-260.

AFRICAN TEMPORARY WATERS REVIEW

This review includes the idea that most species occupying temporary water are habitat generalists, and this explains why endemism appears to be low. The stated caveat is “except for a few specialist groups” and these certainly include many of the beetles. The authors (or author, i.e. David Bilton) cite, for example, the wingless haliplid *Algophilus lathridoides* Zimmermann as a Cape endemic known from slightly brackish flood pools and presumably only able to disperse in floodwater, the only southern African *Helophorus*, *aethiops* J. Balfour-Browne, which is common in temporary ponds in the winter rainfall zone, and of course, the rockpool hydraenids in *Prosthetops*.

BIRD M S, MLAMBO M C, WASSERMAN R J, DALU T, HOLLAND A J, DAY J A, VILLET M H, BILTON D T, BARBER-JAMES H M & BRENDONCK L 2018. Deeper knowledge of shallow water: reviewing the invertebrate fauna of southern African temporary wetlands. *Hydrobiologia* doi.or/10.1007/s10750-018-3772-z pp. 33

SWAN NEST BEETLES

An abandoned nest of mute swans (*Cygnus olor* (Gmelin)) in Cheshire, England, yielded amongst other beetles *Cercyon analis* (Paykull), *C. bifenestratus* Küster and *Tanysphyrus lemnae* (Paykull), with *bifenestratus* being new for Cheshire.

WASHINGTON C 2018. *Cercyon bifenestratus* Küster (Hydrophilidae) new to Cheshire VC 58. *Coleopterist* **27** 54.

LEIELMIS AGAIN

The elmid genus *Leielmis* was recently reviewed by David Bilton (see **Latissimus** **40** 32). The new species, characterised by the spine on the inner edge of the hind tibiae, was detected when the revision was in press. It was found in company with *L. gibbosus* Bilton in a stream at high altitude in the Hexrivier mountains, South Africa.

BILTON D T 2018. A new species of *Leielmis* Delève, 1964, with a revised key to members of the genus (Coleoptera: Elmidae). *Zootaxa* **4441** 592-596.

SUBTRIBE DERONECTINA – A MAJOR OVERHAUL

[Goodbye – *Oreodytes sanmarkii*]

Kazimierz Galewski's name will be for ever associated with this subtribe almost by accident. In 1994 he used the term Deronectini in a key to the tribes of the subfamily Hydroporinae. That key referred to figures of *Oreodytes* species and *Deronectes latus* (Stephens), and article 36 of ICZN 1999 leads us to Deronectina with type genus *Deronectes*. But Galewski did not deal with any of the other genera now included in Deronectina. The name was first used by Anders Nilsson and Robert Angus in 1992 in their review of the *Deronectes*-group of genera, but they did not include *Oreodytes* in Deronectina. Kelly Miller and Johannes Bergsten (2014) formally recognised Deronectina on the basis of a molecular phylogeny of the Dytiscidae (Ribera *et al.*, 2018). These 20 genera currently include 194 species and 13 subspecies.

Amurodytes Fery & Petrov – for *A. belovi* Fery & Petrov from Eastern Russia. [not to be confused with the American *Amarodytes* Régimbart]

Boreonectes Angus – type species *Deronectes griseostriatus* De Geer, and nine other montane species in the Nearctic and Palaeartic.

Clarkhydrus n. gen. – type species *Hydroporus roffi* Clark, and nine other species in North America south to the Neotropical in Mexico.

Deronectes Sharp – type species *Hydroporus latus* Stephens, and 58 other species in eight species-groups, all in the Palaeartic.

Deuteronectes Guignot, restored as a Nearctic genus with *Hydroporus picturatus* Horn as type species, plus *D. angustior* (Hatch).

Hornectes n. gen. for a single Nearctic species originally described as *Hydroporus quadrimaculatus* Horn.

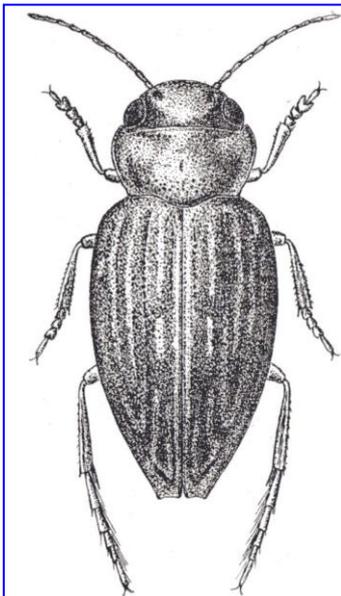
Iberonectes n. gen. for the Iberian *Deronectes bertrandi* Legros.

Larsonectes n. gen. for the Canadian *Potamonectes minipi* Larson.

Leconectes n. gen. for what was originally described as *Hydroporus striatellus* LeConte, a montane species in North America reaching to the Neotropical in Mexico.

Mystonectes n. gen. – type species *Deronectes neomexicanus* Zimmerman & Smith, and two other species in the *neomexicanus*-group in the Nearctic and Mexico in the Neotropical, plus two species in the *coelamboides*-group in the south-western USA. The new name implies some mysteries still to be resolved in this genus.

Nebrioporus Régimbart – type species *Hydroporus kilimandjarensis* Régimbart, with 56



other species in Africa, the Palaeartic and North America. Owing to the difficulties in obtaining fresh *N. kilimandjarensis* from Mount Kilimandjaro Ignacio and his co-workers in Barcelona managed to get a fragment of gene H3 from a museum specimen and found it identical to the equivalent sequence in *N. abyssinicus* (Sharp). In the absence of any possibility of contamination in the laboratory the current placement of this species fully supports earlier proposals about synonymy. *N. kilimandjarensis* is unusual in the genus in that the scutellum is partly visible, though unfortunately this does not show in Félix Guignot's (1959) depiction. The treatment of this genus is accompanied by substantial notes, perhaps the most important being to recognise continuing uncertainties about the position of *N. canaliculatus* Lacordaire.

Nectoboreus n. gen. with type species designated as *Hydroporus aequinoctialis* Clark, and two other species from south-western USA to Mexico.

Nectomimus n. gen. with sole and type species *Oreodytes*

okulovi Lafer, a Siberian and Far East species looking like the short form of what until now we knew as *Oreodytes*.

Nectoporus Guignot, resurrected as a North American and Palaearctic genus with the type species *Hydroporus abbreviatus* Fall and eight other species. These include the Holarctic *Nectoporus sanmarkii* (Sahlberg), common in western Europe.

Neonectes Balfour-Browne, resurrected as a genus with Jack Balfour-Browne as the authority because he designated *Hydroporus natrix* Sharp as type species, whereas the originator of the name *Neonectes*, Alois Zimmermann, did not. The two other species are *N. babai* (Satô) and *N. jakovlevi* (Zaitzev), all three being found in the east of the Palaearctic.

Oreodytes Seidlitz, redefined to cover only the “longer *Oreodytes*” of the past, with type species *Hyphydrus borealis* Gyllenhal in Sahlberg (= *Dytiscus alpinus* Paykull) as designated by Frank Balfour-Browne (1936). This now has 14 species in three species-groups, all with Nearctic and Palaearctic representatives.

Scarodytes des Gozis, type *Dytiscus halensis* Fab., with eleven species in Europe, north Africa and Asia east to Iran.

Stictotarsus Zimmermann reinstated as a genus, having originally been described as a subgenus, including only *duodecimpustulatus* Fab., *maghrebinus* Mazzoldi & Toledo and *procerus* Aubé, as conceived by Anders Nilsson and Robert Angus (1992), *duodecimpustulatus* being the type species as designated by Jack Balfour-Browne (1944). These three species cover much of Europe and north Africa.

Trichonectes Guignot for the Moroccan and Spanish *T. otini* (Guignot), originally described as a *Potamonectes*.

Zaitzevhydrus n. gen. for Zaitzev’s *Hydroporus formaster* from the eastern Palaearctic.

This analysis is accompanied by a key and habitus images, plus photographs, stereoscans and line drawings of structures. This huge piece of work must surely draw a line following on the many twists and turns taken by “*Deronectes*” in the past. However, some workers may have reservations about the large number of monospecific genera. An earlier treatment based on larval setation (Yves Alarie *et al.*, 1999) had suggested that the Australian *Antiporus* Sharp might be linked to the *Deronectes* group, but Ignacio has pointed out that *Antiporus* is among the outgroups in Fig. 29C, eliminating the possibility of Southern Hemisphere representatives of *Deronectina*.

FERY H & RIBERA I 2018. Phylogeny and taxonomic revision of *Deronectina* Galewski, 1994 (Coleoptera: Dytiscidae: Hydroporinae: Hydroporini). *Zootaxa* **4474** 104 pp.

ALARIE Y, NILSSON A N & HENDRICH L. 1999. Larval morphology of the Palaearctic genera *Deronectes* Sharp and *Scarodytes* Gozis (Coleoptera: Dytiscidae: Hydroporinae), with implications for the phylogeny of the *Deronectes*-group of genera. *Entomologica scandinavica* **30** 173-195.

BALFOUR-BROWNE F 1936. Systematic notes upon British aquatic Coleoptera. Part XI. Haliplidae. (*Peltodytes*, *Haliplus* and *Brychius*.) *Entomologist's monthly Magazine* **72** 68-77.

BALFOUR-BROWNE J 1944. Remarks on the *Deronectes*-complex (Col., Dytiscidae). *The Entomologist* **77** 186-189.

GALEWSKI K 1994. The description of third-stage larvae of *Hydroporus tartaricus* Lec. and *H. marginatus* (Duft.) (Coleoptera, Dytiscidae) with a key to third-stage larvae of Central European species of Hydroporini. *Bulletin of the Polish Academy of Sciences, Biological Sciences* **42** 95-113.

GUIGNOT F 1959. Revision des hydrocanthares d’Afrique (Coleoptera Dytiscoidea). 2. *Annales du Musée Royal du Congo Belge Série 8vo (Sciences Zoologiques)* **78** 323-438.

MILLER K B & BERGSTEN J 2014. The phylogeny and classification of predaceous diving beetles. Chapter 3, pp. 49-172 in D.A.Yee (ed.) 2014. *Ecology, Systematics, and the Natural History of Predaceous Diving Beetles (Coleoptera: Dytiscidae)*. Dordrecht: Springer.

NILSSON A N & ANGUS R B 1992. A reclassification of the *Deronectes*-group of genera (Coleoptera: Dytiscidae) based on a phylogenetic study. *Entomologica scandinavica* **23** 275-288.

