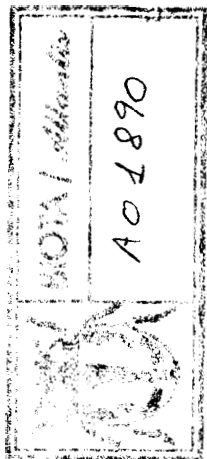


THREE NEW SPECIES OF MICRODONTOMERINI
(HYM., CHALCIDOIDEA, TORYMIDAE)
FROM SPAIN AND THE CANARY ISLANDS

BY R.R. ASKEW



The three species of Torymidae described in this paper, although superficially similar, are placed in two different genera within the tribe Microdontomerini in accordance with Grissell's (1995) recent revision and generic reclassification of Toryminae. However the problems in deciding upon generic placement of the three new species indicate that a reassessment of generic limits within Microdontomerini will be needed when we have a fuller knowledge of the fauna.

Idiomacromerus pallistigmus sp. n.

Female. Body purplish black, not very shining, with relatively long, white setae on head and thorax. Scape testaceous, brownish distally; pedicel mainly brown; first anellus testaceous, remainder of flagellum brown. Coxae metallic; remainder of legs dark brown, only femora weakly metallic, with apices of femora and tibiae, and some of the more proximal tarsal segments, lighter in colour. Forewing (fig. 2) with a moderately intense, arcuate brown mark extending from marginal vein and parastigma to about two-thirds distance across wing; venation mostly brown but parts distal to wing-spot (stigma and most of postmarginal vein) whitish. Length excluding ovipositor 2.4mm, ovipositor sheaths 0.8mm.

Head in dorsal view 1.05× breadth of mesoscutum, 2.1× as broad as long; temples curved, 0.35× length of eye; POL 2.3× OOL. Head in front view with lower edges of toruli nearer truncate anterior margin of clypeus than anterior ocellus (8:15); lower face with slightly flattened, white hairs, two bands of which extend upwards on each side of face, one along inner orbit and another along outer margin of scrobe; malar space 0.35× height of eye; mouth opening 2.8× malar space. Occiput without carina. Antenna (fig. 3) with scape not reaching anterior ocellus; length of pedicel plus flagellum about 0.95× head breadth; flagellum clavate with 2 transverse anelli and 6 funicle segments; funicle broadening distally so that F6 is about 1.6× as broad as F1.

Mesosoma in dorsal view about 1.4× as long as broad; mesoscutum with notaular grooves distinct; scutellum slightly longer than broad, its frenal area not defined; propodeum mostly smooth and shining with a row of foveolae separated by short longitudinal carinulae along its anterior margin; prepectus with a weak carina anteriorly and central triangular area depressed and weakly sculptured; metapleuron pilose, hairs not notably conspicuous. Hind coxa densely, dorsally pilose; front and hind femora swollen, respectively 2.9 and 3.0× as long as broad; ventral surface of hind femur (fig. 4) relatively evenly curved, without subapical notch but with very small, irregular crenulations; hind tibia with longest apical spur not quite so long as apical width and 0.4× as long as basitarsus.

Forewing (fig. 2) costal cell with 1 or 2 complete rows of hairs on under surface, and with basal and apical thirds more extensively pilose; basal cell with a row of hairs on upper surface behind submarginal vein, closed below by hairs on cubital vein; basal vein pilose; speculum moderately large, open below; lengths of costal cell: marginal vein: stigmal vein: postmarginal vein as 154 : 44 : 25 : 34; marginal plus postmarginal veins occupying 0.20× wing length.

Gaster (less ovipositor) about as long as head plus mesosoma; tergites 1-3 apically incised; tip of hypopygium at 0.7× gaster length; ovipositor sheaths 0.70× as long as rest of gaster and 1.26× length of hind tibia.

Male. Closely resembles female, except in reproductive structures, but body colour brighter, more coppery and shining, and wing-spot smaller. Length 2.2mm. Eyes of normal size. The hind femur tends to be more swollen than in the female, varying between 2.6 and 3.1 (allotype) times as long as broad.

Holotype. 9. SPAIN, Zaragoza, Pina de Ebro adjacent to La Retuerta de Pina, ex seed of *Ephedra distachyn*, leg. 16.vi.1996, emerged by 24.vi.1996 (*J. Blasco-Zumeta*). Deposited in the Natural History Museum, London.

Allotype. 8. Same locality and depository as holotype, ex seed of *E. distachya*, leg. 16.vi.1996, em. 14.vii.1996 (*J. Blasco-Zumeta*).

Paratypes. All same locality as holotype ex seeds of *E. distachya* (leg. *J. Blasco-Zumeta*). **Ex** seed collected 8.vii.1995 18; coll. 2.vi.1996 emerged 23.vii.1996 1♂; coll. 7.vi.1996 em. 28.vi.1996 19, emergence dates unknown 1♂ 29♀; coll. 16.vi.1996 em. 24.vi.1996 699, em. 27.vi.1996 1♂, em. 23.vii.1996 5♂ d, em. 28.vii.1996 id, em. 9.viii.1996 6♂♂, em. date unknown 3♂♂ 2P♀; coll. 2.vii.1996 em. 15.vii.1996 1♀, em. 16.vii.1996 1Q, em. 19.vii.1996 19, em. date unknown 1♀. In the Natural History Museum (London), Royal Museum of Scotland (Edinburgh), Museo Nacional de Ciencias Naturales (Madrid) and the author's collection.

Biology. *I. pallistigmus* feeds as a larva in seeds of *Ephedra distachya* in which it probably attacks the phytophagous chalcid *Blascoa ephedrae* Askew (Hymenoptera, Pteromalidae). It is worth noting, however, that no specimen of *I. pallistigmus* was obtained from seeds of *Ephedra nebrodensis* heavily infested by *B. ephedrae* (Askew & Blasco-Zumeta, 1997).

Comments. A combination of straight anterior metapleural margin, hind femur not distinctly dentate, absence of occipital carina and relatively short marginal vein (1.3× as long as postmarginal vein, 1.8× as long as stigmal vein) place this species, according to Grissell's (1995) key, in the tribe Microdntomerini, and the two anelli put it in *Idiomacromerus* Crawford. The dorsally densely pilose hind coxa is exceptional in *Idiomacromerus*, more usually a feature of species of *Adontomerus* Nikol'skaya, but this character appears to have little phylogenetic value in Microdntomerini (Grissell, 1995).

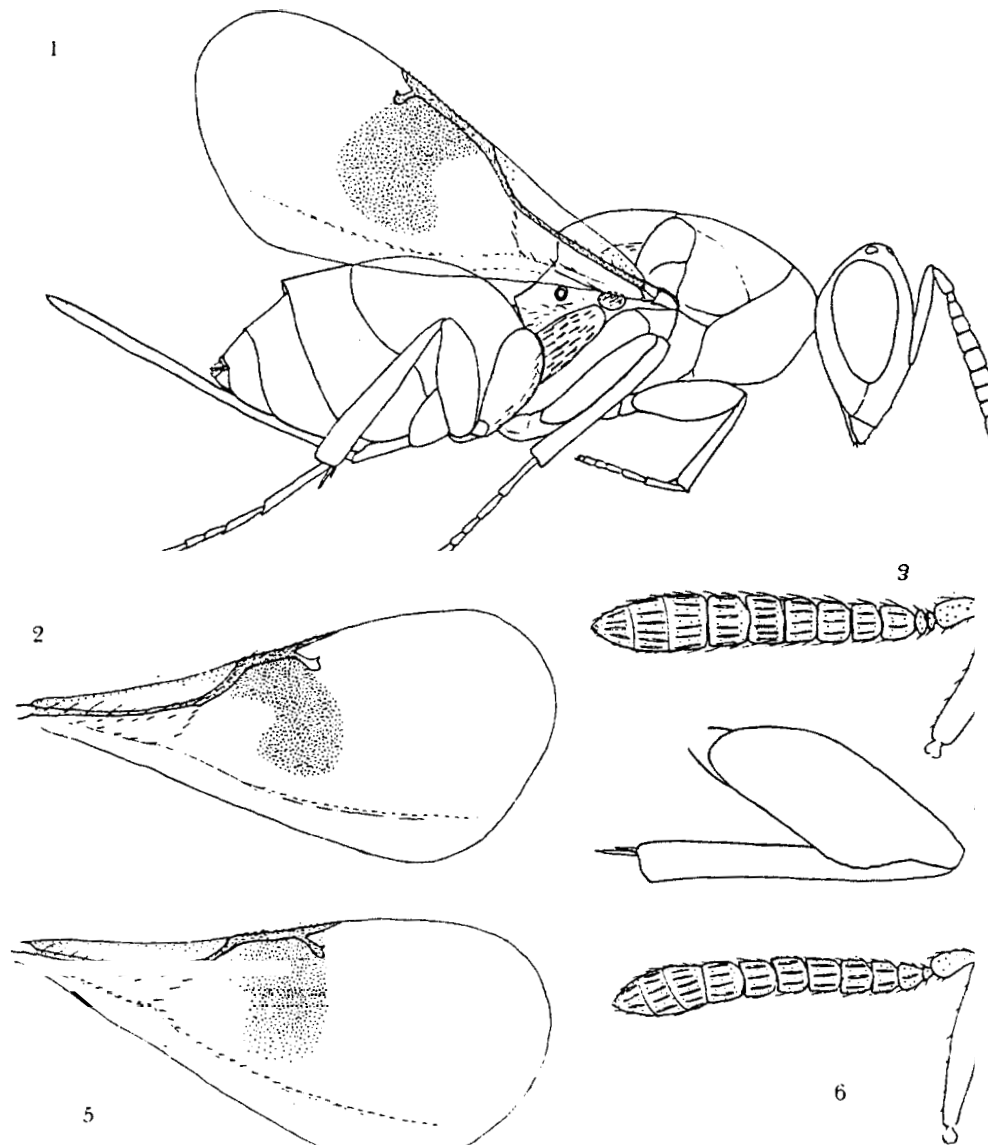
Idiornacromerus ephedricola sp. n.

Female. Body purplish black, not very shiny with relatively inconspicuous white setae. Scape, apex of pedicel and anellus testaceous, remainder of antenna brown. Legs dark with coxae and femora rather weakly metallic; tibiae, last tarsal segments and claws brown; four basal tarsal segments testaceous. Forewing (fig. 5) with rectangular brown mark extending from marginal and stigmal veins to about two-thirds distance across wing; venation brown. Length excluding ovipositor 1.9mm, ovipositor sheaths 0.7mm.

Head in dorsal view 1.14× breadth of mesoscutum, 2.0× as broad as long; temples curved, 0.22× length of eye; POL 2.5× OOL. Head in front view with vertex strongly arched; lower edges of toruli nearer truncate anterior margin of clypeus than anterior ocellus (25 : 41); hairs on lower face not conspicuous; malar space 0.44× height of eye; mouth opening 1.75× malar space. Occiput without carina. Antenna (fig. 6) with scape not quite

reaching anterior ocellus; length of pedicel plus flagellum very slightly less than head breadth; flagellum subclavate with 1 subquadrate anellus and 7 funicle segments; F1 and F2 slightly broader than long, remaining funicle segments subquadrate, F7 about 1.5x as broad as F1.

Mesosorna in dorsal view 1.4x as long as broad; dorsum of thorax finely reticulate, rather dull; mesoscutum with notaular grooves shallow but distinct; scutellum very slightly longer than broad, its frenal area not defined; propodeum very weakly reticulate, shining, with a few very short carinulae at anterior margin; prepectus anteriorly carinate with a



Figs 1-6. — 1, ♀ *Adontomerus confusus* sp. n., whole body right view. 2-4, *Idiomacromerus pallistigmus* sp. n., 2, ♀ right forewing, 3, ♀ left antenna, 4, ♂ left hind femur and tibia. 5, 6, *Idiomacromerus ephedricola* sp. n., 5, ♀ right forewing, 6, ♀ left antenna.

depressed and weakly reticulate, triangular central area; metapleuron pilose, the hairs not conspicuous. Hind coxa with numerous short hairs basally on dorsal surface; femora not notably swollen, front femur $3.3\times$ and hind femur $3.7\times$ as long as broad; ventral surface of hind femur only weakly curved and without subapical notch; hind tibia with inner apical spur a little shorter than apical tibial width and $0.4\times$ length of basitarsus.

Forewing (fig. 5) costal cell with pilosity as in *I. pallistigmus* (above); basal cell with irregular row of hairs on upper surface behind submarginal vein, closed below; basal vein pilose; speculum quite large, closed below; lengths of costal cell: marginal vein: stigmal vein: postmarginal vein as $32:12:5:6$; marginal plus postmarginal veins occupying $0.20\times$ wing length.

Gaster (less ovipositor) about as long as head plus mesosoma; tergites 1–3 with median apical incisions but these shallow on T2 and T3; tip of hypopygium at $0.65\times$ gaster length; ovipositor sheaths $0.70\times$ as long as rest of gaster and $1.22\times$ length of hind tibia.

Male. Unknown.

Holotype. ♀. SPAIN, Zaragoza, Pina de Ebro, Retuerta de Pina, swept from *Ephedra nebrodensis*, 8.vii.1992 (*J. Blasco-Zumeta*). Deposited in the Natural History Museum, London.

Paratype. ♀. Same locality as holotype, ex seed of *E. nebrodensis* leg. 10.vi.1996, emerged by 24.vi.1996 (*J. Blasco-Zumeta*). The ends of both antennae are missing, only the basal 8 (right antenna) and 7 segments remaining.

Biology. Develops in seeds of *E. nebrodensis*, perhaps as a parasitoid of the phytophagous *Blascoa ephedrae* Askew, although not found during a detailed survey of the latter insect (Askew & Blasco-Zumeta, 1997).

Comments. In most morphological features, and in its biology, this species is close to *Idiomacromerus pallistigmus* described above, and the two are considered congeneric even though *I. ephedricola*, because of its single antennal anellus, runs to the genus *Microdontomerus* Crawford in Grissell's (1995) key to genera of Microdontomerini. However, the marginal vein is relatively shorter than is indicated in Grissell's diagnosis of *Microdontomerus*, and the hind coxa is pilose. A single anellus is found in *Adontomerus*, but the complete absence of an occipital carina is a departure from Grissell's diagnosis of the latter. *I. longicornis* Askew has, like *I. pallistigmus*, a single anellus (judged as a flagellar segment lacking linear sensillae), and the number of anelli is clearly an unreliable generic character.

***Adontomerus confusus* sp. n.**

Female. Body black with purple to coppery reflections; antenna with scape testaceous, pedicel and flagellum brown; coxae and femora metallic, tibiae reddish testaceous, sometimes brownish basally, tarsi proximally stramineous, darkening apically to brown claws. Forewing (fig. 1) with an intense, arcuate brown mark extending downwards from marginal and stigmal veins to almost reach the cubital vein. Length excluding ovipositor 2.5mm, ovipositor sheaths 0.9mm.

Head in dorsal view $1.17\times$ breadth of mesoscutum, $2.4\times$ as broad as long; temples curved, not quite $0.2\times$ length of eye; POL $1.8\times$ OOL. Head in front view with lower edges of toruli nearer truncate anterior margin of clypeus than anterior ocellus (3 : 5); white hairs of lower face not scale-like; malar space $0.43\times$ height of eye; mouth opening $1.7\times$ malar space. Occiput with distinct carina, dorsally arched and nearer posterior ocelli than occipital foramen, laterally extending ventrad slightly below the level of the posterior rim of the

hypostomal foramen. Antenna (fig. 1) with scape not reaching anterior ocellus; pedicel plus flagellum very slightly shorter than breadth of head; flagellum clavate with 1 subquadrate anellus and 7 funicle segments; F1 about 1.5× as long as anellus, subquadrate (as F2–F4), F5–F7 more or less transverse, F7 about 1.5× as broad as long and about 1.4× as broad as F1.

Mesosoma compact, in dorsal view 1.4× as long as broad; dorsum of thorax finely reticulate, weakly shining; mesoscutum with very shallow notaular grooves traceable only with difficulty; scutellum as broad as long, frenal area not defined; propodeum shining with engraved reticulation, no median carina but short carinulae at anterior edge separated by foveolae; prepectus reticulate without an anterior carina; metapleuron with many conspicuous white, partly flattened, hairs. Hind coxa with dorsal surface bare; front femur somewhat swollen, 3.5× as long as broad; hind femur more distinctly swollen, 3.35× as long as broad, its ventral edge shallowly angulate at one-third distance before apex, without teeth or subapical notch; hind tibia with inner spur about as long as apical width, 0.37× as long as basitarsus.

Forewing (fig. 1) costal cell with hairs on lower surface at base and apex but broadly bare medially; basal cell bare; basal vein partly pilose; cubital vein with a few hairs below apex of basal cell; speculum rather large, open below; lengths of costal cell: marginal vein: stigmal vein: postmarginal vein as 153 : 71 : 23 : 21; marginal plus postmarginal veins occupying 0.22× wing length.

Gaster (less ovipositor) slightly longer than mesosoma; tergites 1–3 with medio-apical incisions; tip of hypopygium at a little over 0.6× gaster length. Ovipositor sheaths 0.68× length of rest of gaster and 1.13× as long as hind tibia.

Male. Very similar to female in non-reproductive structures except that body sometimes has a dark green tinge and the basal cell may be partly pilose. The antennae are much alike in the two sexes. Length 1.9mm.

Holotype. ♀. SPAIN, Canary Islands, Tenerife, Buena-vista, Punta de Teno, 14.xii.1997 (*M. Koponen*). Deposited in the Natural History Museum, London.

Paratypes. 258♂ 5♀. Same data as holotype (leg. *M. Koponen*). In the Natural History Museum (London), Royal Museum of Scotland (Edinburgh) and in the collections of *M. Koponen* and the author.

Biology. This appears to be a localised species, all 71 known specimens (65♂♂ 6♀♀) being collected by sweep-netting on a single occasion.

Comments. The decision to assign this species to *Adontornerus* was made with hesitancy because, following Grissell (1995), it combines characters of the tribes Microdontomerini (to which *Adontomerus* belongs) and Torymoidini. The well-developed occipital carina extending down to the level of the hypostomal foramen is a character of Torymoidini, but the forewing venation, with marginal vein distinctly more than three times as long as the postmarginal vein (as in Torymoidini) but at most only four times as long as the stigmal vein (as in Microdontomerini), rather confounds the distinction between the two tribes made by Grissell (1995: 63,70).

In Toryrnoidini, the single anellus in the new species would put it in *Pseudotorymus* Masi to which it certainly does not belong, whilst in Microdontomerini the same character puts it in *Adontornerus*. The shape of the hind femur (swollen without a subapical notch), single well-developed wing-spot, dark body colour and hind coxa bare dorsally are characters seen in other species of *Adontomerus* but not *Pseudotorymus*.

A. confusus is considered to be an atypical representative of *Adontomerus*, readily distinguished from other described species of the genus by its relatively short postmarginal vein (slightly shorter than the stigmal vein and less than 0.3 times as long as marginal vein), and by its well-developed occipital carina (partially developed only, not extending ventrally below level of ventral edge of occipital foramen, in other species of *Adontomerus*).

DISCUSSION

From the foregoing comments under descriptions of the new species, it will be apparent that the characters used by Grissell (1995) to define the genera *Adontomerus* Nikol'skaya and *Idiomacromerus* Crawford within Microdontomerini require qualification. Furthermore, the characters of *A. confusus* sp. n. transgress Grissell's definition of the tribe Microdontomerini.

In order to accommodate *A. confusus*, the diagnoses of *Adontomerus* and Microdontomerini must be expanded to take account of the well-developed occipital carina, the relatively long marginal vein ($3.1\times$ stigmal vein) and short postmarginal vein ($0.3\times$ marginal vein). Similarly, the character state of two or more anelli in *Idiomacromerus* must be extended to sometimes having but a single anellus (as in *I. ephedricola* sp. n. and also *I. longicornis* Askew).

Grissell's classification of Toryminae is based upon a very thorough analysis of the distribution of many character states, and every effort has been made here to assign the new species described above to genera according to his scheme. This has resulted in a broadening of the concepts of the genera *Adontomerus* and *Idiomacromerus* to the point where overlap occurs and single character absolute differences disappear. Judgement on generic placement then becomes subjective, being based upon character combinations.

Grissell (1995: 84) acknowledges that *Adontomerus*, *Idiomacromerus* and *Microdontomerus* are 'extremely closely related'; for a time he had considered the assemblage to be congeneric. The latter view may eventually be adopted, in which case the species will all come under *Microdontomerus*. However, this would then be a genus of great diversity. There are undoubtedly many species awaiting discovery and, in the interests of nomenclatural stability, further generic changes in Microdontomerini should be deferred until we have a more complete knowledge of the fauna.

ACKNOWLEDGEMENTS

I am grateful to Javier Blasco-Zumeta and Martti Koponen for allowing me to describe the species of Torymidae that they collected in, respectively, Monegros (Spain) and the Canary Islands.

REFERENCES

Askew, R.R. & Blasco-Zumeta, J., 1997, Parasitic Hymenoptera inhabiting seeds of *Ephedra nebrodensis* in Spain, with descriptions of a phytophagous pteromalid and four other new species of Chalcidoidea, *J. nar. Hist.*, **31**: 965–982. Grissell, E.E., 1995, Toryrninae (Hymenoptera: Chalcidoidea: Toryrnidae) a redefinition, generic classification, and annotated world catalog of species, *Memoirs on Entomology International*, **2**: 1–470.

5, Beeston Hall Mews, Beeston, Tarporley, Cheshire CW6 9TZ.
February 12th, 1999.

Rare and uncommon Coleoptera in England. 1998. — The following list gives rare or regionally significant beetle records made by the author in 1998 including many new Vice-County records. National statuses follow Hyman & Parsons (1992, *A Review of the Scarce & Threatened Coleoptera of Great Britain (Parts 1 & 2)*, JNCC, Peterborough).

CARABIDAE: *Asaphidion stierlini* Heyden. Bentworth Lodge, N. Hants. (SU6940), dry chalk grassland, v–vi. *Bembidion tibiae* (Duftschmidt). Empshott Mill, North Hants. (SU7530), streamside gravel. 25.iii, new for VC12; Hazelbridge, Surrey (SU9735), on 'Sussex Winklestone' gravel by stream, 16.iv.1994 & iv–v.1998. New for VC17. *Calathus cinctus* Motschulsky. Oakhanger Village, N. Hants. (SU7636), under legumes in small sandpit, v–vi. *Perigona nigriceps* (Dejean). Ackender Wood, Beech, N. Hants. (SU6938), abundant in old hay and straw on top of a large manure heap. Not previously recorded from VC12. *Hypomedon debilicornis* (Wollaston) (Staphylinidae) was also present in large numbers, iii–v. *Polistichus connexus* (Fourcroy) (RDB2). Dagenham Chase LNR, Essex (TQ5186). One under stone on muddy draw-down zone of large open pond, 25.ix., with *Acupalpus consputus* (Duftschmidt) (Nb).

HISTERIDAE: *Aeletes atomarius* (Aube) (RDB3). Mountain Wood, Surrey (TQ0950). In frass made by *Leptura scutellata* F. (Cerambycidae) (Na), larvae in beech bark, 24.v. New for VC17.

STAPHYLINIDAE: *Gyrophana strictula* Erichson. (N). Rowhill LNR, ii–v, in gills of the bracket fungus *Daedalia quercina*. *Lathrobium zetterstedti* Rye (Nb) Lingy Fell, Westmorland (NY5513), in *Sphagnum* on open moorland, 16.iii. *Myllaena elongata* (Matthews) (N). Empshott Mill, N. Hampshire (SU7530), streamside gravel, 25.iii, abundant and diurnally active amongst mossy shingle; Woolbeding Bridge, W. Sussex (SU8722), abundant on sandy river bank, 17.ii; Eashing Valley, Surrey (SU9443), on sandy river bank, 14.iii; Haweswater Beck, Westmorland (NY5118), abundant on fine shingle, v–vii. *Quedius plancus* Erichson (Na). Woolbeding Bridge, W. Sussex, on sandy river bank, 8.iv. *Stenus fornicatus* Stephens (Nb). Grazeley, Berks. (SU7066), several in weedy margins of pond, 1.vi.

SCIRTIDAE: *Prionocyphon serricornis* (Müller) (Nb). Mountain Wood, Surrey (TQ0950), larvae abundant in small pools in beech root tangles, 21.vi.

BUPRESTIDAE: *Agrilus laticornis* (Illiger) (Nb), on oak, 8.vii. *A. sinuatus* (Olivier) (Na), several on low hawthorn (*Crataegus*) hedge, 21.vii. at Isleworth, Middlesex (TQ1574).

EUCNEMIDAE: *Hylis olexai* (Palm) (RDB3). Thursley NNR (SU9039), vii, beaten from a fallen thin oak branch. *Melasis buprestoides* (L.) Nb. Mountain Wood, Surrey (TQ0950), two at recently cut ends of fallen oak boughs, 21.vi.

ELATERIDAE: *Athous subfuscus* (Müller) (RDB3). Mountain Wood, Surrey (TQ0950), one swept, 24.v. *Hypnoidus riparius* (F.) Frensharn, Surrey (SU8643), banks of River Wey, vi.1996 & 1998, new for VC17.

DRILIDAE: *Drilus flavescens* (Fourcroy) (Na). Alton, N. Hants, male drowned in pond in rny garden! (SU7138), 30.v; Offham Marshes, E. Sussex (TQ4011), 28.v. Unusually abundant at some sites in 1998 (Peter Hodge pers. comm.).