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A CLASSIFICATION OF THE FAMILY DYTISCIDAE (COLEOPTERA)

by Anders N. Nilsson & Robert R. Roughley

Nilsson *et al.* (1989) published alphabetical lists of all genus- and family-group names that were known within the family Dytiscidae. As these listings also provided information on the usage of each name in current classification, they also gave this classification, although in a cumbersome way. More recently, Pederzani (1995) rearranged the names into systematic order and published a check list of genus- and family-group taxa of Dytiscidae. This list, however, included several taxonomic judgements not shared by Nilsson *et al.* (1989). Points of divergence are chiefly due to Pederzani's ambition to conserve well-known names, also when it is contradicted by the International Code of Zoological Nomenclature (ICZN) or results in clearly unnatural (not monophyletic) groupings.

Nilsson & Roughley (in press) have compiled a list of additions and corrections in order to up-date the work of Nilsson *et al.* (1989). We have also found it useful to produce a systematic list of names that takes advantage of this up-dating and at the same time strictly adheres to the ICZN and excludes taxa that have been shown to be non-monophyletic. Future applications of phylogenetic systematics to more of the dytiscid taxa will no doubt show that a large proportion of the currently recognized taxa are paraphyletic. Until this has been done, we can only view them as arrangements, and continue to use them with this limitation before our eyes.

Only available names are listed. Family group names are given in bold. Names in italics are junior synonyms of the name immediately above them, or in some cases senior synonyms that should or have been suppressed. Subgenera of a particular genus are listed under the appropriate name. Within each category the order of names is alphabetical. An asterisk after a name indicates that it should be conserved.

Family **Dytiscidae** Leach 1815
Subfamily **Agabetinae** Branden, 1884
Agabetes Crotch, 1873

Subfamily **Aubehydrinae** Guignot, 1942
Notaticus Zimmermann, 1928
= *Aubehydrus* Guignot, 1942

Subfamily **Colymbetinae** Erichson, 1837
Tribe **Agabini** Thomson, 1867
= ***Agabinini*** Crotch, 1873
= ***Ilybiini*** Acloque, 1896
Agabinus Crotch, 1873
Agabus Leach, 1817
= *Necticus* Hope, 1839 (preoccupied)
= *Acatodes* Thomson, 1859
= *Eriglenus* Thomson, 1859
= *Gaurodytes* Thomson, 1859
= *Ilybiosoma* Crotch, 1873
= *Arctodytes* Thomson, 1874
= *Metronectes* Sharp, 1882
= *Dichodytes* Thomson, 1886
= *Heteronychus* Seidlitz, 1887
= *Scytodytes* Seidlitz, 1887
= *Xanthodytes* Seidlitz, 1887
= *Apator* Semenov, 1899
= *Allonychus* Zaitzev, 1905
= *Asternus* Guignot, 1931
= *Gabinectes* Guignot, 1931
= *Agabinectes* Guignot, 1932
= *Colymbinectes* Falkenström, 1936
= *Nebriogabus* Guignot, 1936
= *Parasternus* Guignot, 1936
= *Ranagabus* J. Balfour-Browne, 1939
= *Dichonectes* Guignot, 1945
= *Allogabus* Guignot, 1951
= *Neonecticus* Guignot, 1951
= *Mesogabus* Guéorguiev, 1969
= *Neoplatynectes* Vazirani, 1970
Agametrus Sharp, 1882
Andonectes Guéorguiev, 1971
Carrhydrus Fall, 1922
Hydrotrupes Sharp, 1882
Ilybius Erichson, 1832
= *Hyobius* Gistel, 1856,
= *Ilyobius* Gemminger & Harold, 1868
= *Idiolybius* Gozis, 1886
= *Agabidius* Seidlitz, 1887
= *Ilybidius* Guignot, 1948
Leuronectes Sharp, 1882
Platambus Thomson, 1859
Subgenus *Agraphis* Guignot, 1954
Subgenus *Anagabus* Jakovlev, 1897
Subgenus *Platambus* Thomson, 1859
= *Stictogabus* Guignot, 1948
= *Paraplatynectes* Vazirani, 1970
Platynectes Régimbart, 1879
Subgenus *Australonectes* Guéorguiev, 1972
Subgenus *Gueorguievtes* Vazirani, 1976
= *Metaplatynectes* Guéorguiev, 1978
Subgenus *Platynectes* Régimbart, 1878
= *Plateocolymbus* Gistel, 1857 (suppressed)
= *Hypoplatynectes* Guéorguiev, 1972
= *Neoplatynectes* Guéorguiev, 1972 (preoccupied)
= *Carinonectes* Vazirani, 1976
= *Notoplatynectes* Guéorguiev, 1978

Tribe **Anisomeriini** Brinck, 1948
Anisomeria Brinck, 1943
= *Anisomera* Brullé, 1835 (preoccupied)
Senilites Brinck, 1948

Tribe **Colymbetini** Erichson, 1837
= ***Cymatopterini*** Portevin, 1929

ADDRESSES The addresses of authors of articles 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.

= ***Carabdytini*** Pederzani, 1995
Bunites Spangler, 1972
Carabdytes Balke, Hendrich & Wewalka, 1992
Colymbetes Clairville, 1806
= *Cymatopterus* Dejean, 1833
Hoperius Fall, 1927
Meladema Laporte, 1835
= *Scutopterus* Dejean, 1833 (suppressed)
Melanodytes Seidlitz, 1887
Neoscutopterus J.Balfour-Browne, 1943
= *Pseudoscutopterus* Hatch, 1953
Rhantus Dejean, 1833
Subgenus *Nartus* Zaitzev, 1907
= *Rantogiton* Gozis, 1910
= *Ilybiomorphus* Porta, 1923
Subgenus *Rhantus* Dejean, 1833

Tribe **Hydronebriini** Guignot, 1948
= ***Hydronebriini*** Brinck, 1948
Hydronebrius Jakovlev, 1897

Tribe **Matini** Branden, 1884
Allomatus Mouchamps, 1964
Batrachomatus Clark, 1863
Matus Aubé, 1836

Subfamily **Copelatinae** Branden, 1884
= ***Aglymbinae*** Branden, 1884
= ***Lacconectinae*** Branden, 1884
Agaporomorphus Zimmermann, 1921
Aglymbus Sharp, 1882
Copelatus Erichson, 1832
= *Liopterus* Dejean, 1833
= *Exocelina* Broun, 1886
= *Pelocatus* Zaitzev, 1908
Lacconectus Motschulsky, 1855
= *Paralacconectus* Vazirani, 1970

Subfamily **Coptotominae** Branden, 1884
= ***Coptotominae*** Brinck, 1948
Coptotomus Say, 1834

Subfamily **Dytiscinae** Leach, 1815
Tribe **Aciliini** Thomson, 1867
= ***Thermonetini*** Sharp, 1882
= ***Graphoderini*** Houlbert, 1934
Acilius Leach, 1817
Subgenus *Acilius* Leach, 1817
= *Heteroelytrus* Ádám, 1993
Subgenus *Homoeolytrus* Gobert, 1874
Aethionectes Sharp, 1882
= *Afronectes* G. Müller, 1942
Graphoderus Dejean, 1833
= *Graphothorax* Motschulsky, 1853
= *Prosciastes* Gistel, 1856
= *Derographus* Portevin, 1929
Rhantaticus Sharp, 1882
Sandracottus Sharp, 1882
Thermonectus Dejean, 1833*
Tikoloshanes Omer-Cooper, 1956

Tribe **Cybistrini** Sharp, 1882
Austrodytes Watts, 1978
Cybister Curtis, 1827
Subgenus *Cybister* Curtis, 1827
= *Trogus* Leach, 1817
= *Cybisteter* Bedel, 1881
= *Alocomerus* Brinck, 1945
= *Megadytoides* Brinck, 1945
= *Meganectes* Brinck, 1945
= *Nealocomerus* Brinck, 1945
= *Gschwendtnerhydrus* Brinck, 1945
Subgenus *Melanectes* Brinck, 1945
Subgenus *Scaphinectes* Ádám, 1993
= *Trochalus* Dejean, 1833 (preoccupied)
Megadytes Sharp, 1882
Subgenus *Bifurcitus* Brinck, 1945
Subgenus *Megadytes* Sharp, 1882
Subgenus *Paramegadytes* Trémouilles & Bachmann, 1980
Subgenus *Trifurcitus* Brinck, 1945
Onychohydrus Schaum & White, 1847
Subgenus *Onychohydrus* Schaum & White, 1847
= *Homoeodytes* Régimbart, 1878
Subgenus *Sternhydrus* Brinck, 1945
Regimbartina Chatanay, 1911
Spencerhydrus Sharp, 1882

Tribe **Dytiscini** Leach 1815
Dytiscus Linnaeus, 1758
= *Leionotus* Kirby, 1837
= *Macrodytes* Thomson, 1859
Hyderodes Hope, 1839

Tribe **Eretini** Crotch, 1873
Eretes Laporte, 1833
= *Eunectes* Erichson, 1832 (preoccupied)
= *Nogrus* Dejean, 1833

Tribe **Hydaticini** Sharp, 1882
Hydaticus Leach, 1817
Subgenus *Guignotites* Brinck, 1943
= *Isonotus* Guignot, 1936 (preoccupied)
Subgenus *Hydaticinus* Guignot, 1950
Subgenus *Hydaticus* Leach, 1817
= *Icmaleus* Gistel, 1856
Subgenus *Pleurodytes* Régimbart, 1899
Prodaticus Sharp, 1882

Subfamily **Hydroporinae** Aubé, 1836
Tribe **Bidessini** Sharp, 1882
Africodytes Biström, 1988
Allodessus Guignot, 1953
Anodocheilus Babington, 1841
= *Anodontochilus* Régimbart, 1895
Bidessodes Régimbart, 1900
Subgenus *Bidessodes* Régimbart, 1900
Subgenus *Hughbosdinius* Spangler, 1981
Subgenus *Youngulus* Spangler, 1981
Bidessonotus Régimbart, 1895
Bidessus Sharp, 1882
Boongurrus Larson, 1994
Brachyvatus Zimmermann, 1919
Clypeodytes Régimbart, 1894
Subgenus *Clypeodytes* Régimbart, 1894
Subgenus *Hypoclypeus* Guignot, 1950

= *Hypodytes* Guignot, 1936 (preoccupied)
Subgenus *Paraclypeus* Vazirani, 1971
Comaldessus Spangler, 1995
Geodessus Brancucci, 1979
Gibbidessus Watts, 1978
Hemibidessus Zimmermann, 1921
Huxelhydrus Sharp, 1882
Hydroglyphus Motschulsky, 1853
= *Guignotus* Houlbert, 1934
Hypodessus Guignot, 1939
= *Brachybidessus* Gschwendtner, 1954
Leiodytes Guignot, 1936
= *Lioclypeus* Guignot, 1950
= *Liodytes* Guignot 1950 (preoccupied)
Limbodessus Guignot, 1939
Liodessus Guignot, 1939
Microdessus Young, 1967
Neobidessus Young, 1967
Neoclypeodytes Young, 1967
Pachynectes Régimbart, 1903
Subgenus *Pachynectes* Régimbart, 1903
Subgenus Yoloides Guignot, 1960
Platydytes Biström, 1988
Pseuduvarus Biström, 1988
Sharphydrus Omer-Cooper, 1958
Tepuidessus Spangler, 1981
Trogloguignotus Sanfilippo, 1958
Tyndallhydrus Sharp, 1882
Uvarus Guignot, 1939
Yola Gozis, 1886
= *Yolula* Guignot, 1950
Yolina Guignot, 1936

Tribe **Carabhydrini** Watts, 1978
Carabhydrus Watts, 1978

Tribe **Hydroporini** Erichson, 1837
= ***Hydrocoptini*** Branden, 1884
= ***Sternopriscini*** Branden, 1884
= ***Hygrotini*** Portevin, 1929
= ***Siettitiini*** Smrz, 1982
Antiporus Sharp, 1882
Barretthydrus Lea, 1927
Canthyporus Zimmermann, 1919
Chostonectes Sharp, 1882
Deronectes Sharp, 1882
= *Bartheus* Houlbert, 1934
Graptodytes Seidlitz, 1887
Haideoporus Young & Longley, 1976
Heroceras Guignot, 1949
Herophydrus Sharp, 1882
Subgenus *Dryephorus* Guignot, 1949
Subgenus *Herophydrus* Sharp, 1882
Heterosternuta Strand, 1935
= *Heterosternus* Zimmermann, 1919 (preoccupied)
= *Heterostethus* Falkenström, 1938 (preoccupied)
Hydroporus Clairville, 1806
= *Hydrocoptus* Motschulsky, 1853
= *Hydatoporus* Gistel, 1856
= *Sternoporus* Falkenström, 1930
= *Hydroporinus* Guignot, 1945
= *Hydroporidius* Guignot, 1949
Hydrotarsus Falkenström, 1938
Hygrotus Stephens, 1828
= *Coelambus* Thomson, 1860
Hyphoporus Sharp, 1882
Laccornellus Roughley & Wolfe, 1987
Lioporeus Guignot, 1950
= *Falloporus* Wolfe & Matta, 1981
Megaporus Brinck, 1943
= *Macroporus* Sharp, 1882 (preoccupied)
Metaporus Guignot, 1945
Nebrioporus Régimbart, 1906
Subgenus *Nebrioporus* Régimbart, 1906
= *Potamodytes* Zimmermann, 1919 (preoccupied)
= *Potamonectes* Zimmermann, 1921
= *Rhabdonectes* Houlbert, 1934
Subgenus *Zimmermannius* Guignot, 1941
= *Bistictus* Guignot, 1941
Necterosoma MacLeay, 1873
Neoporus Guignot, 1931
= *Circinoporus* Guignot, 1945
Oreodytes Seidlitz, 1887
= *Neonectes* J.Balfour-Browne, 1944
= *Deuteronectes* Guignot, 1945
= *Nectoporus* Guignot, 1950
Paroster Sharp, 1882
Peschetius Guignot, 1942
Porhydrus Guignot, 1945
Pseudhydrovatus Peschet, 1924
Rhithrodytes Bameul, 1989
Sanfilippodytes Franciscolo, 1979
Scarodytes Gozis, 1914
Siettitia Abeille de Perrin, 1904
Sternopriscus Sharp, 1882
Stictonectes Brinck, 1943
= *Stictonotus* Zimmermann, 1930 (preoccupied)
Stictotarsus Zimmermann, 1919
= *Trichonectes* Guignot, 1941
Stygoporus Larson, 1994
Suphrodytes des Gozis, 1914
Tiporus Watts, 1985
= *Hypodes* Watts, 1978 (preoccupied)

Tribe **Hydrovatini** Sharp, 1882
Hydrovatus Motschulsky, 1853
= *Oxynoptilus* Schaum, 1868
= *Hydatonychus* Kolbe, 1883
= *Vathydrus* Guignot, 1954
Queda Sharp, 1882

Tribe **Hyphydrini** Sharp, 1882*
= ***Actobaenini*** Gistel, 1856
Andex Sharp, 1882
Coelhydrus Sharp, 1882
Darwinhydrus Sharp, 1882
Desmopachria Babington, 1841
Subgenus *Desmopachria* Babington, 1841
Subgenus *Hintonella* Young, 1981

= *Hintonia* Young, 1980 (preoccupied)
Subgenus *Nectoserrula* Guignot, 1949
Subgenus *Pachiridis* Young, 1980
Subgenus *Pachriodesma* Guignot, 1949
Subgenus *Pachriostrix* Guignot, 1950
Subgenus *Portmannia* Young, 1980
Heterhydrus Fairmaire, 1869
Hovahydrus Biström, 1982
Hydropeplus Sharp, 1882
Hyphovatus Wewalka & Biström, 1994
Hyphydrus Illiger, 1802
= *Actobaena* Gistel, 1856
= *Pachytes* Montrouzier, 1860
= *Allophydrus* Zimmermann, 1930
= *Apriophorus* Guignot, 1936
= *Aulacodytes* Guignot, 1936
Pachydrus Sharp, 1882
Primospes Sharp, 1882

Tribe **Laccornini** Wolfe & Roughley, 1990
Laccornis Gozis, 1914
= *Agaporus* Zimmermann 1919

Tribe **Methlini** Branden, 1884
=***Celinini*** Branden, 1884
=***Celinae*** Falkenström, 1938
Celina Aubé, 1837
= *Hydroporomorpha* Babington, 1841.
Methles Sharp, 1882

Tribe **Vatellini** Sharp, 1882
Derovatellus Sharp, 1882
Subgenus *Derovatellus* Sharp, 1882
Subgenus *Varodetellus* Biström, 1979
Macrovatellus Sharp, 1882
= *Platydessus* Guignot, 1955
Mesovatellus Trémouilles, 1995
Vatellus Aubé, 1837
= *Leucorea* Laporte, 1835 (suppressed).

Subfamily **Hydroporinae** *Incertae sedis*
Allopachria Zimmermann, 1924
= *Nipponhydrus* Guignot, 1954
Amarodytes Régimbart, 1900
Hydrodessus J.Balfour-Browne, 1953
= *Brinckius* Guignot, 1957
Kuschelydrus Ordish, 1976
Microdytes J. Balfour-Browne, 1946
Morimotoa Uéno, 1957
Phreatodessus Ordish, 1976
Terradessus Watts, 1982
Typhlodessus Brancucci, 1985

Subfamily **Laccophilinae** Gistel, 1856
Africophilus Guignot, 1947
Australphilus Watts, 1978
Japanolaccophilus Satô, 1972
Laccodytes Régimbart, 1895
Laccophilus Leach, 1817
Laccoporus J. Balfour-Browne, 1939
Laccosternus Brancucci, 1983
Napodytes Steiner, 1981
Neptosternus Sharp, 1882
Philacus Guignot, 1937
Subgenus *Philacilus* Guignot, 1937
Subgenus *Philacus* Guignot, 1937
Philodytes J. Balfour-Browne, 1939

Subfamily **Lancetinae** Branden, 1884
Lancetes Sharp, 1882

References

BALKE, M., DETTNER, K. & HENDRICH, L. in press. *Agabus* ("*Metronectes*") *aubei* Perris: habitat, morphological adaptations, systematics, evolution, and notes on the phanaerofluicolous fauna (Coleoptera: Dytiscidae). *Aquatic Insects* **19**.

NILSSON, A.N., ROUGHLEY, R.E. & BRANCUCCI, M. 1989: A review of the genus- and family-group names of the family Dytiscidae Leach (Coleoptera). *Ent. scand.* **20** 87-316.

NILSSON, A.N. & ROUGHLEY, R.E. In press. The genus- and family-group names of the Dytiscidae (Coleoptera) - additions and corrections. *Beitr. Ent.*

PEDERZANI, F. 1995. Keys to the identification of the genera and subgenera of adult Dytiscidae (*sensu lato*) of the world (Coleoptera Dytiscidae). *Atti Acc. Rov. Agiati*, a. 244 (1994), ser. VII, **4**(B) 5-83.

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ANOTHER NEW SUBTERRANEAN DYTISCID, *COMALDESSUS*

The Comal Springs have previously been mentioned in connection with the subterranean dryopid, *Stygoparnus comalensis* Barr & Spangler. Further work, including the use of drift nets, revealed a 1.5 mm long dytiscid, closely related to *Uvarus*, but, in contrast to all other Bidessine genera, lacking coxal lines. *Comaldessus* is accordingly named for this new species, which shares the attributes of many other phreatic species:- small size, rudimentary eyes, many long sensory setae and strong swimming hairs on all legs.

SPANGLER, P.J. & BARR, C.B. 1995. A new genus and species of stygobiontic dytiscid beetle, *Comaldessus stygius* (Coleoptera: Dytiscidae: Bidessini) from Comal Springs, Texas. *Insecta Mundi* **9** (3-4) 301-308.

NAMES OF *ELODES*

The status of three taxa is reviewed. It is claimed that *Elodes elongata* sensu Klausnitzer is actually *E. tricuspis* Nyholm 1985, and that *E. koelleri* Klausnitzer 1971 is a junior synonym of *E. elongata* Tournier 1868.

PAULUS, H.F. & HANNAPPEL, U. 1994. Zur Identität von *Elodes elongata* Tournier 1868, *Elodes koelleri* Kalusnitzer 1971 und *Elodes tricuspis* Nyholm 1985 (Coleoptera: Scirtidae). *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* **46** 18-20.

HELOPHORUS FLAVIPES GROUP REVISITED

The 1996 paper updates Angus (1992) and formalises tales told in previous editions of ***Latissimus***. The group is seen to comprise five species:- *H. obscurus* Mulsant; *H. algiricus* Motschulsky; *H. subarcuatus* Rey; *H. seidlitzii* Kuwert; *H. flavipes* Fab. This is based on distinctive karyotypes. The egg cocoon and larva of *H. algiricus* are described, and a key is provided for larvae of four species. It is noted that, unlike *H. obscurus*, the Sardinian *H. subarcuatus* flies readily. The presence of *H. subarcuatus* on Corsica requires confirmation.

ANGUS, R.B. 1992. Insecta: Coleoptera: Hydrophilidae: Helophorinae. *Susswaßerfauna von Mitteleuropa* **20** (10) part 2, 144 pp. Gustav Fischer Verlag.

ANGUS, R.B. 1996. A re-evaluation of the *Helophorus flavipes* group of species (Coleoptera, Hydrophiloidea), based on chromosomal analysis, larvae and biology. *Nouv. Revue Ent.* **13**(2) 111-122.

BRYCHIUS HUNGERFORDI REVISITED

In 1954 Paul Spangler described a new *Brychius* from Michigan. A survey in 1989 of 125 sites in Michigan revealed it at only 12, eleven of them in the Maple River. This confirmed its endangered status, and indicated the need to maintain site integrity and the local beaver population. The larva is described, and observations on it using a mask and snorkel suggest that it feeds by clasping pieces of gravel to scrape off algal material.

STRAND, R.M. & SPANGLER, P.J. 1994. The natural history, distribution, and larval description of *Brychius hungerfordi* Spangler (Coleoptera: Haliplidae). *Proceedings of the Entomological Society of Washington* **96**(2) 208-213.

DO YOU WANT A NATURALIST'S DREDGE?

GB Nets' 1997 catalogue contains this intriguing item: *"Naturalist's dredges are available in zinc-coated mild steel, weight 5 Kg. ... A steel towing harness is attached to the front section of the frame by shackles."* It comes in at about £200 and conforms to the specifications of the Environment Agency, which one must assume is some form of secret sado-masochistic society. Anyone wanting a more prosaic pond net will find them reasonably priced at about £29 plus, where appropriate, Value Added Tax.

Contact: Gill Baldwin, 45 Burnley Road, Todmorden, Lancs. OL14 7BU; telephone and fax: ++ 1706 813941. It would help greatly if members wrote this contact into their address books rather than for ever telephoning the Secretary about it.

GLIM ON 35 PYRENEAN SPECIES

Specialised regression models (Generalised Linear Interactive Modelling) were used to describe the distributions of 35 dytiscid species using 15 environmental variables. The variables with most significant results for dytiscids were, in order of importance, water velocity, altitude, amount and type of vegetation and detritus, redox potential and conductivity, temperature, type of substratum, and water depth.

RIBERA, I., ISART, J. & RÉGIL, J.A. 1995. Autoecología de algunas especies de Hydradephaga (Coleoptera) de los Pirineos. I. Gyrinidae, Haliplidae, Noteridae e Hygrobiidae. *Zoologica baetica* **6** 33-58.

RIBERA, I., ISART, J. & RÉGIL, J.A. 1995. Autoecología de algunas especies de Hydradephaga (Coleoptera) de los Pirineos. II. Dytiscidae. *Zoologica baetica* **6** 59-104.

ITALIAN _HALIPLUS ANDALUSICUS_

H. andalusicus is recorded from Sicily, extending its known range from Andalusia, the Balearics, France, Morocco, Algeria and Tunisia.

SCHIZZEROTTO, A. & MAZZOLDI, P. 1995. La presenza in Italia di *Haliplus andalusicus* Wehncke, 1874 (Coleoptera: Haliplidae). *Studi Trentini di Scienze Naturali, Acta Biologica* **70** (1993) 5-8.

CATALAN CHRYSOMELIDAE

The Pyrenean Vall d'Aran, though only 600 km², supports 139 chrysomelid taxa. The Donaciinae are: *Plateumaris consimilis* (Schrank), *P. discolor* (Panzer) and *P. sericea* (L.). Surprisingly, there are no *Donacia* spp. in the list though *Donacia* do occur elsewhere in the Pyrenees.

PETITPIERRE I VALL, E. 1994. Estudi faunístic i ecològic dels Coleòpters Crisomèlids de la Vall d'Aran. *Butll. Inst. Cat. Hist. Nat.* **62** 77-108.

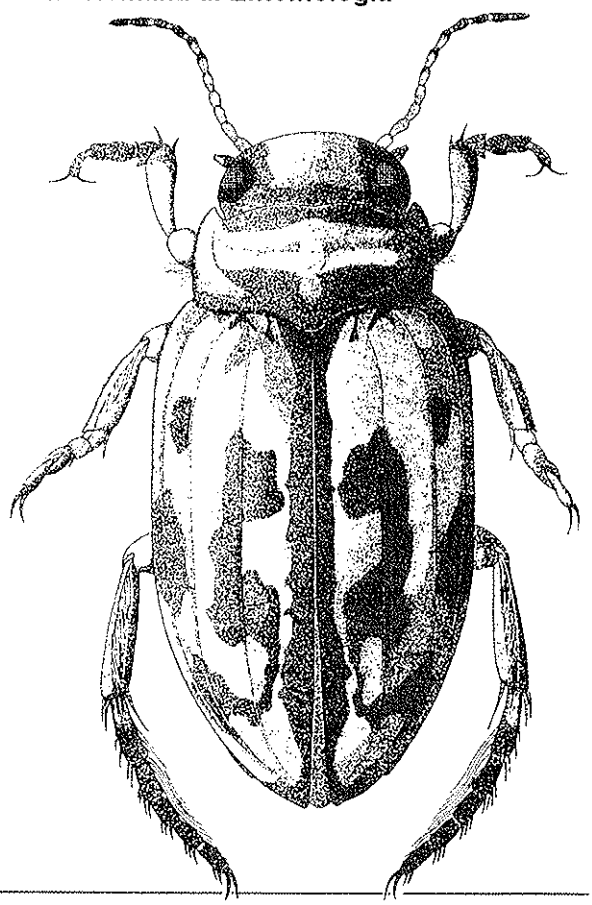
A CASE OF METAPOPULATION DYNAMICS IN *DINEUTES*

A two year study of *Dineutes assimilis* (Kirby) suggests that the Ithaca population functions as a metapopulation, with nine extinction and nine colonisation events being recorded in 51 ponds. *D. assimilis* was able to colonise new sites, and mark-recapture work revealed dispersal from 100 m to at least 20 km. Like most studies of whirligigs, this makes extremely interesting reading but one is left wondering to what extent this dynamic state is found in less easily observed water beetles.

NÜRNBERGER, B. 1996. Local dynamics and dispersal in a structured population of the whirligig beetle *Dineutes assimilis*. *Oecologia* **106** 325-336.

EXCHANGE JOURNALS - Bollettino dell'Associazione Romana di Entomologia

We don't seek exchanges with those publishing journals, mainly because ***Latissimus*** is spasmodic and deliberately kept cheap. Nevertheless it is always good to receive the offer, specially when the journal is decorated by a water beetle. The *Bollettino* has a drawing of the Italian endemic *Nebrioporus fenestratus* (Aubé) by Davide Bruzzese, accompanied by Gianluca Nardi's commentary.



NATUR GOTHA

Both articles are available from Ronald Bellstedt. The water beetle fauna of a stream is described, including two species of *Ochthebius* (*Enicocerus*), *exsculptus* Germar and *melanescens* Dalla Torre. The other paper lists 41 species of Coleoptera found as adults in the fauna of a site known as Ulster in the Thüringen Wald.

BELLSTEDT, R. 1996. Eine interessante Wasserkäfergesellschaft im Thüringer Wald (Coleoptera, Hydraenidae). *Abhandlungen und Berichte des Museums der Natur Gotha* **19** 71-73.

BRETTFELD, R. BELLSTEDT, R., JOOST, W. & ZIMMERMANN, W. 1996. Zur Limnofauna des Unterlaufs der Ulster. *Abhandlungen und Berichte des Museums der Natur Gotha* **19** 3-23.

LEÓN PALPICORNS

The Hydrophiloidea of the the province of León comprise 20 *Helophorus*, 5 *Hydrochus*, and 31 species of the Hydrophilidae s. str. Of special interest are *Helophorus leontis* Angus, *H. bameuli* Angus, *Hydrochus angusi* Valladares and *H. smaragdineus* Fairmaire (a taxon originally described from North Africa - previously cited as *H. foveostriatus* Fairmaire in Europe). Incidentally, we all wish Luis Felipe well after his illness.

VALLADARES, L.F. 1995. Los Palpicornia acuáticos de la provincia de León. III. Helophoridae, Hydrochidae e Hydrophilidae (Coleoptera). *Boletín de la Asociación Española de Entomología* **19** 281-308.

KEY TO CENTRAL EUROPEAN ELMID LARVAE

This key is supported by 160 figures! So it must work!

KLAUSNITZER, B. & RICHOUX, P. 1996. 40. Familie: Elmidae. In: B. Klausnitzer (ed.) *Die Larven der Käfer Mitteleuropas* **3** 112-143.

NOTES ON THE DISTRIBUTION AND HOSTPLANTS OF *TELMATOPHILUS* SPECIES (CRYPTOPHAGIDAE)

by John Bratton

Telmatophilus* on *Typha

A *Telmatophilus* collected on 5 July 1995 from a mixed stand of great reedmace *Typha latifolia* and lesser reedmace *Typha angustifolia* in Orton Mere, when identified several months later, proved to be *T. schoenherri*. I have frequently found *Telmatophilus typhae* on *Typha latifolia*, but had never before found *T. schönherri* nor collected from *Typha angustifolia*. Therefore, during 1996, I collected *Telmatophilus* from as many *Typha* stands as possible during the *Typha* flowering period in order to see whether either *Telmatophilus* was associated with a particular *Typha* species. The first collection produced a mix of both *Telmatophilus* spp., so I attempted to collect at least ten beetles from each site in order to have a good chance of taking both species if both were present.

TABLE 1. Records (numbers collected) of *Telmatophilus typhae* and *T. schoenherri* and the plants on which they were found. Tt = *T. typhae*; Ts = *T. schoenherri*; abs = plant absent from that waterbody; no fl. = plant present but not in flower; none = plant in flower but no *Telmatophilus* found; estimated distance from the *Typha* examined to the closest plant of the other *Typha* species.

Date	Site	VC	Grid ref.	On *Ty. lat.*	On *Ty. ang.*	distance
20 Jun 96	Orton Mere	31	TL166970	8Tt, 3Ts	no fl.	0 m
2 Aug 96	Orton Mere	31	TL166970	no fl.	2Tt, 6Ts	0 m
20 Jun 96	Osier Lake	31	TL165970		8Ts	30 m
6 Jul 96	Osier Lake	31	TL165970		10Ts	30 m
6 Jul 96	Osier Lake	31	TL165969	7Tt, 3Ts		70 m
2 Aug 96	Osier Lake	31	TL165970		no fl.	30 m
21 Jun 96	Hinchingbrooke Park	31	TL219711	22Tt	11Tt, 2Ts	5 m
22 Jun 96	Thorpe Meadows Boardwalk LNR	32	TL1898	40Tt	abs	
19 Jul 96	Boardwalk LNR	32	TL180981	3Tt	abs	
23 Jun 96	Overton Lake	32	TL148980	7Tt	abs	
24 Jun 96	Llyn Mair Fen	48	SH652413	2Tt	abs	
27 Jun 96	Cors Erddreiniog	52	SH473819	12Tt	abs	
2 Jul 96	Castor by-pass ditch	32	TL123992	9Tt	abs	
2 Jul 96	Ferry Meadows car park	32	TL146972	none	5Tt, 2Ts	5 m
3 Jul 96	Eye Green Pit LNR	32	TF230034	11Tt		60 m
9 Jul 96	Eye Green Pit LNR	32	TF229034		12Ts	60 m
6 Jul 96	Orton Goldhay pits	31	TL165949	12Tt	14Ts	15 m
6 Jul 96	Elton by-pass pond	31	TL123932	10Tt	abs	
7 Jul 96	Drysides Gullet	29	TL219976	10Tt	abs	
7 Jul 96	Castor Hanglands	32	TF117011	21Tt	abs	
13 Jul 96	Counter Drain, Eldernell	29	TL309989	12Tt	3Ts	20 m
13 Jul 96	Lattersey LNR north	29	TL281965	abs	9Ts	150 m
13 Jul 96	Lattersey LNR south	29	TL281964	10Tt, 8Ts	1Tt	0 m
14 Jul 96	Sutton railway pond	32	TL095980	12Tt	abs	
20 Jul 96	Baston Fen	53	TF138173	9Tt	abs	
21 Jul 96	Woodwalton Fen	31	TL229849	9Tt	abs	
27 Jul 96	Near Long Pool	33	SO873272	5Tt	abs	
29 Jul 96	West Sedge Moor	5	ST336249	1Tt	abs	
29 Jul 96	Westhay Moor	6	ST455440	1Tt	abs	
31 Jul 96	Stroudwater Canal, Whitminster	34	SO771077	1Tt	abs	
4 Aug 96	Nene Washes RSPB	29	TL280991	1Tt		400 m
10 Aug 96	Nene Washes RSPB	29	TL284992		no fl.	?

Telmatophilus were generally concentrated either inside the flower sheath on *Typha* flowerheads just coming into flower, or on the male flowers during the pollen-shedding stage, though a proportion were usually on the leaves and stems. Pollen-bearing flowers of either *Typha* species were uncommon by the second week in July but stands tended to have one or two flowerheads still shedding pollen after the majority were spent, which lengthened the period available for the survey by a few weeks.

In a mixed catch of *T. typhae* and *T. schoenherri*, the latter are most easily distinguished by the contrast between the almost black first antennal segment and the mid-brown of the rest of the antenna, whereas *T. typhae* has all antennal segments mid-brown in colour.

Telmatophilus schoenherri was found at all but one of 10 sites where *Typha angustifolia* was examined, the exception being the Nene Washes, where *T. angustifolia* was only found late in the season when all flowering was over. *T. schoenherri* was not found at any sites where *T. angustifolia* was absent.

Telmatophilus typhae was found at all 24 sites where *Typha latifolia* was examined, though at one site, Ferry Meadows car park, it was found on *T. angustifolia* and not on the eight *T. latifolia* flowers examined. There were no sites with *T. angustifolia* and no *T. latifolia*, thus the hypothesis that *T. typhae* does not breed in *T. angustifolia* has not been well tested. However, *T. typhae* tended to

be restricted to *T. latifolia* even when *T. angustifolia* was growing close by (e.g. Orton Goldhay pits 15 metres, Counter Drain 20 metres between *Typha* spp.). Where *Typha* stands were mixed or the *Typha* species were adjacent, both *Telmatophilus* species sometimes occurred on flowerheads of either *Typha* species (e.g. Hinchingbrooke Park, Lattersey LNR south).

At Osier Lake, *T. schoenherri* was found on *Typha latifolia* flowers 70 metres from the nearest *T. angustifolia*. Presumably both *Telmatophilus* species fly strongly, since it is rare to find a *Typha* patch that lacks *Telmatophilus*.

There is thus a strong association of *Telmatophilus schoenherri* with *Typha angustifolia*, and of *Telmatophilus typhae* with *Typha latifolia*, even though the beetles sometimes occurred on the 'wrong' *Typha* when both *Typha* species were present. A likely explanation is that each beetle breeds in only one species of *Typha* but that the adult beetles are attracted to the flowers of both *Typha* spp. Published information on the hostplant of *T. schoenherri* is vague: "in stems of *Typha* etc." (possibly referring to hibernating beetles) and "on *Sparganium*" Fowler (1889); "swept off *Typha*" Atty (1983); and Philp (1991) mentioned no hostplants for either *T. schoenherri* or *T. typhae*. Only Hyman & Parsons (1994), quoting Peter Hodge, mentioned *T. schoenherri* having been found on *T. angustifolia*. Similarly, the hostplant of *Telmatophilus typhae* tends to be given as just *Typha* (and the flowers of *Caltha* (Fowler 1889)). Harde & Hammond (1984), referring to the genus *Telmatophilus*, say the larvae develop in seeds. Dissection of *Typha* seedheads from Osier Lake and Orton Mere on 2 August and 15 September 1996 revealed no signs of *Telmatophilus*.

All sites where I examined *Typha angustifolia* were within 30 km of Peterborough, but in this limited area it appears that *T. schoenherri* is no less common than its hostplant. If this is true over a larger area, Parsons was correct to grade it no higher than RDB K, Insufficiently Known (Hyman & Parsons 1994) and it is much more common than previously realised.

Telmatophilus* on *Sparganium

During the course of the summer I have also found *Telmatophilus brevicollis* (RDB 3, Rare (Hyman & Parsons 1994)) at several sites (Table 2). These probably include first records from VC's 5, 31, 32 and 53. It was always on flowers of *Sparganium erectum*. Philp (1991) gave the hostplant as *S. erectum*, and Hyman & Parsons (1994) quoted Eric Philp having "bred" *T. brevicollis* from heads of *S. erectum*. Fowler (1889) said "in stems of *Typha* etc.", which was probably a hibernation site. I frequently found *Telmatophilus caricis* in the same flowerhead as *T. brevicollis*, including at Lattersey LNR which thus joins Higham Marshes, West Kent (Allen 1996), as a site supporting four species of *Telmatophilus*. I have also swept *T. caricis* from flowers of *Carex* by the River Nene, Peterborough (TL138979, 31 May 1994).

Examination of flowers of *S. emersum* in late July in the R. Nene upstream of Sutton, VC 32, and in the R. Frome downstream of Whitminster, VC 34, produced no *Telmatophilus* spp., despite *T. caricis* being frequent on *S. erectum* along the Frome. Nor was any *Telmatophilus* found on numerous flowers of *S. angustifolium* examined in Bugeilyn, VC 47, 25 July 1996.

TABLE 2. Records of *Telmatophilus brevicollis*.

Date	Site	VC	Grid ref.
13 Jul 96	Morton's Leam, Eldernell	29	TL309991
13 Jul 96	Lattersey LNR north	29	TL281965
19 Jul 96	Thorpe Meadows Boardwalk LNR	32	TL180981
20 Jul 96	Baston Fen	53	TF138173
21 Jul 96	Woodwalton Fen	31	TL230847
29 Jul 96	West Sedge Moor	5	ST336249
4 Aug 96	Nene Washes RSPB	29	TL273984
10 Aug 96	As above	29	TL288994

Acknowledgements

I thank Peter Hodge for advice on identifying *Telmatophilus* spp., Roger Key for confirming the identity of my first *T. schoenherri*, Colin Welch for confirming one of the *T. brevicollis* from Woodwalton Fen, and Catherine Duigan for information on Bugeilyn.

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ALLEN, A.A. 1996. *Telmatophilus brevicollis* Aube and *T. schoenherri* (Gyll.) (Col.: Cryptophagidae) in West Kent. *Entomologist's Record* **108** 26.

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FOWLER, W.W. 1889. *The Coleoptera of the British Isles*. Vol. **3**. London, Reeve.

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HYMAN, P.S., & PARSONS, M.S. 1994. *A review of the scarce and threatened Coleoptera of Great Britain. Part 2*. Peterborough, Joint Nature Conservation Committee.

PHILP, E.G. 1991. Vascular plants and the beetles associated with them. *In*: *A coleopterist's handbook*, 3rd ed., J. Cooter (ed.), 183-198. Feltham, Amateur Entomologists' Society.

Received September 1996

SOUTH AMERICAN LACCOBIINI

Only five members of the Laccobiini are known from South America. These are *Oocyclus schubarti* d'Orchymont, *O. decorus* (Kuwert), *O. fryianus* Balfour-Browne, *Beralitra obscura* d'Orchymont and *B. iguazu*, newly described from Argentina.

OLIVA, A. 1996. First mention of the genera *Beralitra* Orchymont, 1919 (with a new species) and *Oocyclus* Sharp, 1882 (Coleoptera: Hydrophilidae: Laccobiini). *Bull. Annls Soc. r. belge. Ent.* **132** 35-43

1996 IUCN RED LIST OF THREATENED ANIMALS

This latest report was compiled by Jonathan Baillie and Brian Groombridge. The selection of species is based on the 1994 IUCN Categories and Criteria. In June 1995 the Club was asked to revise the 1994 Red List using the new categories and criteria by the end of August 1995. This was clearly unrealistic. The new system had some merit in that strict application might be supposed to achieve a comparable, objective categorisation of a wide range of taxa. Unfortunately the strictness of editing extended to the need to specify the criteria, but without mentioning the type of threat. With the help of Michael Balke, Lars Hendrich, Ignacio Ribera and Rob Roughley, I eventually managed this for a small number of species. However, I did this under protest in that I could see little point in having an entry such as

"*Acilius duvergeri* VU B1 + 2b. Algeria, Italy, Morocco, Portugal, Spain".

Most water beetlers would agree that this species is VU for Vulnerable but "B1 + 2b" doesn't get us much further, even when translated as B1 = "either severely fragmented: (isolated subpopulations with a reduced probability of recolonization, if once extinct) or known to exist at a number of locations less than 11 in number" , and B2b = "continuing decline in area of occupancy". I suspect that non-water beetlers might take on trust that we had applied the criteria and that they would be more interested in the possible reasons WHY the species is considered vulnerable, and what if anything could be done about it. We also need the full scientific name, including authority and date, to be reasonably certain that we all talking about the same animal. For *A. duvergeri*, the word "Sardinia" was edited out of the original text; I regard the mention of islands to be very important as it instantly provides a conservation message - that at least one part of the population is truly isolated. A great source of grievance associated with imposition of the new criteria (however good they are) is that we simply couldn't get anyone to evaluate the New World listing of water beetles, which had previously dominated the World List, but which are now largely relegated to "Lower Risk; least concern" for want of evaluation. They will eventually need to be reinstated *en masse*, requiring some verbal dexterities from the poor soul invited to write the Guest Essay.

A telephone directory of threatened species is a good idea but the text for telephone directories is constantly updated, not in a series of short jerks. We must be more prepared next time and we must have a united front best mediated through the specialist group of the IUCN Species Survival Commission.

CUMBRIAN BEETLES

Fourteen or so water beetles are mentioned in this update of the faunas of Cumberland and Westmorland. They include four head water species, *Hydroporus ferrugineus* Stephens, *H. longulus* Mulsant, *H. obsoletus* Aubé and *Agabus biguttatus* (Olivier).

ATTY, D.B. 1996. Some notable beetles (Coleoptera) in Cumbria. *Entomologist's Record & Journal of Variation* **108** 27-36.

BEETLES OF HOLKHAM NNR, ENGLAND

Holkham National Nature Reserve is a large (3,887 ha) reserve, mainly comprising saltmarsh, in West Norfolk. Bryan Sage has compiled a list of 513 species of beetle in 47 families. About 80 species are aquatic, and include many saltmarsh specialists such as *Enochrus halophilus* (Bedel), regarded as new for Norfolk. The conservation statuses of the beetles are given in the main list following the commentaries on particular habitats; *Anacaena bipustulata* (Marsham) and *Limnoxenus niger* (Zschach) should have been marked as Nationally Scarce B.

SAGE, B. 1996. Coleoptera of Holkham National Nature Reserve, Norfolk. *Transactions of the Norfolk and Norwich Naturalists' Society* **30**(5) 523-553.

ISOZYME ANALYSIS OF MEDITERRANEAN ROCKPOOL *OCHTHEBIUS*

This is an important contribution to our understanding of the *Ochthebius quadricollis* complex. Fifteen enzyme systems were used to classify *Ochthebius* of the subgenus *Calobius* from rockpools from Madeira, the Canaries and the Mediterranean from Gerona to Haifa. Eight separate forms appear to be involved, *O. heeri heeri* Wollaston from Madeira, a form of *O. heeri* from Madeira, *O. quadricollis* Mulsant from Spain to Malta, *O. brevicollis steinbuehleri* Reitter from Venice to Turkey, *O. brevicollis brevicollis* Baudi from Cyprus, and two unnamed species, one from Italy and one from Israel. The molecular differences can be related to small morphological differences.

The high degree of genetic variability in *O. quadricollis* can be explained in terms of long periods of isolation during the last glaciations, which led to range fragmentation. On the other hand, the homogeneity of *O. b. steinbuehleri* can be explained by the drastic decrease in the level of the Adriatic that occurred during the Würmian glaciations of the Pleistocene; this allowed the Po Valley to run halfway through the Adriatic basin and induced massive changes in the marine environment, which became no more than a salt lagoon. The beetles would have to retreat to the east, and then the resulting bottlenecked population could return to and colonise the whole of the western area when the Adriatic sea level was restored.

URBANELLI, S., SALLICANDRO, P., DE VITO, E., COLONNELLI, E. & BULLINI, L. 1996. Molecular reexamination of the taxonomy of *Ochthebius* (*Calobius*) (Coleoptera: Hydraenidae) from the Mediterranean and Macaronesion Regions. *Annals of the Entomological Society of America* **89** (5) 623-535.

BERLINER BEETLES

A survey of the Hermsdorfer Sees, Germany, yielded 86 species, whereas the "Märkische Schweiz" nature park in Brandenberg yielded 93. The former site had rarities such as *Agabus striolatus* (Gyllenhal) and *Colymbetes paykulli* Erichson, which are both illustrated. Amongst the more interesting species from the second site were *Agabus biguttatus* (Olivier), *Helophorus pumilio* Erichson and *Elmis maugetii* (Latreille).

HENDRICH, L. 1996. Ein Beitrag zur Kenntnis der Wasserkäferfauna (Coleoptera: Hydradephaga, Hydrophiloidea und Dryopoidea) der Märkischen Scweiz (Brandenburg, Deutschland). *Novius* **20** (1) 445-454.

HENDRICH, L. & BALKE, M. 1996. Die Wasserkäferfauna (Coleoptera: Hydradephaga, Hydrophiloidea und Dryopoidea) des Ehemaligen "Großen" Hermsdorfer Sees im LSG Tegeler Fließtal. *Berliner Naturschutzblätter* **40** (4) 628-642.

BROWSING SECTION

NARROW ROADS OF GENE LAND - A BALFOUR~BROWNE CONNECTION

HAMILTON, W.D. 1996. *Narrow Roads of Gene Land. The Collected papers of W.D. Hamilton. Volume 1: Evolution of Social Behaviour.* 352 pp. Oxford, Freeman. ISBN 0-7167-4530-5 paperback £20; ISBN 0-7167-4551-8 hardback £40.

To echo the review in the *Times Literary Supplement*, this is a very strange book. W.D. Hamilton basically developed the theory of kinship to explain why animals are nice to each other instead of continually struggling for survival against each other. That is one way of looking at it. The other, at first appearance highly discordant, is that there may be more competition between individual genes than between the animals, the eggs and sperm that carry them. Being of Kent and having a special love for beetles, including the wish to be buried by them, Bill Hamilton might just scrape a mention in ***Latissimus***. The main reason, however, is that, on page 139, he reveals that his interest in unusual sex ratios originated in reading a paper by Frank Balfour-Browne... *"Already at LSE I had searched enough in the entomological literature for facts about social insects and their origins to have noticed that there was a real puzzle about departures from Fisher's equalizing principle of the sexes when it came to small and usually habitually inbreeding insects. I well remember reading with delight as with near incredulity F. Balfour Browne's account of the strange life and sex ratio of* Melittobia acasta, *a tiny hymenopterous parasitoid of the cells of solitary bees and wasps."*

BALFOUR-BROWNE, F. 1922. On the life-history of *Melittobia acasta*, Walker; a chalcid parasite of bees and wasps. *Parasitology* **14** 349-370, 1 plate.

BRITISH REED BEETLES, *PLATEUMARIS* AND *DONACIA* (CHRYSOMELIDAE): AN IDENTIFICATION AID USING PRONOTUM SURFACE CHARACTERS

by John Bratton & Malcolm Greenwood

The reed beetles form a small group of wetland species which are of interest to conservationists because several of them are rare and apparently in decline. Fragments of reed beetles, including pronota, can be abundant in the sub-fossil record and, as each species has one or very few foodplants, they provide strong clues to the prevailing habitat. Reed beetles can be difficult to identify, though the situation has been helped by the recent publication of a new key (Menzies & Cox 1996). The pattern of pronotal punctures, wrinkles, finer sculpturing and overall shape is characteristic in many reed beetle species. Thus the electron-micrographs presented here will provide a means of checking reed beetle identifications after using a conventional key or help the coleopterist through difficult parts of a key, and should be of use to palaeo-ecologists. However, if the whole beetle is available for examination, our guide should not be used on its own. A few species cannot be identified using only the pronotal characters. Users need to be able to separate *Plateumaris* from *Donacia*. If in doubt on this point, see Friday (1988).

This is not a taxonomic note so the issue of whether *Plateumaris discolor* deserves specific status is not addressed here. *Plateumaris sericea* and *P. discolor* have been synonymised (Askevold 1991), though this has not been widely accepted and *discolor* is still distinguished by Menzies & Cox (1996). Specimens from acidic sites such as moorlands and lowland heaths tend to have a more wrinkled pronotum whilst those from base-rich sites tend to have a finely roughened surface to the pronotum. When many specimens from a range of habitats are placed in order of increasing rugosity, there is no detectable break in the variation from fairly smooth *P. sericea sens. str.* to wrinkled '*discolor*'. Examples of the two ends of the range are pictured here. Askevold (1991) also made *P. affinis* a junior synonym of *P. rustica*, though most coleopterists have not so far followed this change in nomenclature.

Group 1. *Donacia* spp. with purple stripes on the elytra: *aquatica*, *marginata*, *vulgaris* (usually) and sometimes *semicuprea*

Note the heavy puncturation of *D. vulgaris*, without wrinkles.

D. semicuprea only rarely has purple elytral stripes. Its prominent pronotal foveae are characteristic.

D. marginata has a prominent rugosity running from the disc to the sides, but specimens vary in how far onto the disc the wrinkles penetrate. The variability of *marginata* can make it very similar to *aquatica* and these two species may not be separable on pronotum alone. The apparently transverse thorax of *aquatica* in the picture is accentuated by having been photographed slightly obliquely.

Group 2. *Donacia* spp. with short, partly red legs: *simplex*, *semicuprea*, *vulgaris* again

D. semicuprea has two obvious foveae (occasionally only one) and is smooth between the punctures.

D. simplex and *vulgaris* are more densely punctured and rougher between the punctures. Both usually have a longitudinal furrow. A slight tubercle on the front margin of the *vulgaris* pronotum will distinguish *vulgaris* from *simplex* but this tubercle can be absent. If in doubt, separate *vulgaris* and *simplex* on the basis of puncturation around the eye sockets (Bratton 1995): *D. vulgaris* has a deep shiny groove on the top of the head parallel to the eye socket; *simplex* does not.

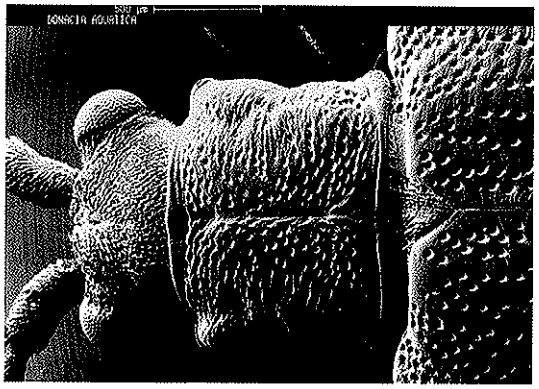
Group 3. Long-legged *Donacia* spp. with thoracic punctures light or absent: *clavipes*, *crassipes*, *dentata*, *sparganii*, *versicolorea*

The pronotum of *D. crassipes* lacks punctures or has a very light peppering of fine punctures visible at x40, and is very finely roughened and so appears matt. It is also strongly transverse.

That of *D. clavipes* is very lightly punctured but also usually smooth. It can be lightly wrinkled on the disc, but is always shining. The width of the front margin is greater than the length, but the narrower hind margin means the pronotum does not appear transverse.

The pronotum of *D. sparganii* lacks punctures but is clearly wrinkled.

D. versicolorea and *D. dentata* differ from other members of this group by having numerous large punctures **and** wrinkles (though the density of punctures is still light compared to species in Group 4). The pronotum alone is not sufficiently characteristic to allow these two species to be separated. The pictures suggest *versicolorea* is smoother than *dentata* either side of the central groove but this is not a constant difference - *versicolorea* can be wrinkled.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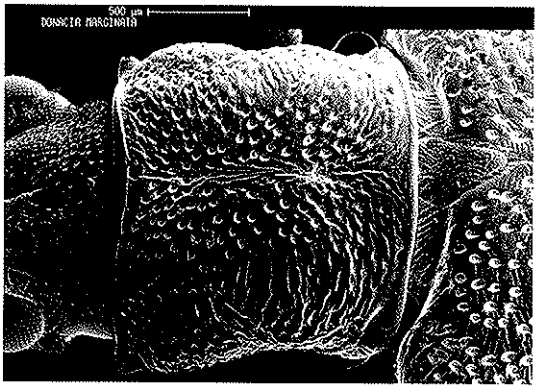
DONACIA AQUATICA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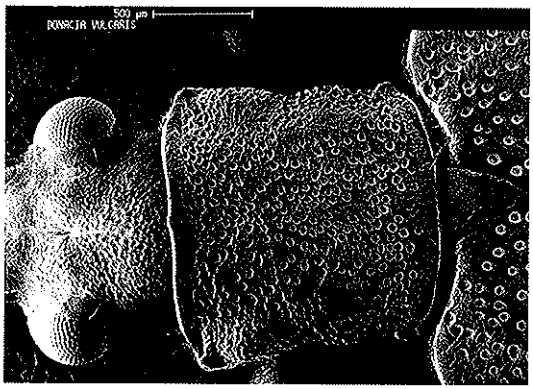
DONACIA MARGINATA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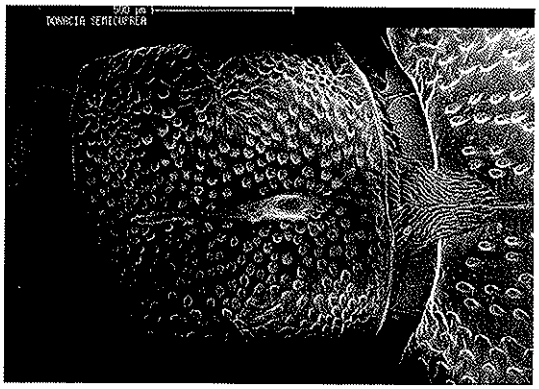
DONACIA VULGARIS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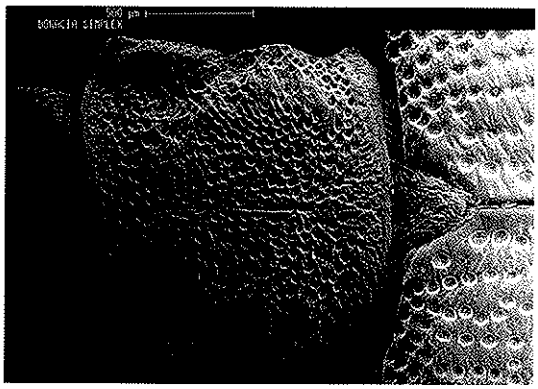
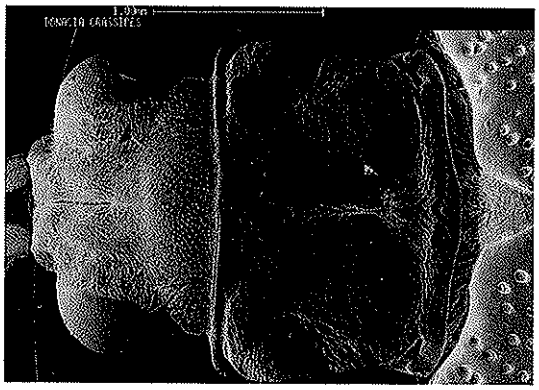
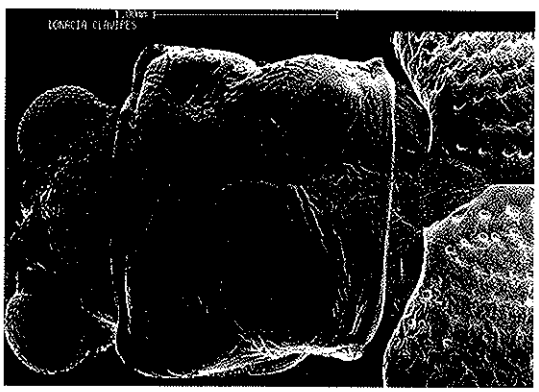
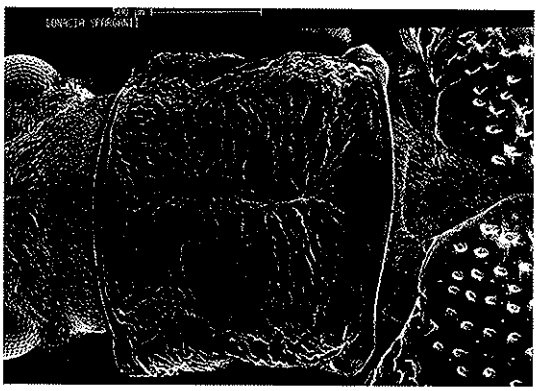
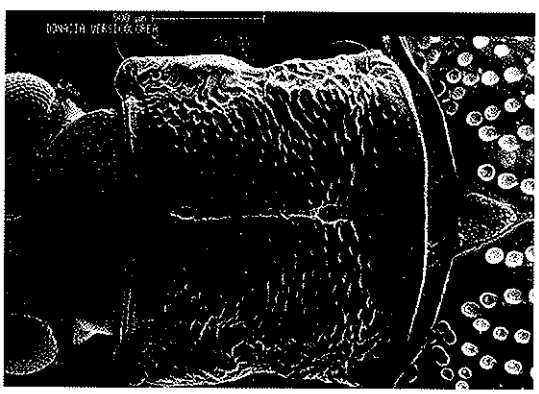
DONACIA SEMICUPREA

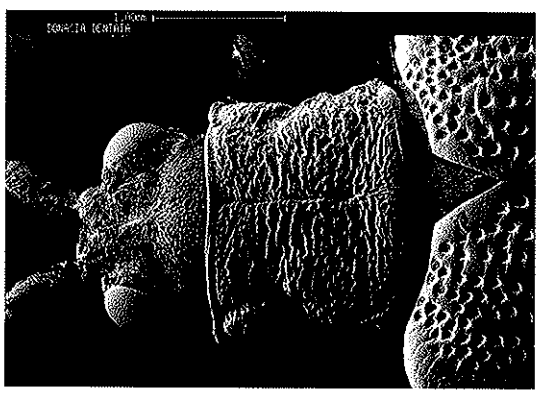

500 µm
DONACIA SIMPLEX

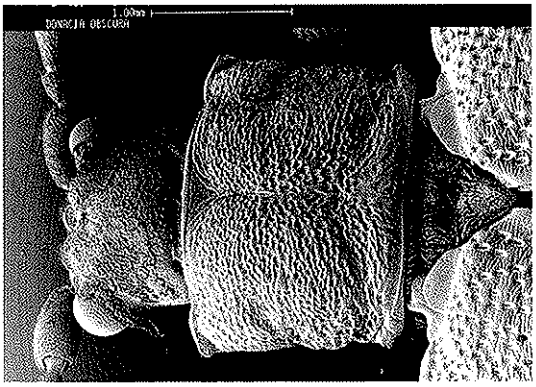

1.00mm
DONACIA CRASSIPES

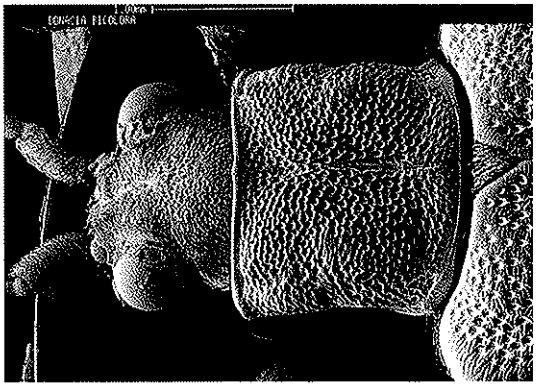

1.00mm
DONACIA CLAVIPES

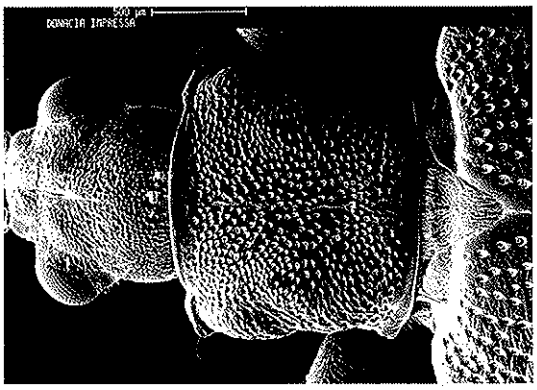

500 µm
DONACIA SPARGANII


500 µm
DONACIA VERSICOLOREA


500 µm
DONACIA DENTATA


BONACIA OBSCURA


BONACIA PICOLOMA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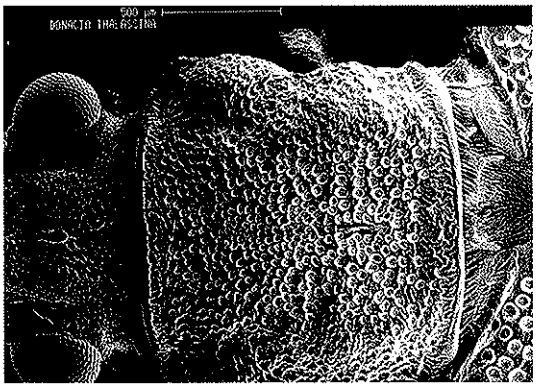
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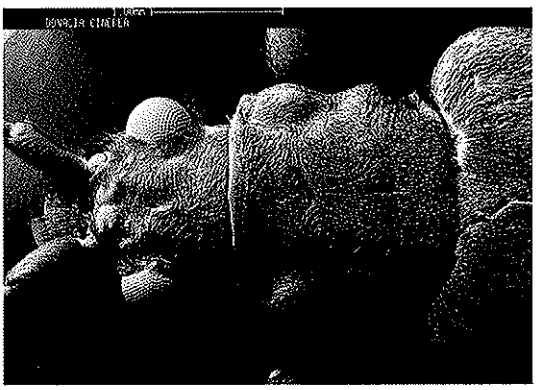
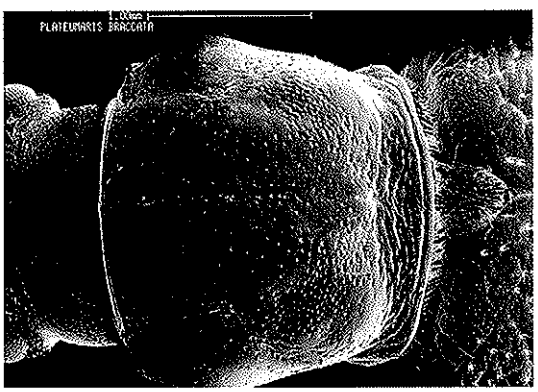
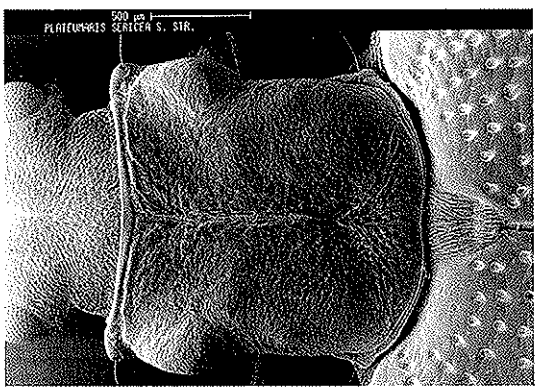
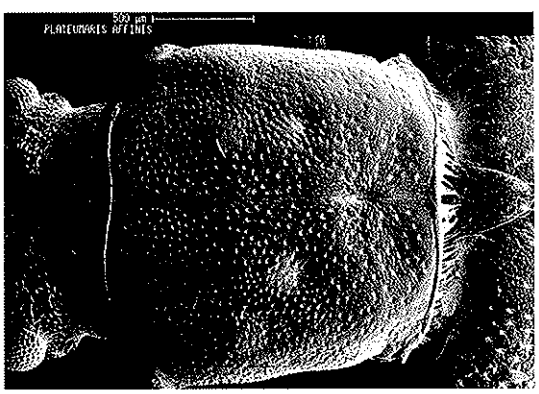
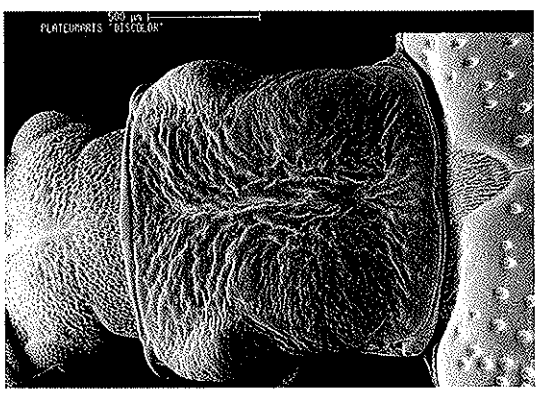

BONACIA CINTFRA


PLATEUMARIS BRACCATA


PLATEUMARIS SERICEA S. STR.


PLATEUMARIS AFFINIS


PLATEUMARIS "DISCOLOR"

Group 4. *Donacia* spp. without red colour on the legs and with heavily punctured pronotum: *obscura, bicolora, impressa* and *thalassina*

The pronota of *obscura*, *impressa* and *thalassina* are sufficiently variable that it has not been possible to find reliable differences between these four species. Because the pronota are domed, the slightly oblique view in the photographs makes the front margins appear falsely convex in *obscura*, *thalassina* and *impressa*. **When viewed from directly above**, the front margin is straight in *impressa* and *thalassina*, concave in *bicolora* and concave or straight in *obscura*.

Apart from colour, differences between *obscura* (dark grey) and *bicolora* (bright green) are slight.

Extremely heavy and large puncturation on the disc of *thalassina* typically contrasts with smooth shiny gaps between punctures on the disc of *impressa*, but heavily punctured *impresssa* and gappily punctured *thalassina* do occur. The front margin at the corners projects into the space behind the eyes in *impressa*. This character is absent or slight in *thalassina*.

P. sericea has sometimes been misidentified as *D. thalassina*. The large size and high density of the punctures in *D. thalassina* contrast with *P. sericea*.

'Group' 5. Dense hairs on pronotum: *Donacia cinerea*

The strongly hirsute pronotum should make *D. cinerea* unmistakable. *P. braccata* can have abundant hairs on the pronotum (often not – they probably rub off easily), but they are much less dense than in *D. cinerea*.

Group 6. *Plateumaris* spp.

The central furrow separates *sericea sens. lat.* from *braccata* and *affinis*. Note the prominent wrinkles on the specimen from the base-poor site, Llyn Mair fen, Snowdonia.

Plateumaris braccata has a prominent lump on each side of the pronotum near the front, and the pronotum narrows towards the back. There is no lump in *P. affinis* and the pronotum is almost rectangular. Also, Menzies & Cox (1996) pointed out that the front setiferous pore is close to the front margin of the pronotum in *P. braccata* but is set back from the margin in *P. affinis*.

Source of specimens pictured (species, date, site, vice-county, collector)
D. aquatica 13.5.1911 Wicken Fen 29 Camb. Univ. ex coll. GW Nicholson. *D. bicolora* 25.5.1991 Bourne Bottom Lake 9 IM. *D. cinerea* 10.5.1980 Virginia Water 22 JO. *D. clavipes* 19.7.1992 Woodwalton Fen NNR 31 JHB. *D. crassipes* 10.7.17 Cloverhill H30 Camb. Univ. GWN. *D. dentata* 11.8.1990 Amberley 13 IM. *D. impressa* 26.7.1994. R. Nene, Castor 32 MTG. *D. marginata* 23.5.1992 Virginia Water 22 JHB. *D. obscura* -.5.1982 Loch Garten 96 JO. *D. semicuprea* 26.7.1994 R. Nene, Castor 32 MTG. *D. simplex* 25.5.1995 R. Trent, Sawley 57 MTG. *D. sparganii* 11.7.1994 Gunwade Lake inflow, Peterborough 31 JHB. *D. thalassina*, Camb. Univ. ex. coll. Fraser, no other data. *D. versicolorea* 23.7.1992 Crowland High Wash 53 JHB. *D. vulgaris* 29.5.1993 Holme Fen NNR 31 JHB. *P. affinis* 14.6.1991 Burton Mill Pond 13 IM. *P. braccata* 29.6.1991 Burton Mill Pond 13 IM. *P. 'discolor'* 24.6.1996 Llyn Mair 48 JHB. *P. sericea* 16.6.96 Thurlby Fen Slipe 53 JHB.

Acknowledgements
The authors are grateful to Dr J. Denton, Dr W. Foster (University of Cambridge), Mr P. Hodge, Dr I. Menzies and Prof. J. Owen for offering or providing specimens for this study; and to Mr D. Lott (Leicestershire Museum) for access to reference specimens. The Joint Nature Conservation Committee funded the printing of this note.

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FRIDAY, L.E. 1988. *A key to the adults of British water beetles.* Taunton, Field Studies Council.
MENZIES, I.S., & COX, M.L. 1996. Notes on the natural history, distribution and identification of British reed beetles. *British Journal of Entomology and Natural History* **9** 137-162.

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THOUGHTS ON BRITISH DONACIINAE

MENZIES, I.S. & COX, M.L. 1996. Notes on the natural history, distribution and identification of British reed beetles. *British Journal of Entomology and Natural History* **9** 137-162, 2 plates. Available as an offprint at £4.00 plus 25 p postage and packing from:- British Entomological & Natural History Society, The Pelham-Clinton Building, Denton Pastures Country Park, Davis Street. Hurst, Reading RG10 OGH, England, UK.

L'homme n'est qu'un roseau, le plus faible de la nature; mais c'est un roseau pensant. Pascal

If man is a thinking reed, could this be a thinking man's guide to reed beetles? There are many avenues and byways of thought to explore in this wide-ranging treatment of British members of the Donaciinae which includes a key, colour plates and information both on individual species and on the group as a whole. On the taxonomic front, 21 species are recognised as British and, remarkably, no names have changed from the 21 listed by Joy in his key published in 1932. This means that *Macroplea appendiculata* and *M. mutica* keep their specific identities and that, more controversially, *Plateumaris sericea* and *P. discolor* are treated as separate species. Some may find interesting the justifications for maintaining their separation which are based on detailed morphological characters connected with the relative lengths of antennal segments and subtle differences in the tip of the penis. Others will wonder why someone does not investigate their biochemistry or carry out breeding experiments.

Apart from the two species pairs mentioned above, British Donaciines are relatively easy to identify with the aid of a reference collection. It has always been a puzzle to me why previously published keys made such a meal of them. I tried this key out on a few species and I have to admit that I met with the usual difficulties. It was not long before I was struggling over the difference between rugosities and coarse, dense punctuation. My specimens of *Donacia marginata* do not fit either alternative of couplet 5 in the key to *Donacia* species and my specimens of *Donacia clavipes* have dark terminal protarsal segments which do not match the description 'legs, including tarsi, entirely reddish brown'. Fortunately, two pages of excellent colour photographs depict 16 species and almost make the key superfluous. Perhaps it would be more effective to print a series of pretty pictures to identify *Donacia* species and dispense with text-based dichotomous keys.

There are general sections on changes in distribution, host plants, life histories and collecting techniques. Individual species accounts contain various snippets of information including national conservation status and a series of vice-county maps which compare pre- and post 1970 distributions. Scrutiny of the Leicestershire area of the maps revealed some surprises. Two recent records and several 19th century published records have been ignored, while I suspect that the inclusion of Leicestershire in the post 1970 map for *Donacia dentata* is based on a questionable and unconfirmed record from the Ashby Canal. These irregularities introduce an element of unreliability to the analysis of differences between old and modern ranges of distribution.

My enjoyment of the paper was raised by some of the more off-beat information. Did you know that *Plateumaris* is named after a wide asiatic slipper or that *cinerea* refers to a slave who heated irons in hot ashes for hairdressers? There is also a photograph of an extendable clap net which, apparently, is a device for catching reed beetles.

All in all, the publication of introductory works, such as this, is to be applauded. Despite my mild criticisms, this paper will be immensely helpful to beginners and people, like me, who are unfamiliar with the group. It is written in a relaxed but informative style and is easy to dip into.

Derek Lott

LIFE HISTORY OF *MACROPLEA APPENDICULATA*

A larva and four cocoons of this species were collected from stems of *Myriophyllum alterniflorum* DC in Talkin Tarn in August 1994. One of the cocoons contained a dead pupa, another a pupa that developed into an adult in September, another an adult that left the cracked cocoon soon after capture, and another a fully developed adult that stayed put. The two adults remaining in cocoons were refrigerated for several months, and they emerged after six days in the warmth.

OWEN, J.A. & MENZIES, I.S. 1996. A note on the life history of *Macroplea appendiculata* (Panzer) (Col.: Chrysomelidae). *Entomologist's Record and Journal of Variation* **108** (11-12) 317-318, Plate I (opp. p. 313).

COLÉOPTÈRES AQUATIQUES RÉCOLTÉS À LA LUMIÈRE UV SUR LES BERGES DU CANAL DU MIDI (HAUTE-GARONNE, FRANCE) par Philippe Ponel

Achevé en 1681 après 14 ans de travaux, ce canal long de 240 km relie le canal latéral à la Garonne, près de Toulouse, à l'étang de Thau, mettant ainsi en communication l'Atlantique avec la Méditerranée. La réalisation de cet ouvrage gigantesque est due à l'ingénieur Pierre-Paul RIQUET (1604-1680) qui fut le premier à résoudre le problème posé par l'obstacle du Seuil de Naurouze (alt. 194 m). Grâce au captage du réseau hydrographique du massif de la Montagne Noire et à la construction d'un bief de partage des eaux suffisamment alimenté, il fut possible d'envisager la construction d'une succession d'écluses sur le versant atlantique comme sur le versant méditerranéen (103 écluses au total). Large de 16 à 19 m et profond de seulement 2 m en moyenne, le Canal du Midi ne permet pas la circulation de péniches de grand gabarit et le trafic de marchandise est actuellement très réduit ou nul. En revanche il supporte pendant l'été depuis quelques années un très important trafic touristique.

Ce canal entièrement artificiel ne paraît pas *a priori* très favorable aux Coléoptères aquatiques, cependant plusieurs soirées de piégeage à la lumière UV pendant les étés 1993 et 1994 ont révélé la présence de quelques espèces intéressantes (tableau 1). La plupart des petits cours d'eau de la région est fortement pollué et il est possible que la relative bonne qualité des eaux du canal soit un facteur positif pour les insectes aquatiques.

Matériel et conditions de piégeage La lampe employée est une lampe mixte à vapeur de mercure de 125 W. Elle a été installée presque tous les soirs favorables (soirées chaudes et sans vent), entre 22 h et minuit (h. l.) du 4 au 9 juillet 1993, du 1 au 3 juillet 1994 et du 13 au 23 août 1994. Le site de piégeage se trouve à proximité de l'écluse de Gardouch, sur le quai et à environ 5 m de l'eau.

Captures intéressantes sur le plan biogéographique La chorologie de plusieurs des espèces rencontrées (*Stenelmis*, *Macronychus*) reste assez mal connue et repose surtout sur des données anciennes. D'autres espèces comme *Dryops sulcipennis*, *Cercyon laminatus* et *Cryptopleurum subtile* n'ont été signalées de France que récemment.

Stenelmis canaliculata. Répartition en France continentale: "Alsace, bassin de la Seine et de la Loire, Bourgogne, région méditerranéenne et aquitanique" (Deville 1935-1938). Répartition dans le sud-ouest de la France: Landes, Gers, Pyrénées-Atlantiques, Haute-Garonne, Aude, Pyrénées-Orientales (Berthélémy 1966); Dordogne (Secq & Secq 1988); Gironde (Tempère 1931); Tarn (Gavoy 1909; Galibert 1932; Rabil 1992); Hérault (Mayet 1909); Ardèche (Balazuc 1984); Creuse (Alluaud 1920).

Stenelmis consobrina. Répartition en France continentale: "Tout le Bassin Aquitain, région méditerranéenne française, Lyonnais, Bassin Parisien" (Berthélémy 1979). Répartition dans le sud-ouest de la France: Landes, Haute-Garonne, Aude, Pyrénées-Orientales (Berthélémy 1966); Dordogne (Secq & Secq 1988); Gironde (Tempère 1931); Tarn (Gavoy 1909; Galibert 1932); Hérault (Mayet 1909).

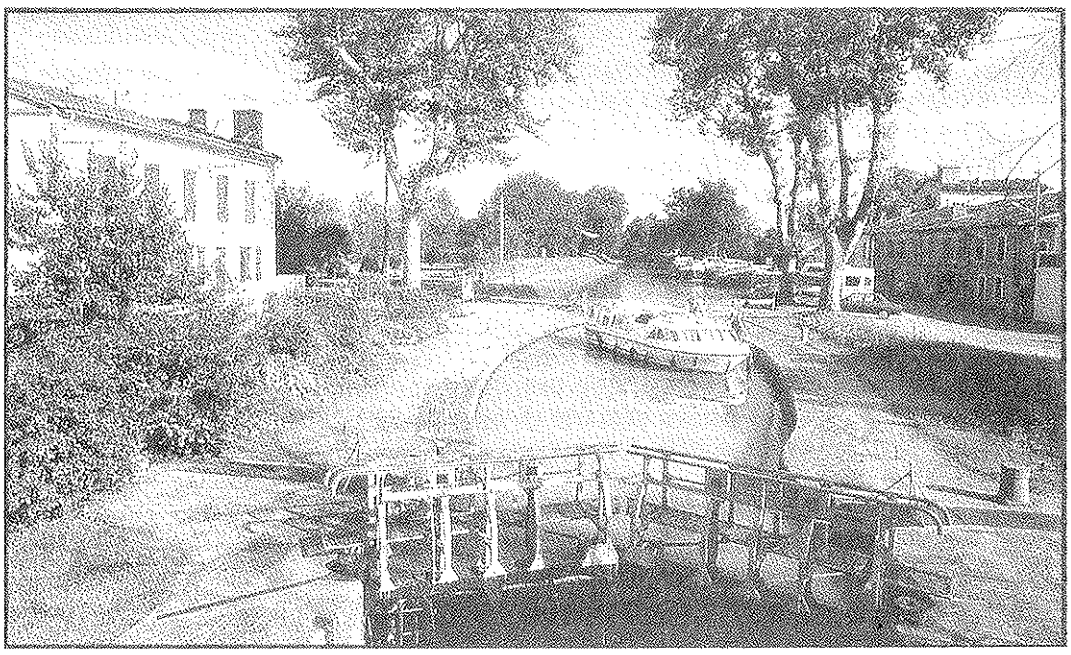
Macronychus quadrituberculatus. Répartition en France continentale: "Rare dans la moitié nord de la France, plus répandu dans le sud-ouest" (Deville 1935-1938). Répartition dans le sud-ouest de la France: Gironde, Lot-et-Garonne, Landes, Gers, Haute-Garonne, Aude (Berthélémy 1966); Haute-Vienne (Alluaud 1920); Dordogne (Secq & Secq 1988); Gironde (Tempère 1931); Ardèche (Balazuc 1984). Espèce indicatrice de la bonne qualité de l'eau du canal (Drost *et al.* 1992).

Dryops sulcipennis. La présence de cette espèce en France a été confirmée récemment par Bameul & Secq (1987), à partir de spécimens récoltés dans les départements de Charente, Charente-Maritime, Dordogne, Gironde et Hérault. Elle a été aussi signalé dans l'Aude (Foster & Levey 1995). La nouvelle localité de Gardouch s'intègre donc bien dans cette aire de répartition et montre que l'espèce est largement implantée dans le Sud-Ouest. L'aire française de *D. sulcipennis* atteint vers l'Est les Alpes du Sud, puisque j'en ai recueilli un exemplaire mâle dans le département des Alpes-de-Haute-Provence: Brunet, bord de la rivière Asse parmi des galets, alt. 410 m, 17/23.VII.90.

TABLEAU 1 Coléoptères aquatiques obtenus au piège lumineux UV du 4 au 9 juillet 1993 (***a***) du 1 au 3 juillet 1994 (***b***) et du 13 au 23 août 1994 (***c***) à l'écluse de Gardouch (Haute-Garonne, France). Nomenclature selon Olmi (1976), Drost *et al.* (1992) et Hansen (1987).

Liste des espèces	*a*	*b*	*c*	Liste des espèces	*a*	*b*	*c*
HALIPLIDAE				*Cercyon atricapillus* (Marsham)	-	-	2
Haliplus lineatocollis (Marsham)	-	-	19	*Cercyon sternalis* (Sharp)	-	-	3
DYTISCIDAE				*Cercyon analis* (Paykull)	-	-	7
Hydroglyphus pusillus (Fab.)	3	2	12	*Megasternum obscurum* (Marsham)	-	1	-
Yola bicarinata (Latreille)	-	-	1	*Cryptopleurum subtile* Sharp	2	1	5
Graptodytes varius (Aubé)	-	-	1	*Hydrobius fuscipes* (L.)	4	5	-
Scarodytes halensis (Fab.)	-	-	1	*Laccobius sinuatus* Motschulsky	3	2	3
Rhantus suturalis (MacLeay)	-	-	1	*Helochares lividus* (Forster)	-	-	1
Laccophilus hyalinus (De Geer)	-	-	3	*Enochrus testaceus* (Fab.)	-	-	1
HYDRAENIDAE				*Enochrus coarctatus* (Gredler)	1	-	-
Hydraena atrata Desbr.	-	-	1	*Hydrochara caraboides* (L.)	-	-	1
Ochthebius viridis Peyron*	-	-	2	*Berosus affinis* Brullé	-	1	+
HYDROCHIDAE				ELMIDAE			
Hydrochus flavipennis (Küster)	-	-	7	*Stenelmis canaliculata* (Gyllenhal)	2	-	+
HYDROPHILOIDAE				*Stenelmis consobrina* Dufour	-	-	4
Helophorus grandis Illiger	-	1	-	*Macronychus quadrituberculatus* Müller	-	-	1
Dactylosternum abdominale (Fab.)	-	-	1	DRYOPIDAE			
Cercyon laminatus Sharp	-	-	18	*Pomatinus substriatus* (Müller)	-	-	9
Cercyon unipunctatus (L.)	-	-	1	*Dryops sulcipennis* (Costa)**	13	2	3
Cercyon quisquilius (L.)	3	1	4	CURCULIONIDAE			
Cercyon terminatus (Marsham)	-	-	2	*Tanysphyrus lemnae* (Paykull)	-	-	2

*GNF det. ** F. Bameul det.



Lieu de l'étude. La lampe UV a été placée sur le quai, à droite de la photo

Cercyon laminatus. L'abondance de ce *Cercyon* en août 1994 indique que cette espèce est bien établie dans la région. Je profite de cette note pour signaler quelques localités françaises: Rhône: Quincieux, 22.V.83, détritus d'inondations, P. Moretto leg.; Vaucluse: Cucuron, route D27, à 1km du village vers Sannes, VIII.89, UV, champs de vignes; Var: Hyères, 31.VII.92 et 3.VIII.92, UV.

Cryptopleurum subtile. La présence de cet Hydrophilide en France et plus particulièrement dans la région toulousaine a été signalée par Rogé dès 1986, dans le secteur des communes de Montbrun, Nailloux et Gardouch (Haute-Garonne). Il a également été trouvé dans le Lot-et-Garonne: Baleyssagues, par F. Bameul (comm. pers.). Présent aussi en Provence (Bouches-du-Rhône: Allauch, le Logis-Neuf, 1 ex le 6.VI.96, UV), il semble y être beaucoup moins fréquent.

Remerciements
Franck Bameul a bien voulu vérifier certaines déterminations délicates (*Dryops*) et a effectué des recherches bibliographiques à mon intention, je le remercie très vivement d'avoir bien voulu se charger de cette tâche ingrate. Valérie Andrieu et sa famille m'ont efficacement secondé dans les opérations de piégeage.

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NEW DANISH CHECKLIST

3,682 species of beetle are known from Denmark. The new checklist is accompanied by a commentary written in both Danish and English. Michael Hansen has done a great editorial job of marshalling the 27,500 records into a modern catalogue of value on a European basis in that it sets out a modern ordination of suborders, super-families, families, subfamilies, tribes and genera. The treatment of water beetle taxa achieves a suitable compromise between the conservative and the modern. There is no price tag but the book is distributed by Apollo Books, DK-5771 Stenstrup, Denmark.

HANSEN, M. 1996. Katalog over Danmarks biller. *Entomologiske Meddelelser* **64** (1, 2), pp. 231.

IMPACT OF AN IMPACT - THE ISSUE OF GROUNDWATER IN ENGLAND

English Nature commissioned groundwater consultants to assess the impact of abstraction on 152 protected sites ("SSSIs") in England. The preamble to the report was written during the summer drought and was reviewed during the first major autumnal deluge. Forty one sites were identified as being at high risk and 48 at medium risk, representing 9% of English wetland SSSIs. This situation is contrasted with 14% of wetland SSSIs affected by drainage for agriculture. The report recommends that a future water resources strategy should rely less on aquifer abstraction and summer river abstraction, but more on winter storage. Although public water supply and irrigation for agriculture are inevitably cited as the most the most frequent threats, irrigation for golf courses and for fish farms also feature. Well known water beetle sites thought to be at high or medium risk either now or in the future include Thorne Moors, Chippenham Fen, the Ant Broads, East Walton Common, East Wretham Heath, Middle Harling Fen, Smallburgh Fen, Redgrave and Lopham Fens, Morden Bog, Cliburn Moss, and Oakmere.

One's confidence is jolted by the statement that Thompson Common is presently at low perceived risk "as site believed to be rainwater fed and not dependent on chalk groundwater" and also "at low future risk for reason above". Perhaps this belief is based on a dangerous extrapolation from the fact that the nearby man-made Thompson Water fluctuates with rainfall rather than water table. However, given that Thompson Common pingo hollows owe their origin to groundwater and that they continue to retain water in Britain's lowest rainfall area, it might be as well to adopt the precautionary principle and assume that groundwater still plays a part in the survival of the 91 species of water beetle found there. The report is to be commended in that it is written in simple terms understandable by laymen. The questions are "Was it written by laymen?" and "What do hydrologists do when they visit a pingo fen?"

BENNETT, S. 1996. *Impact of water abstraction on wetland SSSIs*. English Nature Freshwater Series No. **4**. Peterborough, English Nature.

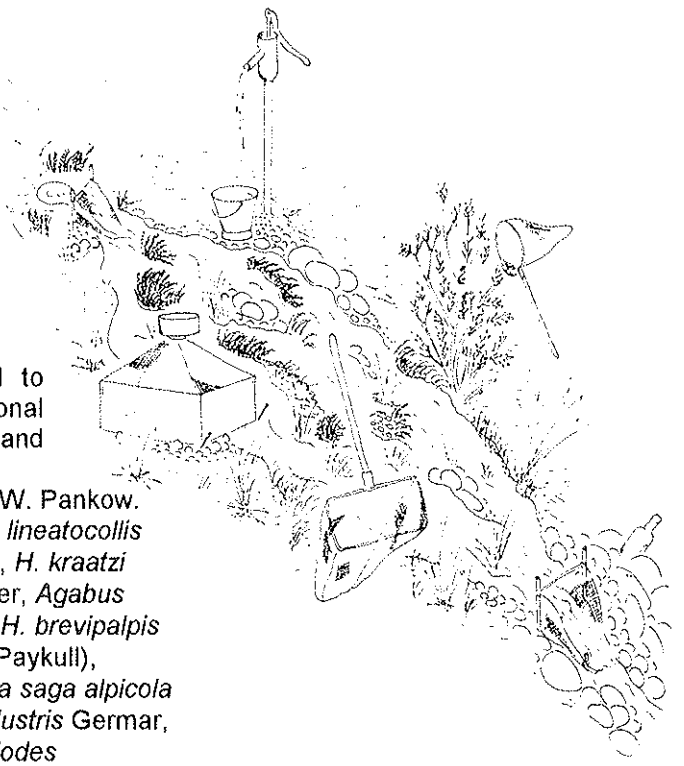
BELARUSSIAN SPRINGS

Forty samples from sixteen springs in Belarus are discussed in relation to spring type. Thirty one taxa are recognised, of which *Elodes pseudominuta* Klausnitzer was the most frequent, surprisingly followed by *Hydroporus striola* Gyllenhal. A single female of *Helophorus alternans* Gené from the Minsk region represents the first record of this species from Belarus. No subterranean species were detected.

MOROZ, M.D. & KHMELEVA, N.N. 1996. Water beetles (Insecta, Coleoptera) from the springs of Belarus. *Oecologia Montana* 5 55-57.

ALPINE SPRING FAUNAS

CREMA, S., FERRARESE, U., GOLO, D., MODENA, P., SAMBUGAR, B. & GERECKE, R. 1996. Ricerche sulla fauna bentonica ed interstiziale di ambienti sorgentizi in area alpina e prealpina. *Centro di Ecologia Alpina Report* No. **8**, 104 pp. Available at Lire 10,000 from Centro di Ecologia Alpina, Viote Monte Bonndone, I-38040 Sardagna (Trento), Italy.



A range of collecting methods were used to survey 30 springs in the Berchtesgaden National Park, Bavaria, and the Trento Alto Aldige and Veneto regions of the Alps.

Beetles were checked by U. Hannappel and W. Pankow. The following beetles were identified: *Haliplus lineatocollis* (Marsham), *Hydroporus ferrugineus* Stephens, *H. kraatzi* Schaum, *H. memnonius* Nicolai, *H. nivalis* Heer, *Agabus guttatus* (Paykull), *Helophorus aquaticus* (L.), *H. brevipalpis* Bedel, *H. nivalis* Giraud, *Anacaena globulus* (Paykull), *Megasternum obscurum* (Marsham), *Hydraena saga alpicola* Pretner, *H. lapidicola* Kiesenwetter, *Eubria palustris* Germar, *Elmis latreillei* (Bedel), *E. rietscheli* Steffan, *Elodes hausmanni* (Gredler), and *E. minuta* (L.).

HOW DOES *ILYBIUS FENESTRATUS* (FAB.) COLONISE NEW PONDS?

by Jonty Denton

Flight capacity in the Dytiscidae has received a fair amount of attention (Jackson 1956), and some supposedly flightless species have been shown to fly occasionally, e.g. *Agabus uliginosus* (L.) (Kirby & Foster 1991), *Oreodytes davisii* (Curtis) (Owen 1984). David Bilton (1994) showed that *Hydroporus glabriusculus* Aubé had differing powers of flight in different populations. It would appear that some species only fly when teneral, and lose this ability thereafter as the flight muscles atrophy.

Ilybius fenestratus is said to be incapable of flight (Nilsson & Holmen 1995). However, its occurrence when I continuously monitored the water bodies on Woolmer Forest, southern England from 1989 to 1995 strongly suggested that some individuals can fly (or hitch a lift from a larger aviator). Alas I have not taken it in flight, but its occurrence in this area cannot glibly be ascribed to 'dispersal by larval walking'. It is locally common in some large ponds on the Surrey/Hampshire border, where it is readily netted and trapped. Indeed it is often abundant in ponds heavily stocked with coarse fish. Its distinctive smell is related to distasteful toxins which deter fish; it is not known whether the larvae have a similar defence.

The only permanent water body in the forest, Cranmer pond was monitored for six years but *I. fenestratus* was taken only twice - once in a the net in May 1991 and when three individuals were trapped on 26 July 1994. The latter capture coincided with a wet, warm period when many species were dispersing to new ponds. The lake is large and it is possible that the beetle may be resident albeit at very low densities. However, the beetle had not been recorded from the nearby Woolmer pond (a large temporary lake), despite a long history of recording. The pond had degraded into a bog by the 1980's and was re-excavated in four stages, between 1986 and 1994. It is separated from Cranmer pond to the north by about 150 m of dry pine woodland, and fed by small run-off streams unconnected to other ponds.

On 15 September 1995 I caught two *I. fenestratus* in the southern end of the pond (>700 m from Cranmer) in the area cleared the previous year. Both beetles were later placed under warm lights but could not be induced to fly, despite being fully winged. The ponds had been intensely monitored (even a stray *Agabus didymus* (Olivier) was once trapped), and I am sure that *I. fenestratus* had not previously been overlooked. Both specimens were found in a part of the pond that dried out each year.

Intriguingly, the capture sites were adjacent to a mud flat used for roosting by about twenty Canada Geese. These birds commuted to other known sites for the beetle in the area, but were present at Woolmer only in late August and in September.

The saucer bug, *Ilyocoris cimicoides* (L.) (Naucoridae), is also said to be flightless, but does appear in ephemeral ponds separated from their neighbours by at least 30 m of dry habitat. I have yet to take *I. fenestratus* at sites without saucer bugs.

Wildfowl are often implicated to explain the dispersal of fish, without much clear evidence. But various seed shrimps and crustacean eggs can even survive the digestive tracts of ducks and waders (Malone 1965; Proctor *et al.* 1967). The accidental transference of eggs, etc. in weed may occasionally happen, but I have yet to see a duck take off trailing bug-strewn weed!

References

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

JACKSON, D.J. 1956. Observations on flying and flightless water beetles. *Journal of the Linnean Society of London* **43** 18-42.

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

MALONE, C.R. 1965. Killdeer as a means of dispersal of aquatic gastropods. *Ecology* **46** 551-552.

NILSSON, A.N., & HOLMEN, M. 1995. *The aquatic Adephaga (Coleoptera) of Fennoscandia and Denmark*. II. *Dytiscidae*, Leiden, E.J. Brill (Fauna Entomologica Scandinavica, No. **32**.).

OWEN, J.A. 1984. Another species gains its wings. *Balfour-Browne Club Newsletter* **29** 3.
PROCTOR, V.W., MALONE, C.R. & DeVLAMING, V.L. 1967. Dispersal of aquatic organisms. *Ecology* **48** 672-676.

Received January 1997

ENVIRONMENTAL MONITORING - OR IS IT SURVEILLANCE?

EYRE, M.D. (ed.) 1996. *Environmental Monitoring, Surveillance and Conservation using Invertebrates*. Newcastle upon Tyne, EMS Publications 101 pp. ISBN 0 9528173 0 6. Can be purchased for £15 from EMS Publications, 13 Manor Grove, Benton, Newcastle upon Tyne NE7 7XQ, England UK.

This book is the result of a workshop at St. Aidan's College, University of Durham, in March 1996. Twenty one papers are presented, mostly in an informal style. One paper specifically concerns water beetles, but they get an airing in several papers. The title of the book is interesting as, halfway through the meeting, Martin Speight differentiated between monitoring and surveillance. Mick accordingly changed the title of the meeting! If you are not sure about the difference, buy the book. My only criticism is that the spine should have a title so that I can find the book easily on the shelf.

NICARAGUAN *BEROSUS*

The three species of *Berosus* known from Nicaragua - *griseus* Sharp, *stramineus* Knisch and *truncatipennis* Castelnau - are described and keyed.

OLIVA, A. 1996. Los *Berosus* (Coleoptera: Hydrophilidae) de Nicaragua. *Rev. Nica. Ent.* **36** 13-17.

AUSTRALIAN HALIPLIDAE

Watts (1988) described 4 new Australian Haliplidae, bringing the total to 8. The later review by Bernhard van Vondel recognises 14 species in the Australian region including three newly described species. New Caledonia supports one species and Papua New Guinea three. The paper is accompanied by a key, by the usual high quality figures and by dot maps.

VONDEL, B.J. van. 1995. Revision of the Haliplidae (Coleoptera) of the Australian Region and the Moluccas. *Records of the South Australian Museum* **28** (1) 61-101.

WATTS, C.H.S. 1988. Revision of Australian Haliplidae (Coleoptera). *Records of the South Australian Museum* **22** (1) 21-28.

HYDRAENID PROTHORAX

Studies of the prothorax of hydraenids indicates that was once thought of as a notopleural suture is no more than a secondary, external ridge. Hydraenids share with other members of the Polyphaga the fusion of the prothorax with the trochantinus

BEUTEL, R.G. & JÄCH, M.A. 1995. Untersuchungen über die Propleura der Hydraenidae (Coleoptera: Staphyliformia). *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen* **47** 59-63.

HYDRAENA ATRATA

H. atrata Desbrochers des Loges is widely distributed in Iberia, being recorded from Portugal for the first time. Where it coexists with *H. testacea* Curtis, it can be distinguished by the broader elytral epipleura. The third species of *Phothydraena, H. hernandoi* Fresneda & Lagar, is recorded from south of the Guadalquivir.

AGUILERA, P., RIBERA, I. & FOSTER, G.N. 1996. Notes on *Hydraena (Phothydraena) atrata* Desbrochers des Loges, 1891, with comments on the Iberian species of the subgenus (Coleoptera: Hydraenidae). *Bol. Asoc. esp. Ent.* **20** (102) 111-118.

NEBRIOPORUS CERESYI GROUP

N. baeticus (Schaum) is recognised as a distinct Spanish species, recently described as *mariae* Millán and Rocchi. *N. acuminatellus* (Fairmaire), from Algeria, is also distinct, having been confused with *ceresyi* and *baeticus* in the past. *N. steppensis* (Motschulskiy), from Kazakhstan, is yet another species.*N. schoedli* is newly described from Tunisia and Algeria. Synonyms and lectotypes are identified. Drawings of the habitus and genitalia (including some remarkably delicate aedeagi) are accompanied by full descriptions but, unfortunately, no key. An enticing photograph of the Altai shows the habitat for *N. formaster* (Zaitzev), *Hygrotus unguicularis* (Crotch), *Agabus lineatus* Mannerheim and *A. pallens* Poppius. In passing, *Stictotarsus otini* (Guignot) is newly recorded from Spain in the provinces of Seville and Cordoba.

FERY, H. , FRESNEDA, J. & MILLÁN, A. 1996. Bemerkungen zur *Nebrioporus ceresyi*-Gruppe sowie Beschreibung von *Nebrioporus schoedli* n. sp. (Coleoptera; Dytiscidae). *Entomologische Zeitschrift* **106** (8) 306-328.

MALAYSIAN ELMIDS

Two macronychine genera are newly described, *Macronevia*, with *Macroncyhus simplex* Hinton as its first species, and *Haraldaria*, with the newly described *schillhammeri*. The opportunity is taken to replace the name *Eonychus* Jäch & Boukal, which was found to be preoccupied, with *Eonychius*.

JÄCH, M.A. & BOUKAL, D.S. 1996. Description of two new riffle beetle genera from peninsular Malaysia (Coleoptera: Elmidae). *Koleopterologische Rundschau* **66** 179-189.

***GEORISSUS, CRENITIS* AND *OOSTERNUM* AT RISK**

Strict application of the Law of Priority could result in us getting *Cathammistes* for *Georissus*, the rather wonderful name *Fontiscrutor* for *Crenitis* and *Crypteuna* for *Oosternum*. The case is made against this and one must hope that they find their way onto the ICZN Rejection heap.

HANSEN, M. 1996. Case 2925. *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 (Insecta, Coleoptera): proposed conservation. *Bulletin of Zoological Nomenclature* **53**(2) 99-103.

CHECKLIST FOR SAXONY

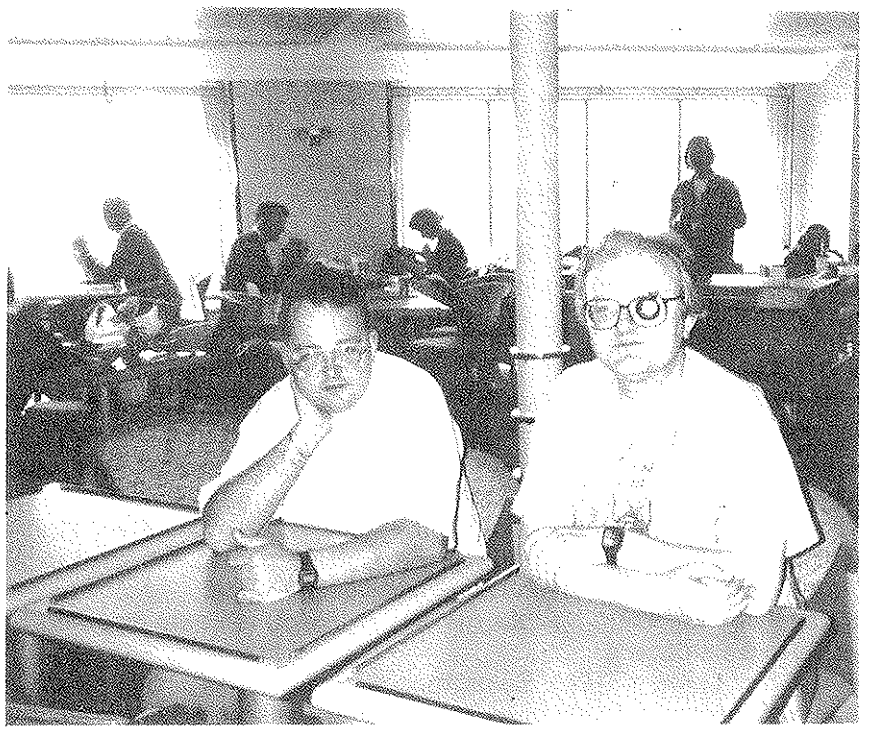
The welcome proliferation of German checklists was noted in ***Latissimus* 7**. This new one concerns Saxony, the distribution of species between the five regions is specified along with ecological data. This particular list does not include an assessment of threat.

KLAUSNITZER, B., BELLSTEDT, R., BRAASCH, D., HEBAUER, F., JÄGER, O., SIEBER, M., SPITZENBERG, D. & ZINKE, J.1996. Kommentiertes Verzeichnis der Wassertreter (Haliplidae), Schlammschwimmer (Hygrobiidae), Tauchkäfer (Noteridae), Schwimmkäfer (Dytiscidae), Taumelkäfer (Gyrinidae), Buckelwasserkäfer (Spercheidae), Wasserkäfer im einiger Sinne (Hydrophilidae ohne Sphaeridiinae und Helophorinae) des Freistaates Sachsen. *Mitteilungen Sächsischer Entomologer* **34** 3-12.

***NEONECTES* LARVAE CONFIRM PRIMITIVE STATUS**

N. natrix was originally described from Japan and is known to occur in north-east China, Korea and Primorye, eastern Russia. Russian larvae are described. They indicate that *Neonectes* is near to *Oreodytes*, *Stictotarsus* and *Nebrioporus*, possessing an occipital suture in the first instar and lacking a maxillary cardo, and forming a basal group for the Hydroporini.

ALARIE, Y. & NILSSON, A.N. 1996. The larvae of *Neonectes* J. Balfour-Browne (Coleoptera: Dytiscidae: Hydroporinae) with a description of *N. natrix* (Sharp) and a discussion of its phylogenetic relationships with members of the tribe Hydroporini. *The Coleopterists Bulletin* **50** (2) 107-121.



Things to do on the ferry to a Club Meeting

(a) nothing

(b) test new nightsight for nocturnal beetles

(c) buy same, cheap watches in duty free

(d) cause embarrassment in large group of people

A NEW SPANISH *HYDROPORUS* IN THE *LONGULUS* GROUP

At our meeting in Barcelona, Dr Robert Constantine showed a male of *Hydroporus* from near Burgos, that was obviously new to the Spanish fauna. This is now described as *H. constantini* Hernando & Fresneda, characterised in particular by the broad tip to the aedeagus. The opportunity is taken to demonstrate the difference between *H. longulus* Mulsant and *H. nevadensis* Sharp, the latter having a longer aedeagus with a sharper tip.

HERNANDO, C. & FRESNEDA, J. 1996. *Hydroporus constantini* n. sp. de la Península Ibérica (Coleoptera, Dytiscidae). *Nouv. Revue Ent.* **13** (2) 155-161.

Dr MIGUEL ARCHANGELSKY

Dr Archangelsky's thesis is entitled *Studies on the biology, ecology and systematics of the preimaginal stages of New World Hydrophiloidea, with considerations on their phylogeny.* It contains descriptions of preimaginal stages of some 40 genera, a key to the larvae of all known New World genera, and information on their biology. There is also a chapter on hydrophiloid phylogeny that presents new information based on immature stages, with some new ideas on the relationships among hydrophiloid families.

PAPERS IN BRIEF

Papers are included here largely because their titles are so descriptive that no further comment is necessary. It must also be admitted that there a "stop press" element - a paper arriving just as we go to press might get this treatment, but a paper can "surface" from the heaps on the desk when they are tidied up as each edition of ***Latissimus*** is being finalised. Rather than review it very late, it is often better to insert it into this section. The editor reserves the right to be incompetent.

BARR, C.B. & SPANGLER, P.J. 1994. Two new synonymies: *Alabameubria*, Brown, a junior synonym of *Dicranopselaphus* and *Alabameubria starki*, a synonym of *Dicranopselaphus variegatus* (Coleoptera; Psephenidae). *Entomological News* **105**(4) 299-302.

FOSTER, G.N. 1996. Site evaluation and management for water beetles. 49-55 in: *Colloquium on Conservation, Management and Restoration of Habitats for Invertebrates: Enhancing Biological Diversity*, Strasbourg, Council of Europe.

FOSTER, G.N. 1996. Conserving Scottish water-beetles. 42-46 in: G.E. Rotheray & I. MacGowan (eds) *Conserving Scottish Insects.* Edinburgh Entomological Club.

HODGE, P.J. 1996. *Elodes tricuspis* Nyholm (Scirtidae) in West Sussex. *The Coleopterist* **5**(3) 82.

PISOLKAR, E. 1996. *Coelambus nigrolineatus* (von Steven) (Dytiscidae) in Warwickshire. *The Coleopterist* **5** (2) 44.

SPANGLER, P.J. 1995. A review and two new species of the genus *Pseudeucinetus* Heller from Southeast Asia and a world checklist of the Thaumastodinae (Coleoptera, Limnichidae). *Special Bulletin of the Japanese Society of Coleopterology, Tokyo* **4** 395-405.

***Latissimus* 7 - missing addresses**

The address file printed on the inside of the front cover was an early and incomplete draft. Those not listed for ***Latissimus* 8** are listed here with the exception of Jonathan Guest, whose present address is unknown. Note that contacts for the purchase of books are indicated in the reviews themselves.

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WWW and WBW - WATER BEETLE WORLD

Visit Sharon Jasper's Water Beetle World on

http://bio-www.tamu.edu/beetles

Sharon is updating files to incorporate the later Warren Brigham's bibliographies.

BALFOUR~BROWNE CLUB MEETING 1997

The meeting is scheduled for Gotha in the Thuringian Wald, 16-18 May.
Booking forms are available from
Ronald Bellstedt, Brühl 2, D-99867 Gotha, and from the Secretary.
Hurry as numbers are expected to be high.

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Correspondence should be addressed to the Honorary Secretary:-
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The e-mail file Stippled areas indicate changes from ***Latissimus* 7**.

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Erratum: the record for *Stenopelmus rufinasus* (Denton 1996. Mass dispersal of *Stenopelmus rufinasus* in Surrey, England. ***Latissimus* 7** 8) should be for 22 September 1995, not as stated.