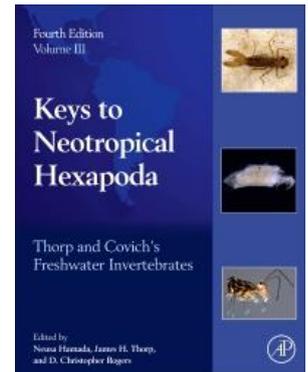
CUBAN METHOD

This fascinating book is worth downloading from the web to see the range of wildlife in Cuba and the ways in which it can be monitored. It is reassuring to see a D-shaped net with a Balfour-Browne rim being deployed alongside a white tray. The cited literature gives some good guidance on what is available relevant for Cuba.

BELLO GONZÁLEZ O C, LÓPEZ del CASTILLO P, TRAPERO QUITANA A D, SUÁREZ MEGNA Y, NEYRA RAOLA B & HERNÁNDEZ QUINTA M 2017. 16 Macroinvertebrados dulceacuícolas. pp. 306-325 in: C.A. Mancina & D.D. Cruz Flores (eds) *Diversidad biológica de Cuba: métodos de inventario monitoreo y colecciones biológica*. Havana: Editorial AMA.

NEOTROPICAL DYTISCIDAE KEYS

One is always wary of these great compendia. They usually cost a lot for material much of which will never be consulted, and they go out-of-date with the release of further editions, most of which involve no changes to the parts of interest. However, it is good nowadays to get the chunk that you need online – and here is a case in point. This is a well illustrated set of keys down to genus level for adults and most larvae. There are some changes required based on Fery & Ribera (2018 – see this *Latissimus* 7-8). *Boreonectes* must be replaced by *Nectoboreus*, and former Neotropical members of *Stictotarsus* are now in *Leconectes* and *Mystonectes*, the question being whether the Neotropical representatives still work in the keys.



BENETTI C J, MICHAT M C, FERREIRA N, BENZI BRAGA R, MEGNA Y S & TOLEDO M 2018. Family Dytiscidae. Chapter 15.3 pp. 539-560 in: N Hamada, J Thorp & C Rogers (eds) *Thorp and Kovich's Freshwater Invertebrates 4th Edition, Volume 3: Keys to Neotropical Hexapoda*. Cambridge, Massachusetts: Academic Press.

OCHTHEBIINI GETS THE TREATMENT

The new phylogeny of this tribe is based on genetic analysis of 186 species. Six genera are recognised:- *Meropathus* Enderlein, *Ochthebius* Leach, *Protochthebius* Perkins, *Prototympnogaster* Perkins, *Tympalopatrum* Perkins and *Tympnogaster* Janssens. *Ochthebius* now has nine subgenera:- the newly described *Angiochthebius* Jäch & Ribera from South America, *Asiobates* Thomson, *Aulacochthebius* Kuwert, *Cobalius* Rey, *Enicocerus* Stephens, *Gymnanthelius* Perkins from Australia, *Gymnochthebius* d'Orchymont from Australia, PNG and America, *Hughleechia* Perkins from Australian rockpools, and finally the subgenus *Ochthebius* Leach with 17 species-groups. The authors take the opportunity to promote two subspecies to specific rank, *O. fallaciosus* Ganglbauer, separate from *O. viridis* Peyron, and *O. deletus* Rey, separate from *O. subpictus* Wollaston. The author for correspondence is Ignacio Ribera.

VILLASTRIGO A, JÄCH M A, CARDOSO A, VALLADARES L F & RIBERA I 2018. A molecular phylogeny of the tribe Ochthebiini (Coleoptera, Hydraenidae, Ochthebiinae). *Systematic Entomology* doi: 10.1111/syen.12318 16 pp. plus supporting information.

CHINESE LIMNICHID

There is no mention of an aquatic habitat in connection with *Cacchothryptus yunnanensis*, but the genus is generally known in wet dead wood in forest streams. This new species belongs to the *testudo* species-group.

YOSHITOMI H 2018. A new species of the genus *Cacchothryptus* (Coleoptera: Limnichidae) from China. *Japanese Journal of Systematic Entomology* **24** 138-140.

DOROTHY J. JACKSON FRES FLS, SCOTTISH ENTOMOLOGIST: A BIBLIOGRAPHY**Jack R. McLachlan**

Dorothy Jean Jackson FRES FLS (1892-1973) should be familiar to anyone interested in water beetles. She published prolifically on the ecology, distribution, flight capacity, and parasites of water beetles, and made especially important contributions to our knowledge of dytiscids. Lees (1974) provided a very brief and somewhat accurate obituary. I am currently preparing a more comprehensive biography of her and would be grateful to receive any notes or anecdotes from those that knew or met her.

Foster (1991), at the request of the late Hans Schaefflein, was the first effort in putting together a publication list. Here I provide a more extensive bibliography of her work that is almost certainly incomplete, but I think includes most of her scientific output between 1907 and 1973. Her first paper was published when she was 14 years old, and her last was completed by Jack Balfour-Browne and published posthumously. Unsurprisingly, there are gaps in her publication list between 1914-1918 and 1939-1945. She had a laboratory at her home in St Andrews, but it was dismantled during the second world war, and she had all but given up entomology until D'Arcy Wentworth Thompson asked her to lecture for him. In preparation for these lectures, she bought her first aquatic net in September 1945. In 1948 Frank Balfour-Browne suggested she start an account of the water beetles of Fife and Kinross, and she began collecting in October of that year. She led work parties in collecting, drying, and packing of moss during the war, and I wonder if this influenced her new post-war interest in dytiscids and other water beetles! Many of her papers are hard to come by, so I can provide copies of any of the works listed below to anyone interested.

1907. Lepidoptera from West [East] Ross-shire. *Annals of Scottish Natural History* **61** 54 + correction **62** 119

1908a. Lepidoptera from East Ross and other localities in the North of Scotland. *Annals of Scottish Natural History* **65** 53-54

1908b. *Amblyptilus punctidactylus*. *Annals of Scottish Natural History* **65** 54

1909a. Notes on the Lepidoptera in the N.E. Highlands. *Annals of Scottish Natural History* **70** 119-120+ correction **72** 248

1909b. List of Lepidoptera captured recently in Rossshire. *Entomologist's Record and Journal of Variation* **21** 115-117, 176-181, 212-216

1910a. Some notes on the Egyptian Lepidoptera. *Entomologist's Record and Journal of Variation*. **22** 17-19

1910b. *Epunda lichenea* and other species at Mull of Galloway. *Entomologist's Record and Journal of Variation*. **22** 117

1910c. A few days amongst the Lepidoptera of Caithness. *Entomologist's Record and Journal of Variation*. **22** 223-224

1910d. Notes on the Lepidoptera of the Scottish Highlands. *Entomologist's Record and Journal of Variation* **22** 130-134

1911. Notes on the Lepidoptera of the Scottish Highlands. *Entomologist's Record and Journal of Variation* **23** 257-260



Dorothy J. Jackson (1892-1973). Photograph probably taken 1945-1955 (J. Baxter, pers. comm). Reproduced courtesy of The St Andrews Preservation Trust

1918. Notes on the aphides of Ross-shire, with descriptions of two species new to science. *Scottish Naturalist* **76** 81-91, 144
1919. Further notes on aphides collected principally in the Scottish Highlands. *Scottish Naturalist* **93** 157-165
1920. Bionomics of weevils of the genus *Sitones* injurious to leguminous crops in Brittain — Part I. *Annals of Applied Biology* **7** 269-298
1921. Genus *Sitones* and its importance in agriculture. *Report of the British Association for the Advancement of Science*, 89th Meeting, p. 462
- 1921b. Notes of the distribution of weevils of the genus *Sitona* in the North of Scotland. *Scottish Naturalist* **120** 178
- 1922a. Further observations on *Sitones lineatus* L. *Annals of Applied Biology*. **9** 69-71
- 1922b. Bionomics of weevils of the genus *Sitona* injurious to leguminous crops in Britain Part II. *Sitona hispidula* F., *S. sulcifrons* Thun. and *S. crinita* Herbst. *Annals of Applied Biology* **9** 93-115
- 1922c. Notes of aphides from Sutherland. Part I. *Scottish Naturalist* **123** 51-59
- 1922d. Notes of aphides from Sutherland. Part II. *Scottish Naturalist* **125** 85-92
1924. Insect parasite of the pea-weevil. *Nature* **113** 353-354
1926. The inheritance of brachypterous and macropterous wings in *Sitona hispidula*. *Nature* **118** 192-193
- 1928a. Wing dimorphism in weevils. *Nature* **122** 478
- 1928b. The biology of *Dinocampus (Perilitus) rutilis* Nees, a braconid parasite of *Sitona lineata* L. Part I. *Proceedings of the Zoological Society of London* **98** 597-630
- 1928c. The inheritance of long and short wings in the weevil (*Sitona hispidula*) with a discussion of wing reduction among beetles. *Transactions of the Royal Society of Edinburgh* **55** 665-735
1929. "Der Flugapparat der Kaefer: Vorbedingung, Ursache und Verlauf seiner Rueckbildung" von Dr. P. Felix Rueschkamp S. J. Stuttgart 1927. 88 pp., 5 figs, 8 pls, 64 refs [book review]. *Entomologist's Record and Journal of Variation* **41** 81-83, 97-99
1933. Observations on the flight muscles of *Sitona* weevils. *Annals of Applied Biology* **20** 731-770
- 1934a. Parasites of weevils of the genus *Sitona*. *Scottish Naturalist* **207** 75-79
- 1934b. Notes on parasites of *Abraxas grossulariata* in Fife. *Scottish Naturalist* **209** 143-147
- 1935a. Giant cells in insects parasitised by Hymenopterous larvae. *Nature* **135** 1040-1041
- 1935b. Further notes on parasites of the magpie moth (*Abraxas grossulariata* L.) in Scotland. *Scottish Naturalist* **214** 89-98
- 1937a. Excretion during cocoon spinning in *Trophocampa (Casinaria) vidua* Grav. *Proceedings of the Royal Entomological Society of London (A)* **12** 52
- 1937b. Host-selection in *Pimpla examinator* F. (Hymenoptera). *Proceedings of the Royal Entomological Society of London (A)* **12** 81-91
- 1937c. Observations on Ichneumonidae. *Proceedings of the Royal Entomological Society of London (C)* **2** 17-18
- 1950a. *Noterus clavicornis* Degeer & *N. capricornis* Herbst. (Col. Dytiscidae) in Fife. *Entomologist's Monthly Magazine* **86** 39-43
- 1950b. Rare moth found. *St Andrews Citizen*, 26th August 1950. p. 5
- 1950c. *Convolvulus* hawkmoth. *St Andrews Citizen*, 2nd September 1950. p. 5
- 1951a. Nematodes infesting water beetles. *Entomologist's Monthly Magazine* **87** 265-268
- 1951b. Food-plant of *Jacksonia papillata* Theobald (Hemiptera: Aphididae). *Proceedings of the Royal Entomological Society of London (A)* **26** 41-42
- 1952a. *Haliplus obliquus* F. (Col. Haliplidae) in Fife with notes on other water beetles and water bugs from the same habitat. *Entomologist's Monthly Magazine* **88** 108
- 1952b. Observations on the capacity for flight of water beetles. *Proceedings of the Royal Entomological Society of London (A)* **27** 57-70
1953. Stridulation of *Cychrus rostratus* L. *Bulletin of the Amateur Entomologists' Society* **12** 22-23
- 1954a. Letter to the Editor. *Entomologist's Gazette* **5** 63 [discussion of *Noterus* spp. names]
- 1954b. Antennal abnormalities in *Hydroporus discretus* Fairm. (Col. Dytiscidae) and a reduced tarsus in *Gyrinus minutus* F. (Col. Gyrinidae). *Entomologist's Monthly Magazine* **90** 173-175
- 1954c. Notes on water beetles from the island of Raasay. *Scottish Naturalist* **66** 30-34

