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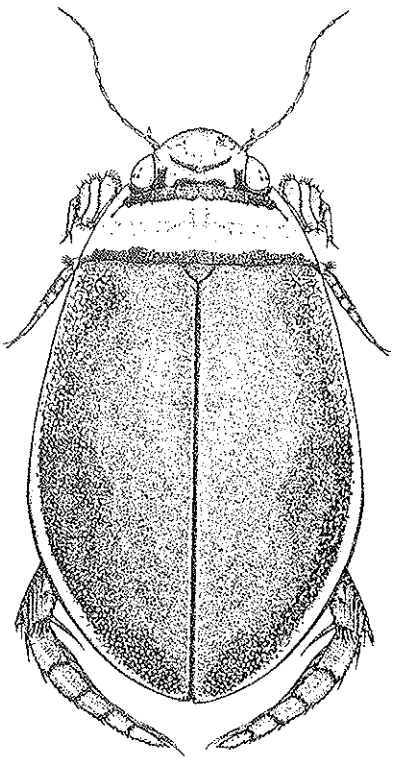
SCANDINAVIAN DYTISCIDAE

NILSSON, A.N. & HOLMEN, M. 1995. *The aquatic Adephaga (Coleoptera) of Fennoscandia and Denmark. II. Dytiscidae*. Fauna Entomologica Scandinavica **32**, 192 pp. Leiden, New York and Cologne, E.J. Brill/Scandinavian Science Press. ISBN 90 04 19456 9. The best deal appears to be to buy it in England from E.W. Classey at £50 inclusive. Postage is not charged by Classey and there is no value added tax in the UK.

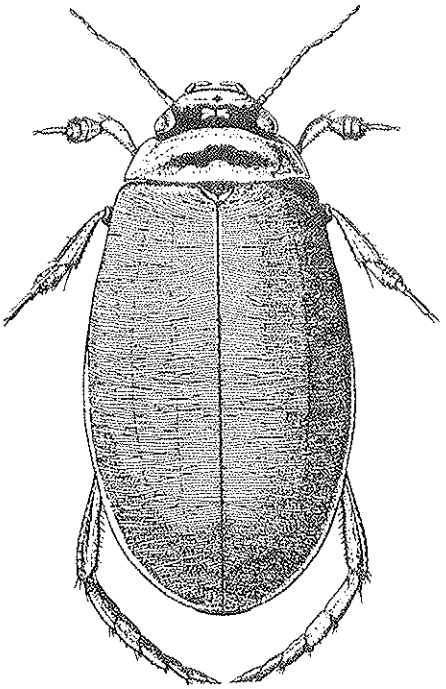
The long-awaited completion of the water beetle studies of Denmark, Norway, Sweden and Finland is most welcome. The treatment in English is complete only for the target area. This is unfortunate as the inclusion of all northern European species might have widened the market for the book. Taking Britain for example the species missing are *Hydrovatus clypealis* Sharp, *Hydroporus cantabricus* Sharp, *Graptodytes flavipes* (Olivier), *Stictonectes lepidus* (L.), *Oreodytes davisii* (Curtis), and *Agabus biguttatus* (Olivier). But then when one thinks that they have had to tackle 35 *Hydroporus* species and 38 *Agabus*, perhaps it is too much to ask for six more.



Nomenclatural changes include the return of *Coelambus* to a subgenus of *Hygrotus*. *H. canadensis* Fall is synonymised with *H. marklini* (Gyllenhal), thus recognising its Holarctic status. *Agabus solieri* Aubé is regarded as a clinal form of *A. bipustulatus* (L.), a view which is fully supported by experience in Scotland where a gradation to narrow forms can occur even at low altitude

The treatment of biology is rather brief and has the appearance of being a last minute addition, including for example the use of a drawing of the pupa of *Lancetes*, not a European genus. There hasn't been time to test the keys, but they are substantial, not simplistic.

The drawings are to a high standard, most of them being prepared by Mrs G. Marklund. Some are too heavily stippled and have suffered from over reduction (e.g. *Hydroporus* prosternal processes). The portrait gallery of habitus figures is an effective replacement for the usual colour plate, being reminiscent of Sharp's *magnum opus*. Some of these drawings have not been well reproduced by the printer and have an "over exposed" effect. However, the accuracy of depicting shapes makes them extremely useful to the inexperienced as a first port of call when trying to pick out a genus, as the figures here reproduced of *Colymbetes dolabratus* (Paykull) and *Graphoderus bilineatus* (De Geer) show. Mrs Marklund's interpretation of the pronotal sides of *Stictotarsus griseostriatus* (De Geer) and *S. multilineatus* (Falkenström) also differs from those of the authors.



Picking out the two Vikings in a crowd will be assisted by their photographs on the back cover. One annoying feature of the new FES volumes is that Brill has changed to a larger format from the earlier works on Haliplidae/Gyrinidae/ Noteridae/ Hygrobiidae and Hydrophiloidea. All fairly trifling criticisms. You will never regret buying it.

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

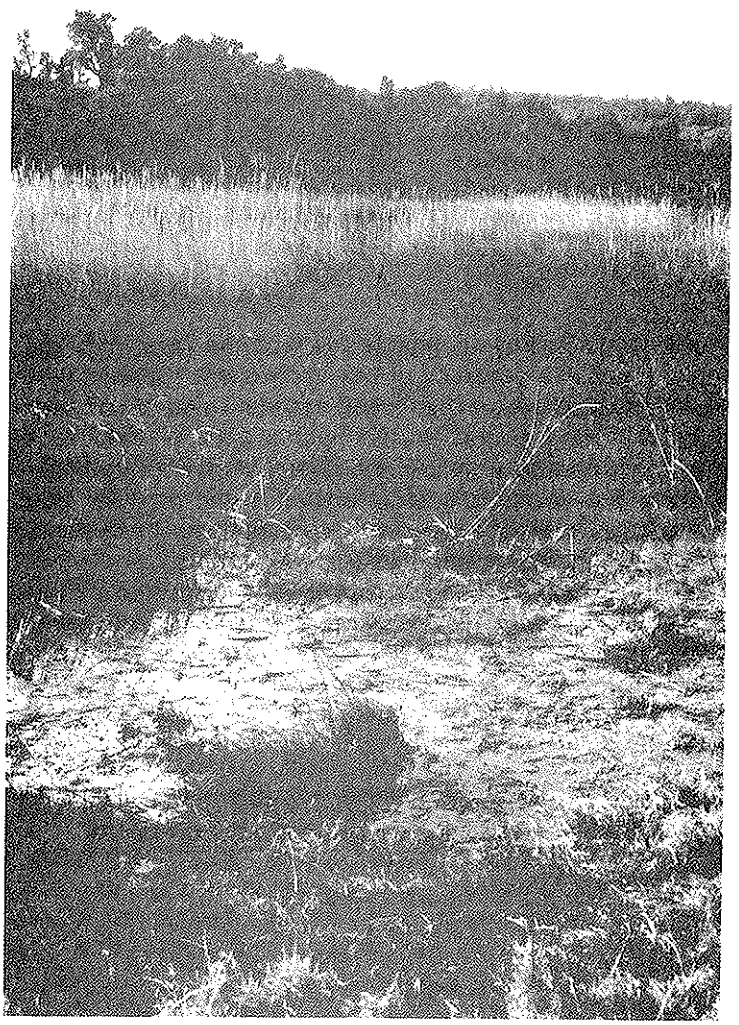
ELS ESTANYS DE CAPMANY: THE MISSING SPANISH PINGO (OR PALSA) FENS?

by Ignacio Ribera and Pedro Aguilera

[AND IS THERE *INTERESTING* LIFE ON MARS?]

If there is a water-beetler's paradise, it must certainly contain some old pingos or palsas: 129 species in Norfolk (Foster 1993), 109 in the Marais de la Perge (Bameul 1994), among them some rare species and late glacial relicts... and also more than one hundred species in what seem to be the north-east Spanish equivalents, the Capmany fens (Els Estanys de Capmany). Pingos and palsas - hydrolaccoliths in a more technical vein - are subterranean ice lens that raise the covering soil layers above the surface level as they grow through the input of groundwater. When the lens of old periglacial pingos or palsas thawed after the last glaciations, they left round or oval depressions which were sometimes subsequently filled with water. Although the question of the origin (and nicknames) of hydrolaccoliths is not resolved, pingos require a continuous permafrost with rather low temperatures, while palsas can be formed through the action of ice lens with a discontinuous growth - and could thus be present in areas with average temperatures above 0° C for part of the year (Pissart 1974; Nelson *et al.* 1985). Different types of depressions formed during the thaw of periglacial frozen ground are known in Ireland, England, Wales, France, Belgium, the Netherlands, Germany, Poland, Denmark, and all around the Arctic (Pissart 1974; Foster 1993; Bameul 1994) (there seem to be old pingos even in Mars, in a place with such a wonderful - and promising - name as Utopia Planitiae, Costard & Kargel 1995).

Anyway, both relict pingo and mineral palsa fens have some characteristic features: they are round or oval, with sizes ranging from a few metres to several hundred in diameter, and occur in aggregates (more linear in palsas) in periglacial areas (Ballantyne & Harris 1994). The presence of a peripheral elevated rim is a bonus that reduces any doubt, but it could be absent either because it was never formed in the first place or because it was later eroded (Ballantyne & Harris 1994). Bomb craters have rims and are found in lines, but their history is usually well documented. Although some pingos have a less impressive fauna (e.g. the Irish pingos, Foster *et al.* 1992; or the Welsh ones, Garth Foster, pers. comm., 1996), the best examples have more than one hundred species, some of them biogeographical relicts that usually occur much further in the north (Foster 1993; Bameul 1994). With this list in mind it is straightforward to recognise the Capmany fens as rather good candidates: they occur in lines and have the right size and shape (Fig. 1), are in the right place (the edge of the Pyrenees), and have the right fauna (Table 1). It is difficult (and embarrassing) to explain why they have not been recognised before, but with this note we want to give a detailed list of their water beetle fauna and to note its most likely thermokarstic origin. More detailed work on the ecology and the biogeography of their fauna is in preparation.



Characteristics of the Estanys Els Estanys are a series of shallow depressions of small to medium size, up to 500 m in diameter, although the largest probably formed through the accretion of several smaller ones. They used to fill with the typical Mediterranean heavy rains either in autumn or early spring, probably both with superficial and ground water. Although there is no evident source within their perimeter, the largest can be totally filled in less than two weeks, a time too short to have resulted solely from superficial runoff. They

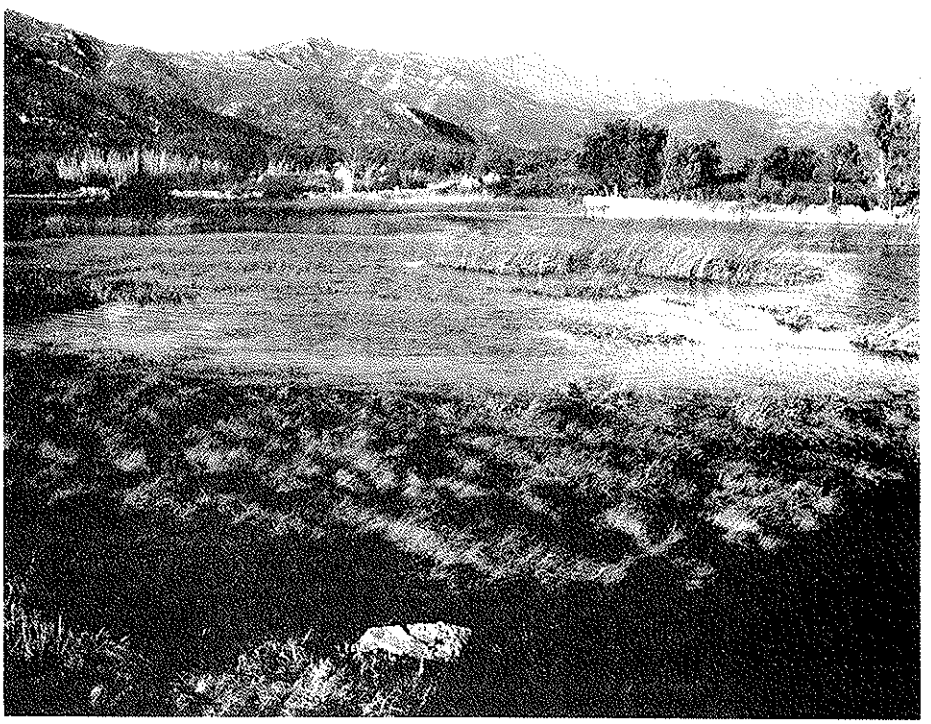
are temporary, and used to dry out between spring and late summer, depending on the year and their size. In some years they can remain dry during the whole winter, but only exceptionally do they retain some water through the summer. They tend to have an irregular and unpredictable two-year cycle (Ribera 1993; Ribera *et al.* 1994).

The Estanys are located in the lower reach of the Oriental Pyrenees, near Figueras (province of Girona) and close to the French border. This is a lowland area (between 100 and 250 m), with unusual high rainfall rates (800-900 mm/year) due to the effect of the Albera mountains, with maximum altitudes over 1,200 m. Winter temperatures can drop below -5° C, but the surface of the fens usually remains free of ice: over the five years that we have sampled the area we found ice only once, in January 1994. The soil is mainly on late-Hercynian granite, with a low permeability. The area was not covered by ice during the Pleistocene (Serrat 1992), being far from the permanent permafrost, and thus they are most likely to be old mineral palsas, or other similar kind of depressions originated by the thaw of ice-ground in partial permafrost, rather than pingos.

Aquatic vegetation is dominated by *Phragmites australis* and several species of *Typha* and *Scirpus*. All the streams and outlets in the area are tributaries of the Llobregat d'Empordà, in the river Muga basin. Data were collected during two periods, corresponding with two complete cycles of the fens: January 1989 to January 1991, and November 1993 to January 1994, plus an isolated visit on 31 December 1995.

Aquatic Coleoptera found in the Estanys Some information can be found in Ribera (1993), Valladares & Ribera (1993), Ribera *et al.* (1994), Ribera & Aguilera (1995), Ribera *et al.* (1995), and Aguilera *et al.* (1996); the complete list is in Table 1. Two broad groups can be distinguished (Ribera, 1993): those which are exclusive to the fens, and those which can also be found in the surrounding habitats, mainly some small artificial reservoirs and nearby streams. Among the latter some species are more or less ubiquitous and opportunistic, being regularly found in a wide range of habitats with regularity (*Haliplus lineatocollis*, *Hydroporus vagepictus*, *Agabus bipustulatus* and *Helochares lividus* are the most obvious examples). Others (in parentheses in Table 1) are mostly restricted to the streams, and their presence in the fens should be considered occasional. Their inclusion in the list (other than to depict the full range of diversity) has a comparative purpose, as there are English and French equivalents, such as *Limnebius truncatellus*, *Anacaena globulus*, *Laccobius striatulus*, *Coelostoma orbiculare*, and *Dryops striatellus*. Some of these often occur in artificial habitats, demonstrating their "true" ecological requirements.

The species found exclusively in the fens (asterisked in Table 1) are the most interesting from a biogeographical and conservation point of view. They include species with predominantly northern distributions, such as *Haliplus variegatus*, *Ilybius quadriguttatus*, *Hydaticus seminiger*, *Graphoderus cinereus*, *Hydrochara caraboides*, and *Hydrophilus piceus* (Ribera *et al.* 1995; Valladares & Ribera 1993). However, all these species have been found in other habitats in NE Spain (NE of the Ebro river) (Ribera *et. al.* 1995; Rosales & Lafuente 1993). Some of these habitats are likely to be at least as old as the Capmany fens, as is the case of the Pitillas lagoon, with *G. cinereus* (see below), or some old meanders of the Ebro, with *H. piceus* (Ribera *et al.* 1995), but others have a much more recent origin, like the Aig-uamolls de l' Emp-ordà and other coastal wetlands on Holocene alluvial deposits, with *I. quadriguttatus* and *H. seminiger* (Rosales & Lafuente 1993; Ribera *et al.* 1995). Despite the almost complete lack of information about the distribution and taxonomy of the Iberian *Enochrus*, *E. testac-eus* seems to be another example of a northern species



at the limit of its distribution; other Iberian records (Delta del Llobregat - Lagar 1967) probably refer to other coastal, widely distributed circum-mediterranean species.

Table 1. Aquatic Coleoptera from the Capmany fens

GYRINIDAE
*1 *Gyrinus caspius* Ménétriés
(2) *G. substriatus* Stephens
(3) *G. dejeani* Brullé
(4) *G. urinator* Illiger
HALIPLIDAE
*5 *Peltodytes caesus* (Duftschmid)
6 *P. rotundatus* (Aubé)
*7 *Haliplus guttatus* Aubé
**8 *H. variegatus* Sturm
9 *H. lineatocollis* (Marsham)
NOTERIDAE
*10 *Noterus clavicornis* (De Geer)
*11 *N. laevis* Sturm
HYGROBIIDAE
12 *Hygrobia hermanni* (Fab.)
DYTISCIDAE
*13 *Copelatus haemorrhoidalis* (Fab.)
14 *Hyphydrus aubei* Ganglbauer
*15 *Hydrovatus clypealis* Sharp
(16) *H. cuspidatus* (Kunze)
(17) *Yola bicarinata* (Latreille)
(18) *Bidessus coxalis* Sharp
*19 *B. goudoti* (Castelnau)
(20) *B. minutissimus* (Germar)
(21) *Hydroglyphus pusillus* (Fab.)
22 *Hygrotus inaequalis* (Fab.)
*23 *H. impressopunctatus* (Schaller)
(24) *Hydroporus planus* (Fab.)
(25) *H. pubescens* (Gyllenhal)
(26) *H. tessellatus* Drapiez
27 *H. vagepictus* Fairm. & Laboulbène
*28 *Graptodytes bilineatus* (Sturm)
29 *G. flavipes* (Olivier)
(30) *G. ignotus* (Mulsant)
31 *G. varius* (Aubé)
(32) *Stictonectes epipleuricus* (Seidlitz)
33 *S. lepidus* (Olivier)
(34) *Deronectes opatrinus* (Germar)
(35) *Stictotarsus 12-pustulatus* (Fab.)
(36) *Agabus brunneus* (Fab.)
(37) *A. didymus* (Olivier)
38 *A. bipustulatus* (L.)
(39) *A. conspersus* (Marsham)
40 *A. montanus* (Stephens)
(41) *A. nebulosus* (Forster)
(42) *Ilybius meridionalis* Aubé
**43 *I. quadriguttatus* (Bois. & Lac.)
44 *Rhantus suturalis* (McLeay)
45 *Colymbetes fuscus* (L.)
(46) *Meladema coriacea* Castelnau
(47) *Laccophilus hyalinus* (De Geer)
48 *L. minutus* (L.)
*49 *L. ponticus* Sharp
(50) *Eretes sticticus* (L.)
**51 *Hydaticus seminiger* (De Geer)
**52 *Graphoderus cinereus* (L.)
(53) *Dytiscus circumflexus* Fab.
(54) *D. marginalis* L.
(55) *D. pisanus* Castelnau
(56) *D. semisulcatus* Müller
*57 *Cybister lateralimarginalis* (De Geer)
HYDRAENIDAE
(58) *Ochthebius exaratus* Mulsant
(59) *O. aeneus* Stephens
(60) *O. dilatatus* Stephens
(61) *O. nanus* Stephens
(62) *O. viridis* 2 *sensu* Jäch
*63 *Hydraena atrata* Desb. des Loges
64 *H. testacea* Curtis
65 *H. cordata* Schaufuss
(66) *Limnebius nitidus* (Marsham)
(67) *L. truncatellus* (Thunberg)
HELOPHORIDAE
68 *Helophorus maritimus* Rey
69 *H. alternans* Gené
70 *H. brevipalpis* Bedel
(71) *H. griseus* Herbst
72 *H. minutus* Fab.
*73 *H. obscurus* Mulsant
HYDROCHIDAE
74 *Hydrochus angustatus* Germar
75 *H. flavipennis* Küster
76 *H. smaragdineus* Fairmaire
HYDROPHILIDAE
(77) *Anacaena bipustulata* (Marsham)
(78) *A. globulus* (Paykull)
79 *A. lutescens* (Stephens)
*80 *Hydrobius convexus* Brullé
*81 *H. fuscipes* (L.)
*82 *Limnoxenus niger* (Zschach)
83 *Laccobius atrocephalus* Sharp
84 *L. femoralis* Rey
(85) *L. striatulus* (Fab.)
86 *Helochares lividus* (Forster)
*87 *Enochrus isotae* Hebauer
**88 *E. quadripunctatus* (Herbst)
**89 *E. testaceus* (Fab.))
*90 *Enochrus (Lumetus) sp.*
**91 *Hydrochara caraboides* (L.)
**92 *Hydrophilus piceus* (L.)
*93 *H. pistaceus* (Castelna)
94 *Berosus affinis* Brullé
*95 *B. signaticollis* (Charpentier)
(96) *Coelostoma orbiculare* (Fab.)
ELMIDAE
97 *Oulimnius rivularis* (Rosenhauer)
(98) *O. troglodytes* (Gyllenhal)
DRYOPIDAE
*99 *Dryops algiricus* (Lucas)
DRYOPIDAE
*99 *Dryops algiricus* (Lucas)
(100) *D. gracilis* (Karsch)
101 *D. luridus* (Erichson)
(102) *D. striatellus* (Fairmaire & Brisout)
CHRYSOMELIDAE
*103 *Donacia vulgaris* Zschach

* Species considered to be typical of the fens.
** Species of northern distribution, found also in French and British periglacial habitats, and mainly restricted to old northern habitats in the Iberian Peninsula.
( ) Species occasionally found in the fens, but not typical of this kind of habitat (most of them are common in streams in the area). The rest are species with a wider ecological tolerance, most of them common in the area in different kinds of habitats.

Comparison with the fauna of the English pingos and the French palsas Els Estanys de Capmany share 49 species with les Marais de la Perge, and 36 with the Norfolk pingos. If we consider only the species present in all three geographical areas (Britain, France and the Iberian Peninsula), the potential maximum number of common species is 73 with La Perge and 52 with Norfolk (excluding Curculionidae). The actual shared species represent respectively a 67 and 69 percent of these maximums. It is interesting to note that, while 24 species found in Capmany do not occur in Britain, all of them can be found north of the Pyrenees, in France. On the contrary, 25 of the species found in La Perge are not known from the Iberian Peninsula. The number of species in the different families is also very similar (Table 2).

Moreover, some of the species found in Capmany but absent from the British fauna are the south-western European replacements of northern species which do occur in Norfolk (and most also in La Perge), like the pairs *Noterus laevis* (Capmany: C) ⇔ *N. crassicornis* (Müller) (La Perge: P, Norfolk: N), *Hyphydrus aubei* (C, P) ⇔ *H. ovatus* (L.) (N); *Graptodytes bilineatus* (C, P, although this species also occurs in Britain) ⇔ *G. granularis* (L.) (P, N); *Hydroporus vagepictus* (C) ⇔ *H. palustris* (L.) (P, N); or *Ilybius meridionalis* (C) ⇔ *I. fuliginosus* (F.) (N).

Some of the species absent from the Iberian peninsula are among the most typical inhabitants of the British and French pingos or palsas. This is the case of *Haliplus furcatus* Seidlitz, *H. ruficollis* (De Geer), *Hydroporus striola* (Gyllenhal), *Ilybius ater* (De Geer), *Hydrochus brevis* (Herbst), *H. ignicollis* Motschulsky, *Helophorus nanus* Sturm, and *Enochrus coarctatus* (Gredler). Typical British species

absent both from La Perge and Iberia are *Hydroporus glabriusculus* Aubé (not found in France) and *H. scalesianus* Stephens.

Table 2. Numbers of species in each family of aquatic Coleoptera in Norfolk, La Perge and Capmany

	Norfolk	La Perge	Estanys de Capmany
Gyrinidae	3	1	4
Haliplidae	8	7	5
Hygrobiidae	1	1	1
Noteridae	2	2	2
Copelatinae	1	1	1
Hydroporinae	26	19	22
Colymbetinae	19	9	11
Laccophilinae	1	2	3
Dytiscinae	4	8	8
Hydraenidae	8	6	10
Helophoridae	10	4	6
Hydrochidae	3	6	3
Hydrophilinae	18	20	18
Sphaeridiinae	8	4	?(>1)
Elmidae	0	1	2
Dryopidae	5	5	4
Heteroceridae	1	1	0[1]
Chrysomelidae	0	1	1
Curculionidae	7	11	?[2]
Total	**125**	**109**	**>103**
without Sphaeridiinae & Curculionidae	110	94	102

[1] One species of Heteroceridae, *H. aragonicus* Kiesenwetter, is found in the streams near the Estanys, which also have other interesting species (e.g. *Enochrus morenae* (Heyden) and *Chaetarthria similis* Wollaston; Ribera *et al.*, 1995).

[2] There are at least two species of aquatic weevil.

All these numbers and names suggest a general pattern in the composition of the respective assemblages: a rarefaction of an old original stock of late glacial communities from north to south, with the addition of some southern or eastern species that never got as far as either Britain or Iberia. Local historical and ecological factors have, of course, played a major role in the detailed composition of each individual site. Therefore, the Norfolk pingos do not have some of the large species present in la Perge and Capmany, such as *G. cinereus*, *H. caraboides* or *H. pistaceus*, or the "jewel" of La Perge, *Graphoderus bilineatus* (De Geer), despite all being known from Britain. The absence in Norfolk of some other smaller species present both in La Perge and Capmany (e.g. *Graptodytes bilineatus* or *Limnoxenus niger*) is more difficult to explain (Foster 1993). It must be noted that the distribution of *L. niger* in Spain is most uncertain, owing to possible confusion with the Iberian endemic *L. olmoi* Hernando & Fresneda.

Concluding remarks In assessing both the conservation value and the origin of the fauna of remnant pingos and mineral palsas there is a key question that has to be carefully considered: Does the extremely rich beetle fauna of these periglacial relicts depend on some special characteristic of the habitat, or it is just the consequence of a long, uninterrupted history, in which the species have been allowed to accumulate, approaching the "local null community" *sensu* Zobel (1992) (all the species of the regional pool which are able to live in that kind of habitat)? In other words, could it be possible to gather more than a hundred species without including anything rare or biogeographically interesting?

The comparison with other habitats with similar general characteristics, and in the same geographical area, could provide some clues. The Laguna de Pitillas, in Navarra, is a steppe lagoon in a closed basin, the northernmost habitat with these features in the Iberian Peninsula (effectively, western Europe). It lies in the basin of a Miocene closed sea, and it is almost certainly as old, if not older, than Els Estanys de Capmany, but with a very different origin. Although it is much larger, the main characteristics of the habitat are similar: a shallow round lagoon with a highly variable water level, almost completely covered with reed and other macrophytes. The water is however more mineralised, and the climate is also more continental, despite being relatively close to the sea (about 100 km, 70 km south of the French border).

One single visit with Andrés Millán in the way back from the Balfour-Browne Club meeting in Lessay in June 1995 rendered 33 species, 24 of them shared with Capmany, among them 10 of those considered to be characteristic of the fens. In a typical visit to Capmany it is usual to found

between 25 and 30 species per site, so it may perfectly well be that Pitillas harbours a similar total number of species. However, there were some interesting substitutions, which made its fauna very different from that of La Perge or Norfolk: *Haliplus andalusicus* Wehncke instead of *H. variegatus; Hydrovatus cuspidatus* instead of *H. clypealis* (in Capmany only a single specimen of *H. cuspidatus* was found, while *H. clypealis* is a common species); *Bidessus pumilus* (Aubé) instead of *B. goudoti*; *Enochrus bicolor* (F.) and *E. halophilus* (Bedel) instead of *E. testaceus* and *E. quadripunctatus*; *Laccobius moraguesi* Régimbart instead of *L. femoralis* and *L. atrocephalus*; or *B. hispanicus* Küster instead of *B. signaticollis*. Some additional species were Iberian endemics, such as *Hygrotus lagari* (Fery), or species with wide distributions but typical of mineralised waters, such as the Holarctic *Ochthebius marinus* (Paykull). In a single visit the absences are much more difficult to evaluate, but it had none of the typical northern species found in Capmany, except *G. cinereus*. It lacked other characteristic species, such as *Copelatus haemorrhoidalis*, *Graptodytes bilineatus* and *Enochrus isotae*, which in Capmany are very common and impossible to miss even in a single visit. Most of these substitutions can probably be explained in ecological terms: no great biogeographical differences might be expected between the sites, being both north of the Ebro valley and close to the main chain of the Pyrenees.

While the species richness could be a direct consequence of the long history of the habitat, the species composition is more dependent on local conditions. Those of the Capmany fens have allowed the persistence of an assemblage which is likely to be a direct inheritance of the communities that inhabited the same kind of periglacial thermokarstic habitats several thousand years ago.

AGUILERA, P., RIBERA, I. & FOSTER, G. N. 1996. Notes on the distribution, morphology, ecology and life cycle of *Hydraena (Phothydraena) atrata* Desbrocher des Loges in the Iberian Peninsula. *Boln. Asoc. esp. Ent.* **20** (1-2) 111-118.
BALLANTYNE, C.K. & HARRIS, C.H. 1994. *The periglaciation of Great Britain*. Cambridge University Press.
BAMEUL, F. 1994. Les Coléoptères aquatiques des Marais de la Perge (Gironde), témoins de la fin des temps glaciaires en Aquitanine. *Bull. Soc. ent. France* **99** 301-321.
COSTARD, F. M. & KARGEL, F. M. 1995. Outwash plains and thermokarst on Mars. *Icarus*, **114** 93-112.
FOSTER, G. N. 1993. Pingo fens, water beetles and site evaluation. *Antenna* **17** 184-195.
FOSTER, G. N., NELSON, B. H., BILTON, D. T., LOTT, D. A., MERRIT, R., WEYL, R. S. & EYRE, M. D. 1992. A classification and evaluation of Irish water beetle assemblages. *Aquatic conservation: marine and freshwater ecosystems* **2** 185-208.
LAGAR, A. 1967. Coleópteros del Delta del río Llobregat. VI nota. *Graellsia* **23** 71-79.
NELSON, F. E., OUTCALT, S. I., GOODWIN, C. W. & HINKEL, K.M. 1985. Diurnal thermal regime in a peat-covered palsa, Toolik lake, Alaska. *Arctic* **38** 310-315.
PISSART, A. 1974. Les viviers des Hautes-Fagnes sont des traces de buttes périglaciaires. Mais s'agissait-il réllement de pingos? *Annls. Soc. géol. Belg.* **97** 359-381.
RIBERA, I. 1993. Two strategies to cope with temporary habitats used by some pyrenean Hydradephaga. *Latissimus* **2** 2-5.
RIBERA, I. & AGUILERA, P. 1995. Heron predation on aquatic coleoptera. *Latissimus* **4** 1-2.
RIBERA, I., AGUILERA, P., BILTON, D. T., FERY, H., FRESNEDA, J., HERNANDO, C. & FOSTER, G. N. 1995. Towards a critical checklist of Iberian water beetles - some old records reconsidered. *Latissimus* **6** 3-7.
RIBERA, I.; ISART, J. & RÉGIL, J. A. 1994. Coleópteros acuáticos de los estanques de Capmany (Gerona). Hydradephaga. *Scientia Gerundensis* **20** 17-34.
ROSALES, N. & LAFUENTE, M. C. 1993. *Hydaticus seminiger* (De Geer) in the Iberian peninsula. *Latissimus* **3** 4.
SERRAT, D. dir. 1992. *Història natural dels Països Catalans. Vol. 2 Geologia (II). Geomorfologia*. Enciclopèdia Catalana, Barcelona.
VALLADARES, L. F. & RIBERA, I. 1993. Sobre la presencia de *Hydrochara caraboides* (Linnaeus,1758) e *Hydrophilus piceus* (Linnaeus,1758) en la Península Ibérica (Coleoptera: Hydrophilidae). *Zoologica Baetica* **4** 7-12.
ZOBEL, M. 1992. Plant species coexistence: the role of historical, evolutionary and ecological factors. *Oikos* **65** 314-320.

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ANOTHER IBERIAN *DERONECTES*

The latest species is very distinct and has previously escaped detection by living in muddy pools in the Prepyrenean streams. The photograph shows three Fosters contemplating the Laosas site in July 1996.

AGUILERA, P. & RIBERA, I. 1996. *Deronectes fosteri* sp. n. from northeastern Spain (Coleoptera: Dytiscidae). *Koleopterologische Rundschau* **66** 39-45.

HYDRAENA LARVA

A first instar *Phothydraena* larva is described with particular reference to its chaetotaxy, a hitherto poorly studied aspect.

DELGADO, J.A. & SOLER, A.G. 1996. Morphology and chaetotaxy of the first-instar larva of *Hydraena* (*Phothydraena*) *hernandoi* Fresneda & Lagar (Coleoptera: Hydraenidae). *Koleopterologische Rundschau* **66** 147-154.

CENTRAL PORTUGUESE BEETLES

One's heart always sinks when one sees someone attempting to record everything. Which subgroup will come off worst? This is an attempt to list all of the beetles, terrestrial and aquatic, found at Concelho de Cascais, on a promontory in central Portugal. Thirteen Dytiscidae, 16 Hydrophilidae, one scirtid, and two dryopids are recorded. The names do not inspire confidence.

AGUIAR, C.A.S. & SERRANO, A.R.M. 1995. Estudo faunístico e ecológico dos coleópteros (Insecta, Coleoptera) do Concelho de Cascais (Portugal). *Boletim da Sociedade portuguesa de Entomologia* **155** 41-66.

HYDRAENIDAE IN NORTH-WEST SPAIN

The following 17 species are recorded from the Órbigo basin:- *Hydraena testacea* Curtis, *H. affusa* d'Orchymont, *H. barrosi* d'Orchymont, *H. brachymera* d'Orchymont, *H. cordata* Schaufuss, *H. corinna* d'Orchymont, *H. inapicipalpis* Pic, *H. sharpi* Rey, *H. stussineri* Kuwert, *H. minutissima* Stephens, *H. emarginata* Rey, *H. exasperata* d'Orchymont, *H. hispanica* Ganglbauer, *H. iberica* d'Orchymont, *Limnebius gerhardti* Heyden, *L. truncatellus* (Thunberg), and *Ochthebius heydeni* Kuwert.

GARCÍA CRIADO, F., RÉGIL CUETO, J.A. & FERNÁNDEZ ALÁEZ, M. 1994. Aspectos ecológicos de la familia Hydraenidae (Coleoptera) en la cuenca del río Órbigo (N.O. España). *Zoologica baetica* (1994) **5** 11-25.

EL COTO DE DOÑANA FAUNA

Twenty eight palpicorns species are recorded from the National Park. These include the following species counts: *Hydraena* 2; *Limnebius* 1; *Ochthebius* 6; *Hydrochus* 2; *Helophorus* 5; *Anacaena* 3; *Berosus* 3; *Enochrus* 6; *Helochares* 1; *Hydrobius* 2; *Limnoxenus* 1; *Paracymus* 1; *Hydrophilus* 1; *Hydrochara* 1; *Dryops* 3. The *Enochrus* records are not acceptable, and will need to be revised when a review is completed for this genus.The records do not include *Helophorus alternans* Gené, which may be common in the area.

GARRIDO GONZÁLEZ, J., SÁINZ-CANTERO, C.-E. & DÍAZ PAZOS, J.A. 1996. Fauna entomólogica del Parque Nacional de Doñana (Huelva, Españna) I. (Coleoptera, Polyphaga). *Nouv. Revue Ent.* **13**(1) 57-71.

HYDRADEPHAGAN BODY SHAPE PATTERNS

An extensive study indicated that there are four main morphometric groups:

1. large to medium size streamlined, wide species, with the maximum width in the rear part of the body and the maximum height in the front part, with short tibia and long tarsi, considered to be adapted to high speed swimming in open waters;
2. small to medium size species with spherical body and long femora, considered to be adapted to manoeuvre in stagnant waters;
3. small species with a discontinuous outline, narrow body and long and slender legs, considered to be poor swimmers in running waters;
4. small to medium size species in general being streamlined, relatively deep-bodied, and with short and wide legs, considered to be adapted to crawl among dense vegetation or detritus.

You can either try and guess what the species and genera are within each group or read the paper. There was considerable evidence that these patterns had evolved several times over, indicating the strong adaptive forces in operation.

RIBERA, I. & NILSSON, A.N. 1995. Morphometric patterns among diving beetles (Coleoptera: Noteridae, Hygrobiidae, and Dytiscidae). *Canadian Journal of Zoology* **73** 2243-2360.

NEW MINORCAN *LIMNEBIUS*

L. minoricensis belongs to the *cordobanus*-group and is so far known from two places in northern Minorca. It must be regarded as endemic, along with *Hydraena balearica* d'Orchymont.

JÄCH, M.A., VALLADARES, L.F. & GARCÍA-AVILÉS, J. 1996. *Limnebius minoricensis* sp. n. (Coleoptera: Hydraenidae) from the Balearic Islands, Spain. *Aquatic Insects* **18** (2) 113-116.

MASS DISPERSAL OF *STENOPELMUS RUFINASUS* IN SURREY, ENGLAND

by Jonty Denton

On 22 July 1995, I visited Esher Common and Great Bookham Common, sites about 5 km apart. The water bodies at both localities were devoid of *Azolla*, but the weevil *Stenopelmus rufinasus* Gyllenhal was abundant in sweep samples at both sites. At Esher dozens were swept from *Molinia* near to the main pond, but a few were taken in a dry forest ride. At Bookham the weevils were found on various types of pondside vegetation. The low water table in the area may have forced the beetles to disperse from an unknown site (or sites) with *Azolla*. The abundance of weevils at widely separate sites indicated that a vast migration was underway. Intriguingly, a single specimen of *Laccophilus hyalinus* (De Geer), normally a species of slow running water in Britain, was taken in a stagnant pond at Bookham on the same day.

Received August 1996

GERMAN STATUS OF *STENELMIS CANALICULATA*

A review of records indicates that the range of this species has become restricted to the south-west and westernmost parts of Germany. The ecology of the species is discussed, including the co-occurrence of other water beetle species.

HESS, M. & HECKES, U. 1996. Verbreitung, Status und Ökologie von *Stenelmis canaliculata* (Gyllenhal, 1808) in Deutschland (Coleoptera: Elmidae). *Koleopterologische Rundschau* **66** 191-198.

GALAPAGOAN BEETLES

The following beetles were recorded from 11 stagnant water localities, mostly in stream-beds, on Santa Cruz, one of the Galapagos Islands:- *Liodessus affinis* Say, *Copelatus galapagoensis* Waterhouse, *Thermonectes basilaris* Harris, *Enochrus waterhousei* Blair and *Tropisternus lateralis* ssp. *galapagonesis* van Dyke. The *Copelatus*, the *Enochrus* and the *Tropisternus* subspecies are endemic to the Galapagos. The reprint was accompained by a translation into english.

REIMER, G. & JÄCH, M.A. 1995 Coleópteros de un arroyo en la Montaña de Santa Cruz. *Informe Anual 1988-1989 de la Estación Científica Charles Darwin* 102-104.

TWO REVIEWS IN ANNUAL REVIEW OF ENTOMOLOGY

Beetles feature conceptually in the review by Batzer and Wissinger. The diversity of the beetle fauna of temporary pools is specially noted, and there are some useful generalisations. In a section on the influence of physicochemical variables "the periodic flooding and drying of wetland habitats is probably the single most important influence on insect communitites, and the way wetland insects deal with drought is a key to their success." Perhaps the most interesting citations concern the experiments of Batzer and Resh (1991) concerning the relationships between beetle larvae, chironomids and algae. Isn't it odd how human beings, asked to review the world literature, end up talking about their own papers? In this case, why not, as they demonstrate that "top-down", predator-driven dynamics in pools may occur with one combination of beetle predators and midges, and that "bottom-up" processes, in this case limitation on midge numbers by algal growth may also drive the same system.

Beetles make a poorer showing in the review of stream ecosystems by Wallace and Webster - in fact they make no showing at all as this review has progressed so far down the functional road that individual invertebrate groups don't get much mention at all.

BATZER, D.P. & WISSINGER, S.A. 1996. Ecology of insect communitites in nontidal wetlands. *Annual Review of Entomology* **41** 75-100.

WALLACE, J.R. & WEBSTER, J.R. 1996. The role of macroinvertebrates in stream ecosystem function. *Annual Review of Entomology* **41** 115-239

AFRICAN *HELOCHARES*

Nine species of *Helochares* are newly described in this revision, which covers 78 species. Keys are provided for the six species of *Helochares* s.s. and for the three species of *Batochares*. The aedeagi of 72 species are illustrated.

HEBAUER, F. 1996. Synopsis der afrikanischen Arten der Gattung *Helochares* Mulsant (Coleoptera, Hydrophilidae). *Acta Coleopterologica* **12** (2) 3-38.

AGABUS LOBONYX GUIGNOT, A NEW SPECIES FOR CHINA

by Jaroslav ŠTASTNÝ

Agabus lobonyx was described by Guignot (1952) on the basis of series of several specimens in the collection of Régimbart from Sikkim - the mountain state lying on the border of China, Nepal and Bhutan.

My colleague, J. Rejsek (Nymburk) has given me his collections of the family Dytiscidae which he acquired during his journey to Chinese provinces Sichuan and Qinghai. In this material there are specimens of *A. lobonyx*. With the exception of Guignot's original description there are no other published data about this species and this is why I think it is interesting to give some information about the circumstances concerning the discovery of this remarkable species.

According to the interruption in the line of punctures along the front of the pronotum and the features on the protarsal and mesotarsal claws of males this species clearly belongs to the *guttatus*-group. At 6.4-7 mm, it is amongst the smallest of the 24 species of this group. Its elytra have almost parallel sides and the hind angles of the pronotum are rounded (Fig.1). The aedeagus has a distinctive tip (Fig. 3).

All the specimens found of *A. lobonyx* came from three very similar localities. They were always undulating plateaux located from 2800 to 4500 m.

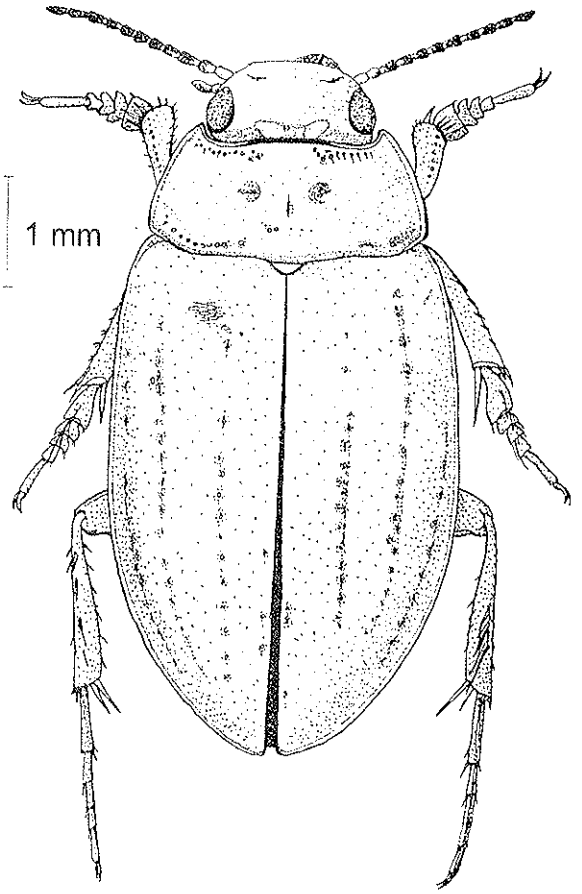

Figure 1. Habitus of *Agabus lobonyx*

The plateaux are based on lime-rich sedimentary rocks and sporadically by metamorphic rocks. The whole relief is strongly formed by glaciation. The surface of upland plateaux is always relatively dry, in lower places overgrown by alpine meadows, but higher up there is vegetation only in damp and ground depressions.

In all localities there was only one kind of water biotope, shallow (about 30-60 cm deep) temporary pools filled either with rain water or with snow melt water. The bottom was stony, covered with a layer of inorganic sediments. Only in the coastal zone were there occasional tufts of grasses.

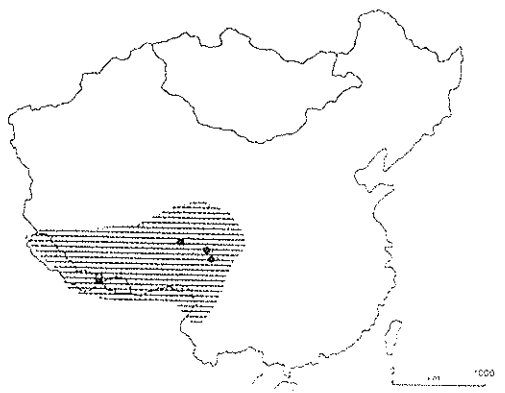

Figure 2. Distribution map

Examined material: "China - NW Sichuan, road Luhuo - Sertar, 40 km SSE Sertar, 2800 m, 12.7.1995, J. Rejsek leg." - 1 ♀. "China - SE Qinghai, road Taramarkong - Nangqén, pass 20 km N Nangqén, 4500 m, alpine meadows, 25.6.1995, J. Rejsek leg." - 14 ♂♂and 11 ♀♀. "China - NW Sichuan, pass 20 km W Sertar, 3800 m, 13.7.1995, J. Rejsek leg." - 13 ♂♂ and 4 ♀♀.

The biology is not well known. We can suppose that this species is typical for oligotrophic water habitats in subalpine and alpine zones. There it occurs together with *A. dichrous* (Sharp) and *A. longissimus* (Régimbart). It is probable that this type of locality is characteristic for *A. lobonyx*, because it was always found in places with similar natural conditions.

Up to now the known Chinese localities for *A. lobonyx* are situated quite far from the type locality in Sikkim but altogether they have a similar character (Fig. 2). This is why we can presume that it occurs in all subalpine zones of the south-west mountains from Qinhai to South Tibet and Himalaya.

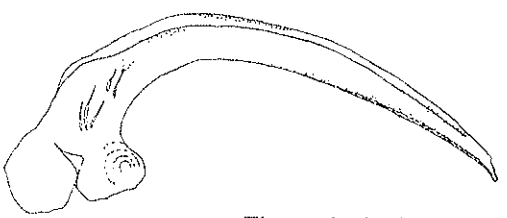

Figure 3. Aedeagus

Acknowledgement
I should like to thank Anders Nilsson for help with the determination. R. Beran kindly prepared figures 1 and 3.

Reference

GUIGNOT, F. 1952. Description des dytiscides inédits de la collection Régimbrat. *Revue française d'Entomologie*. **19** 17-31.

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KEYS FOR WORLD DYTISCID GENERA AND SUBGENERA

Fernando Pederzani has made a remarkable contribution to the study of Hydradephaga by providing a synopsis of the World fauna. The treatment is decidedly conservative in that the noterids are retained at subfamily level, *Guignotus* Houlbert is preferred to *Hydroglyphus* Motschulsky *sensu* Biström and Silverberg, *Hydroporidius* and *Sternoporus* are retained as the subgenera of *Hydroporus*, and some recent changes in *Nebrioporus* and *Stictotarsus* are not accepted. The distinctiveness of *Deronectes bertrandi* Legros and *Uvarus chappuisi* (Peschet) are recognised, with the recommendation that new genera should be created for them. Less conservative is the creation fo the tribe Carabhydrini for the Australian genus *Carabhydrus*.

The keys are largely systematic in origin, though it has occasionally proved necessary to resort to overly simplistic characters (e.g. "Length over 2.6 mm. From other Continents", to distinguish the subterranean *Haideoporus* and *Morimotoa* from *Phreatodessus* and *Kuschelydrus*). It is a pity that the keys are supported by only 22 figures. Nevertheless, this a valuable compendium of the World fauna.

There is no price tag attached to the reprint, so it would appear that the easiest source of copies is the author himself.

PEDERZANI, F. 1995. Keys to the identification of the genera and subgenera of adult Dytiscidae (*sensu lato*) of the World (Coleoptera Dytiscidae). *Atti dell'Accademia Roveretana degli Agiati* **244**(1994) **7**(4B) 5-83.

EFFECTS OF PESTICIDE ON FRESHWATER COMMUNITY

This study of the long term effects of the organophosphorus insecticide chlorpyrifos on macroinvertebrates and zooplankton includes a few mentions of water beetles. *Laccophilus minutus* (L.), *Hygrotus inaequalis* (Fab.) and *H. versicolor* (Schaller) were among the species more sensitive to treatment.

BRINK, P.J. van den, WIJNGAARDEN, R.P.A. van, LUCASSEN, W.G.H., BROCK, T.C.M. & LEEUWANGH, P. 1996. Effects of the insecticide Dursban® 4E (active ingredient chlorpyrifos) in outdoor experimental ditches: II. Invertebrate community responses and recovery. *Environmental Toxicity & Chemistry* **15** (7) 1143-1153.

COPIES OF THE SHARP *MAGNUM OPUS*

Enquiries by David Bilton (noté his new address) have confirmed that stocks of Sharp's Monograph on Dytiscidae really are exhausted, the last copies having fallen victim to a flood. However, the Royal Dublin Society have offered to photocopy the whole volume for him for IR£90. This may seem expensive @ 8.8p per page but the process is slow and can be damage a bound book.

FAUNA OF A RIVER IN NORTH-WEST SPAIN

Thirty four species were found in a survey of the Río Landro, a river in north-west Spain. The river system is notable for the occurence of several *Deronectes* species, *D. angusi* Fery & Brancucci, *D. bertrandi* Legros, *D. costipennis costipennis* Brancucci and *D. ferrugineus* Fery & Brancucci.

PAZ, C. de & OTERO, J.C. 1995. Los Hydradephaga (Insecta, Coleoptera) de la cuenca del río Landro (NW Península Ibérica). I. Resultados faunísticos. *Boletín de la Asociación Española de Entomología* **19** 93-114.

SCOTTISH WATER BEETLE RECORDS

Several species are reported in Geoff Hancock's compilation. These include: *Hydroporus longicornis* Sharp is recorded from the top of the pass at Rest and be Thankful (Argyll), *H. obsoletus* Aubé by Linlithgow Loch and *Phytobius leucogaster* (Marsham) from Lanarkshire. A record for *Acilius canaliculatus* (Nicolai) in an Ayrshire fen was sent in by GNF but should have been credited to Vincenzo Volpe as the discoverer.

HANCOCK, E.G. 1996. Scottish insect records for 1994. *Glasgow Naturalist* **23** 41-43.

BERLINER BEETLES

One paper is primarily concerned with the 20 species of Dytsicidae found in a small nature reserve in Berlin in 1990, and another concerns 33 dytiscid species found in the Teufelsfenn in the Grunewald Forest. Another concerns the presence of *Hydophilus aterrimus* and *H. piceus*. A survey of two springfed fens, the Teufelsbruch and the Großer Rohrpfuhl, in the Spandau Forest of Berlin produced 70-80 species, including some considerable rarities, such as *Hydroporus glabriusculus* Aubé, *Laccornis oblongus* (Stephens), *Agabus neglectus* Erichson and *Dryops anglicanus* Edwards.

HENDRICH, L. & BALKE, M. 1994. Faunistisch-ökologische Untersuchungen der Wasserkäferfauna (Coleoptera: Hydradephaga, Hydrophiloidea und Dryopoidea) in zwei wiedervenäßten Verlandungsmooren im Spandauer Forst von Berlin. *Insecta, Berlin* **3** 100-119.

HENDRICH, L. & BALKE, M. 1995. Faunistisch-ökologische Untersuchungen der Schwimmkäferfauna (Coleoptera: Dytiscidae) in einem anthropogen beeinflußten Kesselmoor - Das NSG "Großes Fenn" in Berlin (Zehlendorf, Wannsee). *Novius* **18**(1) 387-402.

HENDRICH, L. & BALKE, M. 1995. Zum Vorkommen der Kolbenwasserkäfer, *Hydrophilus aterrimus* Eschscholtz und *Hydrophilus piceus* (L.) (Coleoptera: Hydrophilidae) in Berlin - Verbreitung, Habitatbindung, Gefährdung, Schutzmaßnahmen. *Berliner Naturschutzblätter* **39** (3) 345-354.

HENDRICH, L. & BALKE, M. 1995. Faunistisch-ökologische Untersuchungen der Schwimmkasserkäferfauna (Coleoptera: Dytiscidae) mittels Reusenfallen im NSG Teufelsfenn (Forst Grunewald). *Brandenburgische Ent. Nachr., Potsdam* **3**(1) 25-47.

COEXISTENCE STUDIES ON *HYDROPORUS*

Hauke Behr's doctoral thesis brings together eight papers, some of which have been reviewed in the past. These include some valuable contributions to the discussion about how som many *Hydroporus* species can occupy the same habitat. The papers are:

1988. Eine weltere Falle zur quantitativen Erfassung luftatmender Wasserinsekten. *Arch. Hydrobiol.***112** 631-638.

1988. Kleinräumige Verbreitungsmuster von Dytisciden- Populationen (Coleoptera: Dytiscidae) in zwei Oberharzer Hochmooren. *Faun.-Okol. Mitt.* **6** 43-52.

1990. Untersuchungen zum Flug- und Immigrationsverhalten von Wasserkäfern der Gattung *Hydroporus* Clairv. (Col.: Dytiscidae). *Drosera* **'90** (1/2) 77-94.

BEHR, H. & PIPER, W. 1991. Zur Schwimmkäfer-Fauna (Coleoptera: Dytiscidae) der nordfriesischen Insel Amrum. *Faun.-Ökol. Mitt.* **6** 229-242.

1992. Dispersions-, Abundanz- un Dominanzdaten von koexistierenden *Hydroporus*-Imagines (Coleoptera; Dytiscidae) aus sekundären Moorgewässern. *Int. Revue ges. Hydrobiol.* **77** 633-649.

1993. Beiträge zur Kenntnis der Lebenszyklen von acht koexistierenden *Hydroporus*-Arten im Ohemoor (Norderstedt) (Coleoptera, Dytiscidae). *Entomologische Blätter* **89** 59-70.

1993. Wiederfangergebnisse aus Markierungsexperimenten an fünf in einem Moorgewässer koexistierenden *Hydroporus*-Arten (Coleoptera; Dytiscidae: Imagines). *Zool. Jb. Syst.* **120** 201-214.

1994. Lebensgemeinschaften koexistierender Arten der Wasserkäfergattung *Hydroporus* aus zwei norddeutschen Untersuchingensgebieten (Coleoptera: Dytiscidae). *Int. Revue ges. Hydrobiol.* **79** 337-355.

The 1990 paper escaped attention. It concerns flight activity of some bog beetles, with particular reference to *Hydroporus*. The species with the most flight records appeared to have two peaks of flight activity in in 1986 and 1987. Flight phenology appeared to vary within the season, *H. incognitus* Sharp being the first, *H. planus* (L.) next and *H. gyllenhalii* Schiödte (as *piceus*) decidely the last. The 1991 paper about Amrum island lists 38 dytiscid species.

BEHR, H. 1995. *Ökologische Studien an koexistierenden* Hydroporus *(Clairville, 1806)-Arten (Coleoptera: Dytiscidae).* Hamburg, Dissertation.

TREASURER MOVES

Ron Carr has changed his personal address to 9, The Mallows, Monckton's Lane, Maidstone, Kent ME14 2PX. His telephone number (++ 44 1622 759778) and fax (++ 44 1622 687216) remain the same as does his business address. But 18 Albert Street has gone.

MISCELLANEOUS *LACCOBIUS*

Laccobius sanfilippoi is described from Sierra Leone, *L. confusus* from Pakistan, *L. cyclicus* from Viet Nam, *L. tantillus* from Australia, *L. schoedli* from the Philippines, *L. acceptus*, *L. balkei* and *L. centralis* from New Guinea.

GENTILI, E. 1996. *Lacobius* nuovi o poco noti di Sierra Leone, Pakistan, Vietnam, Australia, Sumatra, Filippine e Nuova Guinea (Coleoptera, Hydrophilidae). *Mem. soc. ent. ital., Genova* **74** 21-32.

BALINESE BEETLES

Only two dytiscid species were previously known from Bali, Sunda Islands, but 32 are reported, four being newly described:- *Allopacharia barong, Microdytes elgae, Laccophilus baturitiensis* and *Copelatus uludanuensis*. Five species can be considered endemic. Wallace's line appears to pose no barrier to water beetles. Species are linked to particular habitats:- paddy fields, warm lowland streams, dense mats of grasses around eutrophic crater lakes, small, high altitude forest springs and pools. Threats to the species are identified, in particular the possibility of extinction of *Microdytes elgae*, *Lacconectus punctipennis* Zimmermann and *Copelatus uludanuensis* with the loss of woodland.

HENDRICH, L. & BALKE, M. 1995. Die Schwimmkäfer der Sunda-Insel Bali: Faunistik, Taxonomie, Ökologie, Besiedlungsgeschichte und Beschreibung von vier neuen Arten (Insecta: Coleoptera: Dytiscidae). *Faunistische Abhandlungen Staatliches Museum fürr Tierkunde Dresden* **20** (5) 29-56.

SECOND *GEODESSUS*

Geodessus besucheti Brancucci, the first terrestrial dytiscid to be described, is now known to be widely distributed in northern India and Nepal. The new species, *G. kejvali*, is described from 1700-2200 metres in southern India.

BALKE, M. & HENDRICH, L. 1996. A new species of the terrestrial water beetle genus *Geodessus* Brancucci (Coleoptera: Dytiscidae), sieved from leaf litter in southern India. *Aquatic Insects* **18** 91-99.

GALICIAN WATER BEETLES

Seven species are recorded from Galicia for the first time: *Haliplus rubidus* Perris, *Gyrinus caspius* Ménétriés, *Orectochilus villosus* (Müller), *Bidessus coxalis* Sharp, *Hydroporus gyllenhalii* Schiödte, *H. brancoi* Rocchi and *H. longulus* Mulsant. The total runs to 24 species.

GONZÁLEZ, J. & NOVOA, F. 1995. Coleópteros acuáticos de Galicia. II. Haliplidae, Noteridae, Gyrinidae, Hygrobiidae y Dytiscidae. *Boletín de la Asociación Española de Entomología* **19** 9-21.

AUSTRIAN CHECKLIST

A comprehensive series of checklists for all aquatic beetles has been devised by Manfred Jäch, Jan Kodada, Otto Moog and Stefan Schödl for inclusion in this catalogue of the Austrian aquatic fauna. An annotation for *Deronectes aubei* (Mulsant) from Vorarlberg has been added to the Club copy. Some treatments (*Potamonectes*, including *griseostriatus*, rather than *Nebrioporus*, *Coelambus* and *Nartus* as full genera, "*Laccophilus variegatus*") verge on the traditional. Some species appear to be newly recorded, e.g. *Hydrochus megaphallus* van Berge Henegouwen. Presumably copies of the beetle section can be obtained direct from Dr Jäch.

MOOG, O. (ed.) 1995. *Fauna Aquatica Austriaca. Katalog zur Autökologischen Einstufung aquatischer Organismen Österreichs.* Bundesministerium für Land- und Forstwirtschaft, Vienna.

WEST AFRICAN DYTISCIDAE

Following visits by Sven Persson and Jan Cuppen in 1992-4, the West African checklist now stands at 102 species. The species account is not illustrated but there are several plates of collecting sites and a map of localities. No new species or combinations are described, though it appears we are due a new *Liodessus*, and material ascribed to *Derovatellus assinicus* Régimbart appears to consist of males and females of different species.

NILSSON, A.N., PERSSON, S. & CUPPEN, J.G.M. 1995. The diving beetles (Coleoptera, Dytiscidae) of Guinea Bissau in West Africa. *Journal of African Zoology* **109** 489-514.

HALIPLUS FURCATUS AND _AGABUS PSEUDONEGLECTUS_ IN ITALY

Records for *Haliplus fulvicollis* Erichson and *Agabus montanus* (Stephens) (*melanocornis* Zimmermann auct.) from Ravenna are referred to *H. furcatus* Seidlitz and *A. pseudoneglectus* Franciscolo. Differences between species are described.

PEDERZANI, F. 1995. Sull presenza di *Haliplus furcatus* Seidlitz e *Agabus pseudoneglectus* Franciscolo nei dintorni di Ravenna. *Quad. studi nat. Romagna* **4** 47-50.

MORE _HYDROCHARA CARABOIDES_ IN CHESHIRE, ENGLAND

The centre(s) for the Lesser Silver Water Beetle remain uncertain in Cheshire, where three individuals have been found in three sites.The latest two finds are reported by Jonathan Guest, the first having been reported in ***Newsletter* 49**.Things have got even better since.

GUEST, J. 1996. *Hydrochara caraboides* (Linnaeus) (Hydrophilidae) in Cheshire. *The Coleopterist* **5**(1) 19.

SPANISH CHRYSOMELIDAE

In a detailed listing of chrysomelids of the Sierra Guadarrama, the mountain range north of Madrid, the donaciines recorded are *Donacia polita* Kunze, *Plateumaris discolor* (Panzer) and *P. sericea* (L.).

GARCÍA-OCEJO, A. & GURREA, P. 1995. Los crisomélidos (Coleoptera: Chrysomelidae) de la Sierra de Guadarrama (España Central). Análisis biogeográfico. *Boletín de la Asociación Española de Entomología* **19** 51-68.

EFFECTS OF INSECTICIDE ON WETLAND BEETLES

Phorate is an organophosphorus insecticide. It should come as no surprise, therefore, that it significantly reduced the numbers of invertebrates, including beetles in trials in South Dakota wetland systems in 1991 and 1992.

DIETER, C.D., DUFFY W.G. & FLAKE, L.D. 1996. The effect of phorate on wetland macroinvertebrates. *Environmental Toxicology and Chemistry* **15**(3) 308-312.

LOST AT SEA - A POSTCARD FROM ARGENTINA **by Jonty Denton**

When insects are forced to disperse or deliberately to migrate, how many make it to new homes, and how many perish? These are important questions which on the whole remain unanswered.

I recently visited the Atlantic coast of Argentina, and witnessed an extreme example of nature's inefficiencies. The coast around San Clemente in Buenos Aires Province is a wide sandy beach backed by dunes, much favoured by holidaymakers. In mid-November 1995, I was strolling along the beach when I noticed the remains of a *Hydrophilus* species in the embryo dunes. I bagged what I thought was an unusual find, and went for a paddle, only to be diverted by the latest strandline offering left by the receding tide. More *Hydrophilus*, many more, in fact over a hundred fresh specimens in the first 200 metre stretch. Along the whole beach front, which was at least 3 km long, there was at least one beetle every two metres. This was clearly not a one-off event as previous high tidelines contained similar densities of beetles, albeit more fragmented. the next tide brought in another wave of individuals still relaxed, and presumably recently dead. the *Hydrophilus* was joined by the occasional large diving beetle (a *Cybister*), and a few specimens of a *Rhantus* species.

The district had experienced an unusually dry spell, but there were still large areas of freshwater inland. I netted one such pools (2 km inland) and caught what were probably the same *Hydrophilus* and *Rhantus* species in the first scoop, along with many other species not found on the beach, *Berosus*, etc. I do not know how long this had been happening but fragments such as elytra were present in the rearward dunes. All I can be sure of is that at least 1500 beetles flew out to sea and perished each night for a week or more, how many remained and how many flew elsewhere is a matter for conjecture!

Received February 1996

KÄFER IM UND AM WASSER - NEW EDITION

KLAUSNITZER, B. 1996. ***Käfer im und am Wasser.*** Die Neue Brehm-Bücherei No. 567. ISBN 3-89432-478-3. Westarp Wissenschaften, Magdeburg. Available at DM39.90 from Spektrum Akademischer Verlag GMBH, Vangerowstraße 20, D-69115 Heidelberg, Germany.

❖ Bernhard Klausnitzer's little book has been beautifully updated and should be in the collection of every water beetler. Although the text is exclusively in German and the coverage is of Central european species, the 127 figures and the comprehensive coverage of the lesser groups mean that this review has value for everyone. The keys to genera for larvae and adults do not require a full mastery of German. This new edition has some splendid colour plates reproduced from photographs by Dr H. Bellmann.

NEW AND OLD BRITISH BEETLES - REASONS TO BE JOYFUL

HODGE, P.J. & JONES, R.A. 1995. ***New British Beetles. Species not in Joy's practical handbook.*** ISBN 1-899935-00-2, £24.00 (hardback), ISBN I-899935-01-0, £18.00 (paperback), British Entomological & Natural History Society, Reading. Available from R.D. Hawkins, 30d Meadowcroft Close, Horley, Surrey RH6 9EL, England, UK, postage and packing £2 in Europe.

❖ Joy's Practical Handbook of British Beetles was published in 1932. It has subsequently been reprinted in reduced format. Peter Hodge and Richard Jones have annotated over 650 addtions to the British list since then. The book does not claim to be either an update or a supplement (though it is both) as the authors wish it to be considered as a guide to where further help can be obtained when trying to use Joy's keys. If you are a water beetler, then you probably don't need the water beetle section, but I certainly find the provision under one cover of changes to the rest of the beetle fauna to be useful. I have to use a knowledge of water beetles as a guide to the reliability of the work overall; this approach is largely reassuring and the authors are to be congratulated for the thoroughness of their approach. A few minor errors have crept in concerning changes of name, and these are listed below with a few other comments:

- For *Hygrobia*, the spelling "*herrmanni*" was suppressed by ICZN in 1954. The corect spelling is therefore *hermanni*.
- *Coelambus* has been reduced to a subgenus of *Hygrotus* again (see page 1 of this issue).
- The name *Potamonectes* was replaced by *Nebrioporus* some time ago.
- The correct name for *Agabus melanocornis* auct. is *A. montanus* (Stephens).
- A preferred spelling for *Agabus sturmi* (Gyllenhal) would be *sturmii*.
- For right or wrong, in the forthcoming National Review, *Rhantus bistriatus* Bergsträsser has been adopted as the name for the species also known as *R. aberratus* Gemminger & von Harold.
- The authors adopt the name *Microsporus obsidianus* Kolenati, 1846, for what we used to know as *Sphaerius acaroides* Waltl, 1838 (the authority being Matthews according to Joy). This usage requires some clarification, being based on a change proposed in the supplement to Freude, Harde, Lohse.
- *Laccobius simulatrix* d'Orchymont. Strictly speaking, the name *simulator* is not a misspelling but an unjustified emendation.
- The replacement of the name *Helichus* by *Pomatinus* is overlooked.
- *Dryops similaris* Bollow was probably the species known by Joy, and the true *D. griseus* (Erichson) is the real addition to the British list.

Peter has also asked me to note that the British and Irish weevil is *Polydrusus pulchellus* Stephens, *P. chrysomela* (Olivier) being a southern European species. These rather nitpicking changes, which do not include any omissions, should not detract from the value of this work. However, I must ask what is going to happen in another 64 years. Will there be another non-update/non-supplement? **GNF**

SOUTHERN ENGLISH RUNNING WATER FAUNA

Deronectes latus (Stephens), *Helophorus arvernicus* Mulsant, *Hydraena nigrita* Germar, and *H. rufipes* Curtis are recorded from streams. A new record of *Agabus melanarius* Aubé from its earliest known site in the south-east, the Devil's Punchbowl, is also included.

DENTON, J.S. 1996. Notes on the Coleoptera of running-water habitats in Surrey and North Hampshire, including several new county records. *The Coleopterist, 4(3)*, 68.

BIOLOGICAL CONTROL OF WATER HYACINTH

A report in *New Scientist* refers to the introduction of two South American weevils, *Neochetina eichhorniae* and *N. bruchi*, to destroy the water hyacinth, *Eichhornia crassipes*, choking Lake Victoria. The adults eat foliage and the larvae feed in the stems. The governments of Kenya, Tanzania and Uganda have agreed plans for mass release in 1996. The source of the infestation lies in Rwanda, but intriductions there are made difficult by the present political situation.

WATER BEETLES OF CHINA

JÄCH, M.A. & JI, L. (eds) 1995. *Water Beetles of China.* Volume 1. Available from: Dr H. Schönmann, Naturhistorisches Museum, Burgring 7, A-1014 Wien, Austria. (fax ++ 43 (1) 523 5254); 500 Austrian Schillings (DM80, US$60, about £30).

At 9.6 million km², China is the world's third largest country. It has an exceptionally complex topography, including the world's highest mountain and the world's lowest lake (Aydingkol Lake at -154 m). Its great size is coupled with devastation of natural habitats on a grand scale over many centuries. Agricultural civilisation began 5,000 years ago and deforestation, mainly to limit predatory animals rather than to create pasture, began at least 2,500 years ago. Indiscriminate destruction of habitats is also associated with periods of intense industrialisation, a third period of which is in progress. Only 400 water beetle species have so far been recorded and even the fauna of Hong Kong, which one might have expected to have attracted more attention from British specialists, is poorly known. But at least Hong Kong is not as bad as Macao, for which there are no records at all. Strangely, but typically when one thinks about it, earlier naturalists gravitated upwards to the Tibetan plateau, the fauna of which is therefore comparatively well known even though it is now less accessible. The China Water Beetle Survey was set up in 1992, and it has taken only three years to produce the first in a series of definitive volumes on Chinese water beetles. Twenty three papers and a book review are included in Volume 1. The papers cover the full range of water beetles. The 31 new species listed below do not constitute the major exercise at this stage, which is more concerned with bringing together checklists of the beetles of China and neighbouring areas. Several papers are illustrated with black and white photographs of each species, pleasingly including the weevils. There are also several illustrations in colour, including four new elmid genera.

Space does not permit a review of each paper, but the titles are self-explanatory. The attention of European coleopterists is drawn to the return of *Coelambus* to subgeneric status in Anders Nilsson's paper.

Dr Manfred Jäch and Professor Lanzhu Ji are to be congratulated for making such an impressive start to this invasion of the last *terrae incognitae*. Whilst it might be tempting to write to each author requesting a reprint, it makes more sense to purchase the entire volume, specially as one needs the Introduction in order to appreciate the enormity of the task and the many problems, most of which have been effectively tackled in Volume 1.

The following new species are described, the first-named having been found in a brief sortie outside Beijing during the International Congress.

Platambus jilanzhui Wewalka & Brancucci
P. schillhammeri Wewalka & Brancucci
Helophorus (Thaumhelophorus) inexpectatus Angus
Helophorus (Helophorus) jaechi Angus
Helophorus (Rhopalhelophorus) kazakhstanicus Angus
H. (R.) laferi Angus
Hydrocassis baoshanensis Schödl & Ji
H. metasternalis Schödl & Ji
H. schillhammeri Schödl & Ji
Laccobius almoranus Gentili
L. egregius Gentili
L. fuscus Gentili
L. globulus Gentili
L. inermis Gentili
L. munus Gentili
L. sharmai Gentili
Cuspidevia velaris Jäch & Boukal
Eonychus dudgeoni Jäch & Boukal
Jilanzhnychus costatus Jäch & Boukal
Sinonychus lantau Jäch & Boukal
Littorimus taiwanensis Mascagni
L. hiekei Mascagni
Homoeogenus elongatus Lee & Yang
Eulichas bertiae Jäch
E. dembickyi Jäch
E. dudgeoni Jäch
E. horaki Jäch
E. jendeki Jäch
E. pacholatkoi Jäch
E. tenuicornis Jäch
E. tonkinensis Jäch

ANGUS, R.B. 1995. Helophoridae: the *Helophorus* species of China, with notes on the species from neighbouring areas (Coleoptera). 185-206.

CALDARA, R. & O'BRIEN, C.W. 1995. Curculionidae: Aquatic weevils of China (Coleoptera). 389-408.

GENTILI, E. 1995. Hydrophilidae: 3. The genus *Laccobius* Erichson in China and neighbouring areas (Coleoptera). 245-286.

GENTILI, E., HEBAUER, F., JÄCH, M.A., JI, L. & SCHÖDL, S. 1995. Hydrophilidae: 1. Check list of the Hydrophilinae recorded from China (Coleoptera). 207-219.

JÄCH, M.A. 1995. Hydroscaphidae (Coleoptera). 33-34.

JÄCH, M.A. 1995. Hygrobiidae (Coleoptera). 109-110.

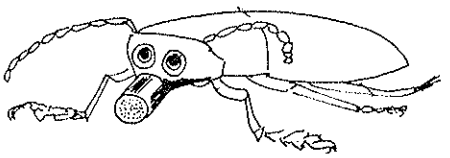
JÄCH, M.A. 1995. Hydraenidae (Coleoptera). 173-180.

JÄCH, M.A. 1995. Hydrochidae (Coleoptera). 181-183.

JÄCH, M.A. 1995. Eulichadidae: Synopsis of the species of the genus *Eulichas* Jacobson from China, Laos and Vietnam (Coleoptera). 359-388.
JÄCH, M.A. & BOUKAL, D.S. 1995. Elmidae: 2. Notes on Macronychini, with descriptions of four new genera from China (Coleoptera). 299-323.
JÄCH, M.A. & JI, L. 1995. Introduction. 5-32.
JÄCH, M.A. & KODADA, J. 1995. Elmidae: 1. Check list and bibliography of the Elmidae of China (Coleoptera). 289-298.
JI, L. & JÄCH, M.A. 1995. Amphizoidae (Coleoptera). 103-108.
KLAUSNITZER, B. 1995. Scirtidae (Coleoptera). 287-288.
KODADA, J. & JÄCH, M.A.1995. Dryopidae: 1. Check list and bibliography of the Dryopidae of China (Coleoptera). 325-328.
LEE, C.-F. & JÄCH, M.A.1995. Psephenidae: 1. Check list of the Psephenidae of China (Coleoptera). 349-354.
LEE, C.-F. & YANG, P.-S. 1995. Psephenidae: 2. Notes on the genus *Homoeogenus* Waterhouse (Coleoptera). 355-357.
MASCAGNI, A. 1995. Heteroceridae: Check list of the Heteroceridae of China and neighbouring countries, and description of two new species (Coleoptera). 341-348.
MAZZOLDI, P. 1995. Gyrinidae: Catalogue of Chinese Gyrinidae (Coleoptera). 155-172.
NILSSON, A.N. 1995. Noteridae and Dytiscidae: Annotated check list of the Noteridae and Dytiscidae of China (Coleoptera). 35-96.
SCHÖDL, S. & JI, L. 1995. Hydrophilidae: 2. Synopsis of *Hydrocassis* Deyrolle & Fairmaire and *Ametor* Semenov, with description of three new species (Coleoptera). 221-243.
VONDEL, B.J. van. 1995. Haliplidae: Review of the Haliplidae of China (Coleoptera). 111-154.
WEWALKA, G. & BRANCUCCI, M. 1995. Dytiscidae: notes on Chinese *Platambus* Thomson, with description of two new species (Coleoptera). 97-102.

THE *ILYBIUS* RECTUM - FARTESIAN DIVERS?

Observations on dissected *Ilybius* showed that the rectum is enlarged and full of water in pre-reproductive adults, the space later being used for the ovaries. The role of this large fluid-filled sac is discussed. Being surrounded by the rectal chitin, it does not pose an osmoregulatory problem, and it is suggested that this is used as a buoyancy mechanism at times when the fat content of the body is depleted. It also provides a possible explanation of how beetles that have been out of the water stop floating, possibly by drinking and filling the distended crop and rectum.



HICKS, B. & LARSON, D.J. 1991. The rectum as a hydrostatic organ in the predaceous diving beetle genus *Ilybius* Erichson (Coleoptera: Dytiscidae). *The Coleopterists Bulletin* **45**(3) 274-278.

Dr ELIZABETH KATHLEEN GOLDIE-SMITH†

Kathleen died on 27 September 1995. She was active as a member of the Club in the 1980's, when she attended the meeting in Leicester and helped to organise the meeting the following year in Rye. Kathleen did a lot of work at the nature reserve at Rye and published an illustrated booklet *Life in Castle Water*. Latterly, she became more interested in flies, in particular Dixidae, and worked as the national recorder for this group. Her investigation of beetles in the vicinity of Rye produced some interesting results, in particular *Haliplus varius* Nicolai, etc. Local material in her collections have been given to the warden of the Rye nature reserve, but Dr Henry Disney, of Cambridge Museum, has been given most of her entomological material, which included some tubed Coleoptera. I am grateful to the wildlife artist, Brian Hargeaves, who was a friend and neighbour, for the majority of the information in this note.

GNF

COLYMBETINAE PHYLOGENY BASED ON LARVAL STRUCTURES

A tentative phylogenetic reconstruction of colymbetine genera is provided based on 24 larval characteristics. *Agabus, Ilybius* and *Agabinus* comprise one lineage, opposing *Colymbetes, Rhantus, Neoscutopterus* and *Matus. Neoscutopterus* and *Matus* stand out by the presence of several peculiar features. The subgenus *Nartus* is indicated as the sister-group of *Neoscutopterus*.

ALARIE, Y. 1995. Primary setae and pores on the legs, the last abdominal segment, and the urogomphi of larvae of Nearctic Colymbetinae (Coleoptera: Adephaga: Dytiscidae). *Canadian Entomologist* **127** 913-943.

Dr ROLAND RICHTER†

Roland Richter - Bex to all his friends - died on 11 December 1995, aged about 88.

Bex spent his working life as Head of Biology at Gordonstoun School in Morayshire. He was educated at Salem, Dr Kurt Hahn's earlier foundation in Baden, and then took his degree and Ph D at Berlin. He was among Hahn's band of founders at the start of Gordonstoun in 1933, and, apart from a short period on internment in Canada during the early part of the last war, he remained at Gordonstoun till his retirement in 1972.

Bex was among my earlier mentors in the study of water beetles - indeed I would have learned the craft at his feet but for the fact that my first two years at Gordonstoun (1958-59 and 1959-60) were spent at the Altyre branch of the school, near Forres and I did not join Bex on the main site till September 1960, by which time I had got started (even if I did have a rather narrow *Laccobius bipunctatus* standing as *Berosus luridus*!).

It is very difficult to do Bex justice in a few lines. He was modest and almost self-effacing, but quietly firm, witty, endlessly patient and incredibly knowledgeable over a vast range of biological subjects. As a schoolboy I found his encyclopaedic knowledge quite staggering - and even when I had a new and shining Zoology degree from Oxford I found my wonder undiminished!

With the passing of Bex - no-one can tell me how he got the name - one suggestion was that it was what he had called a pet squirrel when he was a boy - I find myself looking sadly at a now closed chapter of my early life as a naturalist. It is rather like my feeling when Professor Balfour-Browne (to whom Bex introduced me) died. From Bex I learned many things - some deep and intangible, some small and immediate, like where to hunt for Turnip Mud Beetles in the neep fields by Loch Strathbeg - "among the leaf-bases, but come on!". We were on a wildfowl census, but the discovery of the beetles - in abundance - caused an acceptable delay.

It was from Bex I received my introduction to the joys of Spain, in the course of two Easter holiday expeditions in 1960 and 1961. In 1961 we found *Canthydrus diophthalmus* and *Cybister vulneratus* at the now almost destroyed site near Adra, where, many years later, the *Methles* was added to the Spanish list.

Bex was a good and enthusiastic water beetler, but his natural history interests were very wide, and latterly he became very enthusiastic about Bryophyta which, he felt, gave a great amount of immediate ecological information. He was a keen ornithologist, taking part in regular wildfowl censuses for the RSPB, to whom he has left his whole estate. He wrote one paper on water beetles. In 1959, he reviewed the distribution of Jenkins' Spire Shell in the Moray area.

He was a member of the Balfour~Browne Club from its inception, and his contributions - translations of German papers, including the *Cercyon* key by Hermann Vogt, well illustrate his patience and unstinting helpfulness to other naturalists. At the time of writing, the disposal of his collection is uncertain but it appears that Inverness Museum is the most likely place.

RICHTER, R. 1951. The aquatic Coleoptera of the County of Elgin. *Scottish Naturalist* **63** 101-121.

RICHTER, R. 1959. The present distribution of *Potamopyrgus jenkinsi* (Smith) in Buchan and the southern Moray Firth area. *Glasgow Naturalist* **18**(2) 98-105.

Robert Angus

THE LAST NOTES ON *COELAMBUS*?

Hans Fery's paper is mainly concerned with the *Coelambus saginatus* group, *C. semenowi* Jakowlew and *C. armeniacus* Zaitzev being redescribed as members of it. New records are provided for other members of the group, which is keyed. In addition more information is provided for other species not belonging to the *saginatus* group:- *C. distinctus* Feng, *C. pectoralis* (Motschulsky), *C. pallidulus* (Aubé) and *C. chinensis* var. *opacus* Falkenström, the last being *C. impressopunctatus* (Schaller). And why "last"? See page 1 of this issue.

FERY, H. 1995. Ergänzungen zur *saginatus*-Gruppe sowie Bemerkungen zu weiteren Arten der Gattung *Coelambus* Thomson (Coleoptera, Dytiscidae). *Linzer biol. Beitr.* **27**(2) 1045-1061.

TENTH SUBTERRANEAN DYTISCID GENUS

Stygobiont dysticids have previously been described from France, West Africa, Japan, New Zelands, Texas and Mexico. The latest one, from Oregon, comes nearest to Sanfilippodytes Franciscolo. The description and stereoscans of the new eyeless genus demonstrate that this new taxon lacks the long hairs typical of so many phreatic species.

LARSON, D.J. & LABONTE, J.R. 1994. *Stygoporus oregonensis*, a new genus and species of subterranean water beetle (Coleoptera: Dytiscidae: Hydroporini) from the United States. *The Coleopterists Bulletin* **48**(4) 371-379.

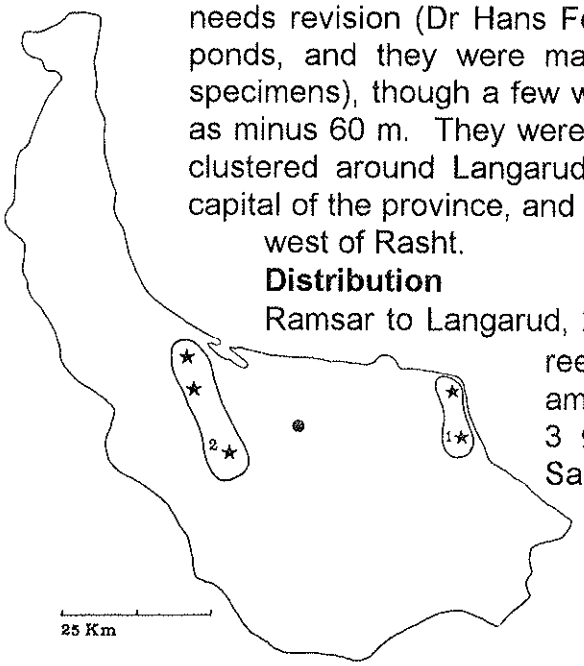
METHLES RECTUS SHARP CONFIRMED FOR IRAN

by Sh.O. Hosseinia & H. Hosseinpour

Vassil Guéorguiev (1965. Sur la faune des Coléoptères Hydrocanthares d'Iran (Resumé). *Acad. Bulg. Sci.* **19** 116-117) recorded *M. rectus* from Iran, but he failed to provide any locality information. In about 20 years of collecting water beetles from different habitats and provinces in Iran, and obtaining numerous specimens belonging to a number of genera and species, *Methles* has been found in small numbers in a few places. It has only been found in the province of Gilan, in collections made in 1976, 1993 and 1995.

The province of Gilan is on the southern edge of the Caspian Sea. It has a surface area of about 15,000 km², and it is between longitudes 48° 40' and 50° 30' East and latitudes 36° 32' and 38° 15' North. The climate is Mediterranean.

The species was identified as *M. rectus* Sharp, although the genus apparently needs revision (Dr Hans Fery, pers. comm.). They were in streams and ponds, and they were mainly found at about 180 metres altitude (7 specimens), though a few were found at 60 m (4 specimens) and as low as minus 60 m. They were also restricted in their distribution (★), being clustered around Langarud (1 on the map), to the east of Rasht, the capital of the province, and around Sowma-eh-Sara (2 on the map), to the west of Rasht.



Distribution

Ramsar to Langarud, 214 km W of Mahmoud Abad, stream among reeds, -60 m altitude, 1 ♀, 12.vi.1976. Langarud, among reeds in pond on side of rice field, 60 m, 3 ♀♀, 2.viii.1993, 1 ♂, 27.vi.1995. Sowma-eh-Sara to Talesh, 12 km N of Sowma-eh-Sara, in the bottom mud of a stream near a rice field, 20 m, 1 ♀, 7.viii.1993. 15 km N of Sowma-eh-Sara, among reeds in pond, 180 m, 3 ♂♂, 4 ♀♀, 1.vii.1995.

Acknowledgement

The authors wish to thank Dr Hans Fery of Berlin for verification of the species.

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LIFE HISTORIES OF NEWFOUNDLAND *ILYBIUS*

Rearing and dissection of four species of *Ilybius* demonstrated that they mostly follow a univoltine cycle with larvae overwintering and adults occurring during the summer. About 15% were semivoltine, adults surviving through the second winter.

HICKS, B.J. & LARSON, D.J.1995. Life history patterns of *Ilybius* Erichson from Newfoundland (Coleoptera: Dytiscidae). *The Coleopterists Bulletin* **49**(3) 281-287.

SEXUAL DIFFERENCES IN HYDRADEPHAGA

Sex ratios and differences in sizes and shapes between sexes were studied in 29 Pyrenean species. Sex ratios were 50:50 except for a dominance of females in *Noterus laevis* Sturm, *N. clavicornis* (De Geer) and *Stictonectes lepidus* (Olivier), and a dominance of males in *Copelatus haemorrhoidalis* (Fab.). Size and shape varied significantly between the sexes for many species, but there was no evidence to support the hypothesis that larger species should have stronger sexual dimorphism and unequal sex ratios.

RIBERA, I. 1995. Sex ratios and intersexual size and shape differences in selected Hydradephaga species from the Pyrenees (Coleoptera: Noteridae, Hygrobiidae, Dytiscidae). *Elytron* **8**(1994) 79-92.

TAIWANESE DYTISCID CHECKLIST

The Taiwanese checklist includes at least 54 species, 13 of them reported from Taiwan for the first time, plus a *Neptosternus* female, which cannot be presently identified. *Pseuduvarus vitticollis* (Boheman) is recorded from the Oriental Region for the first time, having originally been described as *Bidessus gentilis* Sharp. *P. vitticollis* is now seen to range across Africa, Madagascar, Sri Lanka, India, Pakistan, Malaysia and Taiwan.

NILSSON, A.N. WEWALKA, G., WONG, L.-J. & SATÔ, M. 1995. An annotated list of Dytiscidae (Coleoptera) recorded from Taiwan. *Beitr. Ent., Berlin* **45** 357-374.

BRITISH CHECKLIST OF LABOULBENIALES

This stands at 114 named species (Weir 1996) *Hydraeomyces halipli* (Thaxter) is illustrated by Weir (1994). The water beetle associations named are as below. Weir & Beakes (1995) provide a useful illustrated account of the group.

Gyrinus substriatus Stephens	*Laboulbenia gyrinicola* Spegazzini
G. suffriani Scriba	*L. fennica* Huldén
Haliplus obliquus (Fab.)	*Hydraeomyces halipli* (Thaxter)
H. ruficollis (De Geer)	*H. halipli*
Cercyon littoralis (Gyllenhal)	*Hydrophilomyces hamatus* T. Majewski
Chaetarthria seminulum (Herbst)	*Chaetarthriomyces crassappendicatus* Scheolske
Heterocerus fenestratus (Thunberg)	*Botryandromyces heteroceri* (Maire) I.I.T. & T. Majewski
Dryops griseus (Erichson)	*Cantharomyces denigratus* Thaxter
	C. italicus Spegazzini
D. luridus (Erichson)	*Cantharomyces denigratus* Thaxter
	Helodiomyces elegans F. Picard

WEIR, A. 1994. Further records of Laboulbeniales from collections of British Coleoptera. *Mycological Research* **98**(4) 433-444.

WEIR, A. 1996. A preliminary check-list of British Laboulbeniales (Fungi, Ascomycetes). *The Entomologist* **115** 50-58.

WEIR, A. & BEAKES, G. 1995. An introduction to the Laboulbeniales: a fascinating group of entomogenous fungi. *Mycologist* **9**(1) 6-10.

SUDANESE LABOULBENIALES

Amongst other beetle associations, *Laboulbenia dineutis* Thaxter is described (and illustrated) from *Dineutus subspinosus*. *Rhynchophoromyces denticulatus* (Thaxter) is recorded from a Nile *Enochrus* species. *Zodiomyces subseriatus* Thaxter is recorded from a *Helochares*.

WEIR, A. 1993. Rare and interesting Laboulbeniales on Sudanese Coleoptera. *Mycological Research* **97**(4) 509-512.

FAR EAST *HELOPHORUS*

It speaks volumes for the thoroughness of previous treatments that this survey has failed to produce any species new to science. It also emphasies the paucity of the Far East *Helophorus* fauna. Only three species have previously been reported from Japan. This survey included 7 species, bringing the Japanese total to 8. Perhaps the most interesting species new for Japan is *H. tuberculatus* Gyllenhal from Sakhalin.

NILSSON, A.N., KHOLIN, S.K. & ANGUS, R.B. 1995. Faunistics and species richness of water beetles of the genus *Helophorus* (Coleoptera, Helophoridae) of the Far East of Russia and Japan. *Japanese Journal of Systematic Entomology* **1** (2) 217-221.

EASTERN SIBERIAN HYDROPHILIDS

The checklist for this area now stands at 26 *Helophorus*, 2 *Hydrochus*, *Spercheus emarginatus* (Schaller), *Coelostoma orbiculare* (Fab.), 5 *Sphaeridium*, 27 *Cercyon*, *Agnaeformia lucida* Shatrovskiy, 2 *Megasternum*, 2 *Pachysternum*, 2 *Cryptopleurum*, 5 *Hydrophilus*, 2 *Hydrochara*, *Hydrobius fuscipes* (L.), *Hydrocassis lucifer* Shatrovskiy, 3 *Crenitis*, *Paracymus zaitzevi* Shatrovskiy, *Anacaena asahinai* Sato, 9 *Laccobius*, 9 *Enochrus* and 2 *Berosus*. The *Enochrus* include the newly described *Lumetus puetzi* and *Methydrus amurensis*. Two species of *Cercyon* are described without being named.

HEBAUER, F. 1995. Bekannte un neue Hydrophiloidea aus Ostsibirien (Col.). *Entomologische Nachrichten und Berichte* **39** 29-36.

INDOMALAYSIAN HYDROPHILIDS

Eleven new species are described, 5 *Helochares* from Bangladesh, India, Papua New Guinea and Thailand, *Chasmogenus larsi* from Malaysia, and 5 *Enochrus* from Borneo, India, Malaysia and Thailand.

HEBAUER, F. 1995. Neues zu den Acidocerina Hansen (Helocharae d'Orchymont) der indomalaiischen Region (Coleoptera, Hydrophilidae). *Acta Coleopterologica* **11** 3-14.

NAMIBIAN AND KALAHARI HYDROPHILIDS

Four species of Spercheidae and 81 species of Hydrophilidae are listed for Namibia and the Kalahari Desert. These include *Amphiops namibicus, A. uhligi, Chasmogenus omissus, Helochares conformis, Laccobius uhligi* Gentili, *Berosus wewalkai* Schödl, described separately.

HEBAUER, F. 1995. Die Hydrophilidae und Spercheidae Namibias. Unter Berücksichtigung des Materials der Namibia-Expedition des Museums für Naturkunde Berlin 1992, ergänzt durch Nachweise aus früheren Namibia- und Kalahari-Expeditionen (Coleoptera, Hydrophiloidea: Hydrophilidae et Spercheidae). *Mitt. Zool. Mus. Berl.* **71** 251-275.

LARVAE OF *AGABUS CHALCONATUS* & *A. ERICHSONI* GROUPS

Larvae of *Agabus albarracinensis* Fery, *A. pseudoneglectus* Franciscolo and *A. hozgargantae* Burmeister are described for the first time. A key is presented for the 1st, 2nd and 3rd instars of the two groups.

DETTNER, K., FERY, H. & HELLDÖRFER, E. 1995. Beitrag zur Kenntnis der Larven der *Agabus chalconatus*- und *A. erichsoni*-Gruppe (Coleoptera: Dytiscidae). *Nouvelle Revue d'Entomologie* **12** 149-160.

POND SURVEY IN OXFORDSHIRE

Macroinvertebrates of 6 temporary and 33 more permanent ponds were compared. Species richness was similar in both types of pond, but their assemblages differed markedly. Rarity indices were higher for the temporary ponds. Water beetles recorded include *Haliplus furcatus* Seidlitz and *Dryops similaris* Bollow.The contact for correspondence is P.J. Williams.

COLLINSON, N.H., BIGGS, J., CORFIELD, A., HODSON, M.J., WALKER, D., WHITFIELD, M. & WILLIAMS, P.J. 1995. Temporary and permanent ponds: an assessment of the effects of drying out on the conservation value of aquatic macroinvertebrate communities. *Biological Conservation* **74** 125-133.

AFRICAN *OCHTHEBIUS* IN SPAIN

O. merinidicus is reported from Europe for the first time on the basis of specimens from the Río Colomera, Granada.

SÁINZ-CANTERO, C.E., ZAMORA-MUÑOZ, C. & JÄCH, J.A. 1995. Primera cita para la coleopterofauna ibérica: *Ochthebius* (*Ochthebius*) *merinidicus* Ferro, 1985 (Col. Hydraenidae). *Nouv. Revue Ent.* **12**(1) 103-104.

NEW INDIAN ELMID, *RUDIELMIS*

Rudielmis schuhi and *R. concolor* are described from a large amount of elmid material collected by R. Schuh in 1991 and David Boukal in 1993 in southern India.

JÄCH, M.A. & BOUKAL, D.S. 1995. *Rudielmis* gen. n. from South India (Coleoptera: Elmidae). *Koleopterologische Rundschau* **65** 149-157.

A REMARKABLE NEW BEETLE FROM ASIA - *NEMATOPSEPHUS*

The name gives one a good idea of what to expect, a psephenid that looks like a cranefly. The name is intended to refer to the thread-like male antennae and the very long legs. This genus was originally described, but not published, under the name *Sinopsephenoides*. The only species, *N. malickyi*, was caught at light in Thailand.

JÄCH, M.A. & LENG, M.-L. 1995. *Nematopsephus* gen. n., a new genus of Psephenoidinae from Asia (Coleoptera: Psephenidae). *Koleopterologische Rundschau* **65** 159-167.

***PELTHYDRUS* REVISION CONTINUED**

Six species groups with a total of 33 species are recognised from this Oriental hydrophilid subgenus, 25 of them being new to science.

SCHÖNMANN, H. 1995. Revision der Gattung *Pelthydrus* Orchymont. 2. Teil: *Pelthydrus* s.str. (Coleoptera: Hydrophilidae). *Koleopterologische Rundschau* **65** 105-144.

GABONESE BEETLES

Seventy four species of Copelatini and Dytiscinae are recorded, including no less than 23 new species of *Copelatus*. An earlier paper is followed up by additional records of 12 species of Hydroporinae, including 4 new species of *Hyphydrus*.

BILARDO, A. & ROCCHI, S. 1995. Haliplidae e Dytiscidae (Coleoptera) del Gabon con note sistematiche sulle specie di confronto (Parte seconda: Copelatini, Dytiscinae e integrazioni a Hydroporinae). *Atti Soc. it. Sci. nat. Museo civ. Stor. nat. Milano* **134** 135-167

REVIEW OF SOUTHERN SPANISH *HYDRAENA* (*HAENYDRA*)

There are three species of *Hydraena* subgenus *Haenydra* in southern Spain. *H. gaditana* Lagar & Fresneda occurs on the mountains west of Cadiz, *H. tatii* Sáinz-Cantero & Alba-Tercedor on the north side of the Sierra Nevada and *H. manfredjaechi* Delgado & Soler on the Sierra de Segura. This paper carefully compares these species and validates their distinctness. It leaves one wondering whether each of the remaining mountain systems have yet to yield its species.

FRESNEDA, J., LAGAR, A., SÁINZ-CANTERO, C.E. & DELGADO, J.A. 1995. Sobre les especies ibéricas del grupo de *Hydraena tatii* (Coleoptera, Hydraenidae). *Zoologica baetica* **5** (1994) 27-39.

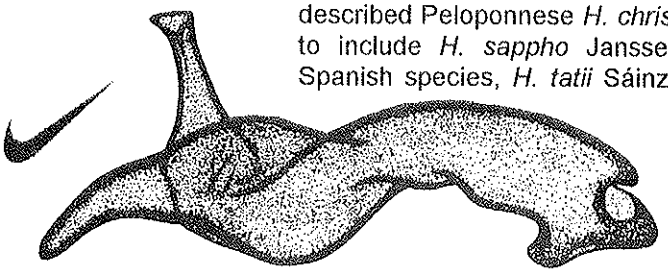
THE *HYDRAENA GRACILIS* COMPLEX

Hydraena gracilis is perceived as a complex with two subspecies, *gracilis gracilis* over much of Europe and *gracilis balcanica* d'Orchymont, in the Balkans, with a large transition zone in Central Europe.*H. nike* is newly described from Greece. Manfred claims an etymology based on the Greek goddess of victory, but one wonders if he has signed a secret sponsorship deal?

JÄCH, M.A. 1995. The *Hydraena* (*Haenydra*) *gracilis* Germar species complex (Insecta: Coleoptera: Hydraenidae). *Ann. Naturhist. Mus. Wien* **97B** 177-190.

GREEK *HAENYDRA*

Fifteen members of the subgenus *Haenydra* are recognsied from Greece, including the newly described Peloponnese *H. christinae*. The "*Hydraena sappho*-group" is proposed to include *H. sappho* Janssens (aedeagus shown) and the three southern Spanish species, *H. tatii* Sáinz-Cantero & Alba-Tercedor, *H. gaditana* Lagar & Fresneda and *H. manfredjaechi* Delgado & Soler. This group appears to be a relict of the Palaeomediterranean species that populated the evolving mountain areas of southern Europe during the Tertiary.The group is likened in origin to fishes of the *Chondrostoma phoxinus*-group and of the genus *Valencia*.



AUDISIO, P., BIASE, A. de & JÄCH, M.A. 1996. Greek species of the genus *Hydraena* (subgenus *Haenydra* Rey) (Coleoptera, Hydraenidae). *Aquatic Insects* 18 65-90

LAELIAENA

This hydraenid genus appears to be primitive, probably being closest to *Limnebius*. *L. sparsa* Sahlberg, from Kazakhstan and Uzbekistan, and *L. sahlbergi* Champion, from northern India, are redescribed, and *L. sichuanensis* is newly described from China.

JÄCH, M.A. 1995. Taxonomic synopsis of the genus *Laeliaena* Sahlberg, 1900 (Coleoptera: Hydraenidae). *Elytron* (1994) **8** 35-41.

TUSCANESE *HYDROPORUS*

Hydroporus gridellii Focarile and *H. tristis* (Paykull) are recorded from Tuscany for the first time.

ROCCHI, S. 1995. Nota su due *Hydroporus* in Toscana (Coleoptera, Dytiscidae). *Bollettino dell'Associazione Romana di Entomologia* **49** 151-154.

MALAYSIAN WATER BEETLES

Some of the more elegant diving beetles of Malaysia are illustrated in colour in this popular article. Only 12 genera and 35 species have been recorded from the Malay Peninsula and there are many waiting to be described, particularly in the rain forests. One interesting strategy is noted, the use of bamboo shoot hollows as refugia by adult *Lacconectus* spp. which live in karstic areas that dry out during the dry season.

HENDRICH, L. 1995. Malaysia's water beetles. *Nature Malaysiana* **20** (2) 46-50.

NEW CYPRIOT *HYDROPORUS*

H. cuprescens is described as the only endemic dytiscid yet known from Cyprus. It is between *H. bodemeyeri* Ganglbauer and *H. anatolicus* J. Balfour-Browne.

MILLER, K.W. & FERY, H. 1995. 1995. *Hydroporus cuprescens* n.sp. von der Insel Zypern (Coleoptera: Dytiscidae). *Entomol. Z.* **105** 405-420.

FUNNEL TRAPPING VERSUS NETTING

Bottle traps, i.e. plastic drinks bottles with the neck inverted, were deployed around Woolmer. An air space was provided to permit beetles to be caught and returned to the wild alive. They caught 38 species, 5 of them found only by trapping rather than by netting.

DENTON, J.S. 1996. An evaluation of live-trapping for water beetles in heathland ponds. *The Coleopterist, 4(3)*, 69-72.

DANISH STUDY TOUR OF LATVIA

This group visited Latvia in September 1993, and it included Mogens Holmen, who recorded at least 50 species of Hydradephaga, including several new for Latvia, *Bidessus grossepunctatus* Vorbringer, *Hydroporus incognitus* Sharp, *H. longicornis* Sharp, *H. striola* (Gyllenhal) and *Agabus wasastjernae* Sahlberg. Species that are possibly extinct in Denmark were also found - *Rhantus notaticollis* (Aubé), *Hygrotus marklini* (Gyllenhal) and *Graphoderus bilineatus* (De Geer). It may be possible to obtain further copies of this report by contacting Jes Philipsen Schmidt but the records can be most easily obtained in the paper by Mogens.

HOLMEN, M. 1995. On some adephagous water beetles from Latvia (Coleoptera: Gyrinidae, Haliplidae, Noteridae, Dytiscidae). *Latvijas Entomologicijas Arhivs* **2** 7-16.

SCHMIDT, J.P. & OVESEN, C.H. (eds) 1995. *A Danish study tour to Latvia*. Special Issue, Alma Bladet, 77 pp.

BROWSING SECTION - 211 AÑOS DESPUÉS

I.J. De Asso produced the *Introductio in Oryctographiam et Zoologiam Aragoniæ* in 1784. Published in Amsterdam, it was the first listing of Iberian beetles using something near to Linnean nomenclature. The paper is reviewed by Melic (1995). Unfortunately the water beetle records listed below are more likely to generate frustration than information, but they do raise the possibility of species such as *Acilius sulcatus*. Caesaraugustae is Zaragoza.

Girinus

1. Gyrinus *natator*. In aquofis frequens.

Dytiscus

1. Dytiscus *piceus*. Vulgo *Escarabajo de aqua*. In aquis frequens.

2. Dytiscus thorace, capiteque viridibus, elytris obscure viridibus striatis, glauco marginalis. Habitat in aquis *Caesaraugustae*, circa *Luna*. Antennae setaceae. Pedes glauci. Varietas *D. marginalis*.

3. Dytiscus fuscus antennis setaceis, elytris striis obsoletis *Tab.III.p.6*. Habitat *Caesaraugustae* in aquis stagnatibus vulgo *Balsas de Ebro Viejo*. Forte *Dytiscus sulcatus* mas. [Examination of the figure is rather inconclusive]

4. Dytiscus cinereus, elytris striatis punctis 3 fuscis. An varietas *D. bimaculati?* Habitat cum praecedenti. Magnitudo grani Oryzae. Antennae setaceae.

MELIC, A. 1995. El primer Catalogus de la Entomofauna Aragonesa, 211 años depués. *Catalogus de la Entomofauna Aragonesa* **7** 11-16.

AFRICAN *HYDATICUS*

Hydaticus ineptus (Guignot, 1953), originally described as a subspecies of *H. servillianus* Aubé from the Belgian Congo, is recognised as a distinct species.

HERNANDO, C. & FRESNEDA, J. 1994. Nota taxonómica sobre especies africanas del género *Hydaticus* Leach, 1817 (Coleoptera, Dytiscidae). *Zapateri, Revta. aragon. ent.* **4** 151-154.

HYDRAENA STUDIES

The paper by Javier Fresneda did not arrive in time for ***Latissimus* 6**, which included reference to the synonymisation of *H. subdepressa* with *H. angulosa* (Jäch 1994). *H. delia* is noted as a common species in some parts of the Spanish Pyrenees, which Javier is able to distinguish from *H. stussineri.*

FRESNEDA, J. 1993. *Hydraena subdepressa Rey,* 1886: *H. delia* Balfour-Browne, 1978; *H. stussineri* Kuwert, 1888 y *H. angulosa* Mulsant, 1844 (Coleoptera, Hydraenidae) Estudio sistemático y geonémico. *Ilerda Ciències* **50** (1992-93) 45-51.

JÄCH, M.A. 1994. New and little known Palearctic species of the genus *Hydraena* (s.l.) Kugelann II (Coleoptera: Hydraenidae). *Entomol. Probl.* **25** 37-46.

NEW SPANISH *OCHTHEBIUS*

O. ferroi is described on the basis of a single ♂ from a spring in Huesca. It is compared with the southern Iberian *O. bonnairei* Guillebeau and with *O. cantabricus* J. Balfour-Browne, from León, but its relationships with *O. heydeni* Kuwert are not established.

FRESNEDA, J. LAGAR, A. & HERNANDO, C. 1993. *Ochthebius (Asiobates) ferroi* n. sp. (Coleoptera, Hydraenidae) de la Península Ibérica. *Ilerda Ciències* **50** (1992-93) 53-58.

DERBYSHIRE BEETLES

Forty six species of rare beetle are recorded from Derbyshire, an English Midlands vice-county. The fauna of this area is rich, despite its being landlocked and with floodplains subject to considerable agricultural, urban and industrial modification. Derbyshire has some very distinct geological substrata and forms a meeting point between the fauna of the north and west with that of East Anglia. Some of the more interesting species are *Gyrinus urinator* Illiger and *Hydraena rufipes* Curtis, both first discovered in 1994

MERRITT, R. 1995. Notable water beetles in Derbyshire: an interim review. *Sorby Record, A Journal of Natural History for the Sheffield Area* **31** 59-65.

DYTISCIDS AND MOSQUITOES

The Dytiscidae and Culicidae of 40 small snowmelt pools were studied at the Arctic Circle in Sweden. Larger pools were warmer than small ones, and those in clearings were warmer than those in the forest. Temperature differences were high until late July. Abundance and species richness for both beetles and mosquitoes were higher in clearings than in forest pools, and these values were both positively correlated with increasing pool area, depth and temperature. Increasing drought frequency had a negative effect. Flying dytiscids were trapped in artificial pools, area 1.6 m^2, but not in smaller ones, area 0.07 m^2. Immigration was higher in clearings than in the forest. Dug pools were colonised faster in clearings than in the forest.

NILSSON, A.N. & SVENSSON, B.W. 1995. Assemblages of dytiscid predators and culicid prey in relation to environmental factors in natural and clear-cut boreal swamp forest pools. *Hydrobiologia* **308** 183-196.

A NEW HETEROCERID

Anything new on Heteroceridae is to be welcomed, even this new *Tropicus* species (*arawak*) from Guadeloupe. Franck Bameul includes a checklist of the 27 species.

BAMEUL, F. 1996. Un nouveau *Tropicus* Pacheco de la Guadeloupe (Coleoptera, heteroceridae). *Bulletin de la Société entomologique de France* **100**(5) (1995) 475-480.

NON-EFFECTS OF FORESTRY INSECTICIDE

Diflubenzuron is an insecticide which acts by preventing the synthesis of chitin in insect cuticle. It is often used in afforested areas to control outbreaks of defoliating caterpillars. Trials in Virginia, where it used against Gypsy Moth, demonstrated a reduction in the numbers of stoneflies, a mayfly and a crane fly, the dominant feeding group, the shredders being most affected. The small amount of data for an *Oulimnius* species and an *Ectopria* (Psephenidae) were not sufficient to indicate an effect.

HURD, M.K., PERRY, S.A. & PERRY, W.B. 1996. Nontarget effects of a test application of diflubenzuron to the forst canopy on stream macroinvertebrates. *Environmental Toxicology and Chemistry* **15** 1344-1351.

NEW HYDROPHILID GENUS

Tylomicrus is a new genus near to *Oreomicus* Malcolm, described from Malaysia. The habitat was wet wood with termite burrows.

SCHÖDL, S. 1995. *Tylomicrus* gen. n. *costatus* sp. n. aus Malaysia (Coleoptera: Hydrophilidae). *Koleopterologische Rundschau* **65** 145-148.

CHECKLISTS FOR ARAGÓN

Aragón comprises the provinces Huesca, Teruel and Zaragossa. The Aragonese checklist runs to 259 species. An accretion curve indicates that the fauna is increasing exponentially! The paper specifically covering Huesca also contains a checklist and it describes collecting at over 60 sites between 1984 and 1995. Four faunal area are recognised: 1. the main Pyrennean chain; 2. the pre-Pyrenees; 3. Guara and Somontano; 4. Los Monegros.

RIBERA, I. & AGUILERA, P. 1995. Coleópteros acuáticos de la provincia de Huesca (Aragón, España). *Zapateri, Revta. aragon. ent.* **6** 7-34.

RIBERA, I., FRESNEDA, J., AGUILERA, P. & HERNANDO, C. 1996. Catalogus: 10. Insecta: Coleoptera 8 (Familias 11-26): Coleópteros acuáticos. Familias: Gyrinidae, Haliplidae, Noteridae, Hygrobiidae, Dytiscidae, Hydraenidae, Helophoridae, Georissidae, Hydrochidae, Hydrophilidae, Elmidae, Dryopidae, Heteroceridae, Psephenidae, Scirtidae, Chrysomelidae Donaciinae. *Catalogus de la entomofauna aragonesa* **10** 3-22.

MORE *BEROSUS*

Eleven species of *rubiginosus* group are recognised from the Ethiopian region. Two new species are described from South Africa: *B. crassipes* and *B. obesus*. The *subglobosus* group is newly recognised with three species, *R. subglobosus* Régimbart and two new species, *B. madagascariensis* and *B. dibaphus*. Get yourself a proper reprint rather than a photocopy in order to savour the beautiful colour plate of *madagascariensis* by W. Zelenka.

SCHÖDL, S. 1995. Revision der Gattung *Berosus* Leach 5. Teil: die äthiopischen und madegassischen Arten der Untergattung *Berosus* Leach, s. str. B: Die *B. rubiginosus* Gruppe (Insecta: Coleoptera: Hydrophilidae). *Koleopterologische Rundschau* **65** 85-104.

SCHÖDL, S. 1995. Revision der Gattung *Berosus* Leach 5. Teil: die äthiopischen und madegassischen Arten der Untergattung *Berosus* Leach, s. str. C: Die *B. subglobosus* Gruppe (Insecta: Coleoptera: Hydrophilidae). *Entomol. Probl.* **26** (2) 129-136.

GERMAN CHECKLISTS

Regional checklists are proliferating nicely in Germany. The two most recently seen are for Niedersachsen (Lower Saxony) and Bavaria. In each case, the checklist is accompanied by Red List and ecological statuses.

HAASE, P., BELLSTEDT, LEMMEL, G., NIEDRINGHAUS & ZIEGLER, W. 1996. Rote Liste der in Nierdersachsen und Bremen gefährdeten Wasserkäfer mit Gesamtartenverzeichnis. *Inform.·d. Naturschutz Niedersachs.* **16** (3) 81-100.

HEBAUER, F. 1994. Katalog der bayerischen Wasserkäfer, ihrer Ökologie, Verbreitung, Gefährdung. *Berichte der Bayerische Akademie für Naturschutz und Landschaftspflege* **18** 47-59.

PAPERS IN BRIEF

FOSTER, G.N. & LEVEY, B. 1995. Redécouverte de *Dryops sulcipennis* (Costa) dans l'Aude (Col. Dryopidae). *L'Entomologiste* **51**(6) 294.

LARSON, D.J. 1991. A new species of *Potamonectes* Zimmermann (Coleoptera: Dytiscidae) from Labrador. *The Coleopterists Bulletin* **45** 280-284.

LEE, C.-F. & JÄCH, M.A. 1996. Review of the genera *Eubria* Latreille and *Microeubria* Lee and Yang (Coleoptera: Psephenidae: Eubriinae). *The Coleopterists Bulletin* **50**(1) 39-51.

NILSSON, A.N. 1995. A new *Hydroporus* species from Kamchatka previously standing as *H. brevis* F. Sahlberg. *Koleopterologische Rundschau* **65** 23-26.

OLIVA, A. 1995. Novidades sobre *Derallus* (Coleoptera, Hydrophilidae). *Physis* (Buenos Aires), *Secc. B* **50** (1992) 1-3.

OLIVA, A. 1995. Redescription and lectotype designation of *Derallus altus* (LeConte, 1855) (Coleoptera, Hydrophilidae). *Physis* (Buenos Aires), *Secc. B* **50** (1992) 45-46.

RIBERA, I. & AGUILERA, P. 1995. Metodos de recolección y estudio de coleópteros acuáticos. *Boletin de la Sociedad entomologica Aragonesa* **12** 43-48.

WATTS, C.H.S. 1995. Revision of the Australasian genera *Agraphydrus* Régimbart, *Chasmogenus* Sharp and *Helochares* Mulsant (Coleoptera: Hydrophilidae). *Records of the South Australian Museum* **28**(1) 113-130.

MOLECULAR PHYLOGENY - LIVE MATERIAL WANTED

The Leverhulme Trust is funding a project entitled "A molecular phylogeny of Coleoptera" undertaken by A. Vogler and Peter Hammond at the Natural History Museum, London (still known as the British Museum (Natural history) by some). Live material of adults and larvae are required for many beetle genera. Expenses can be negotiated. The list of material (which includes some highly accessible genera as well as *Spanglerogyrus*, *Amphizoa*, *Systolosoma* and *Spercheus*). Contact a.vogler@nhm.ac.uk or Peter Hammond.

WORLDWIDE WEB SITES FOR WATER BEETLES

A mainly American site is: **http://www.inhs.uiuc.edu/biod/waterbeetles/**

As with e-mail addresses, we shall note web sites in future, so long as the editor is told about them.

The e-mail file Keep the updates coming in. Stippled areas indicate changes from ***Latissimus* 6**.

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BALFOUR~BROWNE CLUB MEETING 1997

Details will be issued on a separate form.

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