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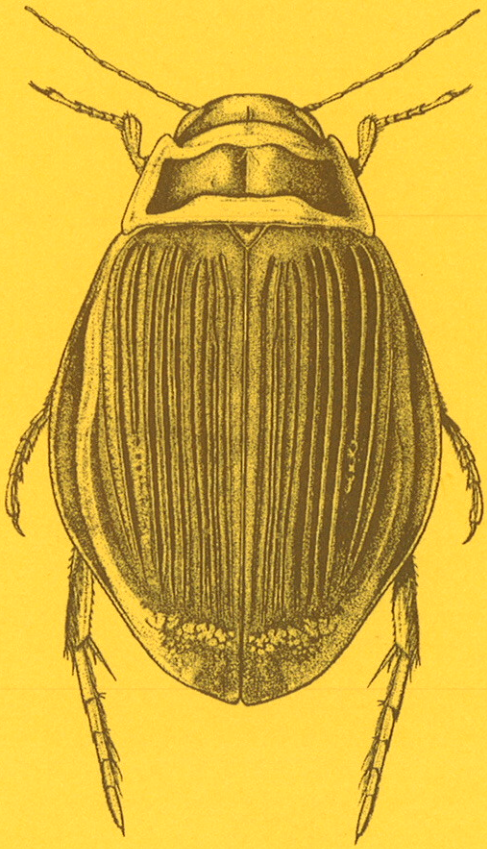
LATISSIMUS

NEWSLETTER OF THE BALFOUR-BROWNE CLUB



Number Thirteen **May 2001**

FLIGHT RECORDS FOR YORKSHIRE WATER BEETLES by Martin Hammond

The capacity for flight has long been an important concern in British water beetle studies, especially in the context of species with highly localised or 'relict' distributions (e.g. Jackson 1952). Inference of flightlessness from examination of the wing musculature has proven to be problematic due to the process of autolysis (Bilton 1994) and a number of purportedly flightless species have been shown to be capable of flight at least on occasion (e.g. Holmen 1987b; Kirby & Foster 1991).

Whilst it may be difficult to prove flightlessness, the ability to fly has been demonstrated for many species. In this study, varying numbers of live water beetles of 136 species have been tested in the laboratory to try to induce flight. Generally the results do no more than confirm existing data but records for some less common species presented here may be of interest.

Methodology

Live collections of water beetles were made from a range of habitats and locations in the Yorkshire region between March 1998 and October 2000. Beetles were placed in tubes amongst damp moss or similar material at the time of collection and tested on same day.

The mixed species collections were placed in a white plastic tray in the laboratory under a warm spot lamp and observed for around 30 minutes. Specimens which succeeded in taking off and clearing the tray were recaptured and killed to confirm identification. Where necessary, critical species have been checked by referees. Note was also made of species which showed preparatory behaviour such as taxiing, raising the elytra and pumping the abdomen but did not achieve flight. Some specimens also made short hopping flights but were not recorded as flying unless they achieved a clear take-off.

This is an admittedly crude methodology. Flight is known to be stimulated in some water beetles by a combination of factors such as temperature, time of day and wind, none of which was controlled for. Riffle beetles and whirligigs expired rapidly during testing. Some species probably have specialised means of take-off (e.g. launching from the water surface or when perched on vegetation), so that flight might not be induced in these artificial conditions. Some beetles would have been severely stressed or damaged by collection and transit. Nonetheless, flight was positively recorded in 78 species.

Results

Flight was recorded on at least one occasion among the species listed in Table 1. Ubiquitous species which are well-known fliers were tested only in small numbers; the number of individuals of other species varied according to availability.

Several additional species did not achieve a clear take-off but showed obvious flight preparation behaviour and very probably fly in the wild:

- *Gyrinus urinator* - an abortive flight attempt made by 1 of 2 tested.
- *Copelatus haemorrhoidalis* - although no positive flight record, 5 of 15 showed some preparatory behaviour with one making an abortive flight attempt.
- *Agabus didymus* - 2 of 6 raised their elytra and pumped their abdomens but did not achieve flight.
- *Agabus paludosus* - 3 of 11 showed preparatory behaviour or made abortive attempts at flight.
- *Hydrochus elongatus* - 1 of 2 females made repeated, unsuccessful attempts to take off.
- *Coelostoma orbiculare* - of 8 tested, 2 'taxied' with raised elytra and unfurled wings but did not take off.
- One female *Laccobius* similar to *L. ytenensis* flew but its identity remain uncertain (*L. ytenensis* flies readily – ed.)

Discussion

Results from this type of study do not necessarily provide an accurate picture of how water beetles disperse in natural conditions. For example, around 130 individuals of 12 species of Haliplidae were tested, of which only *H. lineatocollis* flew. This seems to concur with Holmen (1987a) but many *Haliplus* occur in new ponds where they are unlikely to have arrived except by flight. Some very widespread species of Dytiscidae which occur commonly in isolated ponds, such as *Hyphydrus ovatus* and *Hygrotus inaequalis*, also proved unwilling to fly in these tests.

The Gyrinidae are considered to be flying species with the exception of *Orectochilus villosus* (Holmen 1987a). Proof of flight in *Gyrinus distinctus* and *G. paykulli* concurs with the increasingly frequent occurrence of these uncommon species in reed-fringed borrow pits, clay workings and fishing lakes in the southern Vale of York and neighbouring areas.

ADDRESSES OF AUTHORS The addresses of authors of articles and reviewed works (except publication details), are given at the end of this issue of *Latissimus*, together with a selection of e-mail numbers. The address for other correspondence is: Professor G.N. Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK.

Table 1. Flight records for water beetles. Species in which flight was recorded for more than one individual are marked *, whilst species in which several individuals flew are marked **.

SPECIES	NOTES	SPECIES	NOTES
Gyrinus distinctus *	2 of 6 tested made brief flights	*Acilius canaliculatus*	1 male tested in field and flew strongly
G. marinus *		*A. sulcatus**	2 of 3 flew
G. paykulli *	2 of 5 tested flew	*Dytiscus marginalis*	1 tested and flew; also observed flying in field
G. substriatus **		*Helophorus aequalis* *	2 tested, both flew
Haliplus lineatocollis **	9 of 18 flew	*H. brevipalpis* **	
Laccophilus minutus **	5 of 11 flew	*H. dorsalis* **	5 of 7 flew readily
Hydroglyphus pusillus	1 of 5 flew	*H. flavipes* **	27 of 33 flew, most very readily
Hygrotus confluens **	4 tested, all flew	*H. fulgidicollis**	4 of ca 25 flew
H. impressopunctatus **	4 of 10 flew	*H. grandis* **	8 tested and all flew
Hydroporus gyllenhali **	5 flight records of ca 25 tested	*H. griseus* *	2 flying males identified amongst mixed small
H. incognitus	1 of 6 flew	*H. longitarsis*	1 male identified amongst several small *Helophorus* that flew
H. longulus	1 of 2 flew	*H. minutus* **	very ready flier in laboratory and field
H. memnonius **	7 of 17 flew	*H. nanus* *	3 of 16 flew well; 5 others showed preparatory behaviour
H. neglectus *	3 of 18 flew	*H. obscurus*	only 1 male of 32 specimens flew
H. nigrita	1 of 8 flew	*Cercyon marinus* **	6 of 9 flew
H. palustris *		*C. tristis*	1 brief flight and 3 attempts from ca 20 specimens
H. planus **	very active flier; most flew readily	*Hydrobius fuscipes* *	
H. pubescens **	13 of 18 flew	*Paracymus scutellaris*	1 tested and flew
H. striola	1 of 8 flew	*Anacaena lutescens* **	10 of ca. 15 flew
H. tessellatus *	2 tested, both flew	*Laccobius bipunctatus* **	20 of ca. 35 flew
H. tristis *	2 of ca. 30 tested flew	*L. colon*	1 of 10 flew
H. umbrosus	around 40 tested with a single flight record	*L. minutus* **	9 of 15 flew
Suphrodytes dorsalis	1 of 20 flew	*L. sinuatus* **	14 of 16 flew; a very active flier
Stictonectes lepidus	1 of 2 flew	*L. striatulus* *	4 tested - all flew
Agabus bipustulatus **		*Enochrus affinis* **	11 of 16 tested flew
A. chalconatus **	5 of 7 flew	*E. bicolor* **	12 tested; most flew readily
A. melanarius **	5 of 11 flew	*E. coarctatus* **	7 of 10 flew
A. montanus *	3 of 7 flew	*E. melanocephalus*	1 of 2 flew briefly
*A. nebulosus**		*E. ochropterus* *	5 of 21 flew (some only briefly)
A. sturmii	1 of 12 flew successfully; 3 others made attempts	*E. testaceus*	1 of 9 flew
Ilybius ater		*Helochares lividus* **	5 of 7 flew
I. fuliginosus		*H. punctatus* **	4 of 6 flew
I. guttiger	1 of 3 took off briefly	*Cymbiodyta marginella* *	4 of 8 flew
I. subaeneus *	3 of 8 flew with 3 others showing preparatory behaviour	*Ochthebius dilatatus* **	several flight records
Rhantus exsoletus *	2 tested, both flew	*O. marinus* *	3 of 6 flew
R. grapii *	2 of 8 flew	*O. minimus* **	very ready flier
R. suturalis	only one tested; flew almost immediately, and strongly	*Hydraena riparia*	1 of 10 identified males flew
*R. suturellus**	2 tested, both flew	*Limnebius truncatellus* *	2 of 15 flew
Colymbetes fuscus *	2 tested both flew; also observed flying in field	*Dryops luridus*	1 of 8 flew

Flight records for diving beetles add little to the existing literature. Foster (2000) gives the flight capacity of *Rhantus grapii* as unknown; flight was confirmed in this study and concurs with the species' regular occurrence in man-made habitats. The relatively large samples of *Hydroporus tristis* and *H. umbrosus* suggested that these species perhaps fly only occasionally. However, both occur in very isolated artificial habitat patches such as mossy dew ponds on the Yorkshire Wolds which indicates active colonising ability.

Amongst the Helophoridae, *Helophorus obscurus* appears to be a reluctant flier but is nonetheless a common colonist of ephemeral grassy pools. By contrast, *H. nanus* seems to be quite an active flier although its distribution, at least in lowland Yorkshire, is 'semi-relict' - that is, it occurs mainly in semi-natural fens or swamps and the richly-vegetated margins of ancient ponds. It is, however, found on occasion in isolated ponds of relatively recent origin. The flight record for *H. longitarsis* is expected for a pioneer species, and this specimen (from a complex of clay pools on the outskirts of York) apparently represents the most northerly British record to date (G.N. Foster, pers comm.) *H. dorsalis* is evidently an active flier, an attribute shared by other specialist water beetles found in water-filled vehicle ruts on forest rides like *Agabus melanarius* - good dispersal ability is a prerequisite for the opportunist colonisation of such small, ephemeral habitat patches.

A similar propensity for active flight was noted in saltmarsh species such as *Enochrus bicolor* and *Ochthebius marinus* - insects which must also migrate to survive within a patchy and unstable environment.

References

BILTON, D.T. 1994. The flight apparatus and flying ability of *Hydroporus glabriusculus* (Coleoptera, Dytiscidae), with a brief review of structural modifications in flightless beetles. *Entomologisk Tidskrift* **115** 23-32.

FOSTER, G.N. 2000. *A review of the scarce and threatened Coleoptera of Great Britain, 3: Aquatic Coleoptera.* Joint Nature Conservation Committee: Peterborough. Accessed at www.jncc.gov.uk/species.

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HOLMEN, M. 1987b. *Agabus labiatus* flying. *Balfour-Browne Club Newsletter* **41** 12.

JACKSON, D.J. 1952. Observations on the capacity for flight of water beetles. *Proceedings of the Royal Entomological Society of London (A)* **27** 57-70.

KIRBY, P. & FOSTER, G.N. 1991. *Agabus uliginosus* takes off. *Balfour-Browne Club Newsletter* **49** 8-9.

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BERINGIAN BEETLES – THE FOSSIL RECORD

Beringia, lying between Siberia and Alaska, has always proved of interest biogeographically, not only because it provided a land bridge between two continents during much of the Pleistocene, but also because it provided a glacial refugium. Fossil beetles assemblages of east and west Beringia are found to be remarkably different. Eastern Beringia has tundra and riparian beetles almost entirely lacking from the western assemblages. In ground beetle terms this amount to *Pterostichus* and *Bembidion* in the east and *Elaphrus* in the west. The authors make no great play of the fact that there is no overlap at all between the water beetle faunas of the two areas. About ten species are recorded from north-east Siberia, including two *Colymbetes* and three *Gyrinus* spp. More than twice as many species are recorded from Eastern Beringia, but with no *Gyrinus*, and many more palpicorns and small diving beetles.

ELIAS, S.A., BERMAN, D. & ALFIMOV, A. 2001. Late Pleistocene beetle faunas of Beringia: where east met west. *Journal of Biogeography* **27** 1349-1363.

NORTHERN SPANISH BEETLES

This study is based on 39 sites in Burgos, La Rioja and Soria. Endemism in this area is important, 23% of the 103 taxa recorded being Iberian endemics. Half of the Hydraenidae are considered endemic to Iberia. *Hydroporus brancuccii* Fery is recorded from Spain for the first time, in La Rioja. *H. constantini* Hernando & Fresneda was found at the same site, Collado de San Lorenzo. *H. morio* Aubé is recorded from the Lagunas de Neila, Burgos at 1900 m.

VALLADARES, L.F., DIAZ, J.A. & GARRIDO, J. 2000. Coleópteros acuáticos del Sistema Ibérico septentrional (Coleoptera: Haliplidae, Gyrinidae, Dytiscidae, Hydraenidae, Helophoridae, Hydrochidae, Hydrophilidae). *Boln. Asoc. Esp. Ent.* **24** (3-4) 59-84.

CYCLOLIMNICHUS

This Afrotropical genus is recognised as comprising four species, the genotype *C. presignis* Delève, and three newly described species. They are associated with the margins of shaded streams.

HERNANDO, C. & RIBERA, I. 2000. Taxonomic revision of the Afrotropical genus *Cyclolimnichus* Delève (Coleoptera: Limnichidae). *African Entomology* **8** (2) 211-216.

TWO RECENT RECORDS FOR *HELOPHORUS LONGITARSIS* IN SOUTH-EAST ENGLAND

by Peter J. Hodge

In the late 1980's a new pond, known locally as the Adonis Dew Pond, was constructed a short distance east of the highest point on Malling Hill near Lewes, East Sussex at an altitude of about 145 metres, on Sussex Wildlife Trust's Malling Down nature reserve (TQ430111). The main purpose of the pond was to feed two cattle troughs with water so that the grassland could be grazed without the need to transport water by vehicle. From the very beginning the pond was prone to fluctuating water levels and eventually it failed to hold water because of a combination of faulty joins in the neoprene liner and damage to one of the outlet pipes. In 1993 the pond was rebuilt, using a different type of clay, from Hamsey brick works, to cover a heavier duty polythene liner.

Following the reconstruction of the Adonis Dew Pond, it was sampled for aquatic insects on several occasions in October 1994 and April 1995. In October 1994 a series of pale, brightly coloured *Helophorus* of the '*minutus* group' proved, on dissection of males, to be *H. longitarsis*, a species with only one previous record from Sussex. Another rare water beetle, *Ochthebius pusillus*, occurred in quite large numbers during October 1994. Table 1 below shows the species of aquatic Coleoptera recorded from this pond.

Table 1. A comparison between the water beetle communities at two ponds in East Sussex supporting *Helophorus longitarsis* (Hydrophilidae)

Species	Adonis Dew Pond Malling Down Sussex Wildlife Trust Reserve TQ430111		Rotherfield Millennium Green TQ558297
	October1994	April 1995	September 2000
DYTISCIDAE			
Agabus bipustulatus (L.)			+
Agabus nebulosus (Forster)	+		
Hydroglyphus pusillus (Fab.)			+
Hydroporus discretus Fairmaire			+
Hygrotus confluens (Fab.)	+	+	+
Hygrotus nigrolineatus (von Steven)			+
HYDRAENIDAE			
Ochthebius pusillus Stephens	+		
HYDROPHILIDAE			
Anacaena lutescens (Stephens)			+
Berosus affinis Brullé	+	+	
Helochares lividus (Forster)	+	+	+
Helophorus brevipalpis Bedel	+		+
Helophorus grandis Illiger	+		+
Helophorus griseus Herbst		+	
Helophorus longitarsis Wollaston	+	+	+
Helophorus minutus Fab.	+	+	
Helophorus obscurus Mulsant	+		
Laccobius bipunctatus (Fab.)	+		
Laccobius minutus (L.)			+

The pond was revisited in April 1995, by which time all that remained of the pond's aquatic habitat was a shallow pool in the centre of a saucer-shaped depression. *H. longitarsis* was still present in good numbers but on dissection of a sample of males collected, a small proportion proved in fact to be *H. griseus*. This species also appears to be very scarce in Sussex, although from a national viewpoint it is less rare than *H. longitarsis*. Shortly after the last survey visit on 23rd April 1995 the pond became completely dry and it has not held more than a few centimetres. of water since that time. In June 1995 a plan to restore the pond to an aquatic habitat was planned, but this work has not yet been carried out.

During a survey of insects at a new nature reserve: Rotherfield Millennium Green, Rotherfield, East Sussex, a clay-bottomed pond was constructed at TQ558297 in June 2000. This was sampled for aquatic insects on 10th September 2000. The habitat was immediately recognised as potentially suitable for *H. longitarsis* and it was not very surprising when two males and two females were found struggling on the surface of the water after vigorously disturbing the edge of the pond. In addition, a single example of another pioneer species, *Hygrotus nigrolineatus*, was captured. This is a recent

colonist in Britain, recorded in Sussex only from a gravel-pit at Rye Harbour (TQ9318). Table 1 below shows the species of aquatic Coleoptera recorded from this pond.

Apart from the fact that the sites where *H. longitarsis* occurred were both recently created clay-bottomed ponds containing little or no aquatic vegetation, there are few common ecological features which link the two habitats. Malling Hill is a very exposed chalk grassland site, admittedly not very far from the levels marshes at Lewes in the Ouse valley where *H. longitarsis* is very likely to be present, whereas the field at Rotherfield is in an area of mixed sand and clay soils. It is therefore tempting to suggest that *H. longitarsis* might be attracted to any new clay-bottomed pond that lies within the restricted geographical area from which it has been recorded in south-east England.

It is thought that *H. longitarsis* is most likely to be a pioneer species that may not be capable of withstanding competition from other aquatic invertebrates. The pond at Malling Down dried up whilst the species was still present and therefore *H. longitarsis* had no chance of surviving, but the pond at Rotherfield is set to become a more permanent aquatic habitat and therefore a project to monitor the population should be possible.

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NEPTOSTERNUS IN INDIA AND THE PHILIPPINES

Neptosternus is a laccophiline genus of over 80 species associated with streams in primary rainforests. *N. hydaticoides* (Régimbart) was the only species known from the Philippines; two new species are described, *cebuensis* and *montalbanensis*. The Indian checklist now comprises 12 species, including the newly described *annettae* and *leyi*.

HENDRICH, L. & BALKE, M. 2000. Two new species of Indian diving beetles of the genus *Neptosternus* Sharp 1882 (Coleoptera: Dytiscidae). *Linzer biol. Beitr.* 32 (2) 1285-1290.

HENDRICH, L. & BALKE, M. 2000. The genus *Neptosternus* Sharp 1882 in the Philippines: taxonomy and biogeography (Coleoptera: Dytiscidae). *Linzer biol. Beitr.* 32 (2) 1291-1299.

SRI LANKAN HYDOPHILIDAE

One of the difficulties of working with insect surveys is persuading non-entomologists that it takes a long time to get all the material accurately identified. But 1962 may be pushing our luck. Lund University is well known for its ability to set up expeditions. This one to what was then called Ceylon is still producing useful results. Franz Hebauer lists over 80 hydrophilid species and describes *Cercyon pilosellus*, *Coelostoma bibliense* and *Dactylosternum lanipes*.

HEBAUER, F. 2000. Results of the Lund University Ceylon Expedition 1962, Hydrophilidae, with an updated Sri Lanka check list. (Coleoptera: Hydrophilidae). *Acta Coleopterologica* 16 3-13.

MOCCAS PARK LIST

Moccas Park is an old deer park in Herefordshire. A large list of beetles has been assembled for it, unfortunately unstitching several corrections that could easily have been ascertained from the national recording scheme. *Agabus montanus* is still referred to by the incorrect name *melanocornis*. The true *Gyrinus natator* has not been recorded from this area. The true *Helophorus aquaticus* is not known from Britain. *Enochrus bicolor*, a saltmarsh species, surely requires some comment, and the record is rejected for recording purposes until voucher material can be seen. The records for *Dryops anglicanus* and *striatellus* have at least in the latter case been recognised as errors, the species involved being *D. auriculatus*, which is strikingly common at Moccas. Additions to the list are *Haliplus fulvus*, *Hydroporus umbrosus*, *Ilybius fuliginosus*, and *Dryops ernesti*. The easily rectified errors are a pity because the list of wetland beetles, if one includes weevils, reed beetles and so on, is almost doubled. It certainly emphasises the need for more work at this site, an outpost for many species, particularly *Graphoderus cinereus* and *Helochares obscurus*.

WELCH, R.C. & COOTER, J. 2000. A check list of the Coleoptera. In: Harding, P.T. & Wall. (eds) *Moccas: an English deer park*. 305-316. Peterborough, English Nature.

ALBACETE LAGOONS

This well illustrated account reveals the importance of the southern Spanish lakes. Of the 102 beetle species found, the most unexpected species is probably *Hydaticus seminiger* (De Geer). Also of interest are *Hydrochus ibericus* Valladares, Díaz-Pazos & Delgado and *Ochthebius irenae* Ribera & Millán.

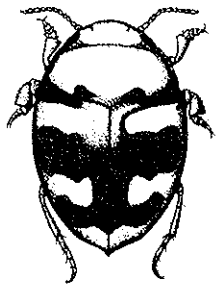
MILLÁN, A., MORENO, J.L. & VELASCO, J. 2001. Estudio faunístico y ecológico de los coleópteros y heterópteros acuáticos de las Lagunas de Albacete (Alboraj, Los Patos, Ojos de Villaverde, Ontalafia y Pétrola). *Revista de Estudios Albacetenses* 1 (1) 43-94.

NEARCTIC SHARP

🕮 LARSON, D.J., ALARIE, Y. & ROUGHLEY, R.E. 2000. *Predaceous Diving Beetles (Coleoptera: Dytiscidae) of the Nearctic Region, with emphasis on the fauna of Canada and Alaska.* ISBN 0 660 17967 9, National Research Council of Canada, Ottawa. 982 pp. Enquiries to Monograph Orders, NRC Research Press, M-55, Ottawa, Ottawa, Canada K1A 0R6. Cost is $64.95 US except for Canadian customers who should pay $64.95 CAN + 7% GST. E-mail research.journals@nrc.ca and Website www.monographs.nrc.ca

This major work covers beetles in the seven dytiscid subfamilies occurring in Canada and the USA. Adults and, if known, the larvae of the 51 genera are keyed, with work in detail on the 276 species known from Canada and Alaska.

Hydrovatus cuspidatus (Melsheimer)



New taxa are described: the subfamily Hydrotrupinae for *Hydrotrupes* Sharp; the genus *Hydrocolus*, with genotype *Hydroporus paugus* Fall for members of the *Hydroporus oblitus* group; five new Mexican *Agabus*, plus one from New Jersey; *Hydrocolus oblitoides* from Arkansas; *H. rupinus* from Georgia; *H. aurora* and *H. boraeorum* from the Northwest Territories; *H. gossei* from Newfoundland; *H. klamathensis* from Oregon; *H. zackii* from Nevada; *Sanfilippodytes bertae* from Alberta and *S. setifer* from California. The *Hydroporus vilis* group and *Hydroporus corvallis* Fall are transferred to *Sanfilippodytes*. The authorities for new names are variously Larson and Roughley or Roughley and Larson. Many new synonyms are proposed and lectotypes designated, with neotypes for *Hydroporus larsoni* Nilsson and *H. niger* Say.

In 1895 H.F. Wickham, discussing Canadian beetles, noted that "the Dytiscidae do not offer the diversity of form, colour and sculpture presented by many of the families of terrestrial beetles, hence the selection of easily seen, though superficial, points of which groups might be set apart has not been found practicable, and it has been considered wise to use in the main the structural differences proved useful by such workers as Drs. Sharp and Leconte..." This states the problem of getting dytiscid beetles identified rather well, but I wonder whether we can possibly move one a little from Wickham's day? Tom Huxley had visited Prince Edward Island and Newfoundland in 1999, and given me about a dozen dytiscid species to identify. The lazy approach starts, not on page one of the key, but with flicking through the book trying to find near-fits in the figures and discarding possibilities if they seem to be based on something not found east of the Rockies. On this basis, this book helped me rather well in that I feel much more confident about some identifications of Tom's beetles than I did before. The quality of most of the drawings is quite excellent, with fine detail of genitalia being depicted effectively.

What I would have liked in addition was a starter pack, perhaps a pictorial key or a series of paintings of representatives of each genus. There are 24 photographs of larvae, and these surely give newcomers to the group the fix that they need. Could we not have some photos of adults as well? The other item missing, something in which these authors have excelled in the past, is the provision of stereoscanning photographs, particularly good for showing microsculpture. Presumably these were ruled out on the grounds of cost.

This treatment covers Holarctic species so it is nice to see old friends described in a different context. A few may persist with aliases. *Oreodytes laevis* (Kirby) is retained as a Nearctic species on the basis that its metacoxae project more than in *O. alpinus* (Paykull. But it is now far more likely that the only species likely to be newly recognised as Holarctic will be those yet to be discovered in Siberia. The boot is now firmly on the other foot, in that any material thought new in the Palaearctic will have to be checked out against this Nearctic treatment.

Dave Larson, Yves Alarie and Rob Roughley have produced a new Sharp 1882.

HYDROPORUS IN AUSTRIA

Hydroporus gyllenhalii Schiödte and *H. morio* Aubé are noted from Niederösterreich, the latter being new for Austria.

JÄCH, M.A. & KOMAREK, A. 2000. Bemerkenswerte Käferfunde aus Österreich (IX). (Coleoptera: Micromalthidae et Dytiscidae). *Koleopterologische Rundschau* **70** 223-224.

MEGAGRAPHYDRUS HANSEN

Four new species are described to be added to the five known when the genus was created.

HEBAUER, F. 2000. The genus *Megagraphydrus* Hansen, 1999, with description of new species (Coleoptera: Hydrophilidae). *Acta Coleopterologica* **16** 14-22.

WATER BEETLES OF AN URBAN BALANCING LAGOON by Martin Hammond

Balancing lagoons are water bodies engineered to store surface run-off from new areas of building development, in order to reduce fluctuations in discharge to streams. Although hundreds of such lagoons are created in Britain each year, little attention has been paid to their nature conservation potential. This is perhaps not surprising: water quality is often poor and these structures are usually designed with little thought of providing wildlife habitat. Balancing lagoons are often stone- or concrete-lined with steep sides and may be subject to severe fluctuations in water level.

A small balancing lagoon on an industrial estate in the City of York was visited on six occasions between October 1998 and October 1999 to assess its water beetle fauna. The stone-lined pond had been constructed about ten years previously and contained shallow water with extensive stands of reedmace (*Typha latifolia*). The margins supported extensive carpets of *Calliergon cuspidatum* moss and jointed rush (*Juncus articulatus*). Water samples indicated a pH of 7.4 and conductivity of about 570 µS. Although pollutant levels were not analysed, water quality was manifestly poor for much of the survey period with foul-smelling 'sewage fungus' carpeting the bed of the lagoon.

Table 1. Species list for a balancing lagoon in York. * - Nationally Scarce B species

Haliplidae	*Hydroporus planus*	*Helophorus obscurus*
*Haliplus heydeni**	*Hydroporus pubescens*	Hydrophilidae
Haliplus immaculatus	*Hydroporus tessellatus*	*Cercyon marinus*
Haliplus lineatocollis	*Stictotarsus duodecimpustulatus*	*Hydrobius fuscipes*
Haliplus lineolatus	*Copelatus haemorrhoidalis*	*Anacaena limbata*
Haliplus ruficollis	*Agabus bipustulatus*	*Anacaena lutescens*
Haliplus wehnckei	*Agabus montanus*	*Laccobius bipunctatus*
Hygrobiidae	*Agabus nebulosus*	*Laccobius sinuatus**
Hygrobia hermanni	*Agabus paludosus*	*Enochrus affinis**
Noteridae	*Agabus sturmii*	*Enochrus melanocephalus**
Noterus clavicornis	*Ilybius ater*	*Enochrus ochropterus**
Dytiscidae	*Ilybius fuliginosus*	*Enochrus testaceus*
Laccophilus minutus	*Colymbetes fuscus*	*Helochares lividus*
*Hydroglyphus pusillus**	*Acilius sulcatus*	*Helochares punctatus**
Hygrotus impressopunctatus	*Dytiscus marginalis*	*Cymbiodyta marginella*
Hygrotus inaequalis	Gyrinidae	Hydraenidae
Hydroporus angustatus	*Gyrinus substriatus*	*Ochthebius minimus*
Hydroporus erythrocephalus	Helophoridae	*Hydraena riparia*
Hydroporus gyllenhalii	*Helophorus grandis*	
Hydroporus palustris	*Helophorus minutus*	

The water beetle fauna nonetheless proved to be remarkably rich with 50 species recorded, seven of which are listed as Nationally Scarce in Britain (Foster 2000). This assemblage included many ubiquitous species and some more localised ones which are nonetheless characteristic of man-made ponds, such as *Hygrobia hermanni, Hydroglyphus pusillus, Rhantus suturalis* and *Laccobius sinuatus*.

The most important feature of the pond for water beetles was the fringing carpet of *Calliergon*, which supported a fauna characteristic of mossy pools and mires. This included the nationally scarce *Helochares punctatus*, *Enochrus affinis* and *E. ochropterus*, all of which appeared to be well-established.

The site is about seven kilometres from Strensall Common, a large remnant of lowland wet heath which very probably provided colonists of several species. Vagrant individuals of *E. affinis*, for example, have been found on a number of occasions in atypical habitats within a 13 km radius of Strensall Common, although this appears to be the only site at which the species has become established.

Although Foster (2000) suggests that *E. affinis* is dependent on *Sphagnum* bogs, its presence at this site shows that it is not obligately acidophilous and is capable of colonising *Calliergon* stands in base-rich waters within its dispersal range.

Interestingly, both *H. lividus* and *H. punctatus* were represented by breeding populations with females of both species found bearing egg cocoons. In Yorkshire, *H. punctatus* is by no means restricted to peaty or acidic water bodies and occurs quite widely in eutrophic ponds. However, it is usually associated with dense marginal fen vegetation whilst *H. lividus* is more typical of open or grassy vegetation.

Ironically, this lagoon is due to be filled in as part of a commercial redevelopment because the local authority decided that a man-made pond would not be worthy of retention on conservation grounds. It

is clear that suitably designed balancing lagoons have the potential to support an interesting wetland insect fauna, especially if extensive mossy margins can be created.

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WICKEN FEN CHECKLIST

FRIDAY, L. & HARLEY, B. 2000. *Checklist of the Flora and Fauna of Wicken Fen.* ISBN 0 946589 61 5 £12.50 soft back from Harley Books, Martins, Great Horkesley, Colchester, Essex CO6 4AH, England – in UK, add £3.75 p & p and use FREEPOST for your order. You can contact Harley Books on harley@keme.co.uk.

Wicken Fen is the oldest nature reserve in Britain, and must have been among the haunts of Charles Darwin when he collected beetles. This checklist follows the Five Kingdoms approach. The compilers note that there was some disagreement among experts about the order in which to present species. In the absence of an index, an alphabetic approach might have achieved a bigger vote. Having prepared one inventory as the first act of science, the second is usually to do some counting! I was disappointed that this had not been done for me, and daunted at the size of the task. Suffice it that this is represents one of the best traditions of Wicken Fen, a periodic, scientifically accurate, review. Laurie challenges me to find the "typo" among the water beetle entries, and I seem to have failed that task too.

INDIAN OCEAN LIMNICHID BEETLE

Hyphalus was described from the Great Barrier Reef. The single male, collected on the Aldabra Atoll in 1968, and now the type of *H. crowsoni,* was originally identified by the late Professor Crowson as a limnichid before this strange genus was first recognised. This brings the known list to seven, this first Indian Ocean species, the original Australian species, four in New Zealand, and one in Japan.

HERNANDO, C. & RIBERA, I. 2000. The first species of the intertidal genus *Hyphalus* Britton from the Indian Ocean (Coleoptera: Limnichidae: Hyphalinae). *Ann. Soc. Entomol. Fr.* **36** (3) 239-243.

NEW GREEK *HYDRAENA*

Hydraena arachthi is named after the Arachthos River, not the drink. It is closely related to the Turkish *H. cappadocica* Jäch. It resembles species in the *H. pulchella* and *H. rufipes* groups.

FERRO, G. & JÄCH, M.A. 2000. *Hydraena* (s. str.) *arachthi* sp. nov. from Greece (Coleoptera: Hydraenidae). *Entomological Problems* **31** (1) 95-96.

MURCIAN RIVER ADEPHAGA

The review of this paper was delayed because reprints were not available until recently. Multivariate analysis of the habitats of 64 species of Adephaga in the Rio Segura catchment demonstrated that the most important variables were altitude, mineralization of the water and the abundance of riparian vegetation. The study also revealed a very strong gradient from the headwaters to the estuary. Four species-groups could be defined:- those typical of headwaters; species in the main plain of the river; less mineralised water bodies in the low reaches; highly mineralised waters in the low reach.

MILLÁN, A., VELASCO, J., SUÁREZ, M.L., VIDAL-ABARCA, M.R. & RAMÍREZ-DÍAZ, L. 1996. Distribucion espacial de los Adephaga acuáticos (Coleoptera) en la cuenca del Río Segura (SE de la Península Ibérica). *Limnetica* **12** (2) 13-29.

NEW BALEARIC *OCHTHEBIUS*

O. pedroi and *O. javieri* are described from Mallorca and Menorca respectively, as Balearic endemics in the *O. metallescens* group.

JÄCH, M.A. 2000. Revision of the Palearctic species of the genus *Ochthebius* Leach XVIII. Description of two new species from the Balearic Islands, Spain (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* **70** 65-67.

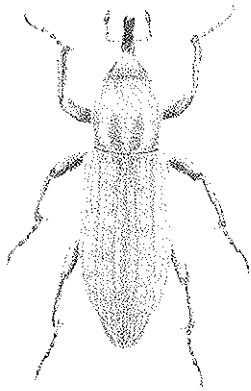
HYGROTUS IS A *HYDROPORUS*!

David Sharp was the first to throw doubt on his own placement of the Japanese *Hygrotus discedens* in *Coelambus*, subsequently included in *Hygrotus*. *Hydroporus tokui* Satô is redescribed and compared with this new member of its group. Unfortunately the name *discedens* is not available following the shift of genus, and the species is renamed *Hygrotus hygrotoides*.

FERY, H. 2000. *Coelambus discedens* Sharp 1882 is the second member of the *Hydroporus tokui*-group! (Coleoptera, Dytiscidae). *Linzer biol. Beitr.* **32** (2) 1247-1256.

A REVIEW OF GERMAN *BAGOUS* AND THE CASE FOR THEIR INCLUSION IN THE EU HABITATS DIRECTIVE

This is groundbreaking stuff! This review is primarily concerned with making the case for inclusion of the Bagoinae, almost as a whole in the Habitats Directive's Annex II along with *Dytiscus latissimus* and *Graphoderus bilineatus*. Eleven species are confined to Europe and nine extend only as far as the Near East and North Africa, while six have a wider, Palaearctic distribution. All species are considerable to be vulnerable in at least one Bundesland. Several species haven't been found for more than 50 years. Interaction with host plants, including larval development and secondary plant metabolites, is considered the key factor in the niche selection of *Bagous* species. The main reasons for threat in Bagoinae are their high degree of ecological and trophic specialisation, their low dispersal power, and their sensitivity to pollution. Some species occur only in mesotrophic or eutrophic lakes and ponds with dense vegetation, and others are confined to rivers, to periodically flooded meadows, bogs and saline habitats; one species, *B. diglyptus* Boheman, is restricted to dry grassland with *Saxifraga granulata*.



Four species, *B. binodulus* (Herbst), *B. elegans* (Fab.), *B. frivaldszkyi* Tournier (right) and *B. majzlani* (Kodada, Holecova & Behne), meet the admission criteria for inclusion in the list of vulnerable species on the basis that their habitats are not fully protected. A case may need to be made for the inclusion of a further four species.

Thanks go to Lars Hendrich for drawing attention to this interesting paper, which requires careful translation to make full value of it.

SPRICK, P. 2000. Eignung einer Insektengruppe für die Fauna-Flora-Habitat-Richtlinie der EU (92/43/EWG, 21.Mai 1992) am Beispiel der Rüsselkäfer-Unterfamilie Bagoinae (Col., Curculionidae). *Insekta, Berlin* 6 98-114.

***DYTISCUS LATISSIMUS* AND *GRAPHODERUS BILINEATUS* IN GERMANY**

This review covers the biology of both species and what is known of their distribution in Germany, with special emphasis on eastern Germany. *D. latissimus* is known from 12 ten km squares since 1960, scattered mainly around the periphery of Germany. *G. bilineatus* is known from 14 squares, mainly in the north and east, since 1960. The problems associated with monitoring programmes are discussed.

HENDRICH, L. & BALKE, M. 2000. Verbreitung, Habitatbindung, Gefährdung und mögliche Schutzmaßnhamen der FFH-Arten *Dytiscus latissimus* Linnaeus, 1758 (Der Breitrand) und *Graphoderus bilineatus* (De Geer, 1774) in Deutschland (Coleoptera: Dytiscidae). *Insekta, Berlin* 6 61-97.

RED LIST AND CHECKLIST FOR BRANDENBURG

These lists for the Bundesland of Brandenburg are accompanied by some great colour photographs. The checklist is based on a review of literature back to 1909. Of the 236 species listed, 19 are believed to be extinct in the region and 76 are considered to be endangered to some degree. The percentage of extinct or endangered species is higher in the Hydradephaga and the Dryopidae than in the Hydrophiloidea.

BRAASCH, D., HENDRICH, L. & BALKE, M. 2000. Rote Liste und Artenliste der Wasserkäfer des Landes Brandenburg (Coleoptera: Hydradephaga, Hydrophiloidea part., Dryopidae part. und Hydraenidae). *Naturschutz und Landschaftspflege in Brandenburg* 9 (3) 3-35.

***LIMNICHUS PYGMAEUS* IN WALES**

Amongst the mainly terrestrial species recorded from Wales is this seldom-recorded beetle.

PAVETT, P.M. & LEVEY, B. 2001. New and noteworthy Coleoptera from Wales. *The Coleopterist* 9 (3) 149-154.

ARGENTINE HALIPLID LARVA

Previously the only Neotropical larva described was that of *Haliplus valdiviensis* Moroni. The front legs of *H. subseriatus* has spiny bulbous extensions.

VONDEL, B.J. van. 2001. Description of the third instar of *Haliplus subseriatus* (Coleoptera: Haliplidae). *Entomologische Berichte, Amsterdam* 61 (1) 14-16.

HYDROCHUS ALJIBENSIS CASTRO & DELGADO ET *H. TARIQI* RIBERA, HERNANDO & AGUILERA, DEUX NOUVEAUX *HYDROCHIDAE* POUR LE NORD DE L'AFRIQUE

par Nard Bennas & Carmen E. Sáinz-Cantero

Abstract Two recently described species of *Hydrochus, H. aljibensis* and *H. tariqi* have been found in Morocco and are new for northern Africa.