- 1955a. Further notes on beetles from the island of Raasay, and some Scottish records of Donaciinae. *Scottish Naturalist* **67** 34-39
- 1955b. Ladybirds. *St Andrews Citizen*, 17th September 1955. p. 5
- 1955c. Untitled [wing size variation in *Caraphractus cinctus* Walker]. *Proceedings of the Royal Entomological Society of London (C)* **20** 36
- 1956a. Observations of water beetles during drought. *Entomologist's Monthly Magazine* **92** 154-155
- 1956b. *Nebria brevicollis* F. (Col., Carabidae) in flight, and a question regarding flight-termination in Dytiscidae. *Entomologist's Monthly Magazine* **92** 155-156
- 1956c. Notes on Hymenopterous parasitoids bred from eggs of Dytiscidae in Fife. *Journal of the Society for British Entomology* **5** 144-149
- 1956d. The capacity for flight of certain water beetles and its bearing on their origin in the Western Scottish Isles. *Proceedings of the Linnean Society of London* **167** 76-96
- 1956e. Dimorphism of the metasternal wings in *Agabus raffrayi* Sharp and *A. labiatus* Brahm. (Col. Dytiscidae) and its relation to capacity for flight. *Proceedings of the Royal Entomological Society of London (A)* **31** 1-11
- 1956f. Observations on flying and flightless water beetles. *Zoological Journal of the Linnean Society of London* **43** 18-42
1957. A note on the embryonic cuticle shed on hatching by the larvae of *Agabus bipustulatus* L. and *Dytiscus marginalis* L. (Coleoptera: Dytiscidae). *Proceedings of the Royal Entomological Society of London (A)* **32** 115-118
- 1958a. *Plutella maculipennis* Curtis in swarms at St. Andrews. *Entomologist* **91** 210
- 1958b. Observations on *Hydroporus ferrugineus* Steph. (Col. Dytiscidae), and some further evidence indicating incapacity for flight. *Entomologist's Gazette* **9** 55-59
- 1958c. Notes on some nematodes and trematodes infesting water beetles. *Entomologist's Monthly Magazine* **94** 109-111
- 1958d. A further note on a *Chrysocharis* (Hym. Eulophidae) parasitizing the eggs of *Dytiscus marginalis* L., and a comparison of its larva with that of *Caraphractus cinctus* Walker (Hym. Mymaridae). *Journal of the Society for British Entomology* **6** 15-22
- 1958e. Egg-laying and egg hatching in *Agabus bipustulatus* L. with notes on oviposition of other species of *Agabus* (Col. Dytiscidae). *Transactions of the Royal Entomological Society of London* **10** 58-80
- 1958f. Observations on the biology of *Caraphractus cinctus* Walker (Hymenoptera: Mymaridae) a parasitoid of the eggs of Dytiscidae I. Methods of rearing and numbers bred on different host eggs. *Transactions of the Royal Entomological Society of London* **110** 533-554
- 1959a. Observations on three gynandromorphs of *Caraphractus cinctus* Walker (Hym., Mymaridae), and notes on antennal variation in this species. *Entomologist's Monthly Magazine* **95** 198-203
- 1959b. The association of a slime bacterium with the inner envelope of the egg of *Dytiscus marginalis* (Coleoptera), and the less common occurrence of a similar bacterium on the egg of *D. semisulcatus*. *Quarterly Journal of Microscopical Science* **100** 433-443
- 1959c. British Water Beetles of the Family Hydrophilidae Vol. 3 by Prof. Frank Balfour-Browne. liii + 210 (London: The Ray Society, 1958. Bernard Quaritch, Ltd., 11 Grafton Street, W.1.) [book review]. *Nature* **183** 1420-1421
- 1960a. Revised determination of a Eulophid (Hym., Chalcidoidea) bred from eggs of *Dytiscus marginalis* L. *Entomologist* **93** 181
- 1960b. Fertile eggs laid by females of *Dytiscus marginalis* long separated from males. *Entomologist's Gazette* **11** 204-206
- 1960c. Observations on egg-laying in *Ilybius fuliginosus* Fabricius and *I. ater* Degeer (Coleoptera: Dytiscidae), with an account of the female genitalia. *Transactions of the Royal Entomological Society of London* **112** 37-52
- 1961a. *Orectochilus villosus* (Mull.) (Col., Gyrinidae) recorded out of water. *Entomologist's Monthly Magazine* **97** 210
- 1961b. Diapause in an aquatic mymarid. *Nature* **192** 823-824

- 1961c. Observations on the biology of *Caraphractus cinctus* Walker (Hymenoptera: Mymaridae) a parasitoid of the eggs of Dytiscidae (Coleoptera). 2. Immature stages and seasonal history with a review of mymarid larvae. *Parasitology* **51** 269-294
- 1961d. *Coelopa frigida* (Fabricius) (Diptera, Coelopidae) swarming on a January night on windows at St. Andrews. *Entomologist* **94** 166
1963. Diapause in *Caraphractus cinctus* Walker (Hymenoptera - Mymaridae), a parasitoid of eggs of Dytiscidae (Coleoptera). *Parasitology* **53** 225-251
- 1964a. Observations on the life history of *Mestocharis bimacularis* (Dalman) Hym. Eulophidae, a parasitoid of the eggs of Dytiscidae. *Opuscula entomologica* **29** 81-97
- 1964b. Water beetles collected in the Morton Lochs Nature Reserve, Fife. *Scottish Naturalist* **71** 95-97
1966. Observations on the biology of *Caraphractus cinctus* Walker (Hymenoptera: Mymaridae), a parasitoid of the eggs of Dytiscidae (Coleoptera) III. The adult life and sex ratio. *Transactions of the Royal Entomological Society of London* **118** 23-49
1969. Observations on the female reproductive organs and the poison apparatus of *Caraphractus cinctus* Walker (Hymenoptera: Mymaridae). *Zoological Journal of the Linnean Society* **48** 59-81
1972. Dispersal of *Hyphydrus ovatus* L. (Col. Dytiscidae). *Entomologist's Monthly Magazine* **108** 102-104
1973. The influence of flight capacity on the distribution of aquatic Coleoptera in Fife and Kinross. *Entomologist's Gazette* **27** 247-293
- FOSTER G N 1991. Dorothy Jackson – a publications list. *Balfour-Browne Club Newsletter* **49** 16-17.
- LEES A W 1974. President's remarks. *Proceedings of the Royal Entomological Society, Series C* **38** 57

Received August 2018

AULONOGYRUS OUT OF AFRICA

Aulonogyrus Motschulsky has more than 50 species, until this analysis, spread over five subgenera. It has high endemism in southern Africa, with other endemics scattered around the southern hemisphere. Ancestral range reconstruction indicates that the genus originated in Africa with several separate Cenozoic dispersals to Madagascar, plus movements into the Palaearctic and Oceania. This reappraisal has resulted in recognition of only two subgenera, *Aulonogyrus* s. str. with four species in the Palaearctic, Australia and New Caledonia, and *Afrogyrus* Brinck, with 50 known species found mainly in Africa, four in Madagascar and *A. obliquus* Walker in India and Sri Lanka. *Aulonogyrus* s. str. (illustrated, courtesy of Grey) has a strigose labrum whereas this is mostly smooth in *Afrogyrus*.



GUSTAFSON G T 2018. Cenozoic out-of-Africa dispersal shaped diversification of the whirligig beetle genus *Aulonogyrus* (Coleoptera: Gyrinidae: Gyrinini). *Arthropod Systematics & Phylogeny* **76** 295-302.

TROGLOMORPH COPELATUS

The new species is described from a Brazilian cave. It is the second cave-dwelling copelatine diving beetle after *Exocelina abdita* Balke *et al.*, and has the troglomorphic trappings of blindness, narrowness and winglessness, plus long hairs and the elytra being fused. The female genitalia are added to the more normal range of illustrations.

CAETANO D S, DE CASSIA BENÁ D & VANIN S A 2013. *Copelatus cessaima* sp. nov. (Coleoptera: Dytiscidae: Copelatinae): first record of a troglomorphic diving beetle from Brazil. *Zootaxa* **3710** 226-232.

SARDINIAN BEETLES

The following are reported from a mountainous area near Cagliari in the south of Sardinia:- *Haliphus lineatocollis* (Marsham), *Agabus bipustulatus* L.), *A. didymus* (Olivier), *A. nebulosus* (Forster), *Colymbetes fuscus* (L.), “*Meladema coriacea*” (which must be *M. lepidoptera* Bilton & Ribera - see **Latissimus 40** 29), *Dytiscus pisanus* Castelnau, *Stictonectes optatus* (Seidlitz), and *Deronectes moestus* (Fairmaire).



This is from the first volume of *Naturalistica*, produced as part of by *Mediterraneaonline*. The editor says “L’iniziativa è rivolta principalmente a giovani ricercatori, laureandi, dottorandi e a chiunque si voglia cimentare in pubblicazioni dalla valenza scientifica.” Perhaps this will be the first scientific journal where one must offer proof of age?

CILLO D, ANCONA C, DESSI J, MATĚJIČEK J & BAZZATO E 2018. Contributo preliminare all conoscenza degli Hydroadephaga del territorio montano di Dolianova (Sardegna su orientales) (Coleoptera, Hydroadephaga). *Naturalistica* **1** 48-56.

PHILOLACCOLILUS ON THE NEW GUINEA ANVIL

Well, if the authors can have a rather cryptic title then that can be matched here. This is a paper about the diving beetle *Philolaccolilus ameliae* Balke *et al.* This complex ranges across New Guinea with the analysis here indicating that it comprises three or four species. The authors work on the basis of Richard Southwood’s much-cited Habitat Template (originally Templet, a word chosen to emphasise archaism and flexibility). Southwood intended to provide a framework in which to classify “the almost infinite variety of life-history features” in terms of species traits and habitats. The pattern of connectivity between the *Philolaccolilus* species fits overall with the idea of stability provided by running water, but a deeper analysis of two clades shows a greater complexity based on “dispersal across rugged mountains and watersheds of New Guinea up to 430 km apart”. Ruggedness echoes the use of Southwood’s anvil metaphor “I wished to develop the idea that the features of an organism’s life history had been forged by evolution on the anvil of its habitat”. The authors liken the possible evolution of some *Philolaccolilus* in tropical streams to what Ignacio Ribera *et al.* (2011) showed as a way for *Haenydra* to have evolved in European streams.

