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BRITISH AND EUROPEAN TRYPHONINI, EXENTERINI,  
ECLYTINI AND IDIOGRAMMATINI  
(HYM., ICHNEUMONIDAE: TRYPHONINAE)  
IN THE NATIONAL MUSEUMS OF SCOTLAND,  
INCLUDING 19 SPECIES NEW TO BRITAIN

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During visits by DRK to the National Museums of Scotland (NMS) in the autumns of 2001 and 2002, the collection of Western Palaearctic Tryphoninae in the tribes Tryphonini, Exenterini, Eclytini and Idiogrammatini was reviewed, and as far as possible all material (over 2300 specimens) was identified to species (of which about 116 are present, 113 of them identified). Our rationales for presenting the results in this paper are essentially those given by Shaw & Kasparyan, 2003 (see also Schwarz & Shaw, 1989), and hinge on the fact that Ichneumonidae are so poorly known in Britain that these outline data on occurrence, abundance and phenology, taken from a large collection which is especially the result of relatively recent, widespread and large scale sampling, represent a worthwhile advance in knowledge. Nineteen species are recorded from Britain for the first time.

The four tribes treated in this paper are all believed to be parasitoids of sawfly larvae in the families Xyelidae, Argidae, Cimbicidae, Diprionidae and Tenthredinidae (Hymenoptera), except that in the genus *Grypocentrus*, which is primarily associated with leaf-mining Fenusini (Tenthredinidae), some species appear to have specialised on Eriocraniidae (Lepidoptera) making similar mines in tree leaves.

Kasparyan has provided keys to Palaearctic species of Tryphonini (Kasparyan, 1973; Kasparyan & Tolkanitz, 2000), Exenterini (Kasparyan, 1990), Eclytini (Kasparyan, 1977; Kasparyan & Tolkanitz, 2000) and Idiogrammatini (Kasparyan & Tolkanitz, 2000), on which the

identifications behind this paper are based. However, unless otherwise indicated we follow Yu & Horstmann (1997) for nomenclature and also dates of publication of species group and genus group names.

### Tryphonini

#### *Grypocentrus* Ruthe, 1855

All the species in NMS of this medium-sized Holarctic genus have been identified.

*Grypocentrus albipes* Ruthe, 1855. 3♀, 3♂, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 25.v-7.vi.1984 (2♂), 29.vi-9.vii.1984 (2♀), 16-25.vii.1983 (1♂), 9-20.vii.1984 (1♀) (*J. Field*); 1♂, England, Cheshire, Lindow, ex *Fenusia pusilla* (Lepelletier) (Hym., Tenthredinidae) mining *Betula*, coll. 19.vii.1977, em. 2.ix.1977 (*M.R. Shaw*).

*Grypocentrus basalis* Ruthe, 1855. 1♀, Scotland, Dunbartonshire, Caldarvan, NS 448838 (V.C. 99), Malaise trap 25.v-8.vi.1983 (*I.C. Christie*); 1♀, Scotland, Stirlingshire, Flanders Moss (V.C. 87), 5.vi.1996 (*M.R. Shaw*); 2♂, England, Surrey, Richmond Park (V.C. 17), fogged from *Quercus* 15.v.1984 (*N.E. Stork*); 1♂, England, Cumbria, Roudsea Wood NNR (V.C. 69), ex *Eriocrania semipurpurella* (Stephens) (Lep., Eriocraniidae), coll. 1958, em. 5.v.1959 (*J. Heath*); 1♀, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 2-11.vi.1983 (*J. Field*).

*Grypocentrus bilobus* Kasparyan, 1976. New to Britain. 1♀, Scotland, Midlothian, Crichton Glen (V.C. 83), on *Ulmus* 19.vi.1980 (*M.R. Shaw*).

*Grypocentrus cinctellus* Ruthe, 1855. 1♀, England, Surrey, Wisley Garden (V.C. 17), ex *Metallus gei* (Brischke) (Hym., Tenthredinidae), em. 19.vii.1999 (*A.J. Halstead*); 1♀, England, Wiltshire, Savernake Forest, SU 214671 (V.C. 7), Malaise trap 15.viii-5.ix.1990 [*K. Porter*]; 1♀, England, Oxfordshire, Taynton Fen, SP 233148 (V.C. 23), Malaise trap 7-28.vii.1989 (*K. Porter*); 1♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 15-27.viii.1984 (*J. Field*).

#### *Polyblastus* Hartig, 1837

This is a moderately large Holarctic genus. All the species in NMS have been identified.

*Polyblastus (Cophenchus) macrocentrus* Thomson, 1888. 6♀, 4♂. Scotland (V.C. 82), England (V.C. 7, 17, 23, 28). Specimens collected in iv-vi(vii).

*Polyblastus (Labroctonus) melanostigmus* Holmgren, 1857. 13♀, 6♂. Scotland (V.C. 84, 88, 92, 96, 99, 101, 102, 104, 105), England (V.C. 3, 7, 22), Isle of Man (V.C. 71). Specimens collected in v-ix; presumably plurivoltine. One was swept from *Juniperus*.

*Polyblastus (Labroctonus) nanus* Kasparyan, 1973. New to Britain. 1♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 26.vi-10.viii.1983 (*J. Field*); 1♀, England, Oxfordshire, Wychwood Forest, SP 343171 (V.C. 23), Malaise trap 17.vii-14.viii.1990 (*K. Porter*); 1♂, England, Oxfordshire, Dry Sandford Pit, SU 468995 (V.C. 22), Malaise trap 14-30.vi.1990 (*K. Porter*); 1♂, England, Oxfordshire, Taynton Fen, SP 233148 (V.C. 23), Malaise trap 11-26.v.1989 (*K. Porter*).

*Polyblastus (Labroctonus) pallicoxa* Thomson, 1888. 9♀, 1♂. England (V.C. 12, 22, 23, 29), Isle of Man (V.C. 71). Specimens collected in (v)vi-viii.

*Polyblastus (Labroctonus) stenocentrus* Holmgren, 1857. 1♀, Scotland, Aberdeenshire, Cairnwell (V.C. 92), on *Saxifraga aizoides* at 2400ft. 19.viii.1985 (*R. Knill-Jones*); 1♂, Scotland, Dunbartonshire, Caldarvan, NS 450836 (V.C. 99), Malaise trap 8-27.vi.1983 (*I.C. Christie*).

*Polyblastus (Labroctonus) westringi* Holmgren, 1857. 11♀, 5♂. Scotland (V.C. 86, 88, 97, 98), England (V.C. 7, 69). Specimens collected in (v)vi-ix.

*Polyblastus (Polyblastus) cancer* Hartig, 1837 (= *palaemon* Schiödte, 1838). 1♀, Scotland, Perthshire, Blairgowrie (V.C. 89), ex *Nematus hypoxanthus* Foerster (Hym., Tenthredinidae) on *Salix atrocinerea*, coll. 3.vii.1989, em. vii.1989 (*M.R. Shaw*); 2♀, Isle of Man, Goshen, The Curraghs, SC 361949 (V.C. 71), Malaise trap 6–13.viii.1995 (1♀), 13–21.viii.1995 (1♀) (*S.M. Crellin*). The rearing data suggest that it is plurivoltine.

*Polyblastus (Polyblastus) cothurnatus* (Gravenhorst, 1829). 5♀, 1♂. Scotland (V.C. 99), England (V.C. 22, 28, 60). Specimens collected in vi and vii/viii. The male was reared from an unidentified sawfly larva coll. on *Betula* 4.viii.1988, em. 27.viii.1988 (*M.R. Shaw*). The rearing data suggest that it is plurivoltine.

*Polyblastus (Polyblastus) subalpinus* Holmgren, 1857. 14♀, 8♂. Scotland (V.C. 88, 89, 92, 96, 101, 105, 106). Specimens collected in v–vii; presumably univoltine.

*Polyblastus (Polyblastus) tener* Hübner, 1909. 14♀, 9♂. Scotland (V.C. 77, 84, 86, 90), England (V.C. 7), Hungary (Vas). Specimens collected in v–vii and ix(x); presumably plurivoltine.

*Polyblastus (Polyblastus) tuberculatus* Teunissen, 1953. New to Britain. 2♂, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 25.vi 9.vii.1985 (1♂), 6–20.vii.1985 (1♂) (*J. Field*).

*Polyblastus (Polyblastus) varitarsus* (Gravenhorst, 1829). 77♀, 98♂. Scotland (V.C. 88, 92, 96, 97, 105, 106, 108, 110), England (V.C. 1, 7, 9, 12, 22, 23, 27, 29), Wales (V.C. 52), Isle of Man (V.C. 71), France (Aude). Specimens have been collected in v–ix, particularly in wet grassland. Presumably plurivoltine.

*Polyblastus (Polyblastus) wahlbergi* Holmgren, 1857. 20♀, 7♂. Scotland (V.C. 72, 75, 88, 96), England (V.C. 3, 6, 7, 12, 19, 22, 23, 29), Ireland (V.C. H.20). Specimens collected in (v)vi–ix; presumably plurivoltine.

### *Ctenochira* Foerster, 1855

This is a large and predominantly Holarctic genus, in which some taxonomic problems remain. In addition to the species we list, we have recognised two further British species in the NMS collection that at present we are unable to identify. Both are near *gilvipes* and *pastoralis*.

*Ctenochira ?gelida* Kasparyan, 1973. New to Britain, but the British population has shorter pectination on the hind claws than the form found on the Continent, and possibly represents a different species. 5♀, 24♂, Scotland, Aberdeenshire, Glen Tanar, NO 4892 (V.C. 92), 1990 (*I. MacGowan*); 2♀, 2♂, Scotland, Inverness-shire, Glen Strathfarrar, NH 330391 (V.C. 96) (*I. MacGowan*); 1♀, 14♂, Scotland, Inverness-shire, Loch Garten (V.C. 96), 1981, 1982, 1983, 1984 (*J.A. Owen*); 1♀, Scotland, Perthshire, Rannoch, NN 5655 (V.C. 88), 1990 (*I. MacGowan*); 5♂, Scotland, Easter Ross, Amat, NH4689 (V.C. 106), 1989 (*I. MacGowan*); 2♂, Scotland, Wester Ross, Rassal NNR, NO 845432 (V.C. 105), 1991 (*P.W. Brown*); 1♂, Scotland, Angus, Glen Clova, Craig Rennet (V.C. 90), 1995 (*K.P. Bland*); 1♂, England, Oxfordshire, Taynton Fen (SP 233148 (V.C. 23), 1989 (*K. Porter*); 1♂, England, Oxfordshire, Yarnton Mead, SP 471104 (V.C. 23), 1989 (*K. Porter*). The Scottish specimens are practically all from native pinewoods, which may suggest that the two English males from lowland fens should be regarded as doubtful. Specimens collected in v–viii, but the vast majority in vi; presumably univoltine.

*Ctenochira genalis* (Thomson, 1883), New to Britain. 4♀, England, Wiltshire, Savernake Forest, SU 229656, SU 214671 and SU 209681 (V.C. 7), 1990, 1993 (*K. Porter*); 2♀, England, Oxfordshire, Frilford Heath, SU 442986 (V.C. 22), 1991 (*K. Porter*); 1♀, England, Hampshire, Ashford Hill Meadow, SU 561620 (V.C. 12), 1989 (*K. Porter*); 3♀, 1♂, England, Oxfordshire, Wychwood Forest, SP 343171 and SP 331162 (V.C. 23), 1989, 1990 (*K. Porter*); 1♀, England, Oxfordshire, Taynton Fen, SP 233148 (V.C. 23), 1989 (*K. Porter*); 1♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), 1985 (*J. Field*); 3♀, England, Cheshire, Abbots Moss, SJ 5886 (V.C. 58), 1986 (*R.R. Askew*); 1♂, England, Herefordshire, Moccas Park NNR (V.C. 36), 1992 (*J. Cooter*). Also 3♀, 1♂, France (Dordogne, Lot-et-Garonne). Specimens collected in (v)vi–ix(x);



presumably plurivoltine. This is evidently a fairly common species in England, as over much of mainland Europe, and it is surprising that it has not been recorded in Britain previously. The localities include both wetland and woodland sites.

*Ctenochira gilvipes* (Holmgren, 1857). 1♂, Scotland, Easter Ross, Conon Bridge (V.C. 106) on *Alnus* 27.vi.1954 (*A.R. Waterston*); 1♂, Scotland, Perthshire, Rannoch Moor, ix.1996 (*K.P. Bland*); 1♀, England, Somerset, West Sedgemoor, ST 351261 (V.C. 5), 22.vi.1983 (*A.P. Foster*); 1♂, England, Oxfordshire, Chimney Meadows Ditch, SU 352999 (V.C. 22), Malaise trap 14.vi–10.vii.1991 (*K. Porter*); 1♂, England, Norfolk, Walberswick, TM 462732 (V.C. 25), 11.vii–25.viii.1988 (*A.P. Foster*). Most of these localities are open, exposed sites.

*Ctenochira grossa* (Brischke, 1871). This species was recorded from England by Kasparyan (2000). 1♂, Scotland, Perthshire, Glen Lochay, NN 538355 (V.C. 88), on *Corylus* 15.vi.1985 (*M.R. Shaw*).

*Ctenochira haemosterna* (Haliday, 1839) (= *aberrans* (Ruthe, 1885) = *subrufa* (Bridgman, 1888)). 6♀, 3♂. Scotland (V.C. 81, 83, 88), England (V.C. 7, 22, 23). One specimen emerged 10.v.1975 from a sawfly cocoon collected in leaf litter below *Quercus*, in which the external parasitoid was seen feeding on the sawfly larva [or prepupae] in iv.1975 (*K.P. Bland*), and another is labelled as bred 25.ix.1954, with no host details. Specimens collected in vi, vii/viii(ix) and ix–xi(xii); presumably plurivoltine.

*Ctenochira marginata* (Holmgren, 1857). 50♀, 93♂. Scotland (V.C. 92, 96, 97, 99, 101, 102, 105, 106, 107), England (V.C. 1, 7, 27, 29, 36, 58), Wales (V.C. 52). Specimens collected in (v)vi–viii(ix) and ix/x; presumably plurivoltine.

*Ctenochira meridionator* Aubert, 1969. New to Britain. 1♀, England, Norfolk, Catfield, TG 379201 (V.C. 27), 1983 (*R.T.J. Jarvis*); 2♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), 1983, 1985 (*J. Field*); 1♀, England, Oxfordshire, Barrow Farm Fen, SU 468976 (V.C. 22), 1990 (*K. Porter*); 4♀, England, Oxfordshire, Frilford Heath, SU 442986 (V.C. 22), 1991 (*K. Porter*); 3♀, 1♂, England, Oxfordshire, Otmoor Rifle Range, SP 573130 (V.C. 23), 1989 (*K. Porter*); 1♀, England, Oxfordshire, Dry Sandford Pit, SU 468995 (V.C. 22), 1990 (*K. Porter*); 2♀, England, Oxfordshire, Spartum Fen, SP 654015 (V.C. 23), 1988 (*K. Porter*); 3♀, England, Berkshire, Windsor Forest, SU 945705 (V.C. 22), 1992 (*K. Porter*); 6♀, 2♂, England, Oxfordshire, Wychwood Forest, SP 331162, SP 345170 and SP 343171 (V.C. 23), 1989, 1990 (*K. Porter*); 4♂, England, Wiltshire, Savernake Forest, SU 209670, SU 224657, SU 214671 and SU 225660 (V.C. 7), 1990, 1991, 1992 (*K. Porter*). Also 1♂, France (Lot-et-Garonne). Specimens collected in (v)vi–vii(viii) and (viii)ix(x); presumably plurivoltine.

*Ctenochira pastoralis* (Gravenhorst, 1829). 1♀, Norway, Troms, Paras, 700–850m, 9.vii.1984 (*K.P. Bland*). The type of *Tryphon pastoralis* Gravenhorst is lost and a neotype has not been designated. This Norwegian specimen conforms with Kasparyan's (1973) concept of the species.

*Ctenochira pratensis* (Gravenhorst, 1829). 1♀, England, Hampshire, Ashford Mill Meadow, SU 561620 (V.C. 12), Malaise trap 2.v–6.vi.1989 (*K. Porter*).

*Ctenochira propinqua* (Gravenhorst, 1829) (= *obscura* (Stephens, 1835)). 39♀, 71♂. Scotland (V.C. 88, 92, 95, 96, 97, 104, 105, 108), England (V.C. 7, 12, 22, 23, 26, 27, 28, 58). Specimens collected only in v–vii (especially vi); clearly univoltine.

*Ctenochira romani* (Pfankuch, 1925) (= *pygobarbus* Roman, 1937). 1♀, England, Cheshire, Rostherne Mere NNR (V.C. 58), 12.x.1979 (*M.R. Shaw*).

*Ctenochira rubranator* Aubert, 1965. New to Britain. 1♂, Scotland, Aberdeenshire, Morrone Birkwood NNR (V.C. 92), Malaise trap 21.vi–12.vii.1984 (*B.D. Batty*).

*Ctenochira rufipes* (Gravenhorst, 1829). 1♂, labelled only "Beaul." [= Scotland, Inverness-shire, Beauly (V.C. 96)] (*P. Cameron*); 1♂, England, Norfolk, Welborne (V.C. 27), ex green sawfly larva on *Salix*, coll.6.viii.1983, em. 22.viii.1983 (*R.E. Evans*); 1♂, England, Oxfordshire, Yarnton Mead, SP 471104 (V.C. 23), Malaise trap 25.v–21.vi.1989 (*K. Porter*). The rearing data suggest that this is a plurivoltine species.

*Ctenochira sanguinatoria* (Ratzeburg, 1852). 3♀, 1♂, England, Berkshire, Earley (V.C. 22), ex *Trichiocampus viminalis* (Fallén) (Hym., Tenthredinidae) on *Populus x canadensis*, coll. 8.viii.1979, em. 26.ix.1979 (1♀) and coll. 12.ix.1979, em. v.1980



(2♀, 1♂) (*B.T. Parsons & M.R. Shaw*). The rearing data suggest that this species is plurivoltine.

*Ctenochira sphaerocephalus* (Gravenhorst, 1829). 3♀, 6♂. Scotland (V.C. 96, 97, 99, 105, 106, 108). Specimens collected in vi–viii.

*Ctenochira validicornis* (Brischke, 1871). New to Britain. 1♀, Scotland, Perthshire, Tummel Bridge (V.C. 88), ex *Nematus viridescens* Cameron (Hym., Tenthredinidae) on *Betula*, coll. 3.vii.1989, em. 16.vi.1990 (*M.R. Shaw*); 1♂, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 16–25.vi.1983 (*J. Field*); 1♂, England, Kent, Hothfield NR (V.C. 15), 14.vi.1970 (*P. Chandler*). The rearing data suggest that this is a univoltine species, at least in Scotland.

*Ctenochira xanthopyga* (Holmgren, 1857). 4♀, England, Oxfordshire, Wychwood Forest, SP 343171 and SP 335172 (V.C. 23), Malaise trap 10.v–7.vi.1991 (1♀), 17.vii–14.viii.1990 (3♀) (*K. Porter*); 1♀, England, Norfolk, Catfield, TG 379201 (V.C. 27), Malaise trap 17–29.viii.1983 (*R.T.J. Jarvis*); 1♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 25.vi–5.vii.1985 (*J. Field*).

### *Erromenus* Holmgren, 1857

This is moderately large Holarctic genus. All the species in NMS have been identified.

*Erromenus analis* Brischke, 1871. 1♀, Scotland, Lanarkshire, Falls of Clyde (V.C. 77), Malaise trap 8–20.viii.1988 (*R.P. Knill-Jones*); 1♀, England, Oxfordshire, Otmoor Rifle Range, SP 573130 (V.C. 23), Malaise trap 27.vi–4.viii.1989 (*K. Porter*); 1♀, England, Oxfordshire, Spartum Fen, SP 654015 (V.C. 23), Malaise trap 14.vii–12.viii.1988 (*K. Porter*).

*Erromenus bibulus* Kasparyan, 1973. 20♀, 9♂. Scotland (V.C. 92, 99, 101, 102, 103, 108), England (V.C. 7, 22, 23, 28, 29), Wales (V.C. 49). Specimens collected in v–ix; presumably plurivoltine.

*Erromenus brunnicans* (Gravenhorst, 1829). 2♀, England, Oxfordshire, Frilford Heath, SU 442986 (V.C. 22), Malaise trap 18.vi–12.vii.1991 (1♀), 12.vii–1.viii.1991 (1♀) (*K. Porter*); 1♀, England, Oxfordshire, Yarnton Mead, SP 471104 (V.C. 23), Malaise trap 25.v–21.vi.1989 (*K. Porter*).

*Erromenus calcator* (Müller, 1776). 1♀, Scotland, Dunbartonshire, Caldaran, NS 450936 (V.C. 99), Malaise trap 17–31.viii.1983 (*I.C. Christie*).

*Erromenus junior* (Thunberg, 1822). 1♂, Scotland, Dumfriesshire, Raeburn (V.C. 72), 10.viii.1936; 1♂, England, Somerset, Chilton-Catcott, SJ 404415 (V.C. 6), 29.vi.1983 (*A.P. Foster*); 1♂, England, Oxfordshire, Spartum Fen, SP 654015 (V.C. 23), Malaise trap 12.viii–20.ix.1988 (*K. Porter*); 1♀, France, Lot-et-Garonne, Bernac, Malaise trap 26.vi–6.vii.1991 (*R.R. Askew*).

*Erromenus melanotus* (Gravenhorst, 1929). 1♀, France, Lot-et-Garonne, Bernac, Malaise trap 25.vii–2.viii.1993 (*R.R. Askew*).

*Erromenus plebejus* (Woldstedt, 1878). 3♀, England, Hampshire, Ashford Hill Meadow, SU 561620 (V.C. 12), Malaise trap 6–29.vi.1989 (*K. Porter*).

*Erromenus punctatus* (Woldstedt, 1878). New to Britain. 1♀, Scotland, Wester Ross, Beinn Eighe NNR, NH 015634 (V.C. 105), 1992 (*P.W. Brown*); 1♀, 1♂, Scotland, Aberdeenshire, Glen Tanar, NO 4892 (V.C. 92), 1990 (*I. MacGowan*); 1♀, Scotland, Dunbartonshire, Caldaran, NS 448838 (V.C. 99), 1983 (*I.C. Christie*); 1♀, Scotland, Aberdeenshire, Morronc Birkwood NNR (V.C. 92), 1984 (*B.D. Batty*); 2♂, Scotland, Inverness-shire, Glen Strathfarrar NH 330391 (V.C. 96), 1988 (*I. MacGowan*); 1♂, Scotland, Wester Ross, Sheildaig, NG 8252 (V.C. 105), 1991 (*I. MacGowan*); 1♂, Scotland, Beinn Dearg, NC 2766 (V.C. 108), 1983 (*D. Horsfield*); 1♂, Wales, Anglesey, Cors Goch (V.C. 52), 1981 (*M.R. Shaw*); 1♂, Wales, Ceredigion, Cors Ergair Maen, SN 652649 (V.C. 46), 1987 (*P. Holmes*); 1♂, Wales, Ceredigion, Cors Gorsgoch, SN 482504 (V.C. 46), 1987 (*P. Holmes*). Also 2♂, Norway, Troms, Reingjerdjfellet, pollinating *Listera*, 11.vii.1984 (*K.P. Bland*). Specimens collected in (v)vi–viii.



*Erromenus punctulatus* Holmgren, 1857. 1♂, Scotland, Perthshire, Rannoch (V.C. 88), ex sawfly cocoon under bark of dead *Betula pubescens*, coll. 16.v.1981, em. 9.vi.1981 (M.R. Shaw); 1♂, England, Manchester, East Didsbury (V.C. 59), ex indet. sawfly on *Salix atrocineria*, larva coll. v.1977, em. 11.v.1978 (M.R. Shaw). The rearing data suggest that this is a univoltine species.

*Erromenus zonarius* (Gravenhorst, 1820). 2♂, Scotland, Inverness-shire, Loch Garten (V.C. 96), Malaise trap vi/vii.1985 (J.A. Owen); 1♂, England, Surrey, Thursley Common (V.C. 17), 30.viii.1969 (P.J. Chandler); 1♂, Wales, Anglesey, Cors Goch (V.C. 52), 28.viii.1981 (M.R. Shaw).

### *Monoblastus* Hartig, 1837

This is a moderately large Holarctic genus, though represented in Britain by only two species. All the species in NMS have been identified.

*Monoblastus brachyacanthus* (Gmelin, 1790). 4♀, 4♂. Scotland (V.C. 83, 92, 103), England (V.C. 12, 22, 23, 29), Ireland (V.C. H.3). Specimens collected in vi–viii.

*Monoblastus marginellus* (Gravenhorst, 1829). 3♀, England, Wiltshire, Savernake Forest, SU 214671 and SU 209670 (V.C. 7), Malaise trap v.1990 (1♀), 30.v–27.vi.1991 (1♀), 13.v–2.vii.1992 (1♀) (K. Porter).

### *Otoblastus* Foerster, 1869

This is a small genus, largely Holarctic but represented also in the Neotropical Region. Only one species is present in NMS. It was treated under *Monoblastus* by Fitton *et al.* (1978).

*Otoblastus luteomarginatus* (Gravenhorst, 1829). 11♀, 2♂. England (V.C. 7, 22, 23, 28), France (Dordogne, Lot-et-Garonne). Specimens collected in (v)vi–vii(viii), and also v in France.

### *Neleges* Foerster, 1869

The only species in this genus is confined to Europe. It was treated under *Monoblastus* by Fitton *et al.* (1978).

*Neleges proditor* (Gravenhorst, 1829). 2♀, 1♂, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap (J. Field); 5♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap (J. Field); 12♀, 17♂, France, Lot-et-Garonne, Bernac, Malaise trap (R.R. Askew). Specimens collected in vi–vii; evidently univoltine.

### *Dyspetes* Foerster, 1869

We follow Yu & Horstmann (1997) for the nomenclature of what we believe to be a single European species of this small Holarctic and Oriental genus.

*Dyspetes praerogator* (Thomson, 1883) (= *arrogator* Heinrich, 1949). 57♀, 56♂. Scotland (V.C. 77, 83, 84, 86, 99, 105), England (V.C. 3, 7, 13, 16, 17, 21, 22, 23, 26, 27, 28, 29, 34, 38, 58, 59, 69), Wales (V.C. 49, 52), France (Dordogne). Specimens have been collected in v–x; presumably plurivoltine. Hinz (1961) regarded male specimens with black hind femora flying in May as belonging to a different species (*arrogator*) from those with red hind femora flying in late summer. However, some of the late summer males in NMS have black hind femora.



*Cosmoconus* Foerster, 1869

All the species in NMS of this medium-sized Holarctic genus have been identified.

*Cosmoconus ceratophorus* (Thomson, 1888). 1 ♀, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 1-15.viii.1984 (*J. Field*); 1 ♀, England, Oxfordshire, Wychwood Forest, SP 243171 (V.C. 23), Malaise trap 17.vii-14.viii.1990 (*K. Porter*); 1 ♀, England, Oxfordshire, Chimney Meadows Ditch, SU 352999 (V.C. 22), Malaise trap 14.vi-10.vii.1991 (*K. Porter*); 4 ♂, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 16-24.vi.1983 (1 ♂), 25.vi-9.vii.1985 (2 ♂), 6-20.vii.1985 (1 ♂) (*J. Field*).

*Cosmoconus elongator* (Fabricius, 1775) (= *elliotti* (Morley, 1911)). 1 ♂, Scotland, Dumfriesshire, Lochmaben (V.C. 72), 9.vii.1982 (*M.R. Shaw*); 1 ♂, Scotland, Orkney, Graigiefield & Quoyberston (V.C. 111), 1996 (*S.V. Gauld*); 1 ♀, England, Norfolk, Thompson Common (V.C. 28), 22.vi.2000 (*M.R. Shaw*); 1 ♂, England, Oxfordshire, Chimney Meadows Ditch, SU 352999 (V.C. 22), Malaise trap 14.vi-10.vii.1991 (*K. Porter*); 3 ♀, 1 ♂, France, Haute-Marne, Fayl-Billot, 10.viii.1996 (1 ♀), 4.viii.1997 (2 ♀, 1 ♂) (*M.R. Shaw*).

*Cosmoconus hinzi* Kasparyan, 1971. New to Britain. 1 ♀, 1 ♂, Scotland, Roxburghshire, Craik Forest (V.C. 80), 23.viii.1980 (*A.D. Liston*).

*Cosmoconus meridionator* Aubert, 1963. New to Britain. 1 ♂, Scotland, Inverness-shire, Loch Garten (V.C. 96), Malaise trap v-viii.1981 (*J.A. Owen*); 2 ♀, England, Cumbria, Witherslack (V.C. 69), 30.ix.1975 (1 ♀), 8.x.1975 (1 ♀) (*M.R. Shaw*); 1 ♀, Cheshire, Abbots Moss, SJ 5868 (V.C. 58), Malaise trap 12.x-29.xi.1986 (*R.R. Askew*); 1 ♀, England, Berkshire, Windsor Forest, SU 945705 (V.C. 22), Malaise trap 11.viii-26.ix.1992 (*K. Porter*); 1 ♀, England, Surrey, Box Hill (V.C. 17), 18.ix.1982 (*S.I. Baldwin*).

*Cosmoconus nigriventris* Kasparyan, 1971. New to Britain. 1 ♀, Scotland, Dumfriesshire, Gretna (V.C. 72), 4.viii.1937 (*J. Murray*); 1 ♀, Scotland, Perthshire, Crieff (V.C. 88), 28.vii.1934 (*J. McDougal*); 1 ♂, Scotland, Barra, Craigston (V.C. 110), 10.viii.1978 (*A.R. Waterston*); 1 ♀, England, Cambridgeshire, Wicken Fen (V.C. 29), 10.ix.1943. Also 1 ♂, indecipherable locality (probably Scotland), 27.vii.1902; and 2 ♀, 1 ♂, France, Pas-de-Calais, Houvin-Houvigneul, 11.viii.1918 (1 ♀), 14.viii.1918 (1 ♀), 16.viii.1918 (1 ♂) (*H.M. Vickers*).

*Tryphon* Fallén, 1813

This is a large Holarctic genus. All the species in NMS have been identified.

*Tryphon (Tryphon) abditus* Kasparyan, 1969. 1 ♂, Scotland, Angus, Inchdowrie (V.C. 90), 11.vii.1995 (*K.P. Bland*).

*Tryphon (Tryphon) atriceps* Stephens, 1825. 1 ♀, England, Dorset, Down Farm, ST 995145 (V.C. 9), 24.vi.1993 (*A.M. Barker*); 1 ♀, 1 ♂, Wales, Anglesey, Llangristiolus (V.C. 52), 25.vii.1981 (1 ♀), 29.vii.1981 (1 ♂) (*M.R. Shaw*); 1 ♂, Hungary, Sopron, Fertő-Hanság National Park, 16.v.2001 (*M.R. Shaw*); 1 ♂, Turkey, Sivas, Cumhuriyet University Campus, 7-9.vi.1999 (*M.R. Shaw*).

*Tryphon (Tryphon) auricularis* Thomson, 1883. 29 ♀, 46 ♂. Scotland (V.C. 91), England (V.C. 7, 22, 23, 28, 29), Wales (V.C. 52), France (Pas-de-Calais). Specimens collected in (v)vi-viii; evidently univoltine.

*Tryphon (Tryphon) bidentulus* Thomson, 1883. 3 ♀, 1 ♂, Scotland, Wester Ross, Beinn Eighe NNR, NH 0064 (V.C. 105), Malaise trap v.1989 (*I. MacGowan*); 1 ♀, Scotland, Inverness-shire, Glen Strathfarrar, NH 330391 (V.C. 96), Malaise trap vi.1988 (*I. MacGowan*); 1 ♀, England, Oxfordshire, Otmoor Rifle Range, SP 573130 (V.C. 23), Malaise trap 20.v-27.vi.1989 (*K. Porter*).

*Tryphon (Tryphon) nigripes* Holmgren, 1857. 2 ♀, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 7-18.vi.1984 (*J. Field*); 1 ♀, Belgium, Hainaut, Braine-le-Compte, 27.vi.1919 (*H.M. Vickers*).



*Tryphon (Tryphon) relator* (Thunberg, 1822). 61 ♀, 28 ♂, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap (*J. Field*); 1 ♀, England, Norfolk, Thetford Warren Lodge (V.C. 26) (*M.R. Shaw*); 1 ♀, England, Yorkshire, Strensall Common (V.C. 62) (*P. Chandler*); 1 ♂, England, Norfolk, East Wretham (V.C. 28) (*M.R. Shaw*); 1 ♂, England, Cambridgeshire, Chippenham Fen NNR (V.C. 29) (*J. Field*). Specimens collected in vi–vii; evidently univoltine.

*Tryphon (Tryphon) rutilator* (Linnaeus, 1761). 15 ♀, 1 ♂. Scotland (V.C. 72, 83, 88), England (V.C. 8, 23, 29, 70), Wales (V.C. 52), France (Pas-de-Calais, Haute-Marne). Specimens collected in (v)vi–viii.

*Tryphon (Tryphon) signator* Gravenhorst, 1829. 48 ♀, 23 ♂. Scotland (V.C. 88, 96, 97, 101, 105, 111, 112), England (V.C. 7, 16, 23, 24, 37, 58), Wales (V.C. 51, 52), Isle of Man (V.C. 71), Belgium (Hainaut), Hungary (Sopron, Vas, Veszprém). Specimens collected in v–viii, but mainly in vi; evidently univoltine.

*Tryphon (Tryphon) thomsoni* Roman, 1939. 13 ♀, 10 ♂. Scotland (V.C. 96), England (V.C. 23, 27, 28, 29), Wales (V.C. 52). Specimens collected in (vi)vii–viii; evidently univoltine.

*Tryphon (Tryphon) trochanteratus* Holmgren, 1857. 21 ♀, 19 ♂. Scotland (V.C. 78, 87), England (V.C. 5, 6, 8, 12, 22, 23), France (Oise). Specimens collected in (v)vi–viii(viii); evidently univoltine.

*Tryphon (Stenocrotaphon) obtusator* (Thunberg, 1822). 2 ♀, Hungary, Vas, Velem, 19.v.2001 (*M.R. Shaw*).

*Tryphon (Symboethus) bidentatus* Stephens, 1835. We are listing the typical form (hind femur black) separately from form *rufifemur* Kasparyan (hind femur red) which is transitional towards, and may correspond to, a separate species *T.(S.) hinzi* (Heinrich, 1953), though we regard the specific status of these specimens as unclear. Form *bidentatus*: 82 ♀, 96 ♂. Scotland (V.C. 72, 76, 86, 88, 89, 90, 92, 96, 97, 99, 101, 102, 105, 106, 107, 108, 109), England (V.C. 5, 6, 7, 12, 23, 27, 28, 29, 34, 36, 58). Specimens collected in v–ix and x/xi, though very sparingly late in the year; probably only partly plurivoltine. Despite the large number of specimens and the wide distributional range expressed above this is evidently a local species, apparently absent from several heavily sampled localities. There is no immediately obvious explanation in terms of habitat. Form *rufifemur*: 6 ♀, 4 ♂. Scotland (V.C. 96, 97, 105). Specimens collected in v–vii.

*Tryphon (Symboethus) duplicatus* (Heinrich, 1953). 1 ♀ (damaged), Scotland, Argyllshire, Kilmartin (V.C. 98), 30.vi.1984 (*I.C. Christie*); 1 ♀, England, Yorkshire, Strensall Common (V.C. 62), 17.vii.1996 (*P. Chandler*).

*Tryphon (Symboethus) exclamatoris* Gravenhorst, 1829. 1 ♂, England, Oxfordshire, Dry Sandford Pit, SU 468995 (V.C. 22), Malaise trap 30.vi–19.vii.1990 (*K. Porter*).

*Tryphon (Symboethus) heliophilus* Gravenhorst, 1829. 8 ♀, 50 ♂, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), mostly Malaise trap (*J. Field*), also (*M.R. Shaw*); 3 ♀, 5 ♂, England, Norfolk, Catfield, TG 379201 (V.C. 27), Malaise trap (*R.T.J. Jarvis*); 1 ♂, England, Norfolk, Thompson Common (V.C. 28) (*M.R. Shaw*); 1 ♀, England, Hampshire, Ashford Hill Meadow, SU561620 (V.C. 12), Malaise trap (*K. Porter*). All the localities are alkaline fens. Specimens collected in vi–viii(ix); presumably univoltine.

*Tryphon (Symboethus) fulviventris* Holmgren, 1857. This species was recorded from England by Kasparyan (1973), but it was not listed by Fitton *et al.* (1978). 1 ♀, 1 ♂, Scotland, Dunbartonshire, Caldarvan, NS 448838 (V.C. 99), Malaise trap 7–18.vii.1983 (1 ♂), 19.vii–1.viii.1983 (1 ♀) (*I.C. Christie*).

## Exenterini

### *Kristotomus* Mason, 1962

This is a rather large Holarctic and Oriental genus. All species in NMS have been identified.

*Kristotomus laticeps* (Gravenhorst, 1829). 1 ♀, 2 ♂, England, Norfolk, Catfield



(V.C. 27), Great Fen, 13–14.vii.1983 (*M.R. Shaw*) (2♂), and TG 379201, Malaise trap 19–26.viii.1984 (*R.T.J. Jarvis*) (1♀).

*Kristotomus pumilio* (Holmgren, 1857). 5♀, 1♂, England, Oxfordshire, Taynton Fen, SP 233148 (V.C. 23), Malaise trap 7–28.vii.1989 (1♀), 16.viii–8.ix.1989 (1♀, 1♂), 18.ix–3.x.1989 (1♀), 30.ix–6.xi.1991 (2♀) (*K. Porter*); 1♀, England, Oxfordshire, Wychwood Forest, SP 343171 (V.C. 23), Malaise trap 14.viii–12.ix.1990 (*K. Porter*).

*Kristotomus ridibundus* (Gravenhorst, 1829). 7♀, 8♂, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap (*J. Field*); 1♀, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap (*J. Field*); 7♀, England, Oxfordshire, Wychwood Forest, SP 343171, SP 345170 and SP 331162 (V.C. 23), Malaise trap (*K. Porter*); 2♀, England, Oxfordshire, Dry Sandford Pit, SU 468995 (V.C. 22), Malaise trap (*K. Porter*); 3♀, England, Oxfordshire, Taynton Fen, SP 233148 (V.C. 23), Malaise trap (*K. Porter*). Specimens collected in vi–viii; presumably univoltine.

*Kristotomus triangulatorius* (Gravenhorst, 1829). 1♀, England, Herefordshire, Moccas Park NNR (V.C. 36), flight interception trap 24–31.v.1992 (*J. Cooter*); 1♀, England, Berkshire, Windsor Forest, SU 945705 (V.C. 22), Malaise trap 6–15.v.1992 (*K. Porter*); 1♀, England, Wiltshire, Savernake Forest, SU 205767 (V.C. 7), Malaise trap 26.v–16.vi.1993 (*K. Porter*); 1♀, no data.

### *Cycasis* Townes, 1965

There are only two species in this genus, one Eastern and one Western Palaearctic. Only the latter is present in NMS.

*Cycasis rubiginosa* (Gravenhorst, 1829). 1♀, 1♂, Scotland, Argyllshire, Taynish NNR, NR 730845 (V.C. 101), Malaise trap 1–10.vi.1984 (*I.C. Christie*); 2♂, Scotland, Inverness-shire, Loch Arkaig, NN 0291 (V.C. 97), Malaise trap vi.1992 (*I. MacGowan*); 1♀, Scotland, Perthshire, Coire Choille Chuilc, NN 3328 (V.C. 88), Malaise trap vii.1985 (*I. MacGowan*); 2♀, France, Dordogne, St Marcel du Perigord, Malaise trap 1–19.v.1998 (*R.R. Askew*).

### *Exyston* Schiødte, 1839

This is a medium-sized Holarctic genus. All of the species in NMS have been identified.

*Exyston calcaratus* Thomson, 1883. 1♀, England, Cambridgeshire, Chippenham Fen NNR, TL 650693 (V.C. 29), Malaise trap 27.viii–27.ix.1984 (*J. Field*); 1♀, England, Wiltshire, Savernake Forest, SU 209670 (V.C. 7), Malaise trap 27.vi–27.vii.1991 (*K. Porter*); 1♀, England, Oxfordshire, Dry Sandford Pit, SU 468995 (V.C. 22), Malaise trap 14–30.vi.1990 (*K. Porter*).

*Exyston pratorum* (Woldstedt, 1874). 40♀, 4♂. Scotland (V.C. 96, 99, 101, 105), England (V.C. 3, 7, 9, 17, 22, 29). Specimens collected in v–viii(ix).

*Exyston sponsorius* (Fabricius, 1781). 4♀, England, Wiltshire, Savernake Forest, SU 214671 and SU229656 (V.C. 7), Malaise trap 13.vi–4.vii.1990 (*K. Porter*); 1♂, England, Dorset, Stodborough/Slepe Heath, 1.vii.1998 (*P. Chandler*); 1♀, France, Ardèche, Darbres, 19.vii.1996 (*M.R. Shaw*), 1♀, Germany, Nordrhein-Westfalen, Fräkmuntegg, 17.vii.1981 (*A.D. Liston*).

### *Smicroplectrus* Thomson, 1833

This is a medium-sized Holarctic genus. In addition to those we list, there is one British species in NMS that remains unidentified.

*Smicroplectrus bohemani* (Holmgren, 1857). 1♀, Hungary, Vas, Köszeg, 19.v.2001 (*M.R. Shaw*).

*Smicroplectrus bucculatus* Kasparyan, 1976. 1♀, France, Alpes-de-Haute-Provence, Villars-Colmars, 30.vii–4.viii.1986 (*M.R. Shaw*).



*Smicroplectrus nigricornis* Kasparyan, 1976. New to Britain. 1♂, Scotland, Aberdeenshire, Ballater (V.C. 92), 23.vi.1984 (*M.R. Shaw*); 1♀, England, Lancashire, Ainsdale Dunes NNR (V.C. 59), 5.vi.1975 (*M.R. Shaw*).

*Smicroplectrus perkinsorum* Kerrich, 1952. 2♀, England, Oxfordshire, Frilford Heath, SU 442986 (V.C. 22), Malaise trap 25.v-18.vi.1991 (1♀), 18.vi-12.vii.1991 (1♀) (*K. Porter*). Also 1♀ without data but probably Scotland (*W.B.R. Laidlaw*).

*Smicroplectrus quinquecinctus* (Gravenhorst, 1820). 1♂, France, Lot-et-Garonne, Bemac, Malaise trap 27-31.v.1991 (*R.R. Askew*).

### *Acrotomus* Holmgren, 1857

This is a small Palaearctic genus. All the species in NMS have been identified.

*Acrotomus lucidulus* (Gravenhorst, 1829). 8♀, 6♂. Scotland (V.C. 77, 83), England (V.C. 3, 28, 70), France (Lot-et-Garonne, Dordogne). Specimens collected in v-viii, and 1♂ em. v from an unidentified sawfly cocoon coll. iii.

*Acrotomus succinctus* (Gravenhorst, 1829). 41♀, 21♂. Scotland (V.C. 103, 110), England (V.C. 6, 7, 22, 23, 27, 28, 29, 58), France (Pas-de-Calaise, Lot-et-Garonne, Dordogne). Specimens collected in v-ix(x), and one emerged v from an unidentified sawfly cocoon collected from sacking put round a *Quercus* trunk the previous autumn; evidently plurivoltine.

### *Cteniscus* Haliday, 1832

This is a medium-sized Holarctic genus. All females in NMS have been identified, but not the males.

*Cteniscus pedatorius* (Panzer, 1809). 1♀, Scotland, Dunbartonshire, Caldaran, NS 448838 (V.C. 99), Malaise trap 19.vii-1.viii.1983 (*I.C. Christie*); 1♀, Scotland, Wester Ross, Beinn Eige NNR, 22.vi.1988 (*G.E. Rotheray*); 3♀, England, Norfolk, Stanhoe (V.C. 28), ex *Croesus septentrionalis* (Linnaeus) (Hym., Tenthredinidae), larvae coll. on *Betula* 1987, em 1987 (*K.A. Beckett*); 1♀, 1♂, England, Cheshire, Abbots Moss (V.C. 58), ex *Hemichroa crocea* (Geoffroy) (Hym., Tenthredinidae), larvae coll. on *Betula* 3.x.1973, em. 6.viii.1974 (1♀) and 16.viii.1974 (1♂) (*M.R. Shaw*); 1♀, Ireland, Kilkenny, Mullinavat (V.C. H.11), 10.ix.1950 (*R.C. Faris*). While the reared series from Cheshire, which was treated under outdoor conditions of temperature and daylength, suggests that this is a univoltine species, the other data indicate that it can be at least partly plurivoltine.

*Cteniscus scalaris* (Gravenhorst, 1829). 1♀, Scotland, Aberdeenshire, Oldmeldrum (V.C. 93), viii.1983 (*M.R. Young*); 1♀, England, Cumbria, Beetham (V.C. 69), 28.v.1991 (*M.R. Shaw*); 1♀, England, Oxfordshire, Otmoor Rifle Range, SP 573130 (V.C. 23), Malaise trap 20.v-27.vi.1989 (*K. Porter*).

Among the unidentified males of *Cteniscus* in the collection is one from England, Cumbria, Beetham (V.C. 69) reared from *Nematus leucotrochus* Hartig (Hym., Tenthredinidae), larva coll. 25.v.1991 on *Ribes uva-crispum*, em. 25.iv.1992 (*M.R. Shaw*).

### *Exenterus* Hartig, 1837

This is a medium-sized and predominantly Holarctic genus. All the species in NMS have been identified.

*Exenterus abruptorius* (Thunberg, 1822). 22♀, 55♂. Scotland (V.C. 73, 83, 88, 94, 95, 96, 97, 105, 107, 108, 109), England (V.C. 28). Specimens collected in vi-vii and occasionally viii. Thirty eight of the specimens were reared in vi from cocoons of *Neodiprion sertifer* (Geoffroy) (Hym., Diprionidae) in which the parasitoid overwinters. This is an abundant univoltine parasitoid of *N. sertifer* in Scotland, occurring in both *Pinus contorta* and *Pinus sylvestris* plantations, as well as in native stands of the latter. Rearings



from 7 forests are represented in the collection, as well as specimens resulting from an outbreak of *N. sertifer* of 2–3 years' duration in the mid 1980s on an isolated small *Pinus sylvestris* tree in an Edinburgh garden, which was extinguished soon after its discovery by *E. abruptorius* and the ctenopelmatine ichneumonid *Lamachus eques* (Hartig).

*Exenterus adpersus* Hartig, 1838. 1♀, Scotland, Morayshire, Tiendland, NJ 2955 (V.C. 95), Malaise trap 26.vii–9.viii.1999 (*B. Hicks*); 1♂, England, Cheshire, Abbots Moss (V.C. 58), ex *Diprion simile* (Hartig) (Hym., Diprionidae), larva on *Pinus* coll. 1.ix.1976, em. 22.v.1977 and a further 1♀, 1♂ reared from cocoons of *D. simile* coll. on *Pinus* in ix and x, em. vi the following year, as well as 2♂ reared from unidentified diprionid cocoons coll. near *Pinus* in vii and ix and em. respectively viii and x the same year (*M.R. Shaw*); 1♂, England, Oxfordshire, Waterperry Wood (V.C. 23), ex indet. diprionid on *Pinus*, larva coll. 11.vii.1985, em. by iv.1986 (*P. Waring*); 1♀, England, Berkshire, Burghfield Common (V.C. 22), ex indet. diprionid on *Pinus*, larva coll. 27.ix.1978, em. 28.vi.1979 (a tachinid fly was a successful multiparasitoid, emerging 27.vi.1979) (*M.R. Shaw*); 1♂, England, Berks, Ufton (V.C. 22), ex indet. diprionid cocoon coll. beneath *Pinus* 24.viii.1979, em. 21.v.1980 (*B.T. Parsons*).

*Exenterus amictorius* (Panzer, 1801). 1♀, Scotland, Aberdeenshire, Morrone Birkwood NNR (V.C. 92), Malaise trap 21.vi–12.vii.1984 (*B.D. Batty*); 2♀, 2♂, France, Dordogne, St Alvère, Malaise trap 1–21.v.1999 (2♂), 21.v–4.vi.1999 (1♀), 30.vii–15.viii.1999 (1♀) (*R.R. Askew*).

*Exenterus ictericus* (Gravenhorst, 1829). New to Britain. 7♀, Scotland, Aberdeenshire, Morrone Birkwood NNR (V.C. 92), Malaise trap 5–29.viii.1983 (5♀), 29.viii–23.ix.1983 (1♀), 17–30.viii.1984 (1♀) (*B.D. Batty*); 2♀, Scotland, Inverness-shire, Speybridge (V.C. 96), beaten ex *Juniperus* 12.viii.1998 (*M.R. Shaw*); 1♀, Scotland, Aberdeenshire, Crathie (V.C. 92), on *Juniperus* 9.viii.1985 (*M.R. Shaw*); 1♀, 2♂, Scotland, Inverness-shire, Loch Garten (V.C. 96), Malaise trap viii–ix.1985 (*J.A. Owen*); 1♀, 1♂, Scotland, Aberdeenshire, Glen Tanar, NO 4892 (V.C. 92), Malaise trap viii.1990 (*I. MacGowan*); 1♀, France, Lot-et-Garonne, Bernac, Malaise trap 23–28.vi.1995 (*R.R. Askew*). This is a relatively small species, found among *Juniperus* and presumably a univoltine parasitoid of *Monoctonus juniperi* (Linnaeus) (Hym., Diprionidae).

*Exenterus oriolus* Hartig, 1838. 1♀, England, Norfolk, Santon Downham, TL 818883 (V.C. 28), Malaise trap 5.ix–13.x.1985 (*J. Field*).

### *Eridolius* Foerster, 1869

This is a large and predominantly Holarctic genus, but represented also in the Oriental and Neotropical regions. The taxonomy of the genus remains difficult. In addition to the species we list at least one other may be present in the *basalis* group.

*Eridolius alacer* (Gravenhorst, 1829). 4♀, 10♂. Scotland (V.C. 77, 84, 96), England (V.C. 3, 7, 23, 58). Specimens collected in (ix)x–xi; evidently univoltine. It may be significant that 2♀, 1♂ were collected at light.

*Eridolius aurifluus* (Haliday, 1839). 3♀, 2♂, England, Norfolk, Catfield (V.C. 27), Great Fen 13–14.vii.1983 (1♀, 1♂) (*M.R. Shaw*), and TG 379201, Malaise trap 17–24.vii.1983 (1♀), 8–17.viii.1983 (1♂), 8–23.ix.1984 (1♀) (*R.T.J. Jarvis*); 1♂, England, Norfolk, Barton Turf (V.C. 27), 12–13.vii.1983 (*M.R. Shaw*); 1♂, England, Somerset, Godney Moor (V.C. 6), 5.vii.1983 (*A.P. Foster*). All the localities are fens dominated by *Phragmites*.

*Eridolius basalis* (Stephens, 1835) (= *flavilabris* (Holmgren, 1857) = *hostilis* (Holmgren, 1857) = *limbatellus* (Holmgren, 1857)). As some may turn out to be separate species, we are listing 4 colour forms separately as follows: form *basalis* (hind femur black with trochanter and trochantellus at least partly yellowish but often infuscate in northern specimens); form *limbatellus* (hind femur red with trochanter and trochantellus yellow); var.1 (hind femur black with black trochanter and trochantellus); var.2 (hind femur red, darkened at apex, with trochanter and trochantellus red). Form *basalis*: 68♀, 76♂. Scotland



(V.C. 78/79, 86, 88, 96, 99, 101, 102, 104, 105, 106, 108, 110), England (V.C. 7, 23, 27, 29, 36), Wales (V.C. 52), Ireland (V.C. H.24 [one doubtful male]). Specimens collected in v-ix; presumably plurivoltine. Form *limbatellus*: 14♀, 7♂. Scotland (V.C. 96, 99, 101, 102, 105), England (V.C. 7, 23), Wales (V.C. 52), Ireland (V.C. H.9). Specimens collected in v-viii(ix). Var. 1: 5♀, 2♂, Scotland (V.C. 88, 96), England (V.C. 8), Wales (V.C. 46). Specimens collected in vