ISSN 0966 2235

LATISSIMUS

NEWSLETTER OF THE BALFOUR-BROWNE CLUB

Number Four **August 1994**

✞ HANS SCHAEFLEIN 24.3.1915-17.5.1994
We regret to announce the recent death of Hans Schaeflein, a revered member of the Club and a great enthusiast for Dytiscidae.

REPORT ON THE FOURTH INTERNATIONAL CONFERENCE ON CLASSIFICATION, PHYLOGENY AND NATURAL HISTORY OF HYDRADEPHAGA

by G. William Wolfe & Michel Brancucci

The Fourth International Conference on Hydradephaga was convened at Reinhardt College, Waleska, Georgia, USA from 17 to 20 August 1993. Seventeen papers were presented on a wide variety of subjects.

Reports on morphology focused on the stridulation apparatus in *Hydrovatus* and spermathecal structure in *Canthyporus*. Phylogenetic studies and revisions, pertained to *Heterogyrus, Canthyporus, Hydrovatus, Hyphoporus, Herophydrus* and *Heterosternuta*. Faunal analyses reviewed water beetles in the Netherlands, Japan (Ryukyu), and Arkansas, Texas, and New York. Life history analysis of *Agabus distintigratus* and methods of assessing diurnal movements of water beetles also were discussed. A new stygobiontic water beetle was reported from Texas. Interesting water beetle biotopes in Africa and South America also were reviewed. Most papers dealt with Dytiscidae but one dealt with Gyrinidae and another with Haliplidae.

Two extended collecting trips were made. The first was to the Central Basin of Central Tennessee, from 13 to 16 August. The weather was near perfect and twelve gravel stream biotopes were sampled. Thanks to an incredibly quick report made by Anders Nilsson, we estimate that about 35-40 species of Dytiscidae were taken. Nine of the species are more or less specific to lotic habitats.

A second collecting trip to search for *Spanglerogyrus* was made to Southern Alabama in the vicinity of Andalusia. Collecting here was not as successful but several specimens of *Spanglerogyrus* were found at the last stop before returning to Reinhardt.

DYTISCIDAE IN THE CENTRAL BASIN OF TENNESSEE, 13-16 August 1994

Copelatus chevrolati Aubé
Copelatus glyphicus (Say)
Celina hubbelli Young
Celina contiger Guignot
Hydrovatus pustulatus (Melsheimer)
Hydrovatus sp.
Desmopachria convexa (Aubé)
Bidessonotus inconspicuus (LeConte)
Uvarus lacustris (Say)
Uvarus granarius (Aubé)
Hydroporus niger Say
Hydroporus rufilabris Sharp
Hydroporus ruficeps Aubé
Neoporus tennetum (Wolfe)
Neoporus mellitus (LeConte)
Neoporus clypealis (Sharp)
Neoporus shermani (Fall)
Neoporus venustus (LeConte)
Neoporus blanchardi (Sherman)
Neoporus striatopunctatus (Melsheimer)
Neoporus undulatus (Sharp)
Neoporus lynceus (Sharp)
Neoporus effeminatus (Fall)
Heterosternuta jenniferae (Wolfe & Matta)
Heterosternuta pulcher (LeConte)
Heterosternuta wickhami (Zaitzev)
Lioporeus triangularis (Fall)
Agabus gagates Aubé
Agabus nr *semivittatus* LeConte
Ilybius biguttulus (Germar)
Rhantus calidus (Fab.)
Laccophilus maculosus Say
Laccophilus fasciatus Melsheimer
Laccophilus proximus Say
Hydaticus bimarginatus Say
Acilius fraternus (Harris)
Acilius mediatus (Say)
Thermonectes basilaris (Harris)

Received June 1994

ROMANTIC INVOLVEMENT DENIED

Regarding the items about Professors in Congress in ***Latissimus* 3**, Vincenzo Volpe denies saying anything to reporters except "I'm a student of the Università 'La Sapienza' of Roma" and that Americans are Americans. So much for Reuter's.

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***. The address for other correspondence is:- Dr G N Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK.

BARCELONA 1994

The rich tradition of our Club includes abysmal failure to acknowledge the efforts of those who organise meetings on our behalf. I have been asked to break with tradition in order to remind those who attended the meeting in Barcelona that some parts of that area of Spain are poorly recorded, particularly Tarragona. Please send your records to Ignacio Ribera. The same applies to our meeting in Poland in 1993 (records to Andrzej Kordylas) and is probably still relevant to the one in Leicestershire at the turn of the Century, plus all those in between.

The Barcelona meeting can best be summarised by reproduction of the bill for Masia Can Borrell, a most memorable Catalonian experience to add to the beetles.

For posterity, this should be known as the birthplace of the Holistic Institute of Portrait Ecology, an alternative vision of the future of ecological research.

HYDROPORUS NIGELLUS COMPLEX

This complex comprises six species. Two Holarctic species, *H. geniculatus* Thomson and *H. nigellus* Mannerheim, are separated on tarsal width. *H. nigellus* is circumboreal whereas *H. geniculatus* is confined to north-west Europe and the north west of North America. *H. semenowi* Jakowlew is Palaearctic, and *H. despectus* Sharp, *H. tartaricus* LeConte and *H. tenebrosus* LeConte are Nearctic. Several new synonymies are established, in particular *H. eugeniae* Zaitzev being a junior synonym of *H. elongatulus* Sturm, and not a junior synonym of *semenowi* as previously suggested.

NILSSON, A.N. 1994. Revision of the *Hydroporus nigellus* complex (Coleoptera: Dytiscidae) including multivariate species separation. *Entomologica scandinavica* **25** 89-104.

CHAETARTHRIA SIMILIS WOLLASTON IN BRITAIN? by Garth FOSTER

Franz Hebauer recently revealed that *C. similis*, originally described from the Canary Islands, was rather more widely distributed in Europe, necessitating dissection of males. In addition to the type locality, he reported it from Sinai, Morocco, Italy, Germany, Switzerland and Spain. He also noted females from France and Israel, in both cases requiring confirmation by examination of males.

On receipt of Franz's manuscript for ***Latissimus***, I worked through British and Irish material and I must confess, not for the first time, that I overlooked one important specimen, in this case the only British male I have ever apparently taken in stream gravel rather than in moss or in muddy pools.

At the Club Meeting in Barcelona this year, Robert Constantin very kindly gave me a specimen of *similis*. I had not previously realised just how important was the broadness of the sclerotised part of the basal piece in the mid-line. This is perfectly well illustrated by Franz Hebauer. My British male has a very large aedeagophore (perish the thought that we have another *megaphallus*!), but is otherwise similar to Dr Constantin's specimen. It does, however, have sclerotised supports to the median lobe (in contrast to the description by Franz Hebauer), so I am reluctant to be categorical about the identification just yet.

I am also sorry to have to remain cryptic about where the specimen was found, but, by chance, the site is being investigated more thoroughly this year by another Club member, and I should not like to be held responsible for disrupting that work. Everyone in Britain should check *Chaetarthria*, specially those from running water. Anyone who likes a puzzle might care to know that I took my specimen on 16th July 1991.

My only other running water *Chaetarthria*, taken in the Rio Bernesga at Léon during the Club Meeting in 1990, also appear to be *similis*.

HEBAUER, F. 1993. European *Chaetarthria*. ***Latissimus*** **3** 1-3.

BEROSUS JAECHI SCHÖDL IN THE IBERIAN PENINSULA

by Pedro AGUILERA & Ignacio RIBERA

According to Schödl (1991), *B. jaechi* has a wide Mediterranean distribution: it has been found in several localities in Greece, the former Yugoslavia, Turkey, Egypt, Italy (including Sardinia), Mallorca and the French Camargue (plus a dubious record from Norway). The type locality for the species is Ebros delta (or Evros in a more frequent transcription of the Greek "ß"), in Greece.

With this background, it is not surprising that one of us (P.A.) collected *B. jaechi* in Ebro delta ... in Spain. This is the first Iberian record for the species, and also the first *Enoplurus* from Catalonia.

There are more coincidences: The river Ebros (the Greek) has a plain ("Ebrosebene" in Shödl's papers), and of course the Spanish Ebro has its officially named plain. The species of *Berosus* from the Greek Ebros are, according to Schödl (1991; 1993): *B. jaechi*, *B. spinosus* (Steven), *B. bispina* Reiche & Saulcy, *B. affinis* Brullé, and *B. signaticollis* (Charpentier). Only *B. spinosus* has not been found in the Iberian peninsula... not yet. We are expecting the results of new trips to "our" Ebro delta.

The specimens were collected in Alfacada, province of Tarragona (UTM 31TCF10), in a small temporary brackish pond on the right side of the Ebro. The species coexisted with *B. affinis* and *B. hispanicus* Küster. All the specimens were collected the same day (22 January 1994). A few weeks later (13 February) the temporary pond was completely dry, but another specimen was collected in a brackish permanent pond nearby.

SCHÖDL, S. 1991. Revision der Gattung *Berosus* Leach 1. Teil: Die paläarktischen Arten der Untergattung *Enoplurus* (Coleoptera: Hydrophilidae). *Koleopterologische Rundschau* **61** 111-135.

SCHÖDL, S. 1993. Revision der Gattung *Berosus* Leach 3. Teil: Die paläarktischen und orientalischen Arten der Untergattung *Berosus* s.str. (Coleoptera: Hydrophilidae). *Koleopterologische Rundschau* **63** 189-233.

Received May 1994

BRITISH COLEOPTERA REVIEW - PART 2

Paul HYMAN & Mark S PARSONS, 1994. ***A review of the scarce and threatened Coleoptera of Great Britain. Part 2.*** 252 pp. ISBN 1 873701 53 5 available at £18.80 (including postage) from Natural History Book Service Ltd, 2-3 Wills Road, Totnes, Devon TQ9 5XN.

❖ One of the pleasures of my time as editor of *Antenna* was to review Part 1 of this valuable series (*Antenna* **16**(4) 195), and now the original author (Paul Hyman), the reviser (Mark Parsons) and a large contingent of coleopterists, both professional and amateur, must be congratulated for completing the second part. To give some idea of the scale of the task, the bibliography comprises some 449 references, covering 658 species with some form of Red List or "Notable" (a British convention) status. The only surprise is the absence of any non-British references - even though the ecologies of species do vary with different range areas, one might imagine that there is some Continental work relevant to conservation of some of the species.

The British distributions of the species covered (no true "water beetles" in the narrow sense, except some Hydrophilidae - Sphaeridiinae) are as comprehensive as possible, though, as in my review of Part 1, I found a wry smile in the absence of my Morayshire record of *Omalium rugulipenne* (published in the EMM many years ago, and checked by D. K. Kevan). I can only repeat my invitation to "wry smilers" given in the *Antenna* review - pass your records on so that they can be included in any revisions.

This work, like Part 1, gives an invaluable overview of the status of many of our most interesting beetles. We can all look forward keenly to the next part, which rumour has it will be much more appropriate for review in ***Latissimus***, even if the editor censors any specially rude review comments.

R B Angus.

FRENCH *GYRINUS*

Gyrinus paykulli Ochs, *G. suffriani* Scriba and *G. natator* (L.) are recorded from the Lac de Cazeaux, some as a result of the Balfour-Browne Club Meeting at Teich in 1992.

BAMEUL, F. 1994. A propos de quelques *Gyrinus* Müller (Coleoptera, Gyrinidae) de l'étang de Cazaux (Gironde). *Bull. Soc. linn. Bordeaux* **22**(1) 31-32.

WELLIES ACROSS THE DESERT - A FLIGHT INTO EGYPT

by Robert Angus

One of the privileges now accorded to supervisors of Egyptian postgraduates is a 10-day visit to Egypt to meet the student in his or her "home department', along with the Egyptian supervisor(s), to review progress and plans. So it was, with the impending arrival of Rowyda Salah Saleh to work with me on Egyptian Dytiscidae, my "flight into Egypt" was arranged for April 18th, one week after my return from a highly successful trip to Sardinia - "*subarcuatus* in the snow" - but that story must be told later!

The week between the trips was largely spent "canning Sardines" - I got the chromosomes I needed, and by the time that Monday evening came I felt that life was beginning to assume a certain air of unreality. I did not know what to expect, but decided to take net and boots - not least because a large GB net would facilitate my recognition at Cairo airport - it did!

Rowyda and her husband Ibrahim, along with Dr Samy Zalat, one of her Egyptian supervisors, duly met me, and before long I was ensconced in my hotel and drinking tea with them in a downstairs room where men were playing what looked like dominoes, and smoking the hookah.

Rowyda is based at the Suez Canal University in Ismailia, but Tuesday was spent in Cairo, where I gave a lecture (on *Helophorus*!) at Ain Shams University, and had the pleasure of meeting again my former postgrads Fatma Shaarawi and Nagwa Hassan. Fatma continues to do interesting work on hydrophiloid chromosomes (she showed me the karyotypes of two more *Spercheus* species, both with the same peculiar arrangement as in *S. emarginatus*). Nagwa, although she worked with mouse and vole chromosomes, showed me an astonishing paper on the chromosomes of a *Limnaea* snail, where cells from the hermaphrodite gland have two types of arrangement, one resembling XX, the other XY! The afternoon was spent shopping in the Bazaar before an excellent kebab dinner at which we were joined by Professor Kascheif, the other Egyptian supervisor. A memorable and kaleidoscopic day.

Wednesday morning was spent in Cairo, after which we moved over to Ismailia ready for the highlight of the trip - a four-day visit to the Suez Canal University's field station at St Catherine, in the mountains of southern Sinai. The bus journey, with a group of students and staff off to do a field course, took all of Thursday, and became increasingly interesting as we got into the hills, until darkness finally fell.

Daylight on Friday revealed a most attractive and well laid out field station set in incredible scenery of bare rocky mountains. The next three days were spent exploring various wadis, with rocky streams and deep pools of clean water. There was a profusion of beetles, and we took good samples, using Gunther Wewalka's excellent zoogeographical account (1986. *Entomologia Basiliensis* **11** 273-288) as a sort of guide book cum shopping list. *Agabus biguttatus* abounded (both black and brown forms all with toothed male anterior tarsal claws), along with at least three *Nebrioporus*, one of which, probably *N. walkeri*, is as large as *Agabus labiatus*! Other spectacular finds included *Hydroglyphus major*, a giant at 3 mm long, *Hydaticus decorus*, looking like something escaped from a sweet shop, and a large *Dineutes* which for the moment answers to the name of Donald!

Exploring these wadis, some reached on foot and some by means of the departmental Land Rover, driven by the incomparable Farag, the local Bedouin driver - the only man Samy would trust to drive up the wadis and who not only had the knack but also, a local man, knew all the footpaths - was a fantastic experience, quite unlike anything I have ever seen before.

Monday was the great trek back to Ismailia, but Samy knew of a low altitude wadi halfway back which merited attention. Accordingly we (Samy, Rowyda, Ibrahim and myself) set off early with Farag in the Land Rover, to meet the others later and complete the journey in the bus. I had decided to attempt to bring livestock home, and, in view of the searing heat of the desert, we packed the tubes in Samy's portable ice-box. This wadi was complete with date palms as well as yet more beetles, including my first *Eretes*. Well pleased, we adjourned to the hot spring of Farayoun on the Red Sea coast, and sat under the awning of a tea-shop to await the bus. It duly came, and we clambered aboard. Farag and the Land Rover set off back to St Catherine, and after a while we set off for Ismailia. Only then it was realised that the precious ice box was still in the Land Rover. Oh

gloom - and the added consolation of having no-one to blame but myself! Samy was more sanguine - "Farag will see it" he said - and he did. As we reached the main road, there was the Land Rover waiting for us, and Farag duly handed over the beetles - a paragon among men!

Tuesday I gave a lecture at the Suez Canal University, and was then treated to a magnificent oriental banquet by Rowyda - fortunately the condition which made me glad of my wellies during an unscheduled visit to the loo at St Catherine's Monastery had, thanks to the Memphis Drug Company, cleared up, and I was able to do the meal justice.

Wednesday we returned to Cairo for more discussions with Prof. Kascheif, Fatma and Nagwa, followed by an afternoon picnic on the Nile and evening visit to the Pyramids. Then it was Thursday morning and suddenly I was on my way to the airport and home. Most of the beetles made it alive, and now I have some useful chromosome preparations to add to Rowyda's database, and I am left breathless and fired with enthusiasm for Egyptian Dytiscidae and Rowyda's arrival in July.

It was a great trip, and I can only end with my warmest thanks to all who showed me so much kindness and hospitality.

Received May 1994

NORTH AMERICAN *AGABUS*

Two papers continue the process of revision started in 1989. The following groups are retained in the 1991 paper, "H" indicating Holarctic species:

elongatus group	*elongatus* Gyllenhal	H	
	inexpectatus Nilsson	H	
zetterstedi group	*zetterstedti* Thomson	H	
confinis group	*thomsoni* (J. Sahlberg)	H	*subfuscatus* Sharp
	moestus (Curtis)	H	*discolor* (Harris)
	clypealis (Thomson)	H	*approximatus* Fall
	phaeopterus (Kirby)		*kootenai* sp. n.
	immaturus sp. n.		*inscriptus* (Crotch)
	canadensis Fall		*smithi* Brown
	audeni Wallis		*sasquatch* sp. n.
	mackenziensis sp. n.		*confinis* (Gyllenhal)
	bicolor (Kirby)		

The 1994 paper reviews:

lutosus group	*lutosus* LeConte	
	griseipennis LeConte	
	rumppi Leech	
obsoletus group	*obsoletus* LeConte	*ancillus* Fall
	morosus LeConte	*obliteratus* LeConte with two named forms
	hoppingi Leech	
fuscipennis group	*fuscipennis* (Paykull)	H
	ajax Fall	
	coxalis Sharp	H
	infuscatus Aubé	H

Keys are provided, along with maps, stereoscanning photographs of microsculpture and other features, and drawings of claws and genitalia. This series of papers will be valuable for use with the Palaearctic fauna as well as, of course, for the North American fauna.

LARSON, D.J. 1991. Revision of North American *Agabus* Leach (Coleoptera: Dytiscidae): *elongatus*-, *zetterstedti*-, and *confinis*- groups. *Canadian Entomologist* **123** 1239-1317.

LARSON, D.J. 1994. Revision of North American *Agabus* Leach (Coleoptera: Dytiscidae): *lutosus*-, *obsoletus*-, and *fuscipennis*- groups. *Canadian Entomologist* **126** 135-181.

AUSTRIAN RED LIST

Of the 7,379 species of beetle recorded from Austria, 1,174 (16%) are considered to have one of the IUCN Red List statuses. The species lists include records for each of the Austrian Länder, plus a brief description of habitat requirements and geographical range. Included are 46 Dytiscidae, the extinct *Hygrobia hermanni*, 3 Haliplidae, 3 Gyrinidae, *Microsporus acaroides*, 15 Hydraenidae, 2 *Hydrochus*, *Spercheus emarginatus*, 5 Hydrophilidae, 5 Dryopidae and 6 Elmidae.

JÄCH, M.A. (ed.) 1994. *Rote Listen gefährdeter Tiere Österreichs (Coleoptera)*. Volume **2**. Bundesministerium für Umwelt, Jugend und Familie, Vienna.

†IN MEMORIAM HANS SCHAEFLEIN

"Nun hat es sich davongestohlen, das alte Rübenschwein". In a typically uncomplimentary way, thus would Hans Schaeflein have commented on his own death. Instead, another must mourn for him.

Hans was an insulting man. Those for whom he was a nodding acquaintance tended to keep it that way because he had no fear of making a public scene. He was a quarrelsome, dogmatic, intolerant, noisy and indelicate man. Not everyone could tolerate his behaviour. Today I am surprised that I never had any problems with him. Perhaps my description is too shallow?

He himself was easily offended. Was his coarse skin only a shield for his sensitive and vulnerable core? What, however should most concern entomologists is that Hans Schaeflein was one of the most co-operative colleagues I have ever known. Whatever I asked, a literature problem or a taxonomic uncertainty, the next day I got bundles of notices, copies, separates and advice from him. He knew everything, every literature quotation and every entomologist - and he was always right. Woe betide anyone who opposed him. He didn't forget a contradiction after twenty years and he recalled it every time during later meetings.

Entering a train, when travelling to an entomological meeting, perhaps in Linz or Stuttgart, and coming across him, it would take no more than a quarter of an hour for the rest of the passengers to change compartments, because they were unable to tolerate the noisy dispute which he kindled.

When Hans was to give a lecture at a meeting, the chairman would put it to the end of the programme, because there was no other way of breaking off the endlessly growing discussion. Hans's themes in reports and publications became more and more exotic and outlandish in his later life. His field of interest was the unusual - the teratology of insects, insects as food for me, eyeless, terrestrial and subterranean water beetles, the *Hydroporus* included in glacier ice - and the life histories and obituaries of entomologists.

At meetings, Hans commonly travelled two days before the start and entered into discussion with the few other early participants, sometimes for the whole night, every time having the last word - and the last beer. Well, he was an officer in the Second World War and his most important job was to command; he never lost that manner. He rarely appeared before lunch at meetings, and if he did attend a morning session, he would not have slept his fill and could prove most surly.

Apart from these human imperfections, Hans exhibited an inexorable scientific thoroughness in his working method, verging on pedantry. His main work was undoubtedly the chapter about Dytiscidae in Freude, Harde, Lohse - *Die Käfer Mitteleuropas* - Volume 3. There was irksome spadework, revising firstly the nomenclature followed by the taxonomy of the Hydradephaga of Central Europe, and then the ecological investigations. Many other beetle families of the Central European fauna were already well treated by Reitter's *Fauna Germanica*, but the water beetles were a weak point in Reitter. Hans Schaeflein clarified the nomenclature and he pursued subsequent nomenclatoral changes with hatred, because they upset the order that he had achieved in his painstaking work. For that reason he strived for a long time against the adaptations proposed for the first supplementary volume edited by Lohse and Lucht, but he finally agreed by reason of scientific necessity.

Preceding and following his main work, Hans Schaeflein published numerous small contributions concerning the taxonomy, teratology and biogeography of the Dytiscidae.

Hans Schaeflein was born in Würzburg/Main and early in his youth came to stay in the Danube valley, where he worked as a supervisor at the Straubing post office until he retired. He married a second time to his ever patient "Liesl", who accompanied him regularly until his later life during excursions to the Austrian Osttirol and to entomological meetings.

I myself owe very much to Hans Schaeflein concerning natural science and history. He acquainted me with the most important literature and he taught me not only workmanlike dissection of water beetles, but also common sense and mistrust of dubious locality records, and of inexact observations and other errors in the literature. I have lost a reliable adviser, whom I often wanted to curse, when he was just too noisy or too intemperate, but for whom I now mourn.

Franz Hebauer

HANS SCHAEFLEIN - A BIBLIOGRAPHY

1961. Halipliden und Dytisciden aus der Umgebung Straubings. *Mitteilungen der Münchner Entomologischen Gesellschaft* **51** 124-149, 2 plates.
1961. Käferfauna einer mit Regenwasser gefüllten Wagenspur. *Nachrichtenblatt der Bayerischen Entomologen* **10** 89-90.
1963. Interessanter Fund von Ilybius ater De Geer (Coleoptera, Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **12** 79-80.
1964. Ein bemerkenswertes Exemplar von *Hydaticus transversalis* Pontoppidan (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **13** 1-3.
1964. *Hydroporus notatus* Sturm in Bayern (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **13** 32.
1965. *Hydroporus longicornis* Sharp auch in Deutschland! *Nachrichtenblatt der Bayerischen Entomologen* **14** 111-117.
1966. Gedanken zur Trennung der Weibchen von *Rhantus exsoletus* Forst. und *Rhantus latitans* Sharp. Beitrag zur Morphologie der Dytisciden (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **15** 41-46.
1968. Neue Halipliden- und Dytiscidenfunde für die Umgebung von Straubing (Coleoptera). *Nachrichtenblatt der Bayerischen Entomologen* **17** 55-59.
1968. Färbungsvariationen von *Hydaticus transversalis* Pontopp. und *Hydaticus seminiger* Deg. (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **17** 118-119.
1968. *Coelambus lautus* Schaum in Mittelfranken gefunden (Col. Dytiscidae). Halophil oder nicht? *Nachrichtenblatt der Bayerischen Entomologen* **17** 31.
1968. *Stictotarsus duodecimpustulatus* (F.) auch in Österreich (Col. Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **17** 126.
1968. Neue Dytiscidenfunde für den Bayerischen Wald (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **17** 64.
1969. Kleine Mitteilungen: Nach mehr als 30 Jahren wiedergefunden! *Entomologische Blätter* **65** 118.
1969. Zur Kenntnis von *Agabus chalconotus* Panz. und *melanocornis* Zimm. (Col., Dytiscidae). *Entomologische Nachrichten* **13** 57-61.
1969. Faunistische Nachrichten aus der Steiermark (*Hydroporus longicornis* Sharp - Erstnachweise für Österreich). *Mitt. naturw. Ver. Steiermark* **99** 214-215.
1970. Neues über *Hydroporus longicornis* Shp. (Col., Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **19** 59.
1970. *Laccornis breviusculus* Gschw. = *Graptodytes kocae* Gglb. (Col., Dyt.). *Nachrichtenblatt der Bayerischen Entomologen* **19** 89.
1971. 4. Familie: Dytiscidae, echte Schwimmkäfer. In: FREUDE, H., HARDE, K.W. & LOHSE, G.A. (eds) *Die Käfer Mitteleuropas* **3**. Goecke & Evers, Krefeld.
1973. *Dytiscus dimidiatus* Bergstr. var. female *mutinensis* Fiori ist species propria (Coleoptera, Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **22**.
1979. Vier interessante Fälle von Schistomelie bei *Agabus nitidus* F., *A. chalconotus* Panz. und *Dytiscus marginalis* L. *Nachrichtenblatt der Bayerischen Entomologen* **28** 97-100.
1979. Beitrag zur Dytiscidenfauna Mitteleuropas (Col.). Nebst einigen ökologischen Miszellen. *Stuttgarter Beiträge zur Naturkunde Serie A (Biologie)* **325** 1-20.
1980. Augenlose, unterirdisch lebende Dytisciden. *Balfour-Browne Club Newsletter* **15** 11-13.
1981. Die heteromorphen Weibchen der Gattung *Coelambus* Thoms. (Col. Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **30**.
1981. Winterbeobachtungen an Dytisciden (Insecta, Coleoptera). *Entomol. Blätter* **77** 93-96.
1981. Augenlose, unterirdisch lebende Dytisciden. *Entomol. Blätter* **77** 133-136.
1982. Dytiscidenfang im Ibmer Moor (Ins. Col.): zwei neue Arten für Oberösterreich. *Linzer biol. Beitr.* **14** 11-14.
1982 (with G. WEWALKA). Ordn.: Coleoptera Fam.: Hygrobiidae, Haliplidae, Dytiscidae. *Catalogus Faunae Austriae* 15c. Österreichische Akademie der Wissenschaften, Wien.
1982. Dytiscidenfang mit selbstgebauter automatischer Falle. *Entomologische Nachrichten und Berichte* **27**163-166.
1983. Zweiter Beitrag zur Dytiscidenfauna Mitteleuropas (Coleoptera) mit faunistisch-ökoloischen Betrachtungen. *Stuttgarter Beiträge zur Naturkunde Serie A (Biologie)* **361** 1-41.
1985. Verbreitung und Formen von *Potamonectes griseostriatus* DeG., 1774 mit Beschreibung einer neuen Variation (Col., Dytiscidae). *Entomologische Nachrichten und Berichte* **29** 209-212.

1986. Schistomelie eines Mundtasters bei *Graphoderus cinereus* L. (Coleoptera, Dytiscidae). *Nachrichtenblatt der Bayerischen Entomologen* **36** 112-113.
1986. *Dytiscus circumcinctus* Ahr. mit asymmetrischen Hinterhüften (Col., Dyt.). *Entomologische Nachrichten und Berichte* **30** 95.
1986. In Memoriam Leopold Gschwendtner 10.9.1899-7.3.1982. *Entomologia Basiliensia* **11** 11-16.
1987. Schistomelie eines Beines bei *Dytiscus marginalis* Linné 1758 (Coleoptera, Dytiscidae). *Acta Coleopterologica* **2** 31-33.
1987. Vier seltene Falle von Teratologie bei Dytisciden (Col.). *Entomologische Nachrichten und Berichte* **31** 219-224.
1987. Das Vorkommen von *Coelambus lautus* Schaum, 1843, mit nomenklatorischen, faunistischen und ökologischen Bemerkungen (Coleoptera, Dytiscidae). *Entomofauna* **8** 309-332.
1989. Dritter Beitrag zur Dytiscidenfauna Mitteleuropas (Coleoptera) mit ökologischen und nomenklatorischen Anmerkungen. *Stuttgarter Beiträge zur Naturkunde Ser. A* **430** 1- 39.
1989. 4. Familie: Dytiscidae pp. 62-68. In *Die Käfer Mitteleuropas* (G.A. LOHSE & W.H. LUCHT eds), **12** (supplement).
1989. Verschiedene Formen von Atrophie an Beinen von Dytisciden (Col.) (Beitrag zur Teratologie bei Dytisciden). *Entomologische Nachrichten und Berichte* **33** 273-276.
1993. Bibliographie der über Larvensystematik der mitteleuropäischen Dytisciden erschienenen Veröffentlichungen. *Beitr. Ent.* **43** 149-188.
1993. Wasserkäfer (s.l.) als Beute und Nahrung von Vertebraten (Coleoptera: Dytiscidae, Haliplidae, Gyrinidae, Elmidae, Hydraenidae, Hydrophilidae). *Entomologische Blätter* **89** 120-126.
1993. Entomologische Detektivarbeit. *NachrBl. bayer. Ent.* **42** 86-89.

ELMIS IS FEMALE BUT THE NAME COULD BE ELMIDAE

A case has been proposed to ICZN to conserve the female status of the name *Elmis*, but to conserve the name Elmidae, which, strictly speaking, should only apply if *Elmis* is a male name, the correct derivation from the female gender being Elmididae. Comments should be sent to the International Commission of Zoological Nomenclature, c/o the Natural History Museum, Cromwell Road, London SW7 5BD.

JÄCH, M.A. 1994. Case 2861. Elmidae Curtis, 1830 and *Elmis* Latreille, 1802 (Insecta, Coleoptera): proposed conservation as correct spelling and of feminine gender respectively. *Bulletin of Zoological Nomenclature* **51**(1) 25-27.

ORIENTAL HALIPLIDAE

This paper includes an Oriental checklist, which includes four species of *Peltodytes*, two species in *Haliplus* s. s., and 20 members of the subgenus *Liaphlus*. The rest of the paper is concerned with the latter, four of them being newly described, and one *Haliplus indicus* Régimbart 1899 being given full specific status. The paper is accompanied by the diagrams of the usual high standard.

van VONDEL, B.J. 1993. Revision of the *Liaphlus* species of the Oriental Region excluding China (Coleoptera: Haliplidae). *Tijdschrift voor Entomologie* **136** 289-316.

POLISH *ANACAENA LUTESCENS*

The presence of both species of the *limbata* complex is reported in Poland. Most of the populations of *lutescens* appear to be parthenogenetic. In one case, 304 females were counted accompanied by three (presumably very tired) males! In distinguishing the two species, the authors note a new upper side character that may be of use. The punctuation of the elytra about two-thirds of the way down is reported as single and irregular in *A. lutescens,* whereas *A. limbata* has a double punctuation of larger strial punctures and smaller interstrial ones. This does not work well with the editor's specimens, but the other upper side character, the difference in intensity of darkening of the pronotum, is a useful character when used in conjunction with the extent of pubescence on the hind femora.

BIESIADKA, E. & KORDYLAS, A. 1993. Wystepowanie *Anacaena limbata* (Fabr.) i *Anacaena lutescens* (Steph.) (Coleoptera, Hydrophilidae) w Polsce. *Przeglad Zoologiczny* **37** (3-4) 267-271.

AN INVESTIGATION OF THE WATER BEETLES OF POLISH SPRINGS

by Andrzej Kordylas

The fauna of springs is not well known except for some mountainous parts of Poland (Galewski 1971, 1979; Tenenbaum 1938) and for lowland areas such as Wigry (Demel 1922) and Niebieskie Źródła (Tranda 1976).

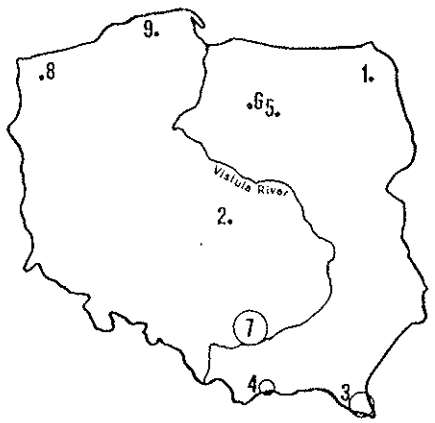
The present work is summarised as a table of the water beetle species of single springs and spring systems based on my own research and that in the literature. I worked spring systems of the Lyna River and the Drwęca River in the Masurian Lakes area, Krakow-Częstochowa, the Miechów Uplands, and those in the area of Słupsk and Nowogard (Pomerania) (Figure 1). The Drwęca River springs are at Pojezierze Olsztynskiw 156-160 metres above sea level. The area is wooded with ash and alder in marshy conditions. The temperature of the spring water varied from 4°-10°C. The samples were taken from several types of water system - helorheocren, limnocren and rheocren with muddy springs. Kraków-Częstocowa and the Miechów Uplands springs are 225-435 metres above sea level. Spring position is variable with flow rates from 1 to 130 dm/second. In summer the spring water temperature varied from 8.7°-10.4°C. Many springs in this area were in use for farming. The lowest flow rates were at the springs near Nowogard and Słupsk, which had only limnocren and helorheocren habitats.

The rheocrens are slow-flowing springs with sand and stones, plus plenty of organic matter in the form of dead leaves. Helorheocrens have base-rich water flowing over sand, gravel or stones overgrown with *Veronica* and also *Lemna*. Limnocrens have a sand or gavel bottom, sometimes with a shallow ferruginous sediment. Rheocrens were muddy.

The beetles were caught using a net with a triangular hoop with 20 cm long sides, and with a mesh size of 0.25 mm. When visits were repeated, long intervals were observed to insure minimal disturbance and change to small springs. Samples were taken from the Łyna River springs in spring, summer and autumn of both 1983 and 1984. 492 specimens were caught, *Agabus guttatus* being the most numerous of the 22 species. The Drwęca River springs were sampled in the spring of 1984. Eighty six individuals of ten species were caught, *A. guttatus* again being the most numerous. The springs of the Kraków-Częstochowa and the Miechów Uplands were sampled in summer 1985 and autumn 1986, 203 specimens of 27 species being caught in 18 springs, with the most numerous species being *Anacaena limbata*. From the area of the Pomeranian Lakes, two species (*Agabus guttatus* and *Anacaena lutescens*) were found in the Zawoja spring near Nowogard in summer 1987; the Damnica spring yielded only *Agabus guttatus* in spring 1992.

Combining my own research with the published literature, 66 species are recorded from Polish springs. Species normally associated with springs constitute only 7.6 per cent of the list, the rest being either species typical of small water bodies or eurytopic, opportunistic species.

I should like to thank Mr Andrzej Zawal of Szczecin University for sending the samples from Zawoja. This research was directed by Dr E Biesiadka and financed by the Department of Ecology WSP in Olsztyn.



Map of the area under investigation.
The numbers correspond to those in the table.

References

DEMEL, K. 1922. Fauna zimowa w źródłach wigierskich. *Prace Stacju Hydrobiol. nad Wigrami, Lwów* **1** (2) 1-25.

GALEWSKI, K. 1971. Pływakowate (Coleoptera, Dytiscidae). *Bieszczadów. Fragm. faun., Warszawa* **17** 179-211.

GALEWSKI, K. 1979. Chrząszcze wodne (Haliplidae, Dytiscidae, Gyrinidae i Hydrophilidae) Pienin. *Fragm. fauna, Warszawa* **24** (7) 227-281.

TRANDA, E. 1972. Fauna Niebieskich Źródeł. Chrząszcze wodne (Coleoptera). *Zesz. Nauk. Uniw. Łódzk* **2** (46) 65-73.

Received March 1994

TABLE. Water beetles recorded from spring systems in Poland

1 Wigry (Demel 1922); 2 Niebieskie Źródła (Tranda 1976); 3 Bieszczady Mountain (Galewski 1971); 4 Piening Mountain (Galewski 1979); 5 Lyna River; 6 Drwęca River; 7 Krakow-Częstochowa and Miechowa Uplands; 8 Zawoja; 9 Damnica. Habitats:- R rheocren; H helorheocren; L limnocren; M rheocren with mud (muddy springs).

	1	2	3	4	5	6	7	8	9
habitat types⇨	R			LM	HLM	HL	RHLM	L	H
Brychius elevatus		o					ooo		
Haliplus heydeni							oo		
H. lineatocollis		o					o		
H. obliquus		o							
H. wehnckei		o							
Noterus crassicornis							o		
Hydroglyphus pusillus		o					o		
Coelambus impressopunctatus		o	o		o				
Hygrotus inaequalis		o					o o		
H. versicolor		o							
Hyphydrus ovatus		o							
Hydroporus discretus			o	oo	o				
H. ferrugineus			o	o					
H. incognitus			o						
H. longicornis				o					
H. melanarius			o						
H. memnonius			o						
H. nigrita				oo	ooo		o		
H. palustris		o		o	oo		oo		
H. planus			o		o				
H. striola		o							
H. tristis			o						
H. umbrosus							o		
Porhydrus lineatus		o							
Oreodytes sanmarki									
Platambus maculatus		o							
Agabus bipustulatus			o				o		
A. fuscipennis							o		
A. guttatus	o		o	oo	ooo	oo			o
A. striolatus					oo	o			
A. sturmii		o			oo				
A. undulatus		o							
Ilybius ater					o				
I. fenestratus		o							
I. fuliginosus		o			o	o			
Dytiscus marginalis		o							
Gyrinus marinus		o							
G. mergus		o							
G. natator		o							
G. minutus		o							
Helophorus aquaticus				o	oo		o o		
H. brevipalpis		o		o					
H. granularis					o		oo o		
H. griseus							o		
H. minutus					o		o		
Coelostoma orbiculare							o		
Cercyon pygmaeus							o		
Hydrobius fuscipes				o	oo	o	o		
Anacaena globulus				o					
A. limbata		osl		oo	o o	o	oooo	o	
A. lutescens					ooo	oo			o
Laccobius alternus				o			o		
L. minutus		o		o	o				
Helochares lividus		o							

	1	2	3	4	5	6	7	8	9
habitat types⇨	**R**			**LM**	**HLM**	**HL**	**RHLM**	**L**	**H**
Enochrus affinis					o				
E. coarctatus		o							
E. melanocephalus		o							
E. quadripunctatus							o oo		
Cymbiodyta marginella					o	o			
Berosus luridus							o		
Ochthebius minimus					o		o		
Hydrena riparia				o			o		
Limnebius crinifer					o				
L. parvulus					o		o		
L. truncatellus				o					
Elmis maugetii							oo		

CHINA WATER BEETLE SURVEY

by Manfred Jäch

At the XIXth International Congress of Entomology in Beijing in July 1992, negotiations were carried out between representatives of the Natural History Museum, Vienna (Section of Coleopterology) and the Institute of Applied Ecology (Shenyang) of the Academy of Science about a thorough faunistic survey of the aquatic and semiaquatic beetles of China. A co-operation agreement for the years 1993-1998 was signed soon after the Congress and the "CHINA WATER BEETLE SURVEY" was launched in October 1993 with the first joint excursion to Hunan and Guangxi in south-eastern China. Joint field trips in 1994 are planned to be carried out in Yunnan, Liaoning and Hainan.

Since the water beetles of Turkey have been rather thoroughly investigated in recent years, the territory of China remains the last *terra incognita* in terms of water beetles in the Palaearctic Realm. Our excursions to China have clearly shown that the water beetle fauna of China is unexpectedly rich in species, especially new ones. For example, during a very short excursion in the municipality of Beijing, a new species of *Platambus* (Dytiscidae) was collected by Lanzhu Ji and Manfred Jäch during the Congress of Entomology in 1992.

Very little material had hitherto been collected in China and very little was published so far. Only recently, activities have increased in Korea, Taiwan and Hong Kong, but not on the Chinese mainland proper.

The survey comprises all Chinese families of aquatic and semiaquatic Coleoptera (Dytiscidae, Noteridae, Amphizoidae, Haliplidae, Gyrinidae, Hygrobiidae, Torridincolidae, Hydroscaphidae, Microsporidae, Hydraenidae, Hydrochidae, Spercheidae, Epimetopidae, Hydrophilidae, Georissidae, Elmidae, Dryopidae, Ptilodactylidae, Chelonariidae, Psephenidae, Eulichadidae, Heteroceridae, Helodidae) and all aquatic members of Curculionidae and Chrysomelidae.

The scientific staff of the joint project is composed of the following water beetle specialists: M.A. Jäch (co-ordinator), H. Schönmann, S. Schödl, J. Kodada, L. Ji, J. Yang and M. Wang.

The scientific results of the "CHINA WATER BEETLE SURVEY" will be printed in a monographic series named *Water Beetles of China*, published by the Vienna Coleoptorological Society (WCV). The first volume will appear in August 1995, with further volumes published biannually.

In the first volume we plan to include introductory chapters on all families of water beetles known to occur in China. These chapters should include all known faunistic records from China, including interpretations of doubtful names, a complete bibliography and, where possible, an historical review of the faunistic exploration, brief introductions on life history and zoogeographical analyses. All in all, it should be an update and a compilation of the present knowledge. So far, the following have agreed to write introductory chapters: R.B. Angus (Hydrophilidae, Helophorinae), E. Gentili (Hydrophilidae, *Laccobius*), F. Hebauer (Hydrophilidae), M.A. Jäch (Hydraenidae, Elmidae, Eulichadidae), L. Ji (Hydrophilidae), J. Kodada (Dryopidae), C.-F. Lee (Psephenidae), D. Makhan (Hydrochidae), P. Mazzoldi (Gyrinidae), A.N. Nilsson (Dytiscidae, Noteridae), S. Schödl (Hydrophilidae), H., Schönmann (Hydrophilidae). Apart from these introductory chapters, any additional taxonomic article on Chinese water beetles will be considered for publication in *Water Beetles of China*. Material from any adjacent area (Assam, northern Thailand, Burma, Laos, Vietnam, Taiwan, Korea, Mongolia, neighbouring parts of Russia) can be included.

Any water beetler who is interested in contributing to "CHINA WATER BEETLE SURVEY" in any form is welcome to contact Manfred Jäch for further information.

IUCN ACTION PLAN FOR CONSERVING WATER BEETLES

Michael Balke and Lars Hendrich have the task of developing an Action Plan to cover all the World's water beetles. Members can help them by sending in information about conservation projects and about candidate species. They ask the following questions:

Which species of water beetle are threatened to your knowledge?

For each species, it would be helpful to indicate:

- what is known of its natural history (e.g. thermophilous, cold-stenothermous, acidophilic, pioneer status)
- its habitats
- known or possible threats
- present conservation status in Red Lists and Red Data Books
- association with other endangered species
- its range
- present number of locations
- locations within protected areas such as National Parks
- things that need to be done to protect the species.

SPIDER RIFFLE BEETLES

The colour illustrations for this popular article include some of the black and yellow patterned *Ancyronyx* of Indonesia, the Malay Peninsula and the Philippines. The anchor-clawed spider beetles were first described in 1847 from eastern North America, followed in 1896 by another species described from Sumatra! Understandably, some specialists cast doubt on the precision of both records. A century later, *A. acaroides* Grouvelle was found extant in Sumatra and in Malaysia, and further work revealed three other species.

JÄCH, M.A. 1993. *Ancyronyx* (Coleoptera: Elmidae) - the spider riffle beetle of the Malaysian forest rivers. *Nature Malaysiana* **18** (3) 86- 89.

DUTCH *HYDROPHILUS PICEUS* RECORDS

The distribution of recent records is mapped along with those for nine terrestrial species. Larvae were first recorded on 15 May and last on 2 August, whereas adults were found between April and November.

CUPPEN, J.G.M. 1992. Het recent voorkomen van tien keversoorten in Nederland (Coleoptera). *Ent. Ber., Amsterdam* **52**(12) 177-184.

NORTH AMERICAN *OREODYTES*

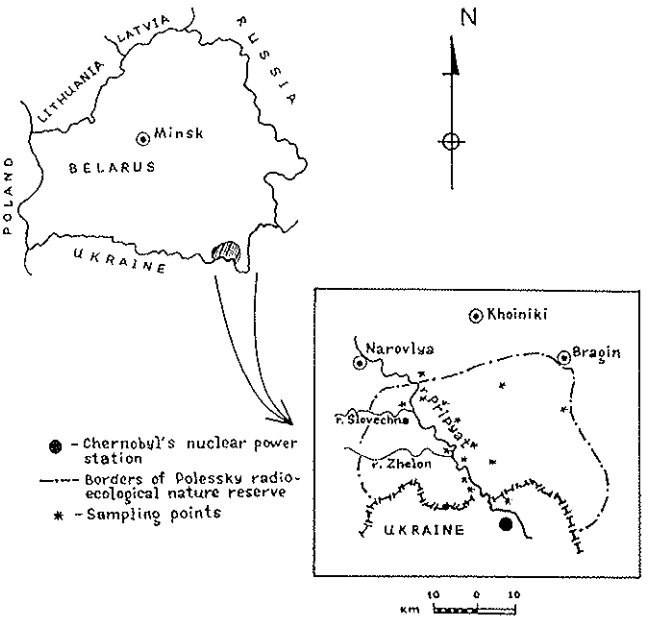
Oreodytes alaskanus s. lat is recognised as comprising four species, the Palaearctic *O. dauricus* (Motschulsky) and the Nearctic *O. alaskanus* (Fall), *O. productotruncatus* (Hatch) and *O. recticollis* (Fall). The Japanese *O. kanoi* Kamiya is considered to be a sister-group, sharing the presence of a distinct emargination of the apex of the last female abdominal sternite. For Western Europeans, it should be added that these are species with the "finned" elytra as seen in *O. alpinus* (Paykull).

The author would also like it known that from 1 July 1993, his address was: Department of Biology, Laurentian University, Sudbury (Ontario), Canada P3E 2C6.

ALARIE, Y. 1993. A systematic review of the North American species of the *Oreodytes alaskanus* clade (Coleoptera: Dytiscidae: Hydroporinae). *Canadian Entomologist* **125**: 847-867.

BELARUSSIAN WORK ON ADEPHAGA

One contact made as a result of the Polish meeting was with Dr Mikhail D Moroz, who wrote to Mick Eyre in good English in December 1993. His researches mainly concern studies within the Polessky State Radio-Ecological Reserve founded in 1988 following on the Chernobyl Disaster. Its total area is about 1200 square kilometres. From 1986-1991 he has studied radionuclides in beetle tissues; these are generally 1000 times greater than background levels. Since 1991 most attention has been devoted to the water beetle communities of water bodies in the polluted areas abandoned by humans after the accident. His other research concerns an inventory of the water beetles of Belarus, 121 species being recorded to date. He needs some help with identification, in particular provision of good quality keys. The Belarus Red Data Book was produced in 1993, and has entries for *Dytiscus latissimus* L., known from six sites, and *Rhantus incognitus* Scholz, known from only one.



Perhaps members can help by sending papers to him or offers of assistance in identification. Unfortunately, much of Dr. Moroz's published work is in Russian or in Belarussian without a summaries in a non-Cyrillic script, so it is not possible to list the papers received. The paper by Zakharenko and Moroz is of use as the checklist is of necessity in Latin. The other paper listed below records 80 species of Hydradephaga from Belarus in land-reclamation canals. Interesting species include *Coelambus polonicus* (Aubé), *Hydroporus elongatulus* Sturm, *Agabus nigroaeneus* (Erichson), *A. subtilis* (Erichson), *A. biguttulus* Thomson, *A. fuscipennis* (Paykull), *Rhantus notaticollis* Aubé, *R. latitans* Sharp, *Graphoderus austriacus* Sturm, *Cybister lateralimarginalis* (DeGeer) and *Gyrinus natator* L.

MOROZ, M.D. 1993. Ecological and zoogeographical characteristics of the Hydradephaga (Coleoptera, Adephaga) in the land reclamation canals of Belarus. *Entomological Review* **72**(2) 321-325 (in Russian).

ZAKHARENKO, V.B. & MOROZ, M.D. 1988. Material on Fauna of water beetles (Coleoptera: Haliplidae, Dytiscidae, Gyrinidae) of Byelorussia. *Revue d'Entomologie de l'URSS* **67** 282-290 (in Russian).

ELMID SENSITIVITY TO PESTICIDE

Artificial stream microcosms were treated with different rates of fenvalerate, a synthetic pyrethroid insecticide, using riffle assemblages from Iowa. Initial exposure resulted in a significant increase in drift at 1 and 10 µg/*l*. After 30 days, the numbers of one taxon were significantly reduced at 0.01 µg/*l* and most were affected by 0.1 µg/*l*. The results suggest that at environmental concentrations of 0.01 µg/*l* mayflies and stoneflies would be eliminated and riffle beetles, caddis flies and some chironomids would be present in significantly reduced numbers. Five elmid taxa were included in the experiment, *Stenelmis parva* being common and the only taxon named. Mortalities were largely confined to its larvae, and it appeared that adults were only significantly affected at 10 µg/*l*. Breneman & Pontasch cite two papers (also listed below) concerning petroleum hydrocarbon spills which have indicated that riffle beetles may be more tolerant of some environmental stresses than other stream insects.

BARTON, D.R. & WALLACE, R.R. 1979. The effects of an experimental spillage of oil sands tailings on benthic invertebrates. *Environmental Pollution* **18** 305-312.

BRENEMAN, D.H. & PONTASCH, K.W. 1994. Stream microcosm toxicity tests: predicting the effects of fenvalerate on riffle insect communities. *Environmental Toxicology & Chemistry* **13** (3) 381-387.

PONTASCH, K.W. & BRUSVEN, M.A. 1988. Macroinvertebrate response to a gasoline spill in Wolf Lodge Creek, Idaho, USA. *Archiv für Hydrobiologie* **113** 41-60.

OCHTHEBIUS SUBGENUS *CALOBIUS*

Only two species are recognised in the distinctive, ant-like *Calobius* subgenus of *Ochthebius*. These are the East Mediterranean *O. brevicollis* Baudi and the West Mediterranean and Madeira/Canarian *O. quadricollis* Mulsant, often referred to in the past as *O. heeri* Wollaston. These beetles live in marine rockpools alongside *Ochthebius (Cobalius) lejolisi* and *subinteger*.

JÄCH, M.A. 1993. Revision of the Palaearctic species of the genus *Ochthebius* XI. The subgenus *Calobius* Wollaston, 1854 (Insecta: Coleoptera: Hydraenidae). *Reichenbachia* **30** (7) 33-45.

AN AMERICAN HOLOTYPE IN BERLIN

The holotype of *Hydraena pensylvanica* Kiesenwetter 1849 has been traced to the Deutsches Entomologisches Institüt, Eberswalde, Berlin. Unfortunately, Perkins designated a neotype for *H. pen[n]sylvanica* which has turned out to be a different species, described as *americana* sp.n.

JÄCH, M.A. 1993. *Hydraena pensylvanica* Kiesenwetter, 1849 - holotype retrieved (Coleoptera: Hydraenidae). *Aquatic Insects* **15**: 225-227.

DERBYSHIRE WATER BEETLES

Derbyshire records for 24 species of Nationally Notable water beetles (reckoned to occur in less than 100 ten km grid squares in Britain) are discussed.

MERRIT, R. 1993. Nationally Notable water-beetles in Derbyshire 1970-1992. *Journal of the Derbyshire Entomological Society* **112**: 12-16.

PROJECT WALLACE OMICRINI

A new genus, *Stanmalcolmia*, is created for *sulawasiensis*, one of seven new species described as a result of the Project Wallace survey of Sulawesi. Like Manfred Jäch's trans-Pacific *Ancyronyx*, Franck Bameul has identified a new *Aculomicrus* species (formerly a Neotropical genus described by Ales Smetana) from Sulawesi. It is strange how a beetle 1.675 mm in length can influence arguments about plate tectonic movement!

The 1994 paper includes descriptions of two new species of the formerly monospecific *Oreomicrus*, *tristis* from East Nepal and *granulatus* from Malaysia. A cladogram is constructed for the Omicrini in order to examine the phylogenetic relationships of this genus.

BAMEUL, F. 1993. Omicrini from Sulawesi Utara, Indonesia (Coleoptera: Hydrophilidae: Sphaeridiinae). *Invertebrate Taxonomy* **7** 751-778.

BAMEUL, F. 1994. New Oriental *Oreomicrus* Malcolm (Coleoptera: Hydrophilidae: Sphaeridiinae) with a redefinition of the genus and notes on its phylogenetical relationships. *Ann. Soc. Entomol. Fr.* **30**(1) 79-91.

DOKTOR DER PHILOSOPHIE - STEFAN SCHÖDL

Congratulations to Stefan Schödl for the award of his D. Phil. in February 1994 for his work on *Berosus*.

WATER BEETLES OF BERLIN

For the first time a Red List of water beetles (Hydradephaga and Hydrophiloidea) is presented for the city of Berlin. It is based on ten years of fieldwork in all types of natural and urban habitats, and on a complete evaluation of relevant literature (published and unpublished) since 1909.

The list comprises all West Berlin species including those not endangered at present. The degree of vulnerability and its cause are given for each species. From a total of 156 species, six are extinct and 22 are endangered. The percentage of missing, extinct or endangered species is distinctly higher in Hydradephaga, specially the Gyrinidae and Haliplidae, than it is in the Hydrophiloidea. The main causes of species becoming endangered are lowering of ground water level in the vicinity of mires and fens during subway construction, in addition to the more usual problems of eutrophication, waste water pollution and infill. All people interested in conservation are invited to request a reprint.

BALKE, M. & HENDRICH, L. 1991. Rote Liste der Wasserkäfergruppen Hydradrephaga und Hydrophiloidea von Berlin (West). *In:* Auhagen, A., Platen, R. & Sukopp, H. (eds) *Rote Listen der gefährdeten Pflanzen und Tiere in Berlin*, Landschaftentwicklung und Umweltforschung, pp. 359-372.

MURCIAN STUDIES

Andres Millán has supplied a series of publications concerning the water beetles of Murcia, mainly in the watershed of the Segura. Gil et al. (1990) characterised the five species of Dryopidae and the 17 species of elmid. Virtually all species were concentrated in or confined to headwaters, the exceptions being *Normandia nitens* (Müller) and *Stenelmis canaliculata* (Gyllenhal). Very small numbers of larval *Potamophilus acuminatus* (Fab.) were also found only in a reservoir canal. An earlier publication (Millán & Soler 1989) listed several records for the *Potamophilus* in Murcia. Vidal-Abarca *et al.* (1991) provide a comprehensive account of the whole fauna of the río Mundo. Millán & Rocchi (1991) describe a new species of *Nebrioporus* under the name *Potamonectes mariae*. Millán, Velasco and Soler (1992) provide a checklist of the 64 species of Hydradephaga. In a later paper, they analyse these data on the basis of the origin of the fauna. Palaearctic species comprise 42% of the total, Mediterranean species 34%, "suprapalaearctic" species 13%, European species 6% and Iberian endemics 5%. The paper concerning the *Berosus* species unfortunately was written before Schödl's analysis became available. The following species occur in Murcia and are fully described in this useful paper: *Berosus affinis* Brullé (*suturalis*); *hispanicus* Küster (*affinis*); *B. fulvus* (Kuwert); *B. guttalis* (Rey).

GIL, E., MONTES, C., MILLÁN, A. & SOLER, A.G. 1990. Los coleópteros acuáticos (Dryopidae & Elmidae) de la cuenca del río Segura (S.E. España). *Anales de Biología* **16** 23-31.

MILLÁN, A. & ROCCHI, S. 1991. *Potamonectes* (s.str.) *mariae*, nuova specie della Spagna. *Atti Mus. civ. Stor. nat. Grosseto* **14** 83-86.

MILLAN, A. & SOLER, A.G. 1989. Presencia de *Potamophilus acuminatus* (Fabricius, 1792), (Col. Elmidae) en el se de la Península Ibérica. *Anales de Biología* **15** (1988) 73-74.

MILLÁN, A., VELASCO, J. & SOLER, A.G. 1992. Los coleópteros Hydradephaga de la cuenca del río Segura (se de la Península Ibérica). Aspectos faunísticos más relevantes (Coleoptera). *Anales de Biología* **18** 39-45.

MILLÁN, A., VELASCO, J. & SOLER, A.G. 1993. Los coleópteros Hydradephaga de la cuenca del río Segura (se de la Península Ibérica). Estudio corológico. *Boln. Asoc. esp. Ent.* **17** 19-37.

SANCHEZ-MECA, J.J., MILLAN SANCHEZ, A. & SOLER ANDRES, A.G. 1993. El genéro *Berosus* Leach, 1817 (Coleoptera: Hydrophilidae) en la Cuenca del Río Segura (Se España). *Elytron* (1992) **6** 91-107

VIDAL-ABARCA, M.R., SUÁREZ, M.L., MILLÁN, A., GÓMEZ, R., ORTEGA, M., VELASCO, J., & MÍREZ-DÍAZ, L. 1991 Estudio limnológico de la Cuenca del Río Mundo (Río Segura). *Jornados sobre el Medio natural Albacetense 20-23 Septiembre 1990* 339-357.

CZECH *YOLA*

Yola bicarinata is reported from Czechia in 1992. A map of its European distribution is included in the paper. The map indicates that there is some doubt about the species' occurrence in northern France, though a dot is near enough to Le Mans, where the species was found recently.

HENDRICH, L. 1994. *Yola bicarinata* (Latreille, 1804) in der Tschechischen Republik (Col., Dytiscidae). *Entomologische Nachrichten und Berichte* **37** 252.

UZBEK *GRAPTODYTES*

A new species is described from near Tashkent, also near to *bilineatus* (Sturm), but smaller, with a weakly defined elytral stripe and having more or less equal male fore claws. The paper includes illustrations of the form and elytral patterns of *bilineatus*, *granularis* (L.), *veterator* Zimmermann, *pictus* (Fab.) and *phrygius* Guignot

HENDRICH, L. 1993. Ein neuer Schwimmkäfer der Gattung *Graptodytes* Seidlitz 1887 aus Uzbekistan - *Graptodytes snizeki* n. sp. (Coleoptera: Dytiscidae). *Entomologische Zeitschrift* **103** 392-398.

LIMNOXENUS IN GERMANY

A sample of beetles from Gartow (about halfway between Hamburg and Berlin) is described. Apart from the *Limnoxenus*, the list includes *Hydaticus continentalis* Balfour-Browne, *Bagous cylindrus* (Paykull) and *B. binodulus* (Herbst).

HENDRICH, L., HERRMANN, A. & TOLASCH, T. 1993. *Limnoxenus niger* (Zschach, 1788) im Niederelbegebiet! *Bombus* **3** (10) 40.

HYPHYDRUS FROM NEW GUINEA & BALI

Four species are recognised from the area, including the newly described *dani* from the highlands of West New Guinea. H. curvipes Régimbart is newly synonymised with *decemmaculatus* Wehncke. The other species discussed are *elegans* (Montrouzier) and *lyratus* Swartz, with its four subspecies. The paper includes several evocative photographs of collecting sites.

BISTRÖM, O., BALKE, M. & HENDRICH, L. 1993. A new species of *Hyphydrus* Illiger 1802 (Coleoptera Dytiscidae) from West New Guinea, and notes on other species of the genus. *Tropical Zoology* **6** 287-298.

BRITISH JOURNAL OF ENTOMOLOGY & NATURAL HISTORY - SPECIAL ISSUE

The proceedings of the 1991 Conference of the [British] National Federation for Biological Recording have been written up in a supplement to the BJENH. Water beetles intrude at several points, in the paper by Stuart Ball about the Invertebrate Site Register, in a paper about monitoring environmental quality and change by Mick Eyre, in the notes on operating a recording scheme by Garth Foster, and in a consideration of the role of local museums by Derek Lott. I remember the day fairly well, stinking hot and packed like a sardine in a train from Gatwick to Falmer, which took longer than the flight from Glasgow. Looking in my journal, I can barely believe that I did not take advantage of the trip to look at some beetles in the field. The GNF paper has up-to-date maps of *Agabus didymus* (Olivier), *Anacaena limbata* (Fab.) s.s. and *Anacaena lutescens* Stephens. Even the papers without water beetles are of interest, the whole volume being purchasable from R.D. Hawkins (30d Meadowcroft Close, Horley, Surrey RH6 9EL) for £6.

BALL, S.G. 1994. The invertebrate site register - objectives and achievements. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 2-14.

ELY, W.A. 1994. The input of invertebrate records for site identification, assessment and conservation at a local records centre. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 15-20.

EVERSHAM, B.C. 1994. Using invertebrates to monitor land use change and site management. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 36-45.

EYRE, M.D. 1994. Invertebrates in monitoring environmental quality and change. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 27-35.

FOSTER, G.N. 1994. Operating a recording scheme. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 46-57.

HARDING, P.T. & ALEXANDER, K.N.A. 1994. The use of saproxylic invertebrates in the selection and evaluation of relic forest in pasture-woodlands. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 21-26.

LOTT, D.A. 1994. The role of local museums in taxonomic support. *British Journal of Entomology and Natural History* **7** (Supplement **1**) 58-60.

THÜRINGIAN RED LIST & CHECKLIST

One list is concerned with all of the water beetles of the Thuringian fauna, the conservation status of each one being identified. The breakdown is Haliplidae 18 species, Dytiscidae 106 spp. (*Hydroporus planus* accidentally omitted from the printed list), Noteridae 2, Gyrinidae 5, Hydraenidae 35, Hydrochidae 5, Spercheidae 1, Helophoridae 14, Hydrophilidae s.s. including all Sphaeridiinae 58, Dryopidae 12, Elmidae 16, Georissidae 1, Scirtidae 17. Some of the names could do with an overhaul but species such as *Anacaena lutescens* (Stephens) are included and the names are all interpretable. The list is particularly rich in *Hydraena* and *Ochthebius*.

The other publication concerns only the Red List species, of which there are 150, 52% of the total fauna of 290 species (presumably including Donaciinae and weevils not listed in the first publication), including an even more alarming proportion of species thought to be extinct.

BELLSTEDT, R. 1993. Wasserkäfer (aquatische Coleoptera), pp. 21-23 in FRITZLAR, F. & BELLSTEDT, R. (eds) *Check-listen Thüringer Insekten*. **1**, 56 pp.

BELLSTEDT, R. 1993. Rote Liste der Wasserkäfer (aquatische Coleoptera) Thüringens. *Naturschutzreport* **5** (1993), pp. 87-92, Jena.

BROWSING SECTION - MAILED ANGELS

This essay comes from *Entomologia Edinensis* (Wilson & Murray, 1834), and refers to *Gyrinus substriatus*:

*This agile little creature appears to have been a favourite object of observation with the entomologist. "Water, quiet still water," says Mr Knapp, "affords a place of action to a very amusing little fellow (*Gyrinus natator*), which, about the month of April, if the weather be tolerably mild, we see gambolling upon the surface of the sheltered pool; and every schoolboy who has angled for minnows in the brook, is well acquainted with this merry swimmer, in his shining black jacket. Retiring in the autumn, it awakens in the spring, rises to the surface, and commences its sports. They associate in parties of ten or a dozen near the bank, where some little projection forms a bay, or renders the water particularly tranquil; and here they will circle round each other without contention, each in his sphere, and with no apparent object, from morning until night, with great sprightliness and animation; and so lightly do they move on the fluid, as to form only some faint and transient circles on its surface. Very fond of society, we seldom see them alone, or, if parted by accident, they soon rejoin their busy companions. One pool commonly affords spaces for the amusement of several parties; yet they do not unite, or contend, but perform their cheerful circlings in separate family associations. If we interfere with their merriment, they seem greatly alarmed, disperse, or dive to the bottom, where their fears shortly subside, as we soon again see our little merry friends gambolling as before. This plain, tiny, gliding water-flea, seems a very unlikely creature to arrest our young attention; but the boy with his angle has not often much to engage his notice, and the social active parties of this nimble swimmer, presenting themselves at these periods of vacancy, become insensibly familiar to his sight, and, by many of us, are not observed in after life without recalling former hours - scenes of perhaps less anxious days; for trifles like these, by reason of some association, are often remembered, when things of greater moment pass off, and leave no trace upon the mind." Wordsworth has likened a beetle to*

"A mailed angel on a battle day;"

And Messrs Kirby and Spence describe the objects of our present notice as being "covered with lucid armour: when the sun shines, they look like little dancing masses of silver and brilliant pearl." They, however, exhale a disagreeable and rancid odour.

They don't write them like that anymore. Isn't it sad to see the dead hand of scientific observation coming in at the last moment to spoil the effect?

WILSON, J. & DUNCAN, J. 1834. *Entomologia Edinensis, or a Description and History of the Insects found in the Neighbourhood of Edinburgh. Coleoptera.* Blackwood, Edinburgh, 351 pp., 2 plates.

GYRINID ALARM PHEROMONE

The pygidial glands of whirligigs are well known as the source of noxious substances that render them unpalatable to fish and other predators (the "disagreeable and rancid odour" referred to above). Experiments with *Gyrinus aeratus* Stephens demonstrate that these secretions include an alarm substance which, when released in sufficient quantity onto the water, results in the evasive swimming behaviour seen in flotillas of whirligigs when disturbed. Konrad Dettner has previously drawn attention to the other functions of the pygidial secretions, i.e. to prevent attachment by microorganisms and to increase wettability after a stay on land or in flight. The paper includes an interesting but incomplete discussion. It is concluded, on the basis that this fast movement of an aggregation of dark beetles is very conspicuous, that the behaviour is aposematic, i.e. a warning to would-be predators. Wilson and Duncan above were not alone in noting that whirligigs *disperse* when disturbed rather than staying together in madly whirling groups, which tend to occur in association with potential prey falling on the water's surface.

HENRIKSON, B.-I. & STENSON, J.A.E. 1993. Alarm substance in *Gyrinus aeratus* (Coleoptera, Gyrinidae). *Oecologia* **93** 191-194

NORTHERN GERMAN ELMIDS

It seems that the elmid fauna includes only *Elmis aenea* (Müller), *E. maugetii* Latreille, *Limnius volckmari* (Panzer) and *Oulimnius tuberculatus* (Müller).

BELLSTEDT, R. & REUSCH, H. 1993. Zur Kenntnis der Hakenkäfer-Fauna im norddeutschen Tiefland (Coleoptera, Elmidae). *Braunschw. naturkdl. Schr.* **4** 241-245.

EGYPTIAN WATER BEETLES

Dr Hassan H Fadl has written requesting help with his work on Egyptian water beetles. He has special problems with some of the Polyphaga and would like copies of descriptions of the following, as well as any comments members may have about their status and the whereabouts of type material:

Enochrus latus Kuwert, *E. maculiapex* Kuwert, *E. nitiduloides* Kuwert (all described in *Deutsche Entomologische Zeitschrift* 1888 , pp. 280, 284 and 291)

Neohydrophilus wehnckei Olivier (*Horae Soc. Ent. Ross.* 1908 XXX VIII p. 369, or *Review Zoology Afr.* 1912 I(3) p. 333)

Anacaena jordanensis Burmeister (*Entomofauna* 6 p. 5)

Helichus quadraticollis Buquet (A specimen so named in Museum Frey, Munich. Specimens identified as this exist in Grouvelle's classical collection in the Museum d'Histoire Naturelle, Paris. The name appears to be a *nomen nudum*.)

Georyssus costatus Castelnau (*Hist. Nat.* 1840 II p. 45 or *Ann. Soc. Ent. Fr.* 1879 51 X p. 237).

Received January 1994

DETECTIVE WORK

The subtitle "Gravierende Fehler in der entomologische Literatur" I think means "Annoying mistakes...." but I am not quite sure who is being held to blame. Five problems are listed and discussed:

- Are the antennae of Haliplidae 10- or 11-segmented?
- Does *Dytiscus marginalis* practise brood-care?
- Which is correct: *Haliplus* or *Laccophilus obsoletus*?
- Which is correct: *Agabus vittiger* or *Ilybius vittiger*?
- Who is Herr Otto Suteminn?

SCHAEFLEIN, H. 1993. Entomologische Detektivarbeit. *NachrBl. bayer. Ent.* **42** 86-89.

SOUTH-WEST SWEDISH BEETLES

The water beetle fauna of the Dalum and Timmele parish in the province of Västergötland was investigated from 1985 to 1992. Selected wetlands with rich local faunas are presented, e.g. Horsäckrasjön with 75 recorded species. Species richness is discussed in relation to area and to latitude. Species of interest in the area include: *Hydroporus glabriusculus* Aubé, *H. elongatulus* Sturm, *Agabus subtilis* Erichson, *A. wasastjernae* (C.R. Sahlberg), *A. fuscipennis* (Paykull), *Gyrinus natator* (L.) , and *Helophorus nanus* Sturm (new for the area).

NILSSON, A.N. & ANDRÉN, B. 1993. Vattenskalbagger från Dalums och Timmele socknar i Ätradalen, Västergötland. *Ent. Tidskr.* **114** 43-49.

TENERIFE MACROINVERTEBRATE COMMUNITIES

The fauna of seven Tenerife streams was investigated in 1991. Six were more or less permanent and one seasonal. The lowest richness was found in the remnant laurel forest and the highest in an exposed, lowland site. *Nebrioporus canariensis* (Bedel), *Agabus biguttatus* (Olivier) and *Laccobius canariensis* d'Orchymont were the only beetles common to all streams. Another twenty species of beetle were found. *Meladema imbricata* (Wollaston) was confined to one stream in laurel forest whereas *M. coriacea* occurred in four other streams.

MALMQVIST, B., NILSSON, A.N., BAEZ, M., ARMITAGE, P.D. & BLACKBURN, J. 1993. Stream macroinvertebrate communities in the island of Tenerife. *Archiv für Hydrobiologie* **128** 209-235

AGABUS BIGUTTATUS - OLIVIER VERSUS GMELIN

The name *Dytiscus biguttatus* Olivier, 1795 is threatened by the existence of an earlier name, *Dytiscus biguttatus* Gmelin, 1790, which may be a synonym of *nebulosus* Forster, 1771. Anders Nilsson has appealed to ICZN for suppression of the Gmelin name.

NILSSON, A.N. 1993. Case 2777 *Dytiscus biguttatus* Olivier, 1795 (currently *Agabus biguttatus*; Insecta, Coleoptera): proposed conservation of the specific name. *Bulletin of Zoological Nomenclature* **50**(2) 127-128.

BAVARIAN ELMIDAE

Klaus Heuss has belatedly sent a reprint concerning the elmids of Middle Franconia in Bavaria. In addition to some interesting maps showing the overlap in the ranges of *Limnius volckmari* (Panzer) and *L. perrisi* (Dufour), and *Elmis aenea* (Müller) and *E. maugetii* Latreille, stereoscanning photomicrographs are provided to demonstrate differences between the pronota and aedeagophores of *E. aenea* and *E. maugetii*. An insert notes the addition of *Esolus parallelepipedus* (Müller) to the list of nine species.

HEUSS, K. 1990. Die Verbreitung der Elminthiden (Coleoptera) in den Fließgewässern Mittelfrankens. *Verh. Westd. Entom. Tag* **1989** 59-68.

ETHIOPIAN DYTISCIDAE

Sven Persson spent much of 1988 and 1989 in Ethiopia, where he collected 7,300 specimens of 53 dytiscid species. The one hundred and sixty eight dytiscid species known from Ethiopia are catalogued in this work. No new species are described but one new synonym is noted, *Rhantus longulus* Régimbart 1895, junior to *R. flavicollis* Régimbart 1887. Most of the 38 species endemic to Ethiopia occur only above 2000 metres altitude, with the Gondar, Shoa, Arssi and Bale provinces having the highest proportion of endemics.

NILSSON, A.N. & PERSSON, S. 1993. Taxonomy, distribution and habitats of the Dytiscidae (Coleoptera) of Ethiopia. *Entomologica Fennica* **4** 57-94.

OLD DANISH ELMID RECORD

The Danish record for *Limnius muelleri* Erichson, from Haderslev, Jutland in 1903, is shown to be based on a specimen of *L. intermedius* Fairmaire.

NILSSON, A.N. 1993. En felbestämd dansk *Limnius*-art (Coleoptera, Elmidae). *Ent. Meddr* **61** 115-116.

MORE ON JAPANESE *HYDROPORUS*

Hydroporus tristis (Paykull), *H. fuscipennis* Schaum, *H. angusi* Nilsson and *H. saghaliensis* Takizawa are recorded from Hokkaido, Japan. Nine Hydroporus spp. are known from Japan. A key is for the ten species known from Japan, Sakhalin and the Kuril Islands. Easily the most interesting record is that of *angusi*, described in 1990 from Vladivostok.

NILSSON, A.N. & SATÔ, M. 1993. Five *Hydroporus* species new to Japan and the Kuril Islands, with additional records of other species (Coleoptera: Dytiscidae). *Transactions of the Shikoku Entomological Society* **20**(2) 87-95.

REPORT ON *DYTISCUS LATISSIMUS* & *GRAPHODERUS BILINEATUS* IN DENMARK

In 1991 the collecting and killing of *Graphoderus bilineatus* and *Dytiscus latissimus* became prohibited by Danish law, following their specification in Appendix II to the Bern Convention. As a further consequence of the Convention, these two species in 1992 became specified in Appendices II and IV to the EC Habitats Directive, though not as priority species. *G bilineatus* has been found in more than 35 localities in Denmark, mainly in the east. *D. latissimus* has been more widely distributed, being recorded from more than 60 localities. Both species are considered vulnerable because of the declining number of suitable habitats. Mogens' paper describes the species, their habitats and biology, the exception being the separation of *Graphoderus* larvae. Well preserved larval exuviae of *G. bilineatus* could not be safely identified using published descriptions.

HOLMEN, M. 1993. Fredede insekter i Danmark Del 3: Biller knytter til vand. *Ent Meddr* **61** 117-134.

FEMALE HYDRAENID CHARACTERS

The structures of the female last abdominal tergite and sternite, and the spermatheca, are characterized in relation to the subgenera *Phothydraena, Haenydra, Hydraena* s.s. and *Hadrenya*.

DIAZ PAZOS, J.A. & OTERO, J.C. 1992. Caracteres femeninos de interes taxonómico en la familia Hydraenidae (Col.) I. Primeras consideraciones sobre el género *Hydraena* Kugelann, 1794. *Eos* **68** 159-165

CUTICULAR MICROSTRUCTURE IN PALPICORNS

Adriana Oliva has produced some elegant and fascinating Scanning Electron Microscope studies on various structures in genera representing two very distinct groupings in Michael Hansen's classification - the Helophorid lineage and the Berosini.

A peculiar and apparently primitive character shown by all the genera of the Helophorid lineage is the presence of slit-like, sunken sensilla on the apical segment of the maxillary palpi. Their number and arrangement varies - reduced to two in *Hydrochus*, but with 12 in *Helophorus porculus*. In aquatic genera (including *Helophorus aquaticus* and *brevipalpis* - not "*brevitarsis*" as named in the paper) these sensilla are lost, and the palpal segment has only an apical group of peg sensilla. Oliva suggests that the arrangement of the slit sensilla may be secondary in *H. porculus*, but their presence is probably primitive. If they are a secondary acquisition associated with terrestrial genera, they should be sought in other groups, notably Sphaeridiinae.

Oliva considers that in the Helophorid lineage a terrestrial life style is primitive, and this may well be true. Certainly in *Helophorus* the disparity of form shown by the semi-terrestrial subgenera contrasts sharply with the relative uniformity and abundant species-clusters shown by the aquatic ones.

One feature of particular interest is the unusual microtrichia found on the underside of the elytra of *Georissus* and *Hydrochus*, which appear to support Hansen's view that these groups are closely related.

The combination of the Helophorid lineage and Berosini in this paper is somewhat unexpected, but stems from Oliva's extensive research on the South American species of the latter group. I am intrigued by Oliva's note of the temptation to regard Berosini as originating near *Helophorus* s. str. (*Meghelophorus*) - resisted as it is so obviously contrary to Hansen's findings. The reason for my being so intrigued is that the two species of the subgenus *Lihelophorus* Zaitzev (from Tibet) have a remarkable superficial resemblance to rather flattened *Enopleurus*!

This paper breaks new ground in Hydrophiloid morphology, and the information is thus very difficult to evaluate - we need similar studies on the other genera!

OLIVA, A. 1992. Cuticular microstructure in some genera of Hydrophilidae (Coleoptera) and their phylogenetic significance. *Bulletin de l'Institut royal des Sciences Naturelles de Belgique* **62** 33-56.

R B Angus, received January 1994

Also received from Adriana Oliva:-

OLIVA, A. 1981. El genero *Derallus* Sharp en La Argentina (Coleoptera, Hydrophilidae). *Revta. Soc. ent. Arg.* **40** 285-296.

OLIVA, A. 1983. *Derallus* de La Cuenca del Amazonas (Coleoptera, Hydrophilidae). *Revta. Soc. ent. Arg.* **42** 343-351.

OLIVA, A. 1986. El genero *Epimetopus* Lacordaire en la Argentina (Coleoptera: Hydrophilidae). *Revta. Soc. ent. Arg.* **44**(1985) 1-14.

OLIVA, A. 1987. El genero *Hemiosus* en Los Andes Meridionales y La Patagonia (Coleopt., Hydrophilidae). *Revta. Soc. ent. Arg.* **44**(1985) 377-381.

OLIVA, A. 1987. Presencia en la Argentina de *Georyssus humeralis* Pic (Coleoptera: Georyssidae). *Revta. Soc. ent. Arg.* **44**(1985) 383-384.

OLIVA, A. 1989. El genero *Berosus* (Coleoptera: Hydrophilidae) en America del Sur. *Revista del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" e Instituto Nacional de Investigación de las Ciencias Naturales. Entomología* **6**(4) 57-236.

OLIVA, A. 1990. Nuevas especies sudamericanas del genero *Berosus* (Coleoptera: Hydrophilidae). *Rev. Soc. Entomol. Argent.* **51** 87-95.

OLIVA, A. 1991. The types of *Hemiosus* Sharp, 1882 (Coleoptera, Hydrophilidae) in the Orchymont and Mouchamps collections. *Bulletin de l'Institut royal des Sciences Naturelles de Belgique* **61** 167-181.

OLIVA, A. 1992. The species of *Hydrochus* (Coleoptera; Hydrochidae; Hydrophiloidea) described from South America. *Bull. Annls Soc. r. belge Ent.* **128** 87-104.

PLATYNECTES VERSUS *PLATEOCOLYMBUS*

Anders Nilsson has proposed to ICZN conservation of the name *Platynectes* Régimbart 1879, which is threatened by the unused name *Plateocolymbus* Gistel 1857.

NILSSON, A.N. 1993. Case 2841 *Platynectes* Régimbart, 1879 (Insecta, Coleoptera): proposed conservation. *Bulletin of Zoological Nomenclature* **50**(3) 212-214

STUDIES ON *HYDROPORUS GLABRIUSCULUS*

Two studies emanating from David Bilton's Ph. D. concern the morphometric variation of populations of *Hydroporus glabriusculus* and a general account of its status in Britain. There are small morphological differences between populations, as one might expect when some have been isolated for about 60,000 years. Morphological differentiation did not show the pattern revealed by allozyme studies, which was more consistent with geographical isolation. In particular, the population of East Walton was particularly distinct, even from a similar lineage, the neighbouring population of Lambs Common. This is taken to emphasise the importance of a "founder event", the establishment of a population from a few individuals. The EMM paper seeks to explain the distribution of *glabriusculus* in Britain and Ireland in terms of the distribution of "primary fens". The map shows twelve 10 km grid squares with modern records, to which three more have been added since the paper went to press. The "explosion" simply reflects the intensification of human interest in finding more primary sites rather than *glabriusculus*'s desire to find secondary ones!

BILTON, D.T. 1993. A morphometric study of the diving beetle *Hydroporus glabriusculus* (Coleoptera, Dytiscidae) in Western Europe, including a comparison of morphological and genetic divergence patterns. *Zool. Anz.* **231** 111-124.

BILTON, D.T. 1993. The distribution and ecology of *Hydroporus glabriusculus* Aubé (Col., Dytiscidae), with particular reference to the British Isles and its status as a relict species. *Entomologist's monthly Magazine* **129** 207-220

A SURVEY OF WATER BEETLES OF KHUZESTĀN by Sh. O. Hosseinie

The province of Khuzestān, south-west of Iran, occupying the north-western corner of the Persian Gulf, was surveyed for water beetles. The adults have been identified to genus. They include: Haliplidae - *Haliplus* (19); Noteridae - *Noterus* (10); Dytiscidae - *Guignotus* (408 specimens), *Bidessus* (2), *Nebrioporus* (115), *Scarodytes* (1), *Hydrovatus* (59), *Hydroporus* (324), *Agabus* (9), *Laccophilus* (57), *Deronectes* (39), *Porhydrus* (35), *Coelambus* (47), *Hyphophorus* (58), *Hydaticus* (5), *Colymbetes* (12), *Rhantus* (26), *Platambus* (8); Hydrophilidae - *Laccobius* (437), *Enochrus* (372), *Sternolopus* (10), *Berosus* (470), *Paracymus* (16), *Hydrochara* (77), *Helophorus* (367); Hydraenidae - *Ochthebius* (59); Dryopidae - *Dryops* (35).

The other Coleoptera include: larval stages of dytiscids (77) and hydrophilids (82); adults of staphylinids (5), coccinellids (2), scarabaeids (2), carabids (14), cantharids (2), anobiids (18), curculionids (6), chrysomelids (1), anthicids (2) and cicindelids (1).

The non-coleopteran groups cohabiting with the beetles include: Libellulidae (23 nymphs), Gomphidae (6 nymphs), Aeshnidae (12 nymphs), Agrionidae (20 nymphs), Baetidae (24 nymphs), Caenidae (32 nymphs), Notonectidae (5 adults and 25 nymphs), Gerridae (1 adult and 32 nymphs), Pleidae (14 nymphs), Corixidae (73 adults and 40 nymphs), Aphididae (1 nymph), Chironomidae (1 adult, 3 pupae, 9 larvae), Drosophilidae (7 adults), Ephydridae (1 adult and 6 larvae), Psychodidae (1 larva), Tabanidae (7 larvae), Culicidae (2 adults , 3 pupae and 11 larvae), Stratiomyidae (4 larvae), Asilidae (2 adults), Empididae (1 larva), Formicidae (5 adults), Gastropoda (36 adults), Crustacea (1043 adults), Diplopoda (2 adults), bony fishes (2 adults) and frogs (175 larvae and 308 eggs).

Specimens were found in ponds (63% of all water beetles collected), rivers (25%), streams (9%) and marshlands (3%). Hydrophilidae were more numerous than the rest (56% of all water beetles), with dytiscid adults next (40%), the other four families being represented by a few specimens each.

This study is supported by a grant from Shiraz University Research Council.

Received September 1993

NEW GUINEAN BEETLES

Rhantus ekari is newly described from West New Guinea, belonging to the same group as *suturalis* (MacLeay). A new colymbetine, carabid-like genus, *Carabdytes*, is described from Papua New Guinea, the specific epithet *upin* referring to a Papuan god.

BALKE, M. & HENDRICH, L. 1992. Ein neuer *Rhantus* Dejean aus West-Neuguinea (Coleoptera: Dytiscidae). *Entomologische Zeitschrift* **102** 37-39.

BALKE, M., HENDRICH, L. & WEWALKA, G. 1992. *Carabdytes upin* n. gen., n. sp. aus Neuguinea (Coleoptera: Dytiscidae). *Entomologische Zeitschrift* **102** 93-112.

CATALOGUE OF WATER BEETLES IN THE FREIBURG MUSEUM

The 750 or so water beetles in the museum collection are catalogued, including data for some.

BRAUN, A.R. 1993. Die Wasserkäfer aus den Sammlungen des Naturkundemuseums in Freiburg. *Mitteilungen Entomologischer Verein Stuttgart* **28** 47-52

SIXTEENTH IBERIAN *HAENYDRA*

This is *Hydraena (Haenydra) altamirensis* from the Sierra de Altamira, Cáceres, belonging to the same subgroup as *truncata* Rey and *iberica* d'Orchymont.

DIAZ PAZOS, J.A. & GARRIDO GONZALEZ, J. 1993. *Hydraena (Haenydra) altamirensis* sp. n. from the Iberian Peninsula (Coleoptera, Hydraenidae). *Aquatic Insects* **15** 169-175

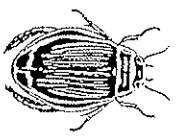
ENHANCED WATER BEETLE COMMUNICATION - A REQUEST BY ANDERS NILSSON

I have now used the PC for personal communication for some time and found that it has some great opportunities. In fact the E-mail is the only way to communicate with far-out places like Vladivostok in a fast and cheap way. One of the major shortcomings is that only a minority of the people you would like to contact are connected to the Internet (or Glasnet etc.), and many of those who are have never provided you with the E-mail addresses.

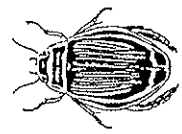
I now encourage all B~BC members who have them to send their E-mail numbers to me for listing in Latissimus. As I now can use my PC also as a telefax I am also interested in getting fax-numbers from more people than I have at the moment. So let's have a fax-number listing as well. Fax numbers should be given as for international use (as below)

E-mail: ANNILSSON@BIOVAX.UMDC.UMU.SE (for direct entry to my bedroom)
LENA.BURSTROM@ANIMECOL.UMU.SE (to my department)
Telefax: + 46 90 167665 (office) or + 46 933 22077 (home) but only when the PC is on.

Received January 1994



Latissimus is a publication of the Balfour-Browne Club.
Issue **4** was published on 29th August 1994.
Correspondence should be addressed to the Club Secretary:-
Dr G N Foster, 3 Eglinton Terrace, Ayr KA7 1JJ, Scotland, UK.



ADDRESSES

Dr Yves Alarie, Department of Biology, Laurentian University, Sudbury, Ontario, Canada P3E 2C6
Dr R.B. Angus, Department of Biology, Royal Holloway, University of London, Egham, Surrey TW20 0EX, England, UK
Pedro Aguilera, Carrer del Pou 21 - 23, Atic 2º; 08016 Barcelona, Spain
Dr M Balke, AG Evolutionsbiologie, Institut für Zoologie, Freie Universität Berlin, Königin-Luise-Straße 1-3, D-14195 Berlin, Germany
Dr Franck Bameul, 45 rue Eugène Olibet, 33400 Talence, France
Dr Ronald Bellstedt, Brühl 2, D-998867 Gotha, Germany
Dr E. Biesiadka, Instytut Biologii WSP, ul. Zolnierska 14, 10-561 Olsztyn, Poland
Dr David T. Bilton, Department of Biology, University of York, Heslington, York YO1 5DD, England, UK
Dr O. Biström, Zoological Museum, University of Helsinki, Järnvägsgatan 13, SF-00100 Helsingfors, Finland
Andreas R. Braun, Straßburger Straße 20, D-77866 Rheinau-Honau, Germany
Dr D.H. Breneman, Department of Biology, University of Northern Iowa, Cedar Falls, Iowa 50613, USA
Dr Michel Brancucci, Naturhistorisches Museum, Augustinergasse 2, CH-4001 Basel, Switzerland
Dr Jan G.M. Cuppen, Department of Nature Conservation, Agricultural University, Ritzema Bos Weg 32A, 6703 AZ Wageningen, Netherlands
Dr Juan Diaz Pazos, Universidad de Santiago de Compostela, Facultad de Bioloxia, E-15706 Coruña, Spain
Dr. J.S. Denton, 26 Bow Street, Alton, Hants GU34 1NY, England, UK
Dr Hassan H Fadl, Entomology Department, Ain Shams University, Abbassia, Cairo, Egypt
Dr Franz Hebauer, Jahnstraße 5 (FOS), D-94469 Deggendorf, Germany
Lars Hendrich, Lupsteiner Weg 69, D-14165 Berlin, Germany
Dr B.-I. Henrikson, Department of Zoology, Section of Animal Ecology, Medicinaregatan 18, S-413 90 Göteborg, Sweden
Dr Karl Heuss, Gartenstraße 58, D-90571 Schwaig, Germany
Dr Møgens Holmen, Højbergvej 11, DK-3200 Helsinge, Denmark
Dr S. Hosseinie, Department of Biology, College of Sciences, Shiraz University, Shiraz 71454, Iran
Dr M.A. Jäch, Naturhistorisches Museum, Burgring 7, A-1014 Wien, Austria
Andrzej Kordylas, Domaradz 1a, 76-241 Stara Dabrowa, Poland
Professor D.J. Larson, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, Canada A1B 3X9
Dr B. Malmqvist, Department of Animal Ecology, University of Umeå, S-901 87 Umeå, Sweden
Robert Merrit, 321 Walton Back Lane, Chesterfield, Derbyshire S42 7AB, England, UK
Dr Mikhail D Moroz, Institute of Zoology, Academy of Sciences of Belarus, Laboratory of Comparative Hydroecology, ul. F.Skoriny 27, 220072 Minsk, Belarus
Dr Andres Millan, Deaprtamento de Biologia Animal y Ecologia, Universidad de Murcia, 30100 Murcia, Spain
Dr Anders N Nilsson, Department of Animal Ecology, University of Umeå, S-901 87 Umeå, Sweden
Dr Adriana Oliva, Museo argentino de Ciencias naturales, Av. A. Gallardo 470-1405, Buenos Aires, Argentina
Dr Ignacio Ribera, Dr Massana 14 2º, 08760 Martorell, Barcelona, Spain
Dr Stefan Schödl, Landstr. Haupstr. 91/4, 1030 Wien, Austria
Vincenzo Volpe, Via Iside 12, 00184 Rome, Italy
Bernhard J. van Vondel, Roestuin 78, 3343 CV Hendrik-Ido-Ambacht, Netherlands
Prof. Dr G. William Wolfe, Reinhardt College, Math & Science Division, 250 Canton St., Waleska GA 30183, USA.

CONTENTS