LAM A, TOUSSAINT E F A, KINDLER C, VAN DAM M H, PANJAITAN R, RODERICK G K & BALKE M 2018. Stream flow alone does not predict population structure of diving beetles across complex tropical landscapes. *Molecular Ecology* doi: 10.1111/mec.14807

RIBERA I, CASTRO A, DÍAZ J A, GARRIDO J, IZQUIERDO A, JÄCH M A & VALLADARES L F 2011. The geography of speciation in narrow-range endemics of the ‘*Haenydra*’ lineage (Coleoptera, Hydraenidae, *Hydraena*). *Journal of Biogeography* **38** 502-516.

SOUTHWOOD T R E 1977. Habitat, the templet for ecological strategies? Presidential address to the British Ecological Society, 5 January 1977. *Journal of Animal Ecology* **46** 337-365 [see also *Current Contents* No. **16**, April 18 1988, Institute for Scientific Information]

TUSCAN ADDITIONS

Ninety-five taxa are discussed, nine of them being considered unlikely in Tuscany - *Helophorus longitarsis* Wollaston, *H. nanus* Sturm, *H. pallidipennis* Mulsant & Wachanru, *Hydrochus nitidicollis* Mulsant, *Laccobius sinuatus* Motschulsky, *L. minutus* (L.), *Paracymus scutellaris* (Rosenhauer), *Cercyon convexiusculus* Stephens, and *C. tristis* (Illiger).

ROCCHI S & TERZANI F 2018. Contributo alla conoscenza dei Coleotteri degli ambienti acquatici della Toscana (Italia Centrale). VI. Aggiornamenti: Sphaeriidae, Helophoridae, Georissidae, Hydrochidae, Spercheidae, Hydrophilidae (Coleoptera). *Onychium* **13** 109-130.

BREATHING UNDER WATER

Siegfried Kehl and Konrad Dettner (2009) (see *Latissimus* 27 37) demonstrated the fine structure of the tracheated setal gills on the elytra of *Deronectes aubei* Mulsant. Under the ordinary microscope these can be recognised by their spoon-shaped setae laying flat on the surface. The current paper compares the gill density between *Deronectes* species. Higher densities were associated with the species living in cold, stable, permanent flowing waters as opposed to those species living in warmer habitats. This makes sense on the basis that warm water species often have to survive in pockets of stagnant still water where surfacing provides the best way of breathing. On the other hand underwater gas exchange is enough to let the cold climate species meet their metabolic needs without risking predation or displacement when surfacing.

KEHL S & DETTNER K 2009. Surviving submerged - setal tracheal gills for gas exchange in adult rheophilic diving beetles. *Journal of Morphology* **270** 1348-1355.

VERBERK W C E P, CALOSI P, SPICER J I, KEHL S & BILTON D T 2018. Does plasticity in thermal tolerance trade off with inherent tolerance? The influence of setal tracheal gills on thermal tolerance and its plasticity in a group of European diving beetles. *Journal of Insect Physiology* **106** 163-171.

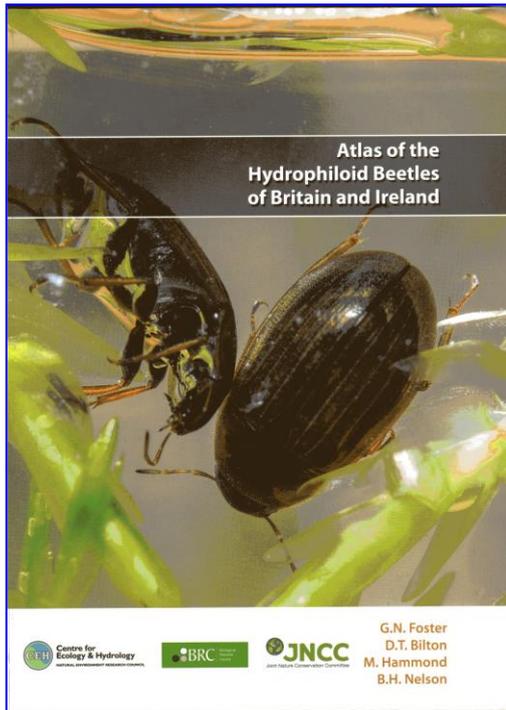
BARBELLION – A SERIOUS MAJOR OR A NEAR MISS?

Wilhelm Nero Pilate Barbellion was the *nom de plume* of Bruce Frederick Cummins (1889-1919), an entomologist working at the Natural History Museum in London. Barbellion was the name of his favourite pastry shop on Gloucester Road. The diaries, dominated by the impact of Multiple Sclerosis, were published soon after his death and have recently been republished in *Penguin Classics* (2017. *The Journal of a Disappointed Man*. ISBN 978-0-241-29769-8). Cummins's other published interest concerned lice, all too rife in the Great War. On 2 July 1915 he recalled spending "the afternoon at the Royal Army Medical College in consultation with the Professor of Hygiene. Amid all the paraphernalia of research, even when discussing a serious problem with a serious Major, I could not take myself seriously." Frank Balfour-Browne's journals are silent around that time, most probably because he was serving in the Sanitary Company of the Royal Army Medical Corps. His autobiography gives him lieutenant status so he was not the "serious Major" but you never know, he may have been around. Cummins/Barbellion could be more serious about nature, describing the "horrificness" of a supposedly bottomless limestone quarry pond...."Everything is absolutely still, air and water are stagnant. A large *Dytiscus* beetle rises to the surface to breathe and every now and then large bubbles of marsh gas come sailing majestically up from the depth and explode quietly into the fetid air."

GERMAN DRAINS

Based on a survey of 124 Brandenburg sites this paper provides a good review of the importance of drainage ditches for water beetles in Germany. Thirteen per cent of the species endangered in Germany were found along with 18% of rare and very rare species. In particular, *Rhantus bistriatus* (Bergsträsser), *Colymbetes striatus* (L.) and *Hydaticus continentalis* Balfour-Browne were found. Predaceous species with reduced flight ability dominated the beetle fauna. Partial redundancy analysis indicated the relative importance of fish abundance, water depth/temperature (inversely related), conductivity and pH, but the authors point out that a contributing factor might not be amongst the variables measured.

ROLKE D, JAENICKE B, PFAENDER J & ROTHE U 2018. Drainage ditches as important habitat for species diversity and rare species of aquatic beetles in agricultural landscapes (Insecta: Coleoptera). *Journal of Limnology* doi:10.4081/JLimnol.2018.1819.



BRITISH & IRISH HYDROPHILOIDEA

📖 FOSTER G N, BILTON D T, HAMMOND M & NELSON B 2018. *Atlas of the Hydrophiloid Beetles of Britain and Ireland*. Wallingford: Biological Records Centre. ISBN 978-1-906698-63-8. £26.99 at NHBS.

Ignore what it says on page 1 – this really is water beetles Atlas 2, but with added terrestrial *Helophorus* and Sphaeridiinae. It is based on about 149,000 records of Hydrophiloidea for 104 species, all of them known for Britain. And including 70 species known from Ireland, 52 from the Isle of Man and 63 from the Channel Isles. Hopefully some readers will derive evocative pleasure from habitat photographs, few of which were taken by expert photographers. Some maps are more complete than others. Those for the terrestrial species benefited from a late surge of records called in by sending a request to beetles-britishisles@yahoo.com. We even got some usable Citizen Science-type records. The opportunity was taken to upgrade Table 1 of Atlas 1, which had

some unfortunate omissions – so the new Table 1 covers both Hydradephaga and Hydrophiloidea. Some issues were ducked. *Hydrobius fuscipes* (L.) is still treated as a complex, because, after a draft was written mapping *H. rottenbergii* Gerhardt and *H. subrotundus* Stephens, it became clear that more genetic analyses were required to establish just how many species there really are. Similarly, there are still problems with the *Megasternum* species-pair, for which individual maps would be misleading at this stage. It is, however, worth pointing out that the first observation in Britain on what must be *H. rottenbergii* is based on specimens taken by the great dipterist, George Verrall, at Lewes in East Sussex, with one possible example found in Bolton Museum by Don Stenhouse.

We don't usually go into this level of detail regarding a book but it must be recorded that Rebecca Farley-Brown, of the Field Studies Council, was saintly in her patience when getting this one into being. Sanctity also surrounds Jonty Denton for latterly admitting that his Milton Lockhart *Cryptopleurum* was a large *minutum* (Fab.) rather than *crenatum* (Kugelann), so *crenatum* has yet to be found in Scotland. Any other mistakes or additions, please contact GNF. Manfred Jäch has already done so, among other things spotting two dates for the last record of *Spercheus emarginatus* in England, 1956 being the right one, not 1954 as stated on p. 8.

VEGETATION AFFECTS BRAZILIAN ELMIDS

The possible impact of riparian vegetation of elm mid populations was assessed in a Brazilian stream complex by comparing plant cover less than 5 metres, 5-15 m, 15-30 m and over 40 m wide on both sides. Larvae of *Hexanchorus* Sharp, *Macrelmis* Motschulsky, *Microcylloepus* Hinton and *Xenelmis* Hinton were associated with narrower strips but there was no other relationship established based on extent of plant cover. Larvae of *Heterelmis* Sharp, *Hexacylloepus* Hinton, *Hexanochorus* and *Phanocerus* Sharp could be linked to the presence of leaf litter. Some genera could also be related to the extent of exposed gravel.

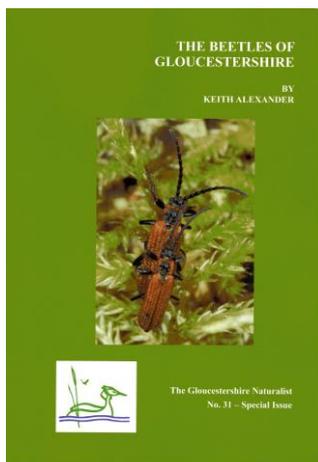
BRAUN B M, PIRES M M, STENERT C, MALTCHIK L & KOTZIAN C B 2018. Effects of riparian vegetation width and substrate type on riffle beetle community structure. *Entomological Science* **21** 66-75.

DYTISCID DIVERSIFICATION NOT RELATED TO BODY SIZE

Dytiscidae are used as a group with over 4,300 species and 50-fold variation in body size to investigate the extent to which diversification is related to a change in body size. In contrast to most animals studied previously, dytiscid body size evolution follows an early-burst model, consistent with an explosion of body sizes during the Early Cretaceous, since when body size ranges in the different branches of the family seem to have remained relatively constant. Ancestral body size is estimated to have been small (ca. 5.5 mm long) with eight subsequent major changes in size, some to smaller and some to larger beetles. Rates of change in body size could not be related to species diversification, disposing of any thought that diversification simply arose through beetles of different sizes exploiting different niches. Nor were there any significant differences in diversification rates between species of running and standing water, with the ancestral habitat being in standing or lentic water (the opposite of what has recently been estimated for dragonflies), and seventeen separate transitions to running water and only two reversions to standing water, endorsing the view that running water species have to be more specialised. It seems true that two main shifts in body size, at the base of the Agabinae and at the split between Cybistrinae, Laccophilinae and Copelatinae, could be linked to a lentic⇒lotic change but there are six others that could not.

DÉSAMORÉ A, LAENEN B, MILLER K B & BERGSTEN J 2018. Early burst in body size evolution is uncoupled from species diversification in diving beetles (Dytiscidae). *Molecular Ecology* **2018** 1-15.

GLOUCESTERSHIRE BEETLES



📖 ALEXANDER K N A 2018. The beetles of Gloucestershire. *The Gloucestershire Naturalist* No. **31**, Special Issue. Gloucester Naturalists' Society. Available from Gloucester Naturalists' Society, NHBS and Pemberley Books for about £25 + postage.

This is a massive update of David Atty's 1983 publication of the beetles of this English county. It includes records for six Gyrinidae, 14 Haliplidae, both the usual *Noterus*, *Hygrobia hermanni* (Fab.), 60 Dytiscidae, 16 Helophoridae, *Georissus crenulatus* (Rossi), three Hydrochidae, 47 Hydrophilidae, 15 Hydraenidae, 14 Scirtidae, 9 Elmidae, 3 each Dryopidae and Heteroceridae, 16 Donaciinae plus many other wetland leaf beetles and weevils. Gloucestershire does not fare well on bagoine weevils, only *Hydronomus alismatis* Marsham being recorded, once in the

gizzard of a blue tit - *Cyanistes caeruleus* (L.) – by Monica Betts! The extensive and detailed lists are alleviated by some colour photographs, but none is of a water beetle. Some coleopterists have visited Gloucestershire rarely, being plagued by a nursery rhyme for many years, an added incentive for acquiring a Chair (please excuse this lapse).

Dr Foster went to Gloucester
In a shower of rain.
He stepped in a puddle
right up to his middle
and never went there again.

BETTS M M 1955. The food of titmice in oak woodland. *Journal of Animal Ecology* **24** 282-323.

DYTISCUS LATISSIMUS IN POLAND

Three records are provided from 2015 in the Dobrzyńskie Lakeland.

STRZELECKI Z & TEMPLIN J 2018. Plywak szerokobrzeżek (*Dytiscus latissimus* Linnaeus, 1758) (Coleoptera: Dytiscidae) na Pojezierzu Dobrzyńskim. *Wiadomości Entomologiczne* **37** 121-122.

MYXOPHAGA PHYLOGENY AND THE *SPHAERIUS* HEAD

This study builds on earlier analyses of Myxophaga, with 98 adult and larval characters, the Lepiceridae being more basal than the Sphaeriusidae (*Sphaerius*), then the Hydrosaphidae (*Hydrosapha* – *Scaphydra* – *Yara* – *Confossa*), and then the Torridincolidae (*Deleva*, *Satonius*, *Ytu*, *Iapir*, *Claudiella*, *Torridincola*, *Incoltorrida*). The detailed musculature of the *Sphaerius* head is given, with reconstruction of the brain sections showing its partial intrusion into the prothorax. The author for correspondence is Rolf Beutel.

YAVORSKAYA M I, ANTON E, JAŁOSYŃSKI P, POLILOV A & BEUTEL R G 2018. Cephalic anatomy of Sphaeriusidae and a morphology-based phylogeny of the suborder Myxophaga (Coleoptera). *Systematic Entomology* doi: 10.1111/syen.12304

DERONECTES TOLEDOI

D. toledo Fery *et al.*, 2001 is endemic to eastern Turkey. This study is mainly concerned with water chemistry but several accompanying dytiscids are identified to species: - *Agabus paludosus* (Fab.), *Ilybius fuliginosus* (Fab.), *Hydroporus thoracicus* Guéorguiev, *Bidessus unistriatus* (Goeze) and *Laccophilus minutus* (L.).

ERMAN Ö K, ÖZEN A & AKYILDIZ G V 2018. A field study on bio-ecology of *Deronectes toledo* (Coleoptera: Dytiscidae) in the Eastern Anatolia Region of Turkey. *Journal of the Entomological Research Society* **20** 109-117.

FERY H, ERMAN Ö K & HOSSEINIE S. 2001. Two new *Deronectes* Sharp, 1882 (Insecta: Coleoptera: Dytiscidae) and notes on other species of the genus. *Annalen des Naturhistorischen Museums in Wien* **103B** 341-351.

THE DEATH OF ECOLOGY?

The first paper is a fairly well balanced discussion of the benefits and problems of conventional biological monitoring versus the use of DNA found in the water, “(e)DNA”. Thirty-three authors from 26 institutions recommend a two-step process, use of barcoding in association with existing biological indexes of water quality and then converting to new indices based entirely on metabarcoding. No need for any more fieldwork. A drone dips into the site and zooms off to deliver the water samples into the machine which extracts, amplifies and analyses eDNA, and presumably a robot writes the report on the basis of which site A survives and site B can be drained. How many of these 33 people will keep their jobs? And how many ponds will survive? And it is not just them of course. There will be no need for taxonomists, for microscopes, for books, for vouchers, for museums. OR, of course, all those redundant scientists can stop worrying about ranking statistics then they might spend more time understanding processes and raise ecology to new heights.

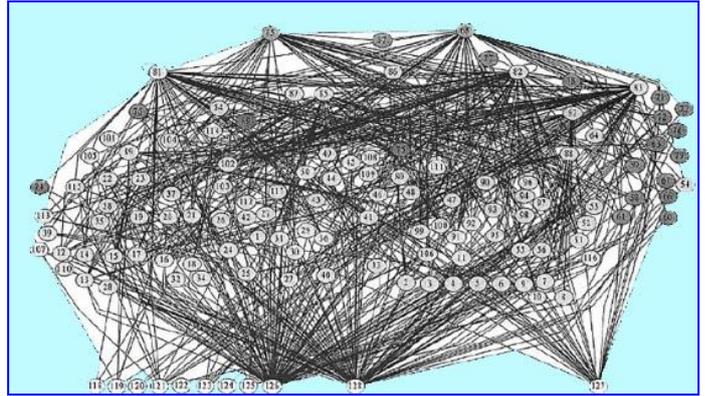
The authors are clearly aware of several of the basic limitations to use of eDNA, e.g. - some organisms being more DNA-leaky than others; the assumption that individual sequences can be grouped into Molecular Operational Taxonomic Units that might be linked to individual species; the best choice of primer for amplification; the huge gaps in our knowledge of DNA sequences associated with some groups. Some of these can be avoided by metabarcoding alone, unfettered by any knowledge of the basic biology of species or their interactions with each other.

PAWLOWSKI J *et al.* 2018. The future of biotic indices in the ecogenomic era: integrating (e)DNA metabarcoding in biological assessment of aquatic ecosystems. *Science of the Total Environment* **837-838** 1295-1310.

de ARAUJO B C, SCHMIDT S, von RINTELEN T, SUTRISNO H, von RINTELEN K, UBaidillah R, HÄUSER C, PEGGIE D, NARAKUSUMO R P & BALKE M 2017. IndoBioSys – DNA barcoding as a tool for the rapid assessment of hyperdiverse insect taxa in Indonesia: a status report. *Treubia* **44** 67-76.

A CASE FOR SMALL WATER BODIES

This paper will certainly get cited, though 22 authors does seem to be a little excessive to put across some fairly obvious ideas about the importance of ponds and headwater streams. Is there really an alternative proposal on offer from 22 lake and river piscophiles? There are some useful mini-reviews here but there are two main problems. Firstly headwater streams and ponds do



not mix, approaches to their conservation being rather different and perhaps demanding separate presentations. Secondly, what is the target audience for “the options for restorative action”? Environmentalists – i.e. preaching to the converted? Policymakers? Farmers? The latter are unlikely to take kindly to the idea that they do not already calibrate fertiliser applicators or that they should “allow grassland field drainage systems to deteriorate”, though most farmers will be more than familiar with most of the other ideas. A farmer might question the supporting chart showing sheep needing access to rivers but not cattle. But the foodweb (above, right) is brilliant!

RILEY W D, POTTER E C E, BIGGS J, COLLINS A L, JARVIE H P, JONES J I, KELLY-QUINN M, ORMEROD S J, SEAR D A, WILBY R L, BROADMEADOW S, BROWN C D, CHANIN P, COPP G H, COWX I G, GROGAN A, HORNBY D D, HUGGETT D, KELLY M G, NAURA M, NEWMAN J R & SIRIWARDENA G M 2018. Small water bodies in Great Britain and Ireland: ecosystem function, human-generated degradation, and options for restorative action. *Science of the Total Environment* **645** 1598-1616.

STREAM MACROINVERTEBRATE STUDY

Invertebrate responses, mainly the tendency to drift, were studied with alterations in siltation, nitrogen and phosphate using 3.5 litre mesocosm chambers. *Elmis aenea* (Müller) and *Limnius volckmari* (Panzer), 4.7% and 3.4% respectively of the total 17,000 animals sampled. However, they did not show the strong negative response to siltation evident in mayflies, the caddis *Micropterna* and EPT species (Ephemeroptera, Plecoptera and Trichoptera) overall.

DAVIS S J, Ó HUALLACHÁIN D, MELLANDER P-E, KELLY A-M, MATTHAEI C D, PIGGOTT J J & KELLY-QUINN M 2018. Multiple-stressor effects of sediment, phosphorus and nitrogen on stream macroinvertebrate communities. *Science of the Total Environment* **637-638** 577-587.

BARCELONNETTE BEETLES

The water beetle fauna is listed from ponds and streams 1,125 to 1,543 metres above sea level near Barcelonnette. The list is limited, 27 species, but is interesting for the three species of *Dryops* - *similaris* Bollow, *striatopunctatus* (Heer) and *subincanus* (Kuwert) – also *Agabus lapponicus* (Thomson) and *Augyles sericans* (Kiesenwetter). The aedeagophores of *D. similaris* and *D. griseus* (Erichson) are compared. Pierre notes *D. similaris* was mistakenly recorded from the Paris region as *D. griseus* (Queney, 2016 – see **Latissimus** 39 4). By way of balance GNF once took a male *griseus* in the Alpes-de-Haute-Provence (Lac des Eissaupres at 2,300 m asl on 15 July 2008).

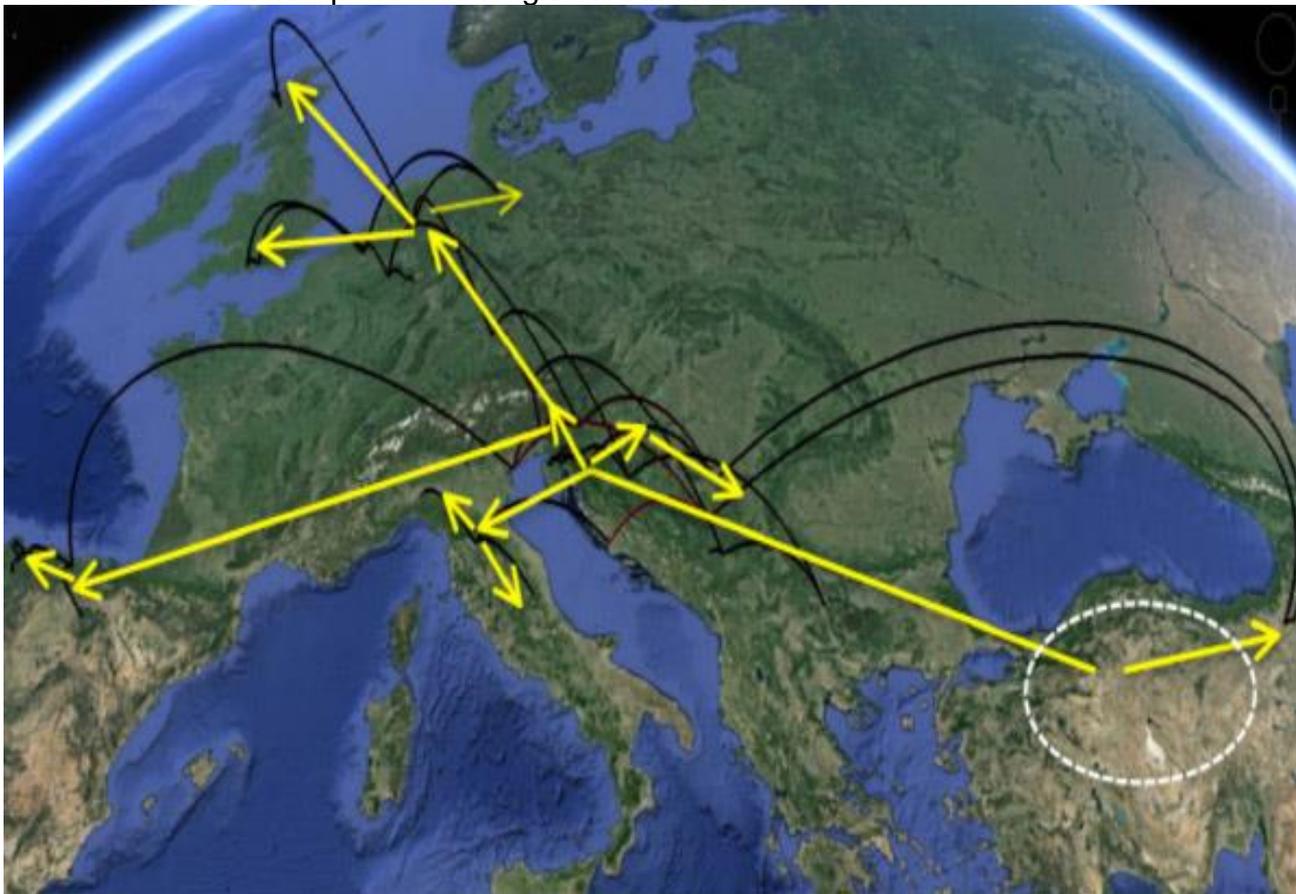
QUENEY P 2018. Coléoptères aquatiques du massif du Mercantour: données complémentaires pour Barcelonnette (Alpes-de-Haute-Provence, France). *Le Coléopteriste* **21** 10-14.

DERONECTES ORIGINS

An analysis of four mitochondrial and two nuclear genes was used to discern the origins of four lineages of *Deronectes*. All species originated in southern Mediterranean peninsulas and were estimated to be of Pleistocene origin. In different glacial cycles it appears that populations finding themselves on the edge of newly deglaciated areas took advantage of improving ecological conditions to invade central and northern Europe. But when such favourable windows closed populations became isolated with closely related but distinct species locked together in the Anatolian, Balkan and Iberian peninsulas. The example figured here, thanks to *PeerJ*, shows the history of the *D. latus* group, with *D. latus* (Stephens) itself getting to Scotland, *D. angusi* Fery & Brancucci to Spain, *D. angelini* Fery & Brancucci to Italy and *D. toledo* Fery, Erman & Hosseinie to Turkey.

Fifty-six of the 297 specimens used were tested for the presence of *Wolbachia*, the maternally transmitted parasitic bacteria that can moderate the patterns of mitochondrial DNA variability. *Wolbachia* was common, especially in the *D. aubei* group: mitochondrial and nuclear DNA sequences gave conflicting suggestions in this group but without a clearcut link to infection.

The author for correspondence is Ignacio Ribera.



GARCÍA-VÁZQUEZ D & RIBERA I 2018. The origin of widespread species in a poor dispersing lineage (diving beetle genus *Deronectes*). *PeerJ* doi 10.7717/peerl.2514

AUGYLES CRINITUS IN POLAND

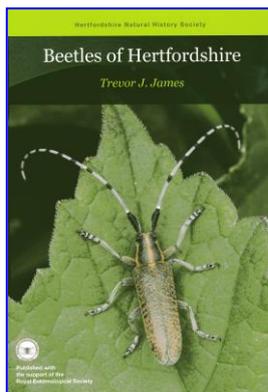
Augyles crinitus is newly recorded for Poland in a stream in the Słonne Mountains.

TWARDY D 2018. Pierwsze stwierdzenie *Augyles* (*Augyles*) *crinitus* (Kiesenwetter, 1850) (Coleoptera: Heteroceridae) w Polsce. *Wiadomości Entomologiczne* **37** 115-119.

PEATLAND RESTORATION IN ENGLAND

This study was based on attempts to restore peat pool assemblages in the North and South Pennines in England, comparing the faunas of artificial and natural pools. The thinness of the comments on water beetles and the fact that GNF was thanked in the acknowledgements initiated a check on what had been sent in. Samain Ramchunder had a few beetles from running water but Jeannie Beadle generated records for about 24 common species associated with peaty habitats, rather more than the 11 taxa mentioned in the paper as secondary to the 28 chironomid taxa. Chironomids so much dominated the study that the authors did well to mention anything else. This underlines the difference between addressing conservation issues and trying to understand community processes, unless of course there is an organisation dedicated to asserting chironomid rights. Jeannie's beetle list includes eleven species of *Hydroporus* but has few of the larger species, the only ones recorded being *Agabus bipustulatus* (L.), *A. congener* (Thunberg) and *A. guttatus* (Paykull). These Pennine peatlands have been degraded not just by drainage but also by nearly two centuries of exposure to human, in particular industrial, activity. Another indicator that the "undisturbed" sites are nothing like that is the near absence of Odonata, the normally ubiquitous *Pyrrhosoma nymphula* L. being the only species found, and that at just one site. It is too early to judge the value of restoration.

BROWN L E, RAMCHUNDER S J, BEADLE J M & HOLDEN J 2016. Macroinvertebrate community assembly in pools created during peatland restoration. *Science of the Total Environment* **569-570** 361-372.



HERTFORDSHIRE BEETLES

📖 JAMES T J 2018. *Beetles of Hertfordshire*. Hertfordshire Natural History Society. Available from the Society – the pre-publication price was £25 + £10 p&p (www.hnhs.org/publications). A corrected pagination of the Contents page is available from the Society.

Hertfordshire is the main county immediately north of London. It was one of the early hunting grounds of James Francis Stephens, whose image (see Wikipedia) looms darkly over the introduction to recording in Chapter 2. His records might have constituted the first county list for Hertfordshire but water beetles would hardly have featured in it. About a third of the water beetle records are from the late Dave

Leeming (see *Latissimus* **40** 26). Comparison with Gloucestershire (see p 17) indicates a draw: four Gyrinidae, 16 Haliplidae, both *Noterus*, *Hygrobia hermanni* (Fab.), 71 Dytiscidae, 13 Helophoridae, *Hydrochus angustatus* Germar, 54 Hydrophilidae, 12 Hydraenidae, 14 Scirtidae, 5 each for Elmidae and Dryopidae, 3 Heteroceridae, 13 Donaciinae plus many other wetland leaf beetles and weevils. Doubtful records are clearly identified. This is a nicely produced hardback with green and yellow head and tail bands plus a ribbon bookmark: it might even attract coffee table status (but with better content!) on the basis of the lavish scale and size, at 30 x 21 cm needing to sit on the outside shelf. All good stuff, what with Yorkshire water beetles done recently (see *Latissimus* **39** 31) that leaves only another 37 English counties to go.

NEW TURKISH DERONECTES

D. taron brings the known *Deronectes* species list to 59. It belongs to the *D. longipes* subgroup of the *D. parvicollis* species group. It was found in a shallow stream in the east of Turkey in the Muş province.

AYKUT M, TAŞAR G E & FERY H 2018. *Deronectes taron* sp. n. from the eastern Anatolian region of Turkey (Coleoptera, Dytiscidae, Hydroporinae). *Zootaxa* **4422** (3) 403-410.

ILYBIUS NEGLECTUS: TO BE, OR NOT TO BE... BELGIAN**Kevin Scheers**

Ilybius neglectus (Erichson, 1837) was first cited as Belgian by Preudhomme De Borre (1890) in his list of beetles of the provinces of East- and West-Flanders, based on a specimen collected at Bois de la Douve near Ploegsteert by (M. Lethierry). Van Dorsselaer (1957) repeated this record and added a new record from Kalmthout, based on a specimen he collected himself on 27.IV.1947. Dopagne (1995) excluded the old record by De Borre (1890), of which there is no specimen in any of the known collections, and only cites the record from Van Dorsselaer (1957). During the revision of the collections present in the Royal Belgian Institute of Natural Sciences (RBINS), I relocated the specimen caught by Van Dorsselaer in 1947. To my surprise the specimen, a male which was already dissected, turned out to be *Ilybius montanus* (Stephens, 1828). In my own collection, however, there is one specimen of *I. neglectus*, which I collected myself in Marais d'Harchies on 22.III.2015. The species can stay on the Belgian species list, as it has since 1890, but should be removed from the Flanders list and instead be added to the species list of the Walloon region. However, the presence of *I. neglectus* in Flanders is not unlikely and populations exist in the Netherlands close to the border with the provinces of Antwerp and Limburg.

DOPAGNE C 1995. Hygrobiidae, Noteridae et Dytiscidae. pp. 29-37 in: G. Coulon (ed.) *Enumeratio Coleopterorum Belgicae 1. Société royale belge d'Entomologie*.

PREUDHOMME De BORRE A 1890. *Matériaux pour la faune entomologique des Flandres. Coléoptères 3ème centurie. G. Mayolez. 40 pp.*

Van DORSSELAER R 1957. *Catalogue des Coléoptères de Belgique. Fasc. III. Société royale belge d'Entomologie 36 pp.*

Received July 2018

TWO-STRIPES FOR THE MILITARY

A photograph of *Graptodytes bilineatus* (Sturm), taken by Robert Aquilina, turned up in an article on the Fingringhoe Firing Ranges in North Essex. It seems that these were part of samples of eighteen species taken by Iain Perkins in May 2017. There are already records for the two-striped diving beetle in the same hectad (TM01) but it is great to see the Military taking an interest. The reporting officer for the article is Major (Retd) Udaibahadur Gurung, MBE.

GURUNG U 2017 Essex Fingringhoe Ranges. *Sanctuary* 46 97.

ALBUFERA, VALENCIA

New information is given on the water beetles and bugs of Albufera de Valencia Natural Park. Between 2004 and 2008 45 beetle taxa were added to the known fauna, including five heterocerid species – *Augyles maritimus* (Guérin-Méneville), *A. marmota* (Kiesenwetter), *Heterocerus aragonicus* Kiesenwetter, *H. flexuosus* Stephens and *H. fossor* Kiesenwetter.

MILLÁN A & RUEDA J 2018. Colepteros y Hemípteros acuáticos de las Malladas de la Devesa y del Racó de l'Olla (Parque Natural de l'Albufera, Valencia, España). *Boletín de la Sociedad Entomológica Aragonesa* 61 141-148.

JIM THOMAS 1938-2018

Jim lived in Carnforth, Lancashire, and will be mainly known as a terrestrial coleopterist producing local checklists published by the now defunct Raven Society. His last work was probably the book on the sandhills of South Lancashire (see **Latissimus** 39 14), but he will be remembered aquatically for the discovery of a specimen of *Cybister lateralimarginalis* (De Geer) (see **Latissimus** 26 23). Jim was 80 in March 2018. Thanks to his wife Maureen and to Don Stenhouse for providing the information.

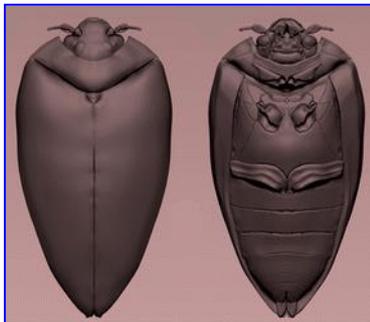
YTU + 5 – NAMING OF PARTS

Five new species of this the most speciose torridincolid genus are described from Brazil. The names *thanatos*, *hypnos*, *hermes*, *nyx* and *coeus* are commendably short and erudite, being based on Greek mythological entities, though they cannot of course beat the ultimate in puns, *Ytu brutus* Spangler. The authors use a formula to describe the arrangement of elytral ridges and striae, which may or may not catch on. The first term, before the /, relates to striae and the second to carinae. The term for striae is subdivided into three parts separated by +. The first part represents the number of complete discal striae followed by **d** for discal. Two striae may be so close together that they almost suppress the interval between them, this being represented by a hyphen, -, within the parentheses and after the **d**. The second part of the stria term gives the number of shorter accessory striae followed by **a** for accessory and, within parentheses, the complete atria with which the accessory stria is linked. The position of **a**, before or after the number of the stria, shows where the accessory stria is linked to the complete striae, either medially or laterally, respectively. The third part of the stria term gives the number of sublateral striae followed by **sl** for sublateral. The carina term has two parts, the first presenting the number of discal carinae followed by **d** and, in parentheses, the intervals that they occupy, whilst the second part presents the number of sublateral carinae, followed by **sl** and, in parentheses, the intervals that they occupy. Thus *Y. hypnos* is 12**d**(I-II, III-IV, V-VI, VII-VIII, XI-XII) + 2**a**(IX**a**, **a**X) + 1**sl** / 5**d**(III, V, VII, IX, XI) + 1**sl**(XIII) and *Y. coeus* is 8**d** + 2**a**(IV**a**, VI**a**) + 1**sl** / 0**d** + 0**sl**. “For today we have the naming of parts”.

LANZELLOTTI B H & FERREIRA-Jr N 2018. Five new species of *Ytu* Reichardt (Coleoptera: Myxophaga: Torridincolidae) and new records from Brazil. *Zootaxa* **4402** 508-524.

REED H 1942. Naming of Parts, from *Lessons of the War*.

PERMIAN WHIRLIGIGS



Tunguskagyru planus is described from an Upper Permian deposit in the Krasnoyarsk region of Russia. It thus appears that a major splitting event began about 250 million years ago, well before the Permian-Triassic mass extinction. It has the eyes divided into four just as in modern Gyrinidae, and has many other gyrid features. The mesoventrite is smaller than in modern gyrids and the changes in this structure are traced though the Mesozoic. The authors provide 3D reconstructions (here) and an artistic reconstruction (our front cover).

YAN E V, BEUTEL R G & LAWRENCE J F 2018. Whirling in the late Permian: ancestral Gyrinidae show early radiation of beetles before Permian-Triassic mass extinction. *BMC: Evolutionary Biology* **18**:33 10 pp.

MORE ON OCHTHEBIUS BILTONI

O. biltoni Jäch & Delgado was described from Cefalù (see *Latissimus* **41** 12). A new site was found away from all those restaurants on the calcareous platform between Mazara del Vallo and Sciacca, 2 m above sea level and in smaller, shallower rockpools than those occupied by *O. quadricollis* Mulsant and *O. subinteger* Mulsant & Rey. The authors identify disposal of wastes by tourists as one of the anthropogenic pressures. This is rather reminiscent of the idea that tourists spend their airplane baggage money on bringing old fridges on holiday.

SABATELLI S, MANCINI E & AUDISIO P 2018. Taxonomical and bionomical notes on the Sicilian endemic water beetle *Ochthebius (Cobalius) biltoni* (Coleoptera: Hydraenidae). *Fragmenta entomologica* **50** 75-76.

SOUTHERN ITALY LIST

The Molise region of Italy is reported as having 192 taxa of water beetles. Among the more interesting are *Hydroporus apenninus* Pederzani & Rocchi, *H. sanfilippo* Ghidini, *Hydrochus grandicollis* Kiesenwetter (previously recorded in the area as *nitidicollis* Mulsant), *Hydraena alia* d'Orchymont, *H. imperatrix* Kniž, *Ochthebius corcyreus* Jäch, *O. virgula* Ferro, *Hydrocyphon ovatus* Nyholm, *Donacia aquatica* (L.), and four species of *Bagous*. Eleven species have not been recorded since the 1970s or earlier.

ROCCHI S, TERZANI F, CECCOLINI F, PIZZOCARO L & CIANFERONI F 2018. Coleotterofauna acquatica e semiacquatica del Molise (Italia meridionale). *Quaderno di Studi e Notizie di Storia Naturale della Romagna* **47** 139-196.

POLISH ELMIDAE – a paper from 2011 was accidentally reviewed here!

Seventeen elmids species are known with certainty from Poland with new locality data provided here for thirteen of them. A surprisingly large number have been reported erroneously (*Dupophilus brevis* Mulsant & Rey, *Elmis rioloides* (Kuwert), *Limnichus intermedius* Fairmaire, *L. muelleri* (Erichson), *Riolus nitens* (Müller), *R. sodalis* (Erichson), *Stenelmis consobrina* Dufour, and *S. puberula* Reitter). *Esolus pygmaeus* (Müller), *Oulimnius troglodytes* (Gyllenhal) and *Stenelmis canaliculata* (Gyllenhal) all need to have their presence verified. *Esolus parallelepipedus* (Müller) and *Riolus cupreus* (Müller) are recorded with confidence for the first time.

PRZEWOŹNY M, BUCZYŃSKY P, GREŃ C, RUTA R & TOŃCZYK G 2011. New localities of Elmidae (Coleoptera: Byrrhoidea), with a revised checklist of species occurring in Poland. *Polish Journal of Entomology* **80** 365-390.

HYDROCYPHON IN AYRSHIRE, SCOTLAND

With beetles seemingly only mentioned as twelve families, three of them misspelt, unless Sciaridae were misplaced, then this otherwise interesting paper has little place here. But then those must have been Scirtidae as there is a reference in the text to *Hydrocyphon deflexicollis* (Müller) in the Water of Tig, Ayrshire in 2008.

BOON P J, WILLBY N, GILVEAR D & PRYCE D 2016. The regional hyporheic fauna of gravel-bed rivers and environmental controls on its distribution. *Fundamental and Applied Limnology* **187** 223-239.

KASHUBIAN NATIONAL PARK, POLAND

This park in northern Poland was surveyed in 2014-2016. The area has large sandy lakes and peatbogs as many small water bodies. Eight-two species were recorded including *Gyrinus natator* L., *Colymbetes paykulli* Erichson, *C. striatus* (L.), *Rhantus incognitus* Scholz, *Graphoderus bilineatus* (De Geer), *Dytiscus lapponicus* Gyllenhal, *Hydroporus figuratus* (Gyllenhal), *H. morio* Aubé, *Helophorus nanus* Sturm, and *Limnebius parvulus* (Herbst).

GRZEGORCZYK T & PRZEWOŹNY 2018. Materials to knowledge of aquatic beetles (Coleoptera: Hydroadephaga, Hydrophilidea, Staphylinoidea, Byrrhoidea) of the Kashubian Landscape Park. *Acta entomologica silesiana* **26** 1-13.

DANUBE DIET

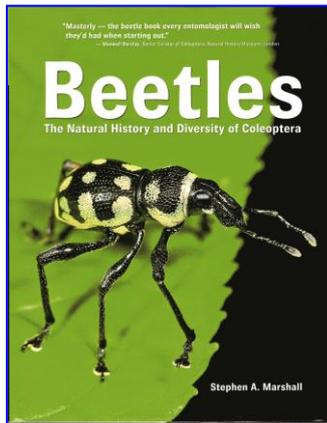
The entrails of 802 fish from the Danube at Belgrade were examined for what the fish had been eating. *Riolus cupreus* (Müller) was the only beetle species named.