Au Maroc le genre *Hydrochus* est représenté par 6 espèces: *H. angustatus* Germar 1824 citée de quelques localités dispersées du nord, centre et sud du pays (Escalera 1914; d'Orchymont 1935; Kocher 1958); *H. flavipennis* Küster 1852 connue de Tanger (Fairmaire & Cocquerel 1858) et de Tétouan (Angus 1976); *H. foveostriatus* sensu Balfour-Browne (1958) mentionnée à Bab-Taza (Chefchaouen) (Kocher 1938) et à Rabat (Kocher 1958); *H. grandicollis* Kiesenwetter 1870 citée à Tanger (d'Orchymont 1935) et à Ceuta (Kocher 1958), *H. nitidicollis* Mulsant 1844 recensée à Casablanca (Escalera 1914) et à Azrou (Kocher 1958), et finalement *H. obtusicollis* Fairmaire 1877 décrite de Tanger. A l'exception de *H. grandicollis* confinée à l'extrême Ouest de la Méditerranée Occidentale et de *H. obtusicollis* endémique du Nord du Maroc, les autres espèces présentent une large distribution dans la région paléarctique et sont qualifiées de trans-Ibérique par Ribera *et al.* (1999a).

Durant l'étude menée sur les Coléoptères aquatiques du Rif, deux endémiques Ibériques, *Hydrochus aljibensis* Castro & Delgado 1999 et *H. tariqi* Ribera, Hernando & Aguilera 1999, sont recensées pour la première fois de l'autre côté du Détroit de Gibraltar. Celles-ci viennent d'être décrites par Castro & Delgado (1999) et Ribera *et al.* (1999b) dans le sud de la Péninsule ibérique.

Avec cette découverte nous élevons à 8 le nombre d'*Hydrochus* connu au Maroc. En l'état actuel des connaissances, ces deux *Hydrochus* constituent les seules espèces du genre à posséder une distribution restreinte, limitée au massifs bétique et rifain et au sud-ouest de la Peninsule ibérique (Foster & Ribera 2000). Par conséquent, on les qualifie généralement d'espèces ibéro-maghrébines. Ces deux *Hydrochus* viennent compléter la liste des espèces considérées comme endémiques ibériques et découvertes récemment au Nord du Maroc. Il s'agit par exemple de *Agabus hozgargantae* Burmeister, *A. heydeni* Wehncke, *Limnoxenus olmoi* Hernando & Fresneda, *Limnebius bacchus* Balfour-Browne, *Hydraena hernandoi* Fresneda & Lagar et *Ochthebius figueroi* Garrido, Valladares & Régil (Sáinz-Cantero *et al.* 1996; Ribera *et al.* 1999a; Ribera 2000). Ces espèces témoignent, une fois de plus, d'échanges faunistiques entre la faune ibérique et berberique et entre la faune européenne et nord africaine à travers le massif bético-rifain. L'histoire paléogéographique montre en effet que ce dernier a fonctionné comme pont continental entre l'Afrique et l'Europe, il y a 6,0 à 5,5 millions d'année (Hsü *et al.* 1983). Cet événement géologique important permet l'explication de la grande similitude et affinité entre le système pénibétique et l'Afrique du Nord non seulement chez les Coléoptères aquatiques (Bennas *et al.* 1992; sous-presse) mais aussi chez d'autres groupes d'animaux (Busack 1986; Fahd 1993; Badih 1997; Sanchez-Ortega & Azouz 1998)

Dans le Rif, *H. aljibensis* a été repérée dans 13 localités rattachées à six provinces rifaines: Chefchaouen, Larache, Tanger, Taounate, Taza et Tétouan. Celles-ci couvrent un intervalle altitudinal très large de 10 à 1380 m. L'espèce semble avoir une certaine préférence pour les cours d'eau à caractère permanent, à courant faible à modéré (1,5 à 9,6 m/s), mais sans pour autant dédaigner d'autres types de milieux aquatiques tels que les sources naturelles, les canaux d'irrigations et les mares. La localité type de cette espèce correspond à un ruisseau de haute altitude (Castro & Delgado 1999). L'espèce paraît indifférente à la granulométrie du substrat, toutefois une légère prédilection pour les substrats limoneux à été notée. L'installation de l'espèce dans les milieux aquatiques semble être liée à la présence d'une végétation aquatique diversifiée et permanente. En outre, l'espèce semble être plus associée à la présence de macrophytes. Cet *Hydrochus* fait montre d'une grande valence thermique, de 13 à 29°C. Il en est de même pour le degré de minéralisation du milieu aquatique, de 24,6 à 7230 µs/cm.

Quant à *Hydrochus tariqi*, elle n'a pu être localisée que dans deux cours d'eau de plaine (37 à 50 m.) appartenant aux provinces de Tanger et de Tétouan. La largeur du lit de ces deux oueds varie entre 1,25 et 4 mètres, leur fond très hétérogène est formé par un mélange de limon, de sable, de graviers, de pierres et de blocs avec une légère prédominance des trois premiers éléments. La vitesse d'écoulement est très modérée (6,7 – 7,4 m/s). Ces observations coïncident avec celles réalisées par Jäch *et al.* (1999). Dans les deux cas, la végétation aquatique associée à la présence de cette espèce est constituée par des macrophytes émergés. La température enregistrée est de 19 °c et la conductivité des eaux oscille entre 602 et 930 µs/cm. La découverte de cette espèce dans le Rif corrobore les prévisions avancées par Ribera *et al.* (1999b) sur la présence probable de cette espèce au Nord de l'Afrique.

Matériel étudié:

Hydrochus aljibensis

Chefchaouen: Oued Ouara, 680 m., El Khizana, 35°03'46" N; 5°14'05" W, 30SUD0185, 30-IV-1997, 3 mm. et 4 ff.; Aïn Ras El Ma, 840 m., Ras El Ma, 35°10'24" N; 5°15'25" W, 30STD9997, 4-VI-1992, 1 m.; Aïn Targualt, 1380 m. Jbel Tafirane, 34°59'51" N; 4°49'34" W, 30SUD3576, 15-VI-1991, 3 mm. **Larache:** Aïn Sidi Brahim Ben Arrif, 500 m., Bâb Hachef-Aïssa, 35°18'22" N; 5°36'57" W, 30STE7317, 9-II-1998, 4 mm.; Oued Tisgris, 580 m., Hmmadesh, 35°22'09" N; 5°31'34" W, 30STE7419, 21-III-1997, 3 mm. et 2 ff.; Daya Sidi Sliman El Amri, 620 m., Sidi Sliman El Amri, 35°19'03" N; 5°32'48"W, 30STE7413, 10-VII-1991, 1 m.; Ruisselet Pinède de Bou-Hachem, 1200 m., Sud de la Maison Forestière Bou Hachem, 35°15'59" N; 5°30'39" W, 30STE7708, 28-VI-1999, 4 mm. et 3 ff.; Ruisselet de Aïn el Ksour, 1220 m. Es Soukkâne (My Abslam), 35°19'03" N; 5°31'06" W, 30STE7812, 19-III-1999, 2 mm. et 2 ff. **Tanger:** Seguia El Hajra, 10 m., El Hajra, 35°33'14" N; 5°52'07" W, 30STE4539, 6-X-1991, 1 m. et 1 f.; Oued Ouljat Echchat, 60 m., Hakkama, 35°39'19" N; 5°41'18" W, 30STE6051, 18-VI-1998, 2 mm. **Taounate:** Aïn Ras El Ma, 1200 m., Après Maison forestière Jbel Oudka, 34°45'40" N; 4°52'07" W, 30SUD3051, 23-VII-1999, 4 mm. **Taza:** Oued Ech-chaouya, 980 m., Doar Oulad Md. Ouabdellah, 34°36'29" N; 3°52'17" W, 30SVD2133, 10-X-1991, 1 m. **Tétouan:** Oued Ajrass, 90 m., Aïn el Hsen, 35°33'06" N; 5°32'27" W, 30STE7539, 9-VII-1991, 1 m.

Hydrochus tariqi

Tanger: Oued Charkane, 37 m., Arbaa Ayacha, 35°23'30" N; 5°54'50" W, 30STE3922, 10-VII-1991, 1 m. **Tétouan:** Oued Achiâr, 50 m., Bounezzal, 35°36'37" N; 5°29'01" W, 30STE7948, 12-VII-1991, 1 m.

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ROUMANIAN WATER BEETLES

The Danube delta is of comparatively recent origin, and it supports no endemic species. It does however have Ponto-Pannonic and Pontic elements in a fauna dominated by species from the north-west Palaearctic. The most interesting species is *Agabus zimmermanni* Scholz, new for Romania and previously known only from three sites on the Black Sea coast. Other species of interest include *Hygrotus enneagrammus* (Ahrens), *Berosus bispina* Reiche, *B. frontifoveatus* Kuwert, *Ochthebius peisonis* Ganglbauer and seven species of *Heterocerus*.

ŠŤASTNY, J. & TRÁVNÍČEK, D. 2000. Water beetles of the Danube delta, Romania (Coleoptera: Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Hydrophilidae, Hydraenidae, Dryopidae, Heteroceridae). *Klapalekiana* 36 147-156.

FOOD WEBS AND CONTAINER HABITATS

📖 KITCHING, R.L. 2000. *Food webs and container habitats. The natural history and ecology of phytotelmata.* ISBN 0 521 77316 4 hardback. Cambridge University Press. £65.

The title gives a clue to the balance of the book, which is authoritative on the theories and analyses of foodwebs, but is possibly a little weak on its attempt to cover container habitats encyclopaedically. For the purposes of a Club review, we can afford to be partisan and ask "Does it do justice to beetles?" Sadly the answer is "no" but it would be unfair to leave it at that without describing the work's general coverage. The book's structure is rather good, with the information base being divided into descriptions of the container types, the faunas, (also described in a bestiary annexe) and the environments, being followed by a review of methodologies and theories. Patterns and processes are then discussed, with a specially good section viewing the processes structuring food webs at global, continental, regional and local scales. The food-web templet provides a final synthesis. Phytotelmata are mainly bromelias, pitcher plants, tree holes, bamboo internodes and axil waters, and the author mentions "zootelmata" in the form of disused snail shells; I thought he missed a trick in not considering "rejectamentotelmata" or whatever one should call the fauna of discarded human debris.

But we are coleopterists are we not so let's look up beetles in the index (not there) then Coleoptera. We are directed to p. 307 but they are not there either, and then to pp. 364-368. One of the few illustration is *Colpodes*, the highly flattened carabid beetle that probably preys on scirtids. The author opines that dytiscids "are unlikely to be phytotelm specialists, merely exploiting the container water bodies as a source of prey for these generalist predators". This is strange as he cites the paper by J. Balfour-Browne on bromeliadicolous *Copelatus*, in which B-B notes *Aglymbus* from the bromeliad *Tillandsia* in Trinidad (not Jamaica as stated in B-B's paper) and a *Copelatus* from *Pandanus* leaf-bases in the Seychelles. Michael Balke has wisely commented to me that Kitching may have a point, if only because coleopterists have failed to prove that some *Copelatus* are obligatorily associated with bromeliad tanks. The author's treatment of Hydrophilidae misses out on Hansen's treatment of *Psilodacnum* as a synonym of *Lachnodacnum*, that genus being confined to bromeliads. The author complains twice about the need to revise the genera of Scirtidae on the basis that they appeared to be assigned by historical necessity; he cites only one early reference by Klausnitzer. In fact this part of the book is far from encyclopaedic. Particularly noticeable is citation of only one of Paradise's papers, the one where he indicates the importance of scirtid larvae in sweeping particles into suspension for use by midge larvae. I can understand why the written treatment needs to be selective but I would have expected a more comprehensive coverage of the faunal assemblages at this stage in understanding these systems.

ROMAN GOD IS BEETLE?

By a strange coincidence I was identifying a beetle from Lindisfarne, North Northumberland within minutes of searching for a paper clip at the back of a drawer. There I rediscovered an object that I had picked up on Holy Island back in 1979. It is about 3 cm long, made of metal, possibly bronze, and it appears to be based on the aedeagus of a dytiscid beetle. One suggestion is that it comes from a Roman priapic statue washed up on the Northumbrian shore. The other suggestion, that it is a bent bullet, is fundamentally absurd as no-one would design a bullet to go round corners.

NEW STERNOPORINE *HYDROPORUS* FROM TURKEY

Even though the subgenus *Sternoporus* is out of fashion it is still remarkably easy to recognise when a new one turns up! This one, from the Turkish province of Erzurum, has the sinuate postcoxal processes and the asymmetrical aedeagus. The new species is most closely related to *H. libanus* Régimbart from Lebanon and southern Turkey. Please note an error in the caption for Figures 4-5, which should read "b from left, c from right".

ERMAN, O.K. & FERY, H. 2000. *Hydroporus erzuramensis* sp.n. (Insecta: Coleoptera: Dytiscidae) from north-eastern Turkey. *Ann. Naturhist. Mus. Wien* **102** B 171-176.

NOTERID KARYOTYPES

Previous conclusions about the phylogeny of the Noteridae are reinforced by chromosomal studies of the primitive *Neohydrocoptus* and the more advanced *Canthydrus*. C-banding indicates that the sex chromosomes of *Canthydrus* are not the pair previously thought. *N. jaechi* is newly recorded from Egypt.

AHMED, R. SALEH & ANGUS, R.B. 2000. Chromosomal analysis of *Neohydrocoptus jaechi* (Wewalka) and *Canthydrus melanophthalmus* (Reiche & Saulcy) (Coleoptera: Noteridae). *Aquatic Insects* **22** (3) 165-170.

† Dr Michael Hansen

We are sad to announce the tragic death in November 2000 of Dr Michael Hansen at the age of 44. He will be remembered for his great and expert productivity, in particular his World studies of the Hydrophiloidea, his two World Catalogues and his contribution to the *Fauna Entomologica Scandinavica* series. Members will be directed to a bibliography when it becomes available.

NEW DATA ON DISTRIBUTION OF PALAEARCTIC HELOPHORIDAE AND HYDROPHILIDAE

by Sergey Ryndevich

Some rare species were found in study of various collections.

Helophoridae

***Helophorus montenegrinus* Kuwert 1885**

The Ukraine: the Ukraine, the Crimea, near Gurzuf, pond, 8 July 1999, S. Ryndevich, 1 specimen. *H. montenegrinus* is new for Crimean Peninsula. This mountain species is known from eastern Austria and Hungary, Moravia (Czech Republic), the Balkans (Croatia, Chernogoria, Greece), Anatolia (Turkey), northern and central Italy, Georgia (Angus 1985;1992), the Eastern Carpathians (the Ukraine) (Shatrovskiy 1988).

***Helophorus faustianus* Sharp 1916**

Russia: North Caucasus, Karachaevo-Cherkesia, River Beskess, 13 August 1997, 1 specimen. This species is distributed in Georgia, "Cherkesia" and northern Anatolia (Turkey) (Angus 1985;1992).

***Helophorus dorsalis* (Marsham 1802)**

Russia: Moscow, Prioksko-Terrasny Reserve, 24 April – 9 May 1995, N.B. Nikitskiy, 1 specimen. *H. dorsalis* is new for the European part of Russia. The species is known from England, France, Germany, and the Northern Caucasus (Russia) (Angus 1992).

Hydrophilidae

***Hydrochara semenovi* Zaitsev 1909**

Georgia: Abhazia, Gulripshinskiy district, Kodor, 1973-IX-5, 1 specimen [in Russian]. This relict species is distributed in mountains of the southern Crimea and the Caucasus (Smetana 1980; Shatrovskiy 1986).

***Anacaena lohsei* van Berge Henegouwen & Hebauer 1989**

Italy: Italia, coll. Stresa 20 May 1937, 4 specimens. *A. lohsei* was described from the mountains of Italy and Switzerland (van Berge Henegouwen & Hebauer 1989)

Acknowledgements

I would like to thank Dr N B Nikitskiy (Zoological Museum of Moscow State University, Moscow) and Dr I A Solodovnikov (Vitebsk State University, Vitebsk, Belarus) for the loan of material.

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ANGUS, R.B. 1985. Towards a revision of Palaearctic species of *Helophorus* F. (Coleoptera, Hydrophilidae). 2. *Ent. Obozr.* **64** 716-747. [in Russian]

ANGUS, R.B. 1992. Insecta, Coleoptera, Hydrophilidae, Helophorinae. *Sussw. von Mitteleuropa* **20/10-2** 1-144.

BERGE HENEGOUWEN, A.L. van & HEBAUER, F. 1989. *Anacaena lohsei*, new species from Italy and Switzerland (Coleoptera, Hydrophilidae). *Bull. Annls Soc. r. belge Ent.* **125** 273-275.

SMETANA, A. 1980. Revision of the genus *Hydrochara* Berth. (Coleoptera: Hydrophilidae). *Mem. Entom. Soc. Can.* **111** 1-100.

SHATROVSKIY A.G. 1986. Water beetles of the genus *Hydrochara* (Coleoptera: Hydrophilidae) of the USSR fauna. *Vestn. zool.* **4** 29-34. [in Russian]

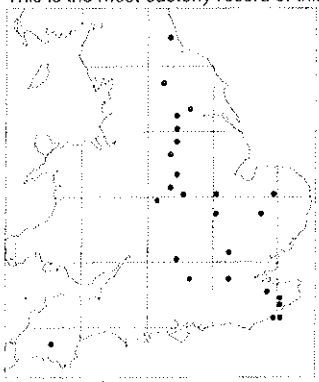
SHATROVSKIY A.G. 1988. To the study of Hydrophilidae (Coleoptera) of European part of the USSR and the Caucasus. Vest. Hark. Univ. **313** 75-77 [in Russian]

Received October 2000

FIRST NORFOLK RECORD FOR *HYGROTUS NIGROLINEATUS* (VON STEVEN)

by Geoff Nobes

A newly flooded gravel pit in Carbrooke, West Norfolk (TF 9500) has yielded the first Norfolk record of *Hygrotus nigrolineatus*. Five specimens were found in the shallows amongst algae on 7 April 2000. This is the most easterly record of this early coloniser of new ponds with a bare substratum.



The first British specimens was found in April 1983 in East Kent by Ron Carr (1984). The second was in 1986 from an MV light trap in Suffolk by Andy Foster, the nearest record to the Norfolk site. Since then the beetle has colonised England from Kent to Durham with a total of 27 known sites.

The shallows of the gravel pit were teeming with *Hygrotus confluens* and *Hydroglyphus pusillus* whilst in the deeper water *Nebrioporus elegans* and *Scarodytes halensis* were common. Berosus signaticollis was also present. A total of 27 species of water beetle have been recorded up to September 2000.

Other insects present that may be of interest were the bugs *Cymatia bonsdorffii, Notonecta viridis, N. glauca* and the water stick insect *Ranatra linearis*. Odonata present were *Ischnura elegans, Coenagrion puella, Enallagma cyathigerum, Libellula depressa, L. quadrimaculata* and *Anax imperator*.

Acknowledgements

I should like to thanks Mr David Minns of Minns Aggregates for allowing access to the site.

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CARR, R. 1984. A *Coelambus* species new to Britain (Coleoptera: Dytiscidae). *Entomologist's Gazette* **35** 181-184.

FOSTER, A.P. 1986b. *Coelambus nigrolineatus* - a second British locality. *Balfour-Browne Club Newsletter* **38** 18.

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WATERFOWL AND DIVING BEETLES IN SWEDISH LAKES

Bird censuses on 30 Swedish lakes were undertaken at the same time as beetles were being trapped. Lakes that were rich in species and numbers of diving beetles were similarly rich in wildfowl. Three of the four bird groups had the same patterns of abundance as water beetles, the exception being the water beetle predators themselves! However, the sample was small, only 11 species, and the non-significant relationship was at least in the same direction. It is difficult to believe that this relationship applies in lakes where wildfowl are artificially encouraged, but it would be interesting to get some data to make the comparison.

ELMBERG, J., SJÖBERG, K., PÖYSA, H. & NUMMI, P. 2000. Abundance-distribution relationships on interacting trophic levels: the case of lake-nesting waterfowl and dytiscid water beetles. *Journal of Biogeography* **27** 821-827.

LOTIC-LENTIC DIFFERENCE DETERMINES SPECIES RANGE

In the first of what is hoped will be a range of papers exploring this theme Nacho Ribera and Alfried Vogler demonstrate that there is an evolutionary divide between stagnant and running water habitats. Rivers and streams have spatial and temporal continuity, allowing long-term persistence of local populations. Stagnant water habitats tend to dry out, forcing dispersal and facilitating gene flow. This constancy of difference between the demands of the two habitats has led to difference in speciation rates and the range of morphological specialization. This profound paper uses data on 490 species of aquatic Coleoptera in the Iberian Peninsula.

RIBERA, I. & VOGLER, A.P. 2000. Habitat type as a determinant of species range sizes: the example of lotic-lentic differences in aquatic Coleoptera. *Biological Journal of the Linnean Society* **71** 33-52.

CENTRAL GERMAN EMERGENCE TRAPS

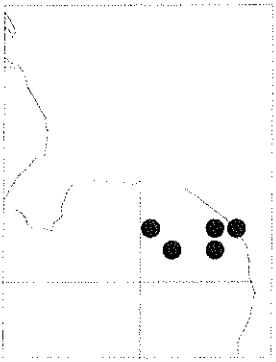
Emergence trap catches from Vessertal include a few water beetles and the limnichid *Pelocharis versicolor* (Waltl).

NORDMANN, M. 2000. Coleoptera-Beifänge in den Emergenz-Untersuchungen 1983, 1984 und 1987 an der Vesser. *Abh. Ber. Mus. Nat. Gotha* **21** 54-59.

TWO NEW SITES FOR *AGABUS STRIOLATUS* (GYLLENHAL) IN NORFOLK

by Geoff Nobes

Agabus striolatus (RDB2) was first recorded in Britain at Horning Marsh, East Norfolk, in 1839 by J L Brown, and Hamlet Clark took it again there in 1855. It was not seen again in Britain until Garth Foster (1982) took two specimens at Catfield Fen in 1977. It has since been found at five other Broadland sites.



In January 2000 two new sites were found for this rare water beetle.

The first was found on 15 January in TG 02, 30 kilometres from the nearest Broadland site. It appears to provide a new habitat type for this species in Britain. I found the beetle in a small, open, shallow, mossy pool near a reedbed. The pool was well vegetated with rushes, sedges, bogbean, water forget-me-not and other plants. Wet woodland is present on the borders of the site but is some distance from this pool. Six specimens were found in the mossy pool and were not easy to detect in the debris in the net as they were very sluggish. Knowing that the literature states that the usual habitat for *A. striolatus* is shaded pools in carr, the woodland was searched and a male was found under bark of a waterlogged, fallen branch in a pool. It was resting with its legs tucked in as if in hibernation.

Other pools throughout the area were searched, but no more specimens were found so it appears to be very localised. Other species common in the pond and reedbed were *Hydroporus glabriusculus* Aubé (RDB3), *Laccornis oblongus* (Stephens) (Na), *Agabus unguicularis* (Thomson) (Nb), and *Ilybius guttiger* (Gyllenhal (Nb) and *I. quadriguttatus* (Lacordaire).

The species assemblage is reminiscent of one from a pingo system and the area certainly looks a bit like one, but there is some historical evidence that the site was used for peat digging. Even though it is surprising that *A. striolatus* has not yet been found on any of the well-recorded pingo fen areas.

The area is an SSSI and has an interesting flora as well as breeding snipe and reed bunting. It is managed at the moment by mowing some areas in late summer.

Two weeks later, flushed with success, I went to Upgate Common (TG 1418), only seven kilometres away, and was amazed to find *A. striolatus* there also. Unbelievably one scoop of the net took six specimens and it was the commonest water beetle present. Upgate has acid and calcareous areas, and *striolatus* was found in a very shallow pool amongst moss and reeds (*Juncus*) similar to the previous; later in the year one specimen was found in a *Sphagnum* pool in a much more open, acid area.

Ilybius guttiger, *Graptodytes granularis* (L.) and *Dytiscus semisulcatus* Müller were common in the first pool, and *Agabus montanus* (Stephens) and *A. unguicularis* in the *Sphagnum*. A return visit with Garth Foster on 25 April turned up *Hydraena palustris* Erichson (RDB2) and *Hydrochus brevis* (Herbst) (RDB3) in mossy pools. This is another SSSI and a very attractive area at present managed by sheep grazing.

One wonders how long *A. striolatus* has remained undetected at these two sites or whether it is a recent coloniser, maybe from the Broads. It is also likely that it may yet be found in other fens in the area.

Acknowledgements

Thanks are due to Garth Foster and Martin Collier for accompanying me on trips subsequent to the initial discovery [as if you could have stopped us. Ed], and also to Peter Lambley for showing me more of the site and detailing its history.

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FOSTER, G.N. 1982. Notes on rare Dytiscidae (Coleoptera) in Norfolk. *Transactions of the Norfolk and Norwich Naturalists' Society* **26** 3-10.

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CYPHON KONGSBERGENSIS IN IRELAND

This species, new to Ireland, is reported from Rathavisteen Fen, County Mayo

MARNELL, F. 2000. *Cyphon kongsbergensis* Munster (Coleoptera: Scirtidae) new to Ireland. *Irish Naturalists' Journal* **26** (7/8) 274-276.

COOPIANA

Another raid on Professor Russell Coope's reprint files has yielded a series of papers largely dedicated to the Last Interglacial.

An exception is the paper by Howard *et al.* concerning an early Holocene marsh fauna beside Ripon racecourse (the racecourse wasn't there then). The basal date for the sample is 9710 BP and the fauna contains many familiar elements, e.g. *Haliplus obliquus* (Fab.), *Hygrotus impressopunctatus* (Schaller), *Ochthebius minimus* (Fab.), *Cercyon tristis* Illiger and *Macroplea appendiculata* (Panzer).

HOWARD, A.J., KEEN, D.H., MIGHALL, T.M., FIELD, M.H., COOPE, G.R., GRIFFITHS, H.I. & MACKLIN, M.G. 2000. Early Holocene environments of the River Ure near Ripon, North Yorkshire, UK. *Proceedings of the Yorkshire Geological Society* 53 (1) 31-42.

Perhaps the most interesting of the papers concerning the Last Interglacial in general terms is a comparison (Mayle *et al.*) of the fossil record with the ice-core record obtained from the Greenland Ice-Cap, based on radioactive oxygen. The clearest signals in British lake records include the thermal maximum between 15000 and 145000 BP, the onset of climate cooling immediately afterwards, a period of climatic instability from 14400 to 12700 BP, and further climatic cooling from 13000 BP, after which biological evidence largely disappeared until the start of the Holocene, with the most severe impact between 12600 and 11500 BP. Although we are here to support beetles, one cannot help noticing that chironomid head capsules also do rather well as indicators.

MAYLE, F.E., BELL, M., BIRKS, H.J., BROOKS, S.J., COOPE, G.R., LOWE, J.J., SHELDRICK, C., SHIJIE, L., TURNEY, C.S.M. & WALKER, M.J.C. 1999. Climate variations in Britain during the last Glacial-Holocene transition (15.0-11.5 cal ka BP): comparison with the GRIP ice-core record. *Journal of the Geological Society, London* 156 411-423.

A summary of the Eemian (Ipswichian) Interglacial fauna in Britain (Coope) notes the presence of climatically significant wetland species such as *Hydrochara caraboides* (L.), *Hydrophilus piceus* (L.), *Stenelmis* spp., *Limnichus pygmaeus* (Sturm), its central and southern European ally *Pelochares versicolor* (Waltl), and *Oodes gracilis* Villa. One such Eemian list is derived from the Welland Bank Pit at Deeping St James, and another from Woolpack Farm quarry, Cambridgeshire.

COOPE, G.R. 2000. The climatic significance of coleopteran assemblages from the Eemian deposits in southern England. *Geologie en Mijnbouw* 79 (2/3) 257-267.

KEEN, D.H., BATEMAN, M.D., COOPE, G.R., FIELD, M.H., LANGFORD, H.E., MERRY, J.S. & MIGHALL, T.M. 1999. Sedimentology, palaeoecology and geochronology of Last Interglacial deposits from Deeping St James, Lincolnshire, England. *Journal of Quaternary Science* 14 (5) 411-436.

GAO, C., KEEN, D.H., BOREHAM, S., COOPE, R.G., PETTIT, M.E., STUART, A.J. & GIBBARD, P.L. 2000. Late Interglacial and Devensian deposits of the River Great Ouse at Woolpack Farm, Fenstanton, Cambridgeshire, UK. *Quaternary Science Reviews* 19 787-810.

The Danish deposit includes beetles no longer found south of the Kattegat, in particular *Oreodytes alpinus* (Paykull) and *Ochthebius lenensis* Poppius, though pride of place must go to the staphylinid *Tachinus caelatus* Ullrich, now "endemic" to Mongolian mountains. As Russell has noted, the last mammoth to go extinct must have felt itself the height of endemism!

COOPE, G.R. & BÖCHER, J. 2000. Coleoptera from the late Weichselian deposits at Nørre Lyngby, Denmark and their bearing on palaeoecology, biogeography and palaeoclimate. *Boreas* 29 26-34.

Lastly beetles get a brief mention in a study of a Late Glacial site on the Finglas River in Kerry, reached by cold-loving species such as *Colymbetes dolabratus* (Paykull) during severe climate events.

TURNEY, C.S.M., COOPE, G.R., HARKNESS, D.D., LOWE, J.J. & WALKER, M.J.C. 2000. Implications for the dating of Wisconsinian (Weichselian) Late-Glacial events of systematic radiocarbon age differences between terrestrial plant macrofossils from a site in SW Ireland. *Quaternary Research* 53 114-121.

AFRICAN BIDESSINI

Uvarus pinheyi is described from Zambia and *Hydroglyphus pseudoctoguttatus* from Angola.

BISTRÖM, O. 2000. Description of two new Bidessini species from the Afro-tropical Region (Coleoptera, Dytiscidae). *Aquatic Insects* 22 (4) 325-328.

CENTRAL GERMAN SALT FAUNA

The fauna of the outflow of a saltworks includes thirteen species of beetle.

SCHULZ, C.-J. & BELLSTEDT, R. 2000. Die Wipper: Verödung und Wiederbesiedlung eines Flusses im ehemaligen Kalirevier "Südharz" dargestellt am Beispiel aquatischer Insekten. *Abh. Ber. Mus. Nat. Gotha* 21 103-110.

WHAT IMPACT DOES *CRASSULA HELMSII* HAVE ON AQUATIC BEETLES?

by Jonty Denton

Much has been written concerning the increasing damage done to the native flora in ponds and lakes by alien waterweeds. The New Zealand Swamp Stonecrop (*Crassula helmsii*) is spreading into British ponds and lakes with alarming rapidity. Tiny fragments are able to propagate themselves so it is readily spread by dogs, livestock, people (specially with pond nets!) and probably by wildfowl. The only thing that seems to restrict its occurrence in lentic sites is water chemistry; in my experience it doesn't seem to establish in ponds with a pH of less than about 5.5.

Once established it is impossible to eradicate without killing all the native plants as well. Methods employed to data include complete herbicide treatment, covering of the pond basin with an opaque plastic sheet, burial under a layer of soil – and even freezing with liquid nitrogen!

C. helmsii thrives in permanent ponds, but can also stand severe desiccation in late summer, recovering as the ponds refill through the winter and spring, so that it can invade the entire water column of at least one metre in depth in one or two years, even in nutrient-poor ponds.

Its effect on the native flora can be devastating as it overgrows less vigorous plants. Shallow drawdown zones once rich in plant species can rapidly become monocultures of *Crassula*. As we shall see this can result in the loss of phytophagous species such as semiaquatic weevils and leaf beetles.

Little information exists on its effects of haliplids, dytiscids and hydrophilids, so I have attempted to summarise my experiences at four sites where *Crassula* has become established, and in some cases dominant.

Woolmer Forest, North Hampshire (SU 7832)

C. helmsii appeared on the forest in the mid-1980s and has at one time or another invaded more than ten ponds with a pH above 5.5. This included a pond artificially limed to raise pH from ca 4.4 to more than 6.0, where it became established only to fade out when the pond pH declined to less than 5.

All these ponds are less than 500 m² and ephemeral, completely drying out in most summers. This annual event combined with their oligotrophic status has been important in preventing *C. helmsii* from becoming completely dominant. Indeed the *Crassula* problem could be described at this site as "stable" for the small ponds at least. Without the seasonal disturbance some of the rare species could be lost. The scarce weevils *Nanophyes gracilis* Redtenbacher and *Pelenomus olssoni* (Israelson) occur on low-growing *Peplis portula*, which is rapidly overgrown by *Crassula*. Similarly the weevil *Gymnetron beccabungae* (L.) has disappeared from pond margins invaded by *Crassula*, surviving only in acid sites still suitable for its host plant *Veronica scutellata*.

Many of the ponds were deliberately created as breeding sites for the endangered Natterjack Toad (*Bufo calamita*). *Crassula* is bad news for Natterjack tadpoles as it provides cover for ambush predators such as Odonata and some dytiscid larvae. A comparison of the fauna before and after Crassula invasion indicates that the dytiscid and hydrophiloid assemblage, which includes several Notable species (*Agabus labiatus* (Brahm), *Hydrochus angustatus* Germar, *Berosus signaticollis* (Charpentier), has changed little. Haliplids have always been scarce. The RDB3 *Dryops striatellus* (Fairmaire & Brisout) has remained relatively common at the site.

West End Common, Esher, Surrey (TQ 1263)

The *Crassula* problem at this site can be regarded as the worst case scenario, owing to the presence of Starfruit, *Damasonium alisma*, a great rarity in Britain.

The beetle faunas of two medium-sized ponds on the Common were investigated by Mr A A Allen and Professor John Owen in 1984 prior to the establishment of *Crassula*. I resurveyed the same ponds in 1999, when much of the previously open water in the ponds was choked with *Crassula*, which also grew through the marginal vegetation. In 1984 several Nationally Notable species (*Hygrotus decoratus* (Gyllenhal), *Graptodytes granularis* (L.), *Agabus labiatus*, *Hydaticus seminiger* (De Geer)) were recorded, all of which I found with ease in 1999, with the exception of *A. labiatus*. Indeed I found two further Notable species, the weevils *Phytobius leucogaster* (Marsham) and *Pelenomus canaliculatus* (Fahraeus), which with *G. granularis* were frequent in the areas where the water column was completely choked by *Crassula*. I could not find any *Myriophyllum*, the host plant of *P. canaliculatus*, among the *Crassula* despite the presence of dozens of weevils.

Lakeside Park, Blackwater Valley, Surrey/Hampshire Border (SU 8851)
Crassula is an increasingly serious problem in relatively young ponds created from old gravel workings. Without some form of intervention, conditions will soon mirror those at West End. The numbers of aquatic beetles did not appear to vary markedly between the *Crassula*-dominated areas and the mossy margins of the pond, which were home to many uncommon species such as *Hydaticus seminiger, Rhantus grapii* (Gyllenhal), *Chaetarthria seminulum* (Herbst), *Hydrochus angustatus* and *Anacaena bipustulata* (Marsham). Above the water's surface, scarce wetland staphylinids such as *Stenus fornicatus* Stephens and *Gymnus brevicollis* (Paykull) were locally abundant on moss, but absent from *Crassula*-dominated margins.

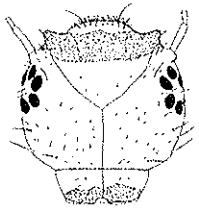
Newdigate Claypits, Surrey (TQ 2042)
These two large, deep lakes formed from clay workings are heavily stocked with coarse fish. The margins are dominated by *Crassula* with some *Mentha, Scirpus* and *Typha*. These margins support 25 water beetles including *Hydrochus angustatus* and *Cercyon convexiusculus* Stephens. Of particular interest was the presence of *Donacia cinerea* Herbst on the *Typha* and *D. impressa* Paykull on *Scirpus*. Adults of both species were numerous, and it would appear that the larvae are not adversely affected by the shading and competition from *Crassula* to the submerged parts of the plants.

Conclusions
It would appear that some diving beetles used to living in densely vegetated waters can thrive in *Crassula*-choked ponds. However, the impact on species with pelagic larvae (e.g. *Acilius, Graphoderus)* is likely to be deleterious.

It is a small crumb of comfort to find *Crassula* providing a niche that several uncommon water beetles can exploit. It should in no way be used as an excuse for inaction. Vast amounts of money are spent on controlling weeds that have negligible effects on overall biodiversity. Government agencies have procrastinated for decades in the face of this growing menace. Indeed it is still perfectly legal to sell *C. helmsii*, and most water garden centres stock it. Other aliens continue to spread. Parrot's Feather (*Myriophyllum aquaticum*) also readily chokes ponds (but it is worth noting that *Pelenomus canaliculatus* readily feeds on this alien). Now the spectre of Floating Pennywort (*Hydrocotyle ranunculoides*) is making the news as it romps over ponds and canals with alarming speed.

Received September 2000

LACCOPHILINAE MORPHOLOGY BASED ON LARVAE
This coming-together results in a fundamental study of the cosmopolitan *Laccophilus*, the Old World Tropical *Neptostemus* (head of *N. hydaticoides* Régimbart left), the Australian *Australphilus* and the African *Africophilus* based on the larvae of 12 species. *Laccophilus* is proposed as a sister-group to the clade *Neptostemus* + *Australiphilus*. *Africophilus* larvae are very distinct, possibly because of their life on wet rock.



ALARIE, Y., NILSSON, A.N., HENDRICH, L., WATTS, C.H.S. & BALKE, M. 2000. Larval morphology of four genera of Laccophilinae (Coleoptera: Adephaga: Dytiscidae) with an analysis of their Phylogenetic relationships. *Insect Syst. Evol.* **31** 121-164.

SUBTERRANEAN AUSTRALIA - MORE BEETLES DOWN UNDER
Perhaps *Bidessus* should be renamed *Bidessous* to accommodate this potentially massive expansion in the number of bidessine species in the World. Looking at the map of aquifers in Western Australia, it seems that many new species are still to be found.

WATTS, C H S & HUMPHREYS, W F 2000. Six new species of *Nirridessus* Watts and Humphreys and *Tjirtudessus* Watts and Humphreys (Coleoptera: Dytiscidae) from underground waters in Australia. *Records of the South Australian Museum* **33** (2) 89-99.

***ILYBIUS* LARVAE**
The larvae of *I. biguttulus* Germar, *I. pleuriticus* LeConte and *I discedens* Sharp are described, and a key is provided to the known North American larvae of *Ilybius*, *I. vittiger* (Gyllenhal), *I. angustior* Gyllenhal and *I. subaeneus* Erichson. Barry has been completing his PhD in Edinburgh and expects to return to Carbonear, Newfoundland in the spring.

HICKS, B.J. & LARSON, D.J. 2000. Descriptions and recognition of larvae of some northern North American species of *Ilybius* Erichson (Coleoptera: Dytiscidae). *The Coleopterists Bulletin* **54** (1) 36-59.

HYDROCHUS MARTINAE MAKHAN REVISITED

by Alberto Gayoso & Ignacio Ribera

In a recent note on some Iberian Hydrochus Ribera *et al.* (1999) suggested that *H. martinae* Makhan was most likely to be *H. interruptus* Heyden, although the formal synonymy could not be established because of the unavailability in the Deutsches Entomologisches Institut (Eberswalde) (DEI) of the unique type of *H. interruptus* from Sierra de Guadarrama, in central Spain.

We have finally been able to study this type, and can now confirm that the specimens of *Hydrochus interruptus* collected by Perez-Arcas (two in the Kraatz collection, DEI; 14 in the Museo Naçional de Ciencias Naturales, Madrid, MNCN), and the types of *Hydrochus martinae* (MNCN) (see Ribera *et al.* 1999 for details) seem to belong to the same species.

We therefore propose *Hydrochus martinae* Makhan, 1996 as a junior synonym of *Hydrochus interruptus* Heyden 1870.

Type of *Hydrochus interruptus* (DEI)

Lectotype (by present designation) female, with labels:
"La Granja / Bruck [hw]"; red Syntypus label; "coll. Heyden"; "Coll. DEI / Eberswalde"; "Dtsch. Entomol. / Institut Berlin"; "A. d'Orchymont vid / 1927 [hw]"; "J. Balfour-Browne rev / IV 1956", with "H. interruptus Hey [hw]" in the reverse; "Coll. DEI / Eberswalde", with "H. / interruptus / Heyd. [hw]" in the reverse; "Hydrochus interrup- / tus Heyden Lectotype / FF des. A. van Berge / Henegouwen 1989 [hw]" [Arno's designation was never published]; "Hydrochus / interruptus / Heyd. [hw]".

The specimens is glued on a triangular card. The two metatarsi are lacking, as well as the major part of the two antennae. The last three articles of the right palpi are glued by the specimen. We have dissected the genitalia, now mounted in DHMF in a separate card, and added a lectotype designation label. Measures of the specimen are as follows: length of pronotum, 0.7 mm; length of elytra, 1.95 mm; maximum width of pronotum (anterior margin), 7.4 mm; maximum width of elytra, 1 mm.

Reference

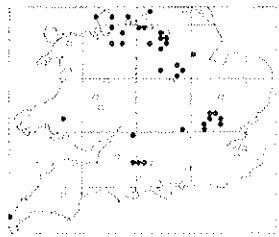
RIBERA, I., HERNANDO, C. & AGUILERA, P. 1999. Notes on the status of *Hydrochus interruptus* Heyden and *H. martinae* Makhan. ***Latissimus*** 11 22-23.

Received September 2000

AGABUS BIGUTTATUS (OLIVIER) IN THE THAMES, ENGLAND by Andy Foster

Following the autumn storms, two female and one male *Agabus biguttatus* were found not far from the sources of the river in the Thames at Kemble (ST 991979) on 29 October 2000. The Watsonian vice-county boundaries include that part of the Cotswolds in North Wiltshire (vc 7) rather than East Gloucestershire (vc 34). There do not appear to be earlier records for either vice-county.

The map is based on 153 records stored electronically and is not yet complete. Solid symbols are for 1980 onwards.



Received November 2000

HYDRAENA PHYLOGENY

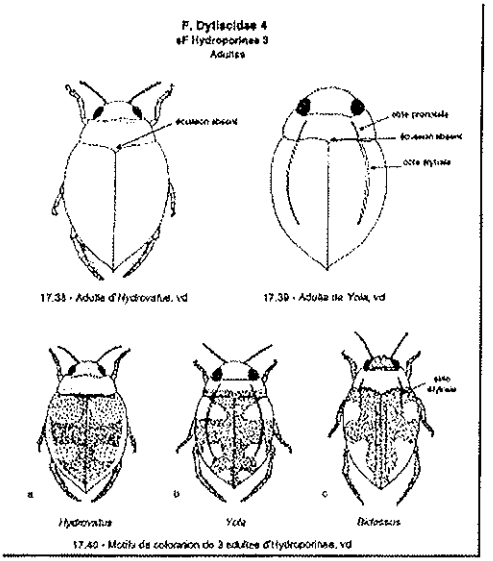
Hydraena is the most speciose aquatic beetle genus. 539 species are listed in the main paper. Despite this, the origins of the genus are in dispute and not yet fully resolved. Everyone appears to agree that it is monophyletic but that is about it. Berthélemy's approach is criticised in the main paper for being too concerned with the number of elytral striae, in one case at least based on an error. Perkins' approach is similarly criticised for it concentration on the hypomeral antennal pocket structure and elytral striation. The present work is based on the cladistics of adult characters, mainly on the head, from 28 species in five supraspecific groupings. This supports the monophyletic, subgeneric status of *Hydraenopsis*. *Haenydra* and *Phothydraena* appear to merit subgeneric status, but the authors believe this cannot be confirmed until the basal lineages of *Hydraena* s. l. are resolved. The selection process for this analysis, which is richly supported by SEM photographs, involved description of eight new species in the second paper, from China, New Guinea, Oman, South Africa, and Vietnam.

JÄCH, M.A., BEUTEL, R.G., DIAZ, J.A. & KODADA, J. 2000. Subgeneric classification, description of head structures and world check list of *Hydraena* Kugelann (Insecta: Coleoptera; Hydraenidae). *Ann. Naturhist. Mus. Wien* **102 B** 177-258.

JÄCH, M.A. & DÍAZ, J.A. 2000. Descriptions of eight new species of *Hydraena* (Coleoptera: Hydraenidae). *Entomological Problems* 31 (1) 41-58.

FRENCH PICTORIAL KEY TO AQUATIC INVERTEBRATES

TACHET, H., RICHOUX, P., BOURNAUD, M. & USSEGLIO-POLATERA, P, 2000. *Invertebrés d'eau douce. Systematique, biologie, écologie.* CNRS Editions. ISBN 2-271-05745-0 paperback. Available from CNRS Editions, La Librairie, 151, bis rue Saint-Jacques, 75005 Paris; e-mail librairie@cnrseditions.fr. Price 250 FF + 35 FF postage = total, including TVA, €43.45.



Some members will recall Philippe Richoux's 1982 pictorial key to beetle genera adults and larvae. This is updated in this reasonably priced production covering all macroinvertebrates. The pictorial approach is particularly good for the beginner because one's eye is drawn to alternatives on the page, lessening the risk that a specimen will be force-fitted into the wrong genus.

Each group is also covered by a small bibliography and a formal description of each genus. The book ends with an explanation of the species-trait approach to ecological study.

RICHOUX, P. 1982. Coléoptères aquatiques (genres: adultes et larves). Introduction practique à la systématique des organismes des eaux continentales Françaises 2. *Bulletin de la Societé Linnéenne de Lyon* **51** (4) 105-303.

BRITISH SALTMARSHES – GENERALISTS AND SPECIALISTS

SHERWOOD, B.R., GARDINER, B.G. & HARRIS, T. (eds) 2000. *British Saltmarshes*, Linnean Society of London, Forrest Text. ISBN 0 95062 076 9 hardback. Available from Forrest Text, Sŵn y Nant, Tresaith, Cardigan, Ceredigion SA43 2JG, Wales, UK.

The editors understandably fail to mention that the symposium on which this book is based took place in 1996. But better late than never as this volume contains no less than three papers about beetles. Other chapters range from studies of radioactivity around the Irish Sea to a pictorial key to ostracods. In my own chapter I demonstrate that the saltmarsh fauna is a mixture of generalist and specialist species, and that the species occupying saltmarsh pools change to some extent from north to south and west to east. I try to relate longstanding field knowledge to the results of multivariate analyses. Martin Luff's approach is different but he also demonstrates that generalist species occur even in the sub-littoral zone; saltmarsh carabid assemblages are characterised by low species richness and a lot of small-scale heterogeneity. Peter Hammond tackles the task in yet a different way, mapping 54 species associated with marine and other coastal habitats. He notes that rove beetles are the dominant beetles in most intertidal assemblages but again that few are truly saltmarsh species. He should have stuck to staphs as the information in his Table 1 about halobiont species of Haliplidae and Dytiscidae is incorrect, and the use of Hydrophilidae *sensu lato* is not informative. I am now glad that I did not try to reproduce maps because other chapters in the book demonstrate the difficulties of resolving dots against an irregular coastal outline; the 50 km square dots work quite well for the staphs but many 10 km square records are obscured on other maps.

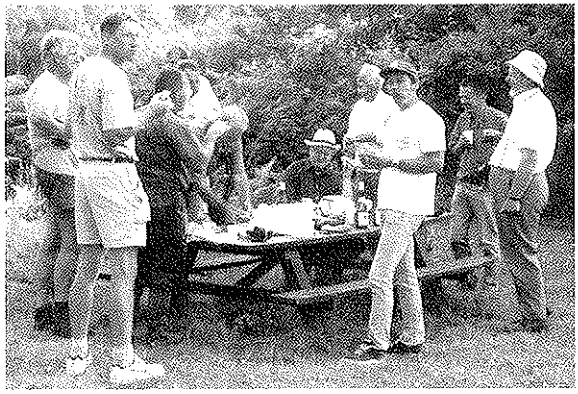
FOSTER, G.N. 2000. Chapter 14. The aquatic Coleoptera of British saltmarshes: extremes of generalism and specialism. 223-233.

HAMMOND, P.M. 2000. Chapter 16. Coastal Staphylinidae 9rove beetles) in the British Isles, with special reference to saltmarshes. 247-302.

LUFF, M.L. & EYRE, M.D. 2000. Chapter 15. Factors affecting the ground beetles (Coleoptera: Carabidae) of some coastal British habitats. 235-245.

POITIERS 2000

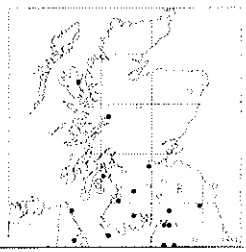
Numbers don't mean everything except of course when they refer to how many species have been caught. Our meeting in Poitiers was planned in 1999 on the basis that there was something special about the Millennium, and that this needed to be honoured in some way. Those 2,000 ponds of the Reserve Naturelle du Pinail seemed to offer the right experience and so *Deux mille mares en deux mille* was born. With hindsight, there was nothing particularly special about the 1st of January 2000 at all, so that fact that only 13 people turned up for the meeting did not really matter, except in that the Club now has a collection of XL celebratory tee-shirts going at the knockdown price of £9.00 inc. p&p in the UK and £10.00 for non-British addresses.



So Robert Angus, Franck Bameul, David Bilton, Ron Carr, Gert van Ee, Garth Foster, Raoul Gerend, Henk van der Hammen, Hans Huijbregts, Ton van Haaren, Keith Miller, Bernhard van Vondel, and Oscar Vorst variously accumulated at the Reserve to the north-east of Poitiers on Saturday morning, The rules of the competition were discarded on the basis that teams don't really work and that no-one listens to them anyway. There was also some anxiety that the winner might be disqualified on the basis of uncertainty about their membership status. During the previous evening much of the party had traced their way to Éspace Reaumur, finding there only a mystified lady who had the sense to hide, and reconvening at the Ibis Sud for a meal and much beer. It has to be said that the quality of the food and wine did nothing for the reputation of France, which was fully restored when twelve of us, suitably mud-stained, descended on a most obliging family restaurant in Vorneuil-sur-Venne. It was there that a tradition of the Club, the erection of the Balfour-Browne Trophy and oratory plinth, was born, closely followed by yet another tradition, that of inserting payment for the meal into the net (as the trophy comprises the Professor's net as fully described by him in 1928 (The 'Balfour-Browne' water-net. *Entomologist's Monthly Magazine* **64** 58-61). As if by magic the sum leaving this cornucopia exceeded that required. Sadly, another tradition temporarily foundered in the absence of Club Orator and the local organiser, Denis Richard. Let's hope that next year finds the Orator in total control of some erudite German.

RAASAY BEETLES

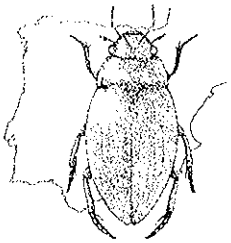
Among the additions to the Raasay fauna recorded by Richard Moore is *Hydroporus obsoletus* Aubé. This is the only modern record for the Hebrides, the map showing what is thought to be the complete data-set for northern Britain, based on 93 records overall, with solid circles representing records for 1980 onwards.



MOORE, R. 2000. More notes on the Coleoptera of the Island of Raasay, Scotland. *Entomologist's monthly Magazine* **136** 168.

IBERIAN CHECKLISTS

📖 VALLADARES, L.F. & RIBERA, I. 1999. *Lista faunística y bibliográfica de los Hydrophiloidea acuáticos (Coleoptera) de la Península Ibérica e Islas Baleares.* Listas de la flora y fauna de las aguas continentales de la Península Ibérica 15. Asociación Española de Limnologia, Villarcayo. The price is 7 € for members of the Spanish Limnological Society, and 11 € for non-members. Orders can be made to Dr Juan Soria, Secretaria de la AEL, Los Angeles 33, E-46920 Mislata, Valencia (jmsoriag@teleline.es), preferably using a credit card.



With the production of the listing of Hydrophiloidea, the Iberian checklist of water beetles is more or less complete. However, the listing includes only *Coelostoma* from the Sphaeridiinae, even though some *Cercyon* are occasionally found in water in Spain. The list covers the following species: 11 *Hydrochus*, 35 *Helophorus*, 3 *Georissus*, 7 *Berosus*, 2 *Hemisphaera*, 2 *Chaetarthria*, 4 *Paracymus*, 4 *Anacaena*, 17 *Laccobius*, 2 *Helochares*, 1 *Chasmogenus*, 16 *Enochrus*, 1 *Cymbiodyta*, 2 *Hydrobius*, 2 *Limnoxenus*, 2 *Hydrochara*, and 2 *Coelostoma* -- 113 in all, of which 16 are considered endemic, 5 doubtfully Iberian and only one doubtful taxonomically. How things have changed in 15 years or so! The list is almost as stable as anywhere else in Europe.

A useful adjunct to this list, and to the earlier faunal lists for the Hydradephaga, Dryopoidea and Hydraenidae, is the paper in *Zapateri*, which provides a critical appraisal of the taxonomy of the Iberian fauna, and fills in the gap on Sphaeridiinae (18 *Cercyon*, 4 *Sphaeridium*, and four other species recognised). 622 species in 100 genera of 20 families are recorded in the Iberian fauna, but 37 species lack confirmed records, 8 are likely to be synonyms, 8 are species complexes and two are of unknown identity. The publication date is a cause for concern. If the paper was accepted on 15 August 1998 and reprints did not become available until 2000, a 1999 publication date seems likely. No new species are described but there may well be new combinations that need to be properly dated.

A few corrections have been noted by the authors:- in Table 1, there should be 139 species of Hydraenidae giving 622 species in all; on p. 70 the name should read *Georissus laesicollis* Germar in Ahrens, 1831; on p. 84 read "*Ochthebius diazi* Jäch, 1999 [...] Jäch (1999)"; p. 90 Notes to *Limnichus* – *Limnichus lederi* Weise, 1877.

RIBERA, I., HERNANDO, C. & AGUILERA, P. 1998. An annotated checklist of the Iberian water beetles (Coleoptera). *Zapateri, Revta. Aragon. Ent.* 8 43-111.

MICROSPORUS BACK TO *SPHAERIUS* AND A NEW FAMILY NAME

The International Committee of Zoological Nomenclature has voted 20:1 to rescind the former decision whereby the name *Sphaerius* Waltl 1838 was suppressed in favour of *Microsporus* Kolenati 1846. The problem originally arose because *Sphaerium* Scopoli 1777 is in use for a mollusc and both names have the root Sphaeri- resulting in synonymous family names. This has been avoided by making the root *Sphaerius* itself resulting in the 5th of 7 rulings to create the family name Sphaeriusidae Erichson 1845 to be used instead of Microsporidae and Sphaeriidae. Even the ICZN member voting against the proposals admitted that the original ruling was flawed, and credit goes to Dr Manfred Jäch for having elucidated the problem.

ICZN 2000. Opinion 1957. *Sphaerius* Waltl, 1838 (Insecta, Coleoptera): conserved; and Sphaeriidae Erichson, 1845 (Coleoptera): spelling emended to Sphaeriusidae, so removing the homonymy with Sphaeriidae Deshayes, 1854 (1820) (Mollusca, Bivalvia). *Bulletin of Zoological Nomenclature* 57 (3) 182-184.

SPEYSIDE RIPARIAN BEETLES

Three species of *Oreodytes*, two *Helophorus*, two elmids and two *Dryops* are included in lists of beetles found by pitfall trapping in Speyside, northern Scotland. It is claimed that riverside species can be divided into two classes, specialist riparian species rarely encountered elsewhere and facultative species that occur in other habitats. That may be so but at least *Oreodytes sanmarkii* (Sahlberg), *O. septentrionalis* (Sahlberg), *Esolus parallelepipedus* des Gozis and *Limnius volckmari* (Erichson) are fully aquatic species. The list does not include any Hydraenidae, and it is not clear whether none was found or whether the authors feel that these are not specialist riparian species.

LYSZKOWSKI, R.M. & OWEN, J.A. 2000. Specialist riparian beetles from riverside sites in Upper Strathspey, Scotland. *Entomologist's Gazette* 51 133-141.

✞ DON GODDARD

In June 2000, the sudden death was reported of Don Goddard, a member of the Club by longstanding and contributor of over a thousand records to the National Recording Scheme, mainly for Leicestershire. He had retired early from teaching on the grounds of ill health and he was relishing a chance to get back to full time beetling

BEETLE TRAITS

At the moment, relating species traits to habitat characteristics is seen as the main way of understanding how communities function. The trouble is that there are so many trades-off between traits that it is difficult to predict accurately the functional diversity of freshwater communities. Being flat, for example can be useful if you want to hide under a stone but it will affect your ability to fly; most species will compromise between the extremes open to them. Multivariate analyses are used in this paper to examine the interrelationships of eleven biological traits in 472 benthic macroinvertebrate taxa. Eight groups were defined using size, reproductive traits, food type, and feeding habit; this mainly followed phylogenetic relationships. Seven ecological groups were related to the gradual shift from oligotrophic mountain streams to eutrophic lowland habitats. Beetles featured in nearly all the ecological groups, but were surprisingly absent from the montane river group.

USSEGLIO-POLATERA, P., BOURNAUD, M., RICHOUX, P., & TACHET, H. 2000. Biological and ecological traits of benthic freshwater macroinvertebrates: relationships and definition of groups with similar traits. *Freshwater Biology* 43 175-205.

***HYDRAENIDA* IN CHILE**

Four species of *Hydraenida* are known from Chile, *H. ocellata* Germain, *H. robusta* Perkins, *H. franzi* Jäch and *H. sanctijacobi* Jäch. A species illustrated but left unnamed by J. Balfour-Browne is confirmed as *robusta*. A new species, *guerreroi*, is described from the Natural Park of Altos del Lircay.

RIBERA, I. 2000. Notes on the genus *Hydraenida* Germain, with description of a new species from Chile (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* 70 53-56.

WEEVIL SWIMMING – OR IS IT DANCING?

Two basic modes of swimming have been described in aquatic beetles. Dytiscids use the middle and hind legs for swimming with the pair on the same segment protracting and retracting simultaneously. The middle legs may row alternately or in synchrony with the hind legs. Those hydrophiloids that swim retract the left middle leg simultaneously with the right hind leg, and the right middle leg in time with the left hind leg. Swimming in weevils is different, and the rice water weevil's (*Lissorhoptrus oryzophilus* Kuschel) is very distinctive, using only the middle legs, Its front and hind legs are held out and serve only as diving or stabilising planes. Even turning is achieved using only the middle legs. *Bagous* species have previously been described as dog-paddling by use of the front legs, with the middle and hind legs pushing against the surface tension. *Phytobius leucogaster* (Marsham) and *P. commari* (Herbst) swim using all three pairs of legs. The precise ways in which other genera swim has not been described.

HIX, R.L., JOHNSON, D.T. & BERNHARDT, J.L. 2000. Swimming behavior of an aquatic weevil, *Lissorhoptrus oryzophilus* (Coleoptera; Curculionidae). *Florida Entomologist* 83 (3) 316-324.

***CRENITIS* REVIEW**

Crenitis punctatostriata (Letzner) is a distinctive hydrophilid of central European peat bogs. Its distribution is reviewed with particular reference to the Swiss Jura. Matthey studied this species in the 1970s, when he noted that the larva, which could not survive immersion, lived in *Sphagnum* moss, pupating there also. Consequently its distribution tracks that of *Sphagnum* on high land.

RICHOUX, P. & BOUGET, C. 2000. *Crenitis punctatostriata* (Coleoptera Hydrophilidae) dans le Jura et intérêt sur la caractérisation des tourbières d'altitude. *Bulletin Romand d'Entomologie* 18 49-58.

NEW *HYDRAENA* IN ALBACETE, SPAIN

A male of a species in the *Hydraena rufipes* group was discovered in a spring in 1990 but the specimen was too damaged to serve as a type. More material was finally found in July 1998, but not until 69 species had been recorded from the area, including eight Iberian endemics. the new species is named *mecai*.

MILLÁN, A. & AGUILERA, P. 2000. A new species of *Hydraena* Kugelann from the spring of Fuenfría (Segura basin, SE Spain), a site a special conservation interest. *Koleopterologische Rundschau* 70 61-64.

UNIQUE CASE OF PARASITISM OR MUTUALISM IN EGG-LAYING BEHAVIOUR OF WATER BEETLES IN JAPAN

by Victor Fursov

The author studied the egg-parasitoids of water beetles in rice paddy fields near Tsukuba-city, Ibaraki Prefecture, Japan during June-August.1997 and June 1999. Some special observations of egg-laying behaviour of water beetles were also undertaken.

It was found that many specimens of water chalcid wasp *Lathromeroidea silvarum* Nowicki (Hymenoptera, Chalcidoidea, Trichogrammatidae) parasitised the eggs of two species of water scavenger beetles (Hydrophilidae): *Berosus (Berosus) punctipennis* Harold *and Berosus (Enoplurus) lewisius* Sharp (Fursov 2000). The eggs of these beetles were laid on the surface of leaves of water plants (*Potamogeton, Alisma* and *Sagittaria* spp.) and rice leaves (*Oryza sativa*) which were floating on the surface of water in a rice paddy fields.

Only one specimen of *L. silvarum* developed inside one egg of both species of *Berosus*. The females of these water scavenger beetles laid eggs inside special cocoons, covered by silk webbing. About 10-12 specimens were reared from large egg cocoons of *B. punctipennis*, which had many eggs. Only 2-3 specimens of *L. silvarum* developed inside the smaller egg cocoons of *B. lewisius*, which had fewer eggs.

I studied the development of large cocoons of *Hydrochara affinis* (Sharp) floating on the surface of water in rice paddy fields. Females of *L. silvarum* did not parasitise the large eggs of *H. affinis* inside their egg cocoons. At the same time during my observations I found that some predaceous diving beetles (Dytiscidae) were laying eggs inside the opened egg-cocoons floating on the surface of water, but only after the emergence of *H. affinis*. After the emergence of larvae of *Hydrochara* the cocoons had a large hole. These cocoons were still floating on the surface of water. During the study I found 5-6 eggs of *Rhantus suturalis* (Macleay) and *Eretes sticticus* (L.) inside large holes of the egg cocoons of *H. affinis*.

In my observations I did not observe the process of direct parasitism (or predaceous behaviour) of Dytiscidae inside the hydrophilid egg cocoons. Future studies on behaviour of beetles will be needed to answer the question: is it mutualism or sometimes parasitism in egg laying sites? Possibly, *Berosus* species are mutualists and just used old egg cocoons of *Hydrochara* for their egg-laying.

It is interesting to note that the phenomenon of egg-parasitism among beetles is confined to the subfamily Pterocolinae (Rhynchitidae). All pterocolines are associated with leaf-rolling weevils (Attelabidae). Female pterocolines enter freshly made attelabid leaf rolls where they eat the attelabid egg and lay their own (Hamilton 1998; Vogt 1992). This unique behaviour of "stealing" an attelabid leaf roll for their own larval development led Vogt (1992) to refer to the pterocolines as "thief" weevils.

Acknowledgements

The author thanks Professor Masatako Satô (Nagoya Women's University, Japan) and M M Bilyashivsky (Zoological Museum, Shevchenko State University, Kiev) for the identification of Hydrophilidae and Dytiscidae beetles. Sincere thanks go to Dr H Fujimaki, Dr K Ogawa and Dr K Hirai (NARC, Tsukuba, Japan) for help in the work at the National Agriculture Research Center.

References

HAMILTON, R W 1998. Taxonomic revision of the New World Pterocolinae (Coleoptera: Rhynchitidae). *Trans. Amer. Entomol. Soc.* 124 N3-4 203-269.

FURSOV, V N 2000. Egg-parasitoids (Hymenoptera) of aquatic beetles. ***Latissimus*** **12** 16-17.

VOGT, G B 1992. Leaf-rolling weevils (Coleoptera: Attelabidae), their host plants, and associated rhynchitid weevils in North America (Canada through the Republic of Panama): summary of a long-term field study. pp. 392-420 in: D Quintero & A Aiello (eds) *Insects of Panama and Mesoamerica: Selected Studies*. Oxford University Press, 692 pp.

Received March 2000

CZECH WATER BEETLES – PÁLAVA

The hydradephagan water beetle list of the Pálava Reserve comprises 68 species of Dytiscidae, ten of Haliplidae, one whirligig, and two Noteridae, 54% of the Czech fauna. The most noteworthy species recorded in this survey are *Haliplus furcatus* Seidlitz, new for the Czech fauna, *Hydrovatus cuspidatus* (Kunze) confirmed for Moravia, *Hygrotus parallelogrammus* (Ahrens), *Bidessus nasutus* Sharp, and *Graphoderus bilineatus* DeGeer. The area is also notable for the occurrence of nine species of *Rhantus*, including *bistriatus* (Bergsträsser), *consputus* (Sturm), *latitans* Sharp and *notaticollis* (Aubé).

ŠŤASTNY, J., BOUKAL, M., BOUKAL, D.S. & HÁJEK, J. 1999. Coleoptera: Hydradephaga. Aquatic invertebrates of the Pálava Biosphere Reserve of UNESCO. *Folia Fac. Sci. Nat. Univ. Masaryk. Brun., Biol.* 101 241-250.

A MODERN RECORD FOR *LIMNEBIUS NANUS* JÄCH

by Ron Carr and David Bilton

In his revision of Palaearctic *Limnebius* (Jäch 1933), Dr Manfred Jäch describes seventeen new species including *L. nanus*. This species is included in the *atomus* group, being characterised by its minute size (1 to 1.1 mm), predominantly brown coloration and aedeagus lacking in appendages, and with a short main piece.

L. nanus is described from only six specimens within the collection of the Naturhistorisches Museum, Vienna and the Museum d'Histoire Naturelle, Paris, all specimens having been collected from central Spain in the Escorial and Guadarrama regions. None of the material has dates.

During August 1999 we undertook a collecting excursion in Spain and Portugal, during the course of which we found a number of specimens of *L. nanus* in sandy fine gravel at the margin of a residual pool in a dried-up river bed south of Castillo de Montfrague, province of Caceres. Associated beetles included *Georissus costatus* Castelnau, *Chaetarthria seminulum sithonica* Hebauer and *Laccobius ytenensis* Sharp.

Our thanks are conveyed to Dr Manfred Jäch for confirmation of the determination of *L. nanus*, and also to Dr Elio Gentili for examining the *Laccobius*.

Reference

JÄCH, M.A. 1993. Taxonomic revision of the Palearctic species of the genus *Limnebius* Leach, 1815 (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* 63 99-187.

Received June 2000

NEBRIOPORUS CANALICULATUS IN BRITAIN – THE REPRISE

This paper reports in more detail the findings reported in ***Latissimus* 11**. For the uninitiated it provides a guide to the change in generic nomenclature.

CARR, R. 2000. The occurrence of *Nebrioporus canaliculatus* (Lacordaire) (Coleoptera: Dytiscidae) in Britain, with a note on recent taxonomic changes to related British species. *Entomologist's Gazette* 51 125-128.

CHAETARTHRIA IN AUSTRALIA

Chaetarthria sjostedti Knisch 1922 (not 1921 as indicated by Knisch in the Junk & Schenkling Catalogue of 1924) and *C. australis* Knisch 1922 are in synonymy with *C. nigerrima* (Blackburn 1891). *C. nigerrima* is the only species so far known in Australia.

WATTS, C.H.S. 2000. Revision of Australian *Chaetarthria* Stephens (Coleoptera: Hydrophilidae). *Records of the South Australian Museum* 33 (1) 29-31.

ANTIPORUS AND *TIPORUS* IN AUSTRALIA

Antiporus mcraeae and *A. pennifoldae* are described from swamps in Western Australia threatened by rising salinity. Three new species of *Tiporus* are described, together with redescriptions of other species. A key is given to the known eleven species.

WATTS, C.H.S. & PINDER, A. 2000. Two new species of *Antiporus* from Western Australia (Coleoptera: Dytiscidae). *Records of the South Australian Museum* 33 (1) 17-19.

WATTS, C H S 2000. Three new species of *Tiporus* Watts (Coleoptera: Dytiscidae) with redescriptions of the other species in the genus. *Records of the South Australian Museum* 33 (2) 89-99.

REVIEW OF A NEW DYTISCID GENUS, *PHILACCOLILUS*

The subgenus *Philaccolilus* is raised to generic rank, thereby leaving *Philaccolus* s. str. as as Afrotropical genus, which is not even a sister group for the new genus. Two known species are redescribed and then new ones are described, all from New Guinea. Most species are associated with forest streams, the dappled dark dorsum seemingly adapted to such situations. These species are under threat from habitat loss, goldmining and logging.

BALKE, M., LARSON, D., HENDRICH, L., & KONYORAH, E. 2000. A revision of the New Guinea water beetle genus *Philaccolilus* Guignot, stat. n. (Coleoptera, Dytiscidae). *Mitt. Mus. Nat. kd. Berl., Dtsch. entomol. Z.* 47 (1) 29-50.

SLOVAK BEETLES

Nebrioporus elegans (Panzer) is newly recorded from Slovakia. Additional records are provided for *Bidessus delicatulus* (Schaum) and *Agabus unguicularis* Thomson.

HÁJEK, J. 1999. New and interesting records of diving beetles (Coleoptera: Dytiscidae) from Slovakia. *Klapalekiana* 35 103-104.

THURINGIAN BEETLES

The Öchse stream runs from the Rhön Mountains to the River Werra in Wartburgkreis. A survey in 1998 involved 146 taxa, including 38 water beetles such as *Agabus biguttatus* (Olivier) and *Hydraena reyi* Kuwert. Between 1997 and 1999 the mountain stream known as the Fränkrischen Muschwitz yielded 55 species of water beetle, including *Elmis rioloides* (Kuwert) and *Hydrocyphon deflexicollis* (Müller).

BRETTFELD, R. & BELLSTEDT, R. 1999. Zur Limnofauna der Öchse im Wartburgkreis (Thüringen). *Thüringer Faunistische Abhandlungen* **6** 67-87.

SKALÉ, A. & WEIGEL, A. 1999. Beitrag zur Wasserkäferfauna der Fränkrischen Muschwitz in südlichen Thüringer Schiefergebirge (Saale-Orla-Kreis). *Thüringer Faunistische Abhandlungen* **6** 163-167.

***PLATYNECTES* – A BIODIVERSITY HOTSPOT IN SERAM**

Like *Philaccolilus*, also reviewed in this ***Latissimus***, *Platynectes* are also forest stream dwellers, typically black with eight to ten yellow spots. Eight species, five new to science, are described. Seram is a very special island with five species, four of them endemic. It lies in the transition zone between the Oriental and Australian/New Guinea faunas. No other running water dytiscids occur here. The high altitudes of the island (up to 3027 m) provide an abundance of stream habitats and the area is free from volcanic disturbance. All these factors converge to deliver an important biodiversity hotspot.

HENDRICH, L. & BALKE, M. 2000. The genus *Platynectes* Régimbart in the Moluccas (Indonesia): taxonomy, faunistics and zoogeography (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **70** 37-52.

ST CATHERINE'S ISLAND, GEORGIA, USA

The Club Orator, Derek Lott has a contact in Georgia Southern University who has indicated that this barrier island has never been surveyed for beetles. Accommodation can be had in the modernised, old slave quarters, an ideal party size being 8-10. Times of year to avoid are late April-May (alligators nesting) and June/July (turtles nesting and high season for research students). August and September are too hot. Contact Derek if you are interested.

***HALIPLUS FURCATUS* NOT CONFIRMED FROM SUSSEX**

A record of *Haliplus furcatus* has been publicised from Sussex. This was based on a survey done by the Environment Agency of Ebernoe Common, West Sussex in March 1999. The identifier contacted me to say that the specimen was not kept because the genitalia were lost during examination. This record cannot therefore be accepted until some voucher material becomes available.

Sussex Biodiversity Record Centre 1999. Editorial. *Sussex Recording Update, Newsletter of the Sussex Biodiversity Record Centre* **1** 1. Ed.

WATER HYACINTH WEEVIL PERFORMANCE

Water hyacinth is one of the most aggressive weeds in the tropics and subtropics. The performance of two weevils, *Neochetina bruchi* Hustache and *N. eichhorniae* Warner were compared under two nitrogen regimes. Although both species gave good control at about 1 mg N/litre, *N. bruchi* gave better control at 2-3.5 mg N/l and 1-2 mg P/l.

HEARD, T.A. & WINTERTON, S.L. 2000. Interactions between nutrient status and weevil herbivory in the biological control of water hyacinth. *Journal of applied ecology* **37** 117-127.

RARE BEETLES IN SOUTH-EAST ENGLAND

Donacia crassipes Fab. and *Bagous lutulentus* (Gyllenhal) are recorded from North Hants and East Sussex respectively.

DENTON, J.S. 2000. Rare and uncommon Coleoptera in England, 1998. *Entomologist's monthly Magazine* **136** 61-62.

LIMBURG BEETLES

The summer meeting of the Netherlands Entomological Society took place in Hensel. Water beetles featured well in the lengthy beetle catalogue, in particular *Laccophilus poecilus, Laccornis oblongus, Agabus striolatus, Hydraena assimilis,* and *Hydrochus megaphallus.*

CUPPEN, J.G.M., VORST, O., HEIJERMAN, T., HUIJBREGTS, J., VAN DE SANDE, C., LANGEVELD, S.C. & KRIKKEN, J. 2000 Coleoptera – kevers in VORST, O. (ed.) Verslag van de 154e Zomerblijeenkomst te Hunsel, 4 t/m 6 j juni 1999. *Entomologische Berichten, Deel* **60** (5) xxv-xxxix.

THE RED WATER FERN WEEVIL

Azolla has proved highly invasive on its introduction to South Africa. The weevil *Stenopelmus rufinasus* Gyllenhal was imported from Florida in 1995 in order to study its potential for biological control. It was originally accidentally introduced into Europe from America along with the fern. The life history of the weevil is described and it is established that its host preference is very much red water ferns in the Azollaceae, but with inferior larval development rates on species other than *A. filiculoides*. So far, the fern has been eradicated at 20 of the 46 release sites for the weevil. The flea beetle *Pseudolampsis guttata* (LeConte) was rejected for this task on the grounds of concern for its potential to attack species of *Azolla* native to South Africa.

HILL, M.P. 1998. Life history and laboratory host range of *Stenopelmus rufinasus*, a natural enemy for *Azolla filiculoides* in South Africa. *BioControl* 43 215-224.

HILL, M.P. 1999. *Azolla filiculoides* Lamarck (Pteridophyta: Azollaceae), its status in South Africa and control. *Hydrobiologia* **415** 203-206.

HILL, M.P. 1999. Biological control of red water fern, *Azolla filiculoides* Lamarck (Pteridophyta: Azollaceae), in South Africa. *African Entomology Memoir* 1 119-124.

BROWSING SECTION

Dra Adriana Oliva has reminded me that the Reverend Wood could often be more straightforward in his presentations than in the item described in ***Latissimus* 12**. In fact, downright mundane if this account of *Dytiscus latissimus* in *Insects Abroad* (1877 Longmans, Green & Co., London) is anything to go by. And he seems to find size challenging.

"After examining carefully a vast number of foreign Water Beetles, I find that they are so exactly like our own familiar insects in size, shape, colour and habits, that three examples will be quite sufficient to illustrate the whole of the Hydradephaga, numerous though they be.

The species which is shown in the illustration, *Dytiscus latissimus*, is certainly the most conspicuous of these Beetles, and yet, as the reader may see, does not differ remarkably from our common *Dytiscus marginalis*.

The colours are the same, though perhaps rather brighter. The ground hue is very dark brown with an infusion of green, and this, besides orange, is the only colour. Round the edges of the thorax runs a band of orange, so as to leave a nearly square dark patch in the middle. Along the outer edge of the elytra there is a similar band, and there is another a little way inside it, running from the base of the elytron to the point, and rapidly becoming narrower as it approaches the tip. This second stripe forms the most conspicuous portion of the colouring, and is well shown in the illustration. There is also near the tip of the elytra a very faint and undefined stripe of orange drawn diagonally across, and looking as if it had been made with a brush on a wetted surface. The streak varies somewhat in different individuals."

Wood adopts the same prosaic description of his second and third examples, the gorgeous *Hydaticus festivus* and the whirligig *Porrorhynchus marginatus*. Clearly there is no need to travel abroad as we have everything we might wish without "going foreign".

***HYDROPORUS ANGUSTATUS* IN ITALY**

Two sites for *H. angustatus* Sturm near to Rome are on the south-western extreme of its distribution. The paper is of interest in that many specimens are recorded from a UV light trap.

NARDI, G., MALTZEFF, P. & PACE, G. 1999. Due nuove stazioni di *Hydroporus angustatus* nell'Italia *Centrale. Bolletino dell'Associazione Romana di Entomologia* **54** 65-69.

WATER FLEA BEETLE, *LONGITARSUS NIGERRIMUS*

The rediscovery of this species in Britain was accompanied by some careful notes on its biology and history of recording in Britain. It feeds on bladderwort, *Utricularia minor*, but the adults cannot dive so they must feed and reproduce in later summer when pools dry out sufficiently to expose bladderwort on the surface. The flea beetle's hind legs have adapted it by accident to be rather a good swimmer.

BOOTH, R.G. 2000. A review of *Longitarsus nigerrimus* (Gyllenhal) (Chrysomelidae) records from the British Isles. *The Coleopterist* **9** (1) 15-18.

NORTH BRITISH RIVERINE BEETLES

By definition, most of the beetles found in these pitfall trap surveys of rivers must be "water beetles" in some way or other. The one that immediately catch the eye are: *Notaris aethiops* (Fab.), normally associated with branched bur-reed (*Sparganium erectum*) but found in many sites without this plant; *Dryops nitidulus* (Heer) in the River Tyne; *Georissus crenulatus* (Rossi) in the River Till (North Northumberland) and Rankle Burn (Selkirkshire); and many records of *Helophorus arvernicus* Mulsant and *Ochthebius bicolon* Germar.

EYRE, M.D., LUFF, M.L. & LOTT, D.A. 2000. Records of rare and notable beetle species from riverine sediments in Scotland and northern England. *The Coleopterist* **9** (1) 25-38.

MALAYSIAN BEETLES

Tasek Cini means the mystery lake and is a river swamp in West Malaysia. It yielded 21 species from five families of water beetles. Four *Helochares* species are described as new from the lake. In contrast, the fauna of Tioman Island yielded 11 more species that are widespread in the Indo-Malayan region, the only exception being *Oocyclus sumatrensis tiomanensis* Hebauer & Wang.

HEBAUER, F., HENDRICH, L. & BALKE, M. 1999. A contribution to the knowledge of the water beetle fauna (Col. Hydradephaga, Hydrophiloidea and Staphylinoidea) of a tropical freshwater lake: Tesek Cini, Pahang, Malaysia. *The Raffles Bulletin of Zoology* 47 (2) 333-348.

HENDRICH, L. & YANG, C.M. 1999. A contribution to the knowledge of the water beetle fauna of Pulau Tioman, Peninsular Malaysia (Coleoptera: Noteridae, Dytiscidae, Hydrophilidae, Hydraenidae, Scirtidae, Limnichidae). *The Raffles Bulletin of Zoology* 1999 Supplement 6 253-262.

IBERIAN WATER BEETLE CONSERVATION

More than 600 species of water beetle are now recognised from the Iberian Peninsula, drawn from 100 genera and 20 families. The level of endemism is about 20%, but the taxonomic distribution of endemism is highly uneven. Five main geographical regions are recognised: Pyrenean, Cantabrian mountains, Hercynian, South East and South West. These areas have a significantly different faunas if considered on the basis of all species, or all Hydraenidae, or all Iberian endemics, or hydraenid endemics, but other groupings follow a random distribution. The main biogeographical division is simply North versus South, with the South East group having more affinities with Morocco than with the other groups, the same being true for the Pyrenees and France. The habitats with the highest conservation value are medium altitude freshwater streams in the Hercynian mountains of central and western Iberia, the pre-Pyrenees and the Baetic cordilleras, plus the saline streams of the South East and the central Ebro Valley. The IUCN red list species are reviewed. The vulnerable status of *Acilius duvergeri* Gobert and the endangered status of *Rhithrodytes agnus* Foster are endorsed. It is proposed that *Agabus hozgargantae* Burmeister, *Deronectes depressicollis* (Rosenhauer), *D. ferrugineus* Fery & Brancucci and *D. algibensis* Fery & Fresneda are excluded, the latter being put into the Data Deficient category. It is proposed that *Potamophilus acuminatus* (Fab.) and *Stenelmis consobrina* Dufour are added to the list as vulnerable species.

RIBERA, I. 2000. Biogeography and conservation of Iberian water beetles. *Biological Conservation* **92** 131-150.

TUNISIAN BEETLES, INCLUDING A NEW *AGABUS*

Agabus africanus is described as a new *Dichonectes* from NW Tunisia. With it were *Rhithrodytes numidicus* (Bedel), *Hydroporus feryi* Wewalka, *Graptodytes fractus* (Sharp) and *Stictonectes samai* Schizzerotto. *A. africanus* lives in the same types of habitat as *A. binotatus* Aubé, from which it is distinguished in a key intended to supplement that introducing *A. picotae* Foster & Bilton.

PEDERZANI, F. & SCHIZZEROTTO, A. 1998. Description of *Agabus (Dichonectes) africanus* n. sp. from North-West Tunisia and notes on the cohabiting species of Hydradephaga (Coleoptera Haliplidae, Gyrinidae and Dytiscidae). *Atti dell'Academia Roveretana degli Agiati* 7 B 87-95.

NEW TURKISH *LACCOBIUS*

The new species, *lycius*, most closely resembles *L. scutellaris* Motschulsky and *L. hindukushi* Chiesa, but has distinctive acuminate parameres. It was found with *L. exilis* Gentili, *Helochares lividoides* Hansen & Hebauer and *Chaetarthria seminulum* (Herbst) in what sounds like a fouled-up stream "contaminated, apparently by degraded organic solids from an ablution-block ... regularly visited due to its high amenity interest".

GENTILI, E. & WHITEHEAD, P.F. 2000. A new species of *Laccobius* (Col., Hydrophilidae) from Lycia, Turkey. *Entomologist's monthly Magazine* 136 73-76.

MOROCCAN BEETLES

Thirty two species of beetle were found in the Maghreb, including two endemic species, *Hydraena scabrosa* d'Orchymont and *Normandia villosocostata* Reiche.

BERRAHOU, A., CHAVANON, G. & RICHOUX, P. 2000. Études sur la Basse Moulouya (Maroc oriental): 6. Les Coléoptères aquatiques de l'Oued Zegzel. *Bulletin mensuel de la Société Linnéenne de Lyon* 69 (3) 44-50.

CANARIAN CATALOGUE

📖MACHADO, A. & OROMÍ, P. (eds) 2000. *Elenco de los Coleópteros de las Islas Canarias*. Instituto des Estudios Canarios Monografia 70. ISBN 84-88366-35-3. Available from EntomoPraxis S.C., Nou 2, 25183 Seròs (Lleida) –also Apartat 36184, 08080 Barcelona; e-mail Entomopraxis.com and check out the website www.entomopraxis.com for direct ordering. Price 4,650 ptas plus surface postage (700 ptas in Europe) – total, including VAT, €33.95.

***Latissimus* 12** included an item of Thomas Vernon Wollaston. His impact on the Canarian fauna can best be appreciated from this stylishly produced catalogue. 1,968 species of Coleoptera are listed, including the following water beetles: three Gyrinidae, one *Haliplus* (*lineatocollis suffusus* Wollaston); 23 Dytiscidae; one *Hydrochus* (*grandicollis* Kiesenwetter); 17 Hydrophilidae; twelve Hydraenidae; one scirtid (*Cyphon gracilicornis* Wollaston); one *Dryops* (*gracilis* Karsch). Strangely, there are no Donaciinae and only one *Bagous* (*exilis* du Val), plus several *Lixus* spp. The authors retain *Potamonectes* for two dytiscids, *cerisyi* (Aubé) and *clarkii* (Wollaston), leaving the infamous *canariensis* (Bedel) alone in *Nebrioporus*.

BELGIAN *DONACIA*

Donacia dentata Hoppe is regarded as a very rare species in Belgium. The authors recount a new find in the extreme south on arrow-head, *Sagittaria sagittifolia*.

FAGOT, J. & THIEREN, Y. 1999. *Donacia dentata* Hoppe à deux pas de la Belgique. *Bull. r. Belge d'Ent.* 135 48-50

WARWICKSHIRE BEETLES

Haliplus laminatus (Schaller), *Ochthebius pusillus* Stephens and *Hydraena nigrita* Germar are recorded from Warwickshire, a vice-county in the English Midlands.

LANE, S.A. & FORSYTHE, T.G. 2000. Noteworthy beetles found in Warwickshire (VC 38) in 1999. *The Coleopterist* 9 (2) 102-104.

BEETLE PHYLOGENY – THE ONGOING QUEST

In this huge special edition of the Boletin devoted to evolution of the Arthropoda, Ignacio Ribera's paper concerns a review of beetle phylogeny. The monophyly of Coleoptera is generally accepted, as well as their proximity to the Neuropteroid complex. However, the sister group is in dispute, with Strepsiptera torn between association with beetles and Diptera depending on the weight you place on the molecular evidence, which favours the association with flies. Some of the questions awaiting a definitive answer are aquatic ones – are the Hydradephaga mono- or poly- phyletic? – what is the relationship between the Scarabaeoidea and the Hydrophiloidea and Staphyliniformia? – what was the evolutionary sequence of transitions to aquatic life in the Elateriformia (i.e. the dryopoids and scirtids)?

RIBERA, I. 1999. Evolución, filogenia y clasificación de los Coleoptera (Arthropoda: Hexapoda). *Boletin de la Sociedad entomológica Aragonesa* 26 435-458.

HYGROBIA HERMANNI STUDY

Jan Cuppen presents evidence to show that the squeak beetle increased its range in the Netherlands in the mid 20th century. Now it is common everywhere except the north. Water type does not seem to be the key factor in determining its distribution, but it appears to avoid extremely shallow, small water bodies as well as the larger water bodies and brackish water. Physiochemical characteristics varied widely at the sites where it occurred. The life cycle is univoltine with larvae mainly in May and June, and to a lesser extent in July. The crops of 15 adults had benthic Chironomidae and, less frequently, Oligochaeta.

CUPPEN, J.G.M. 2000. Distribution, phenology, food and habitat of *Hygrobia hermanni* in the Netherlands (Coleoptera: Hygrobiidae). *Entomologische Berichten, Amsterdam* 60 (4) 53-60.

WICKEN FEN DITCH QUALITY SCORES

Multivariate analysis of data for grazing fen ditches at Wicken Fen divided ditches between two areas, and between small and large water bodies. Ditch age and profile were important influences on faunal composition. Invertebrate distribution was strongly correlated with macrophytes but there was no correlation in rankings between beetles, molluscs and odonates based on quality scores. Quality scores for beetle faunas could be related to ditch age and detritus levels. This survey generated some valuable records for the reserve, notably *Agabus uliginosus* (L.), *Hydraena palustris* Erichson, *Limnebius aluta* (Bedel), *Oulimnius major* (Rey) and *Dryops griseus* (Erichson).

PAINTER, D.J. 1999. Macroinvertebrate distributions and the conservation value of aquatic Coleoptera, Mollusca and Odonata in the ditches of traditionally managed and grazing fen at Wicken Fen, UK. *Journal of Applied Ecology* 36 33-48.

BIODIVERSITY OF DYTISCIDAE IN DISTURBED AREAS

This licentiate thesis starts with a thought-provoking review of the impact of agriculture and urbanization on landscapes in relation to occupancy of aquatic ecosystems by diving beetles. Two papers are presented: Diving beetle (Dytiscidae) assemblages along environmental gradients in an agricultural landscape in southeastern Sweden; Migrating diving beetles (Dytiscidae) in agricultural and urban landscapes in southeastern Sweden. The first paper is based on water traps and the second on window traps. The second paper is specially interesting for the dominance of flying *Hydroporus*, and for flight records of species for which the information was previously limited or non-existent – *Hygrotus decoratus* (Gyllenhal), *Hydroporus fuscipennis* Schaum, *H. neglectus* Schaum, *H. notatus* Sturm, *H. scalesianus* Stephens, all based on single specimens. Some were fully to be expected – *Scarodytes halensis* (Fab.), *Agabus chalconatus* (Panzer), *Colymbetes striatus* (L.), *C. paykulli* Erichson. Also three specimens of *Agabus uliginosus* (L.) were taken from flight traps at Nykvarn, adding to the findings of Kirby and Foster (1991. *Agabus uliginosus* takes off. *Balfour-Browne Club Newsletter* **49** 8-9).

LUNDKVIST, E. 2000. *The importance of wetlands for biodiversity in agricultural and urban landscapes.* Linköping Studies in Science & Technology, Thesis 837.

LUNDKVIST, E., LANDIN, J. & MILBERG, P. 2000. Diving beetle (Dytiscidae) assemblages along environmental gradients in an agricultural landscape in southeastern Sweden. Submitted manuscript reproduced in: Lundkvist, E. *The importance of wetlands for biodiversity in agricultural and urban landscapes.* Linköping Studies in Science & Technology, Thesis **837** 37-54.

LUNDKVIST, E., LANDIN, J. & KARLSSON, F. 2000. Migrating diving beetles (Dytiscidae) in agricultural and urban landscapes in southeastern Sweden. Manuscript reproduced in: Lundkvist, E. *The importance of wetlands for biodiversity in agricultural and urban landscapes.* Linköping Studies in Science & Technology, Thesis **837** 57-80.

PONDSCAPES CONFERENCE PROCEEDINGS

BOOTHBY, J. (ed.) 1999. *Ponds & Pondscapes of Europe.* Proceedings International Conference of the Pond *Life* Project, Vaeshartelt Conference Centre, Maastricht, The Netherlands 30 August – 2 September 1998. ISBN 0-9531291-1-X. Available from Dr John Boothby, Liverpool John Moores University, Henry Cotton Campus, 15-21 Webster Street, Liverpool L3 2ET, England, UK at £10, possibly plus postal charges. You can e-mail j.boothby@livjm.ac.uk.

Thirty four papers are presented concerning pond issues in Europe (and one from Western Australia). These are interlaced with photographs and descriptions of ponds in Cheshire; this is disconcerting, making citations difficult, but one must applaud any experiment to bring together a mixed bag of proceedings. The pond descriptions contain more references to beetles than the proceedings, only the two papers below straying from herpetofauna and flora to more challenging things.

GLEDHILL, D. G. 1999. The conservation value of ponds in Northwest England: species diversity and rarity of invertebrates and macrophytes. In Boothby (*op. cit.*) 89-95.

GUEST, J.P. 1999. Ecology of Cheshire ponds: some historical aspects. In Boothby (*op. cit.*) 103-113.

NEW ANDALUSIAN *OCHTHEBIUS*

Ochthebius andalusicus belongs to the *O. atriceps* subgroup of the *O. foveolatus* group. It lives in saline streams in southern Spain, being darker than many of the other species in this habitat. The only sound distinguishing features lie in the aedeagophore.

JÄCH, M.A. & CASTRO, A. 1999. Revision of the Palearctic species of the genus *Ochthebius* XVII. *Ochthebius* (s. str.) *andalusicus* sp. nov. (Coleoptera: Hydraenidae). *Entomological Problems* **30** (2) 7-8.

JAPANESE *HYDRAENA*

Seven species of *Hydraena* subgenus *Hydraenopsis* are described from Ryukyu, and two new species of *Hydraena* s. str. are described from Honshu. The checklist comprises thirteen species, five *Hydraena* s. str. and the rest *Hydraenopsis*.

JÄCH, M.A. & DIAZ, J.A. 1999. The genus *Hydraena* Kugelann, 1794 (Insecta: Coleoptera: Hydraenidae) in the Ryukyu Archipelago (Nanshei-shoto), Japan. *Ann. Naturhist. Mus. Wien* **101** B 201-215.

JÄCH, M.A. & DIAZ, J.A. 1999. Description of two new species of *Hydraena* Kugelann from Honshu, Japan, with a check list of the Japanese species (Coleoptera, Hydraenidae). *Jpn. J. syst. Ent.* **5** (2) 337-340.

BAVARIAN MULTIVARIATE STUDY

The water beetle and libellulid faunas of 30 moorland ponds were studied in Schwabian Bavaria in 1995. Species occurrence could be explained in terms of pH and the accumulation of organic matter, which were strongly correlated with each other and with the age and successional stage of the ponds. Most instructive is the scatter plot the first axis of which is based on the successional age of the pond and the second on nutrient and mineral status. The twelve Red List species (which include *Bidessus unistriatus*, *Hydroporus rufifrons* and *Acilius canaliculatus*) are mainly associated with the more aged ponds, an exception being *Hydroporus elongatulus*, which is specially associated with *Carex* litter.

SCHMIDL, J. 1999. Erfolgskontrolle an Tümpelneuanlagen in schwäbischen Niedermooren anhand kleingewässerbewohnender Insektengruppen (Hydradephaga, Odonata). *Beiträge zum Artenschutz Bayerisches Landesamt für Umweltschutz, München* **150** 265-270.

EAST PALAEARCTIC DYTISCIDAE

Ten species of Dytiscidae are newly reported from Kamchatka bringing the total to 38. Twenty two are Holarctic. Four species are newly recorded from the Sakhalin and ten from the Kuril Islands. Amongst these, *Graphoderus perplexus* Sharp is reported for the first time from the Palaearctic Region.

Ilybius poppiusi is a mixture of two species. The true *poppiusi* is confined to Mongolia and Yakutia, thence as far as the Chita district of Russia. The newly described species, *I. injae*, ranges from Hokkaido to the far East of Russia.

NILSSON, A.N. 1999. Description of a new Palearctic species of *Ilybius* Erichson previously mixed up with *I. poppiusi* Zaitzev (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **69** 33-40.

NILSSON, A.N., KHOLIN, S.Y. & MINAKAWA, N. 1999. The diving beetles of Kamchatka, with additional records from Sakhalin and the Kuril Islands. *Beitr. Ent.* **49** 107-131.

SENEGALESE INSECTICIDE EXPERIMENTS

There is plenty of literature on the effects of insecticides on the most abundant aquatic invertebrates but such studies usually stop short of consideration of the predators, in particular beetles. These studies were intended to detect the effects of accidental contamination of natural ponds in the savannah of Senegal by insecticides directed at locust swarms. Casualties noted during application of fenitrothion and deltamethrin included "*Eretes sticticus, Rhantaticus congestus*, *Cybister* sp., a large *Hydrophylus* [*sic*] sp. (Hydrophilidae), [and] various small, unidentified coleopteran beetles", also Gyrinidae. Casualties associated with another contact insecticide, the carbamate bendiocarb, were much lower. As might be expected, the slow-acting larvicide, diflubenzuron, caused no immediate losses. Numbers of some copepods and ostracods increased following treatments, because of either reduced competition or reduced predation.

LAHR, J., DIALLO, A.O., GADJI, B., DIOUF, P.S., BEDAUX, J.M., BADJI, A., NDOUR, K.B., ANDREASEN, J.E. & VAN STRAALEN, N.M. 2000. Ecological effects of experimental insecticide applications on invertebrates in Sahelian temporary ponds. *Environmental Toxicology & Chemistry* **19** (5) 1278-1289.

GREEK CHECKLIST

Sixteen species of Dryopidae, 21 Elmidae and 121 Hydraenidae are listed for Greece. The manuscript was accepted for publication on 13 December 1993; complainers about the lateness of ***Latissimus***, please note!

JÄCH, M.A. & AVTZIS, N.D. 1999? Check list of the Dryopidae, Elmidae and Hydraenidae (Coleoptera) of Greece. *Entomologica Hellenica* 12 (1994-1998) 13-17.

DMHF SUPPLIER

David Tempelman notes that one can still obtain DMHF in small quantities from:

Chemical Intermediates Co. Ltd.
Barnfields Industrial Estate
Leek
Staffordshire ST13 5QG Telephone ++ 44 (1) 782 50 4503; fax ++ 44 (1) 782 503869

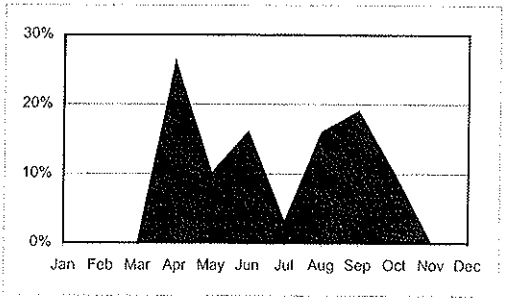
The cost is £8.50 for 250 grams, the minimum sample that can be ordered. Make up the stock solution to 80% by allowing the crystals to dissolve at their own speed in deionised or distilled water. Do not try to heat the mixture but note that solutions can be revived if they go cloudy by use of the microwave oven.

Ignacio Ribera notes that, contrary to remarks made in ***Latissimus*** **12**, Entomopraxis still have a stock of DMHF (check on www.entomopraxis.com).

UPDATE ON THE UK BIODIVERSITY PLAN

Bidessus minutissimus – some attempts to rediscover this species at formerly occupied sites have failed, e.g. John Bratton and Adrian Foster on the Afon Conwy (River Conway) on 3 May 2000.

Bidessus unistriatus - Leo Batten (**Anglian Water**) made enquiries about the action plan for this species on 11 April 2000, and was supplied with updated information on its status and phenology. Anyone intending a survey should note the distinct dip in adult numbers in July, based on the percentage occurrence of 31 records on a monthly basis.



Terry Clough (**Environment Agency**, Anglian Region, Brampton PE18 9UX.) made enquiries on 31 July 2000, on the basis of which it is hoped that survey work will be undertaken on the habitat requirements of *B. unistriatus*, particularly in East Anglia. Garth Foster, Martin Collier, Geoff Nobes, Kleio Kalemtzaki and Terry visited Home Mere on the Stansted Army Training Area on 9 September 2000. This was a site where Paul Hyman found *B. unistriatus* in October 1985. Unfortunately we could not find the beetle and we were unable to gain access to the main firing zone of the training area, where sites were last found to support this species in 1986.

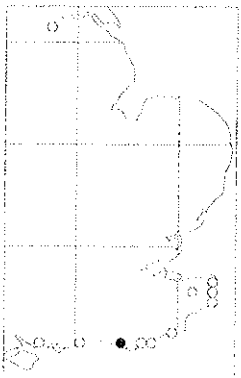
Neil Jarvis (**Brecks Countryside Project** c/o Suffolk County Council) enquired on 12 January 2001 about the status of *Bidessus unistriatus* and *Hydroporus rufifrons*. He was given the latest information we have, basically that *B. unistriatus* has not been reported in the Brecks since 1986 and *H. rufifrons* since 1934 at a site that has been frequently investigated recently.

Tim Smith (**E&L** Ltd) enquired on 9 March 2001 about means of allocating records of *Bidessus unistriatus, Hydroporus rufifrons* and *Donacia bicolora* to catchments in East Anglia. He was supplied with means of allocating 20 hectad records to sites.

Lindsay Husband (**MoD**, DE Conservation, Aldershot) telephoned on 11 April 2001 about the status of *B. unistriatus* on the military training area in the Brecks. She was supplied with imagery and a statement to the effect that the Ministry of Defence may well have been responsible for the survival of the beetle, if only because a military presence lessened demand for groundwater, thereby helping to maintain the area's peculiar hydrology. It might be useful to find *B. unistriatus* in a shellhole as well!

Laccophilus poecilus – **English Nature Research Report** – Peter Hodge's review emphasises the concern about the continued survival of this species in the United Kingdom. He recommends that it should be upgraded to ***Red Data Book 1 – Endangered*** (RDB1) because it appears to be restricted to an isolated section of dykes on the Lewes Levels. The report gives details of all the sites surveyed including a list of the 60 species of water beetle encountered. The stepped structure of the dyke in which it occurs is thought to be important for its survival. The map (right – open symbols before 1980 – 34 records in all) is an update based on the historical records summarised by Peter.

Peter writes (13 April 2001)



"The Lewes site failed to produce any specimens during 2000 and it is feared that the species must be quite close to extinction here. Several ditches where *L. poecilus* used to occur are, for a variety of reasons, no longer considered suitable for the species. Jon Curson, the conservation officer concerned with the Lewes Brooks SSSI and based at the local English Nature office is keen to restore rotational ditch management. One ditch was cleared in August 2000 and monitoring will be carried out here in 2001 when the current Foot & Mouth Disease restrictions are lifted.

Two former sites in Yorkshire: Thorne Moor and Barmston Main Drain, were visited in late August 2000 but the task of locating precise data for any of the Yorkshire records for *L. poecilus* has not bee straightforward. Details of the record for Barmston on 15 July 1977 by the late John Flint cannot be located, neither can the specimen. Bob Marsh has been unable to locate the specimen in John Flint's collection at Leeds Museum, and there are no water beetles listed in John's diary for that

day though he was at the Barmston Drain. The publication point for the record cannot now be traced and a further appeal is made for information. There are at least three separate records for Thorne Moor (precise locations uncertain) and it does seem likely that, with more survey effort, the species will eventually be located there."

Helen Hamilton (**Environment Agency**) enquired on 22 September 2000 about a record for Sefton that had resulted in this beetle appearing in the Northwest [of England] Biodiversity Audit. The Club has no information on any such record.

HODGE, P.J. 2000. The diving beetle *Laccophilus poecilus* (Dytiscidae). Historical review, survey and monitoring on the Lewes Levels. *English Nature Research Reports* **357**.

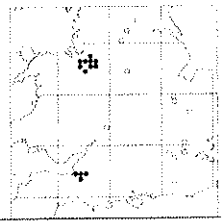
***Hydroporus rufifrons* – not in North Wales** - John Bratton (**Countryside Commission for Wales** – and a Club member) has tracked down the specimens referred to by E S Brown from Caernarfon. Brown's collection is in the Hope Museum, University of Oxford. Darren Mann has checked the specimens labelled "Small pool near Glaefryn, Caernarvon, 5.iv.1941". They are all *H. erythrocephalus* (L.), confirmed by a male dissected by Darren. Professor Frank Balfour-Browne's card index for Caernarvon merely notes the published reference (which had no locality data) and does not include this species among more than fifty Caernarvonshire species sent to him by Brown on 13 June 1943. The card index also notes *H. rufifrons* in a manuscript list of Caernarvon beetles received from his son, Jack Balfour-Browne, on 5 July 1938; in an entry for 23 October 1938 he does not note this species in a long list of Caernarvon material seen by him – nor does J B-B's 1938 journal contain any reference to this species.

David Bilton reports a new site in August 2000, at Rusland, Westmorland (SD 38). Pascale Nicolet has found a new site near Staveley, Westmorland (SD 49) in 2000. Jonty Denton could not find the species at the Boretree Tarn site, also in Westmorland. Mick Eyre re-examined the Kidwelly Castle Moat site on 23 October 2000 without success.

See also comments under *Bidessus unistriatus* in the Brecks and East Anglia in general.

Agabus brunneus – Francis Farr-Cox of the **Environment Agency** contacted the secretary on 22 February 2000 about action points for EA. The data-set was supplied to EA to facilitate identification of subcatchments requiring special consideration in terms of planning applications and abstraction licenses.

Hydrochara caraboides – The secretary was contacted on 31 January 2001 by Moira Anderson of **DETR** (0117 987 8000) because uncertainty had been expressed by **English Nature** as to who the Lead Partner was for this species. I felt obliged to comment that I have had no contact with DETR for some time, the last being in connection with a workshop for lead partners I couldn't attend organised in Coventry early in 2000. Jonathan Guest reports (February 2001) a couple of new sites in Cheshire, bringing the total hectads count to nine.



PhD studentship – conservation ecology of *Donacia* species – special announcement

Background

Two species of reed beetle *Donacia bicolora* and *D. aquatica* are included within the United Kingdom Biodiversity Action Plan (BAP), and are subject to specific Species Action Plans (SAPs). The University of Sussex was tendered to work on all aspects of work of phytophagous beetles under BAP and put forward proposals that included a joint studentship/contractual survey project on the conservation of *Donacia* species.

Objectives

- To plan and initiate implementation of the objectives and actions of the individual SAPs for *Donacia bicolora* and *D. aquatica* beetles under BAP.
- To undertake survey, research and advise practical conservation action to further the various conservation targets of *D. bicolora* and *D. aquatica* listed on the Biodiversity Action Plan.
- To assist in the identification of links, overlaps and possible conflicts with appropriate Habitat Action Plans and, possibly in the longer term, with other Species Action Plans and to ensure that the needs of these species are fed into the implementation of these plans at the appropriate national or local level.

Work will concentrate on the two species with individual Species Action Plans but may include research on other UK donaciine species in order to compare their ecology. However, ten per cent of

project resources may be used for furtherance of conservation of species of other species of donaciine beetle in England categorised as being of Nationally Scarce status within the review of UK Coleoptera (Hyman & Parsons, 1992: *A Review of the Scarce and Threatened Coleoptera in Great Britain*. UK Nature Conservation No 3. Joint Nature Conservation Committee, Peterborough).

The work will be undertaken partly through a post-graduate research studentships using a suitable qualified science graduate. It would be anticipated that the EN project officer would be a co-supervisor of any such studentship and may be involved in the candidate selection process. Amateur and consultant entomologists will be subcontracted to do some of the work, especially in the survey phases of work on individual species. The items of subcontracted work will be agreed in advance with English Nature.

Timescale Resources & Procedures

This contract is for three years, ending in 2003/2004. The studentship will start no later than October 2001. The student will be based at the School of Biological Science at the University of Sussex under the supervision of Dr Alan Stewart. English Nature's Nominated Officer will be Dr Roger Key, who will also act as an external supervisor to the student.

It is anticipated that the work will be undertaken in partnership with amateur and semi-professional entomologist who may be contracted by the University of Sussex for the purposes of survey, monitoring or species identification.

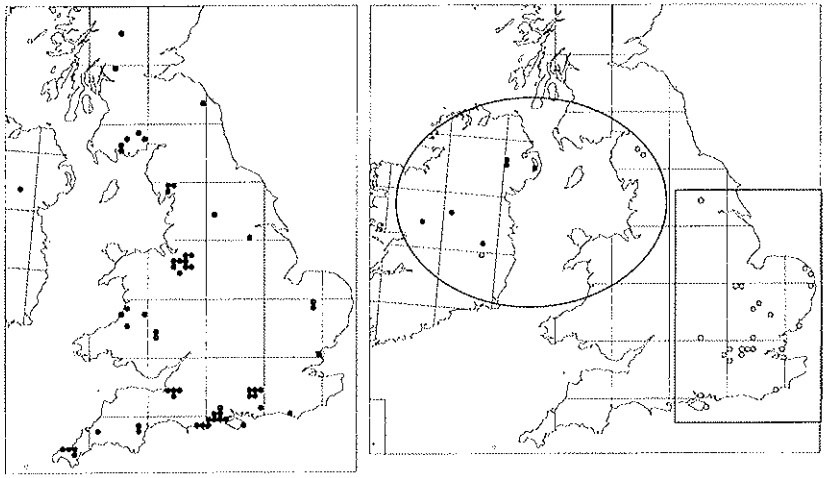
Dr Roger S Key, Senior Invertebrate Biologist, English Nature, Northminster House, Peterborough PE1 1UA, England, UK - (44)(0)1733 455256; roger.key@english-nature.org.uk.
Dr Alan J A Stewart, School of Biological Sciences, University of Sussex, Falmer, Brighton, East Sussex BN1 9QG, UK – (44) (0) 1273 877476; a.j.a.stewart@sussex.ac.uk.

October 2000

The **Environment Agency** has published *Focus on Biodiversity*, their contribution to wildlife conservation in England and Wales, for which they special responsibility to minimise pollution. They took lead responsibility for 39 species of 5 habitats associated with wetlands. These include *Agabus brunneus* (co-ordinator Francis Farr-Cox), *Bidessus minutissimus* (co-ordinator Viki Hirst), *Bidessus unistriatus* (Terry Clough) and various shingle species including *Hydrochus nitidicollis* (co-ordinator Viki Hirst). Updated information was supplied for the articles concerning these species, and Dr Franz Hebauer kindly provided the live illustrations of *A. brunneus* and *B. minutissimus*. Sadly, dead, carded insects were used to illustrate the other species, precisely the opposite of the message that we wish to get across about beetles. "Lead organisation", a term used in the executive summary would appear to be different from "lead partner", the term used to describe us. But we are very similar in that both organisations appear to be in need of extra resources to make further progress. It is not clear whether a charge attaches to this useful review of wetland conservation problems in England and Wales, but you could start by requesting a copy from the head office at Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD (www.environment-agency.gov.uk, www.environment-agency.wales.gov.uk, general enquiries on 0845 933 3111).

Peter West (pwest@animism.freeserve.co.uk), Secretary to the **Hampshire Pond Wardens**, enquired on 23 November 2000 about species resident in Hampshire and neighbouring counties. He was given an update on the status of UK BAP species in this area.

A meeting of the **Insect Conservation Specialist Interest Group** of the Royal Entomological Society took place in London on 6 December 2000. **Ian Middlebrook** (currently attached to RSPB) gave a talk on behalf of Action for Invertebrates. The remit for this group includes two water beetles, *Agabus brunneus* and *Graphoderus zonatus*, as well as some ground beetles and a sponge. For a fuller review see *Antenna* 25 (2) 96-97. At the end of the meeting, I gave a talk entitled "Wetland biodiversity action and beetles – the medium is the message". The medium was as much PowerPoint as water! One point that members may find of interest was a contrast between the conglomerate map of 497 records from 1980 onwards for the 13 BAP species with that for all 42 records on file for six extinct species. Assuming that the UK BAP is about maintaining and possibly restoring the biodiversity inventory, then the most immediate concern should be for species resembling the extinct species in their requirements. The maps suggest that our first selection of species for BAP was off the mark. The conglomerate BAP species (left below) is western in distribution. If one takes out *Gyrinus natator* (the sites in the ellipse) then the conglomerate extinct species (right below, in the rectangle) is mainly eastern in distribution, reflecting loss of the London Marshes and much East Anglian fenland. The criteria in use did not allow me to select species more representative of eastern fenland.



GNF December 2000

OCHTHEBIUS PUNCTATUS IN NORTH-WEST WALES by John Bratton

I had never found this species in 15 years of collecting water beetles until the year 2000, when I found it in four places. I had searched one of the pools about a dozen times over the previous three years. Did *O. punctatus* have a particularly prosperous year in 2000? In earlier years I have occasionally submitted an *O. marinus* to Garth Foster in the optimistic belief it was *O. punctatus*. Once the true *punctatus* has been seen, the difference in size prevents the same mistake being made again – it is a giant among British *Ochthebius* spp.

The materials on which it was found are worth comment. On one occasion two *O. punctatus* were found on the two-dimensional green alga *Ulva*. Three times they were found on pieces of plastic litter in the water, suggesting *O. punctatus* has an affinity with smooth firm surfaces. Unfortunately, I haven't yet had the presence of mind to take any *O. punctatus* alive and observe their behaviour when presented with a choice of materials. The details of the localities are given below.

1. A reed-choked roadside pool near Glan-y-mor, on the landward side of the road but only a few metres from the edge of Foryd Bay, a marine inlet. VC 49. SH453604. Conductivity 2140 uS/cm @ 25 C.
8 April 2000 One *O. punctatus* on a dead oak leaf.
1 May 2000 Two *O. punctatus* under a piece of plastic sheet.

2. Shallow saltmarsh pool, sand and mud bed, mostly dominated by reed. Separated from the sea of Red Wharf Bay by a broad sand bar. VC 52. SH535798. Conductivity 14400 uS/cm @ 25 C.
27 May 2000. Two *O. punctatus* on *Ulva*.

3. Shallow sheep-trampled pond south of Porth-y-garan. VC 52. SH258769. Much decaying vegetation at the margin, anoxic only a few millimetres below the surface. Conductivity 4880 uS/cm @ 25 C. In rocky pasture 8 metres above sea level, about 50 metres from the sea.
28 May 2000. One *O. punctatus* dislodged from a piece of plastic.

4. A small pool about 0.5 metres diameter, in the short turf of Aberffraw Dunes, a few metres from the small estuary of Afon Ffraw. VC 52. SH356687.
2 Sept. 2000 One *O. punctatus* on a piece of submerged plastic film.

There are previous NW Wales records of *O. punctatus* as follows. Llanbedr, SH52, Carnarfon, *circa* 1900, HG Attlee (Morgan 1974). Beaumaris, SH57, Anglesey, 13 July 1937, WM Crawford (Foster & Lazell 1967). Trearddur Bay, brackish lagoon formed by walling up part of the beach, SH27, Anglesey, 1966 (Foster & Lazell 1967).

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MORGAN, M.J. 1974. Coleoptera of Merioneth, North Wales. A supplement to Skidmore & Johnson's list, 1969. *Entomologist's Gazette* **25** 53-75.

Received May 2001

Papers in brief

ARCHANGELSKY, M. 2000. Immature stages of Neotropical Hydrophilidae (Coleoptera): *Hydramara argentina* (Knisch, 1925) and *Hemiosus bruchi* Knisch, 1924. *Proc. Entomol. Soc. Wash.* **102** (2) 280-291.

ARCHANGELSKY, M. 1999. Larvae of Neotropical *Berosus* (Coleoptera, Hydrophilidae): *B. aulus* Orchymont, 1941 and *B. auriceps* Boheman, 1859. *Tijdschrift voor Entomologie* **142** 1-8.

BISTRÖM, O. 1999. *Hydrovatus wewalkai* n.sp. described from Thailand (Coleoptera, Dytiscidae). *Entomologica Fennica* **10** 179-181.

DENTON, J.S. 2000. Rare and uncommon Coleoptera in England, 1999. *The Coleopterist* **9** (2) 96-99.

HEBAUER, F. 2000. The New Guinean species of the genus *Platycyon* Hansen, 1999 (Coleoptera, Hydrophilidae). *Acta Coleopterologica* **16** (1) 3-16.

HERNANDO, C., AGUILERA, P. & RIBERA, I. 1999. *Bothriophorus atomus* Mulsant & Rey, 1852 nuevo para la peninsula Ibérica (Coleoptera: Limnichidae). *Orsis* **14** 39-41.

HERNANDO, C. & RIBERA, I. 2000. Notes on Limnichidae (Coleoptera): *Cyrtolimnichus punctulatus* Delève new junior synonym of *Simplocarina curticollis* Pic. *The Coleopterists Bulletin* **54** (3) 291.

MANN, D.J. 2000. Unusual host-plants for *Prasocuris phellandrii* (Linnaeus, 1758). *The Coleopterist* **9** (2) 92-93.

MORRIS, M.G. 2000. *Thryogenes fiorii* Zumpt (Erirhinidae) at Woodwalton Fen, Cambridgeshire. *The Coleopterist* **9** (2) 101.

NARDI, G. 1998. Reperti. *Scarodytes ruffoi* Franciscolo, 1961. *Bolletino dell'Associazione Romana di Entomologia* **53** 75-76.

NASH, D.R. 2000. *Prionocyphon serricornis* (Müller) (Col.: Scirtidae) in Wiltshire and Suffolk. *Entomologist's Record & Journal of Variation* **112** 183.

NILSSON, A.N. & TOLEDO, M. 1999. *Agabus amnicola* (J. Sahlberg) and *A. jacobsoni* Zaitzev, two poorly known species of the *uliginosus*-group (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **69** 29-32.

PEDERZANI, F. 1999. *Hydroporus (Sternoporus) jurjurensis* Régimbart, 1895 nel Massino del Pollino (Insecta Coleoptera Dytiscidae). *Quaderno di studi e Notizie di Storia Naturale della Romagna* **11** 3-4.

PEDERZANI, F. 1999. *Sternopriscus wattsi* n. sp. from SW Australia (Insecta Coleoptera Dytiscidae). *Quaderno di studi e Notizie di Storia Naturale della Romagna* **11** 5-8.

RYNDEVICH, S.K. 2000. On the distribution of *Helophorus confrater* Kuwert, 1886 in the Eastern Carpathians (Coleoptera; Hydrophilidae). *Zoosystemica Rossica* **8** (2) 311-312.

WEWALKA, G. & BISTRÖM, O. 1997. A new species of the genus *Agnoshydrus* (Coleoptera: Dytiscidae). *Linzer biol. Beitr.* **29** (2) 851-854.

Latissimus is a publication of the Balfour~Browne Club.

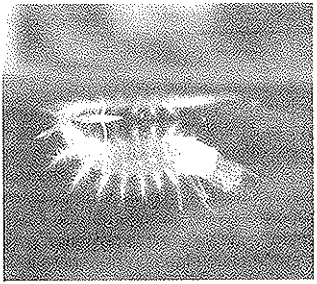
Issue **13** was published on 8 May 2001.

WEBSITES

Anders Nilsson notes that his **Catalogue of Palearctic Noteridae and Dytiscidae** has shifted to www.bmg.umu.se/BigInst/WWW/PERSONAL/HEMSIDOR/AN_BIG/Catr_main.htm

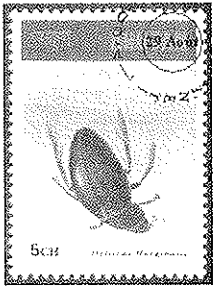
Manfred Jäch draws attention to his website and notes that it contains complete bibliographies of himself and his co-workers. Those requiring reprints should refer specifically to the papers that they need and not ask for "...any other papers relating to this topic, etc."

www.nhm-wien.ac.at/nhm/2Zoo/coleoptera/aqua/aqua.html



Another Umeå site is Philip Buckland's BUGS database of beetle fossil records, upgraded as a some fast zip files and designed to run on Access 2000 (or as a slightly older version for Access 97):
www.umu.se/envarchlab/BUGS/BUGSObtain.html
Nomenclature has its funny side and *Ytu brutus* Spangler 1980 gets an airing again (it was in an early newsletter)
www.best.com/~alta/taxonomy.html
Hydrochara caraboides
Visit Andy Harmer's photographs of larvae and an egg cocoon
http://ds.dial.pipex.com/town/place/xcj80/Hydrochara.htm

But there is so much garbage on the web too!
Rather than name and shame some sites for their egotism and inaccuracy, let's just try a philatelist's centre. The stamp purports to be based on *Dytiscus Marginalis* [sic]. Perhaps the stamp is valuable in the same way that those stamps with printing mistakes.
www.phil-net.net/eng/newstamps/bhutan/19970160.html
Note the way in which the specimen is rising for air! Please notify the editor of any interesting garbage sites.



CORRECTIONS & OMISSIONS - *LATISSIMUS* 12

- page 9 – CIAMPOR, not IAMPOR
- Apologies for the poor quality of the figures on pages 21 and 22. Request a replacement page for No. 22 if you did not receive an insert with your issue. The opportunity was taken on that insert to add Christine Wilson's address, omitted from the addresses of authors along with the same address for Robert Angus (Royal Holloway, University of London, Division of Biology, Egham, Surrey TW20 0EX, England, UK).
- page 38 – the authority for *Paracymus phalacroides* is Wollaston, not Régimbart
- page 40 – *Roraima*, not *Roaraima*

The ever-expanding e-mail listing – changes from last time are emboldened -

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