DJIKANOVIĆ, ČANAK ATLAGIĆ J, ZORIĆ M, ILIĆ M & SKORIĆ S 2018. The diet of 22 fish species in the Belgrade sector of the Danube River. *Book of Abstracts, 3rd Central European Symposium for aquatic macroinvertebrate research, 8-13 July 2018 Łódź, Poland*, p. 99/

TEPUI BEETLES

The tepui are the table-top mountains famous for inspiring Sir Arthur Conan Doyle's "The Lost World". Raraima is the best known and had a small, black hairy bidessine described from it by Spangler (1981), *Tepuidessus breweri*. *T. grulai* is described from the Acopán Tepui 140 km away. It is named after one of its collectors, Daniel Grul'a. The new species is also small, black and hairy but differs from *breweri* in appearance, having a near cordate pronotum. It would run to *Papuadessus* Balke, but is placed in *Tepuidessus* for convenience.

KODADA J, HENDRICH L & BALKE M 2018. *Tepuidessus grulai* sp. nov. from Acopán Tepui in Venezuela (Coleoptera: Dytiscidae: Hydroporinae: Bidessini). *Zootaxa* **4434** 561-572.



REINFORCE YOUR COFFEE TABLE

📖 S A MARSHALL 2018. *Beetles. The Natural History and Diversity of Coleoptera*. Ontario: Firefly Books Ltd. ISBN 978-0-228-10069-0. About £68 in the UK, \$95 in North America, €50-60 Europe.

This book starts badly with the admission by the author of a dipterological leaning and the initial sentence, "Beetles, first and foremost, are flying animals", something to which Dorothy Jackson for example (see pp. 10-13) might have taken exception. This is a remarkable example of the craft of producing giant books - sixteen chapters, 784 pages, 3.4 kg - even the publisher has shied away from trying to count up all the figures. The book is in

two parts, the first for life histories, habits and habitats and the second for diversity. Chapter 2 concerns Freshwater and Marine Beetles, with an attempt to characterise all ten of the lineages that have gone into freshwater. The examples chosen are mostly Nearctic and Neotropical, with some South African and Chinese larvae, and *Rhantus suturalis* (Macleay) because it is in Australia, not in Europe. There are some examples of "oddball" members of mostly terrestrial families, e.g. the nocturnally active carabid *Cicindis horni* Bruch, that swims out in Argentine lakes to feed on fairy shrimps, but these are not supported by illustrations. The latter start with gyrid and scirtid larvae for which it seems there are the same identification problems as in the Palaearctic. In fact named species are in short supply but these are made up for by an abundance of information on traits. There is a paddle in the sea with the most unusual example being the *Nacerda melanura* (L.), an oedemerid known as the Wharf Borer, which mines pilings in salt water. The Diversity section has a straightforward guide to adaphagan water beetles, referring beforehand to the enigmatic Myxophaga, and including the "Mysterious Meruidae". Plates on pages 232-245 include quite a few repeats from illustrations used to support the main text, and are mainly live shots, plus some stereoscans and carded beetles. The account of Scirtoidea and the Staphyliniformia begins with a fabulous shot of an Australian *Berosus* and has a good range of life photographs including *Helophorus grandis* Illiger as Holarctic on the basis of its introduction from Europe over 100 years ago. This coverage provides a particularly good opportunity to see some of the more hydrophilid genera, as does the treatment of Byrrhoidea for groups like the Eulichadidae in south-east Asian forest streams. Some of the photographs are recycled again in jargon-free keys to families in the last main section. The index is a little odd in that genera are listed alphabetically under each family or its subfamilies, whereas a more simply alphabetical approach overall might have been more effective for those just dipping in to this very dippable-in book.

MOROCCAN AQUATIC POLYPHAGA

This survey covers new and old records for the basin of the Moulouya River and elsewhere in the east of Morocco. The checklist runs to 91 species in seven families. *Ochthebius quadrifossulatus* Walth and *Pomatinus substriatus* (Müller) are new for the basin and the following are new for the east as a whole:- *Helophorus occidentalis* Angus, *H. discrepans* Rey, *H. flavipes* Fab., *Hydrochus flavipennis* Küster, *Anacaena globulus*, *Enochrus fuscipennis* (Thomson), *Hydrobius fuscipes* (L.) (ah, but which one?), *Limnebius furcatus* Baudi, *Ochthebius aeneus* Stephens and *O. merinidicus* Ferro. The list includes 12 species of *Helophorus* and 24 *Ochthebius*.

MABROUKI Y, TAYBI A F, CHAVANON G, BERRAHOU A & MILLÁN A 2018. Distribution of aquatic beetles from the east of Morocco. *Arxius de Miscel.lània Zoològica* **16** 185-211.

TREE PITFALL TRAPS

Pitfall traps strapped 2-3 metres above the ground on tree trunks in North Devon, England caught a good range of beetles including *Prionocyphon serricornis* (Müller).

LUFF M L & TOWNS M 2018. Trunk pitfall traps for catching arboreal beetles. *Coleopterist* **27** 67-69.

CERCYON CASTANEIPENNIS IN ENGLAND

Not a water beetle but another new one chalked up by the Gatekeeper in the south-east. Even if the recent Atlas has not encouraged coleopterists to check this paper will make sure that everyone looks out for a brownish *C. obsoletus* (Gyllenhal) close to their nearest horse or cow.

CARR R 2018. *Cercyon castaneipennis* Vorst, 2009 (Hydrophilidae) new to Britain. *Coleopterist* **27** 80-82.

Latissimus is the newsletter of the Balfour~Browne Club.

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ARCTIC CIRCLE 21-23 JUNE 2019

The Abisko site is 2 degrees north of the Arctic Circle in Lapland, Norrbotten County, Sweden and is dominated by the large lake Torne Träsk at 341 m ASL, with plenty of adjacent mountains reaching 1500 m, and lots of bogs, lakes, pools and streams.



The insects As most members should know, Dytiscidae buck the trend in being species-rich not just in equatorial rainforest but also on the Arctic tundra. Of the more northern species we may expect

Gyrinus opacus Sahlberg
Agabus adpressus Aubé
Agabus arcticus (Paykull)
Agabus confinis (Gyllenhal)
Agabus discolor (Harris)
Agabus elongatus (Gyllenhal)
Agabus lapponicus (Thomson)
Agabus serricornis (Paykull)
Agabus setulosus (Sahlberg)
Agabus thomsoni (Sahlberg)
Agabus zetterstedti Thomson
Colymbetes dolabratus (Paykull)
Dytiscus lapponicus Gyllenhal
Boreonectes multilineatus (Falkenström)
Hydrocolus sahlbergi Nilsson
Hydroporus acutangulus Sturm
Hydroporus brevis Sahlberg

Hydroporus fuscipennis Schaum
Hydroporus geniculatus (Thomson)
Hydroporus lapponum (Gyllenhal)
Hygrotus marklini (Gyllenhal)
Hygrotus novemlineatus (Stephens)
Ilybius crassus Thomson
Ilybius opacus (Aubé)
Ilybius picipes (Kirby)
Ilybius vittiger (Gyllenhal)
Oreodytes alpinus (Paykull)
Helophorus glacialis Villa & Villa
Helophorus lapponicus Thomson
Helophorus pallidus Gebler
Helophorus sibiricus Motschulsky
Helophorus strandi Angus
Hydrobius arcticus Kuwert

We may also expect not only to search for insects but insects to search for us. The choice of 20-23 June should coincide with the window between snow melt and the emergence of adult mosquitoes. But come prepared – loose but tightly weaved clothing not in blue, your favourite repellent at full strength, perhaps a veil.

Travel Abisko is 1½ hours drive from the nearest airport, Kiruna, and car hire for a long weekend would be about 225€/£200. Make sure you check with others to see if savings can be made by sharing vehicles. There is also a train between Kiruna and Abisko, and most of the daily transports will be on foot. You can get flight connections to Kiruna by Norwegian Air Shuttle and SAS from Stockholm Arlanda, Oslo and possibly Amsterdam (Transavia), and prices do not seem too bad.

Accommodation Twenty beds have been booked at the Abisko Research Station. Prices are around 50€ per night. There are mainly double rooms. Obviously you need Anders to know what you require, preferably more in advance than usual!

Food and drink The research station does not supply food but there is a Mountain Lodge nearby and there are also kitchens on site that can be used for our own catering, purchasing groceries from a local shop. Anders is bringing beer and wine. We'll probably organise a Club Dinner somehow on Saturday 22 June.

Meetings We welcome a few short lectures for a science session. They do not have to be about the Arctic but any with the word "Arctic" in the title might get preference. Anders has, for example, volunteered "Arctic Madagascar" by Johannes Bergsten.

Contact is Anders Nilsson – [andersnnilsson258 /at/ gmail.com](mailto:andersnnilsson258/at/gmail.com)

POLCIRKELN 21-23 JUNI 2019

Webbplatsen är 2 grader norr om polcirkeln i Lappland, Norrbottens län, och domineras av den stora sjön Torne Träsk, med massor av berg, mossar, pooler och strömmar.

Insekterna Som de flesta medlemmar borde vet Dytiscidae trenden att vara artrik inte bara i ekvatorial regnskog utan även på den arktiska tundran. Av de mer norra arterna kan vi förvänta oss de som listas ovan. Vi kan också förvänta oss att inte bara leta efter insekter utan insekter för att söka efter oss. Vi hoppas att valet den 20-23 juni sammanfaller med fönstret mellan snösmältning och framväxten av vuxna myggor. Men kom beredd - lös men tätt vävda kläder inte i blått, din favoritavstötande i full styrka, kanske en slöja.

Resor Abisko är 1½ timmars bilresa från närmaste flygplats, Kiruna, och biluthyrning för en långhelg skulle vara ca 225 € / 200 £. Se till att du checkar med andra för att se om besparingar kan göras genom att dela fordon. Du kan få flygförbindelser till Kiruna av Norwegian Air Shuttle och SAS från Stockholm Arlanda, Oslo och eventuellt Amsterdam (Transavia), och priserna verkar inte så illa.

Boende Tjugo sängar har bokats på Abisko forskningsstation. Priserna är ca 50 € per natt. Det finns en blandning av enkel- och dubbelrum. Självklart behöver du Anders att veta vad du behöver, föredra i förväg än vanligt!

Mat och dryck Forskningsstationen tillhandahåller inte mat, men det finns en Mountain Lodge i närheten och det finns också kök på plats som kan användas för egen mat och inköp av mat från en lokal butik. Anders tar med öl och vin. Vi arrangerar förmodligen ett klubbmiddag på lördag den 22 juni.

Möten Vi välkomnar några korta föreläsningar för vetenskapligt möte. De behöver inte vara om Arktis, men någon med ordet "Arktis" i titeln kan få företräde. Anders har till exempel frivilligt "Arktisk Madagaskar" av Johannes Bergsten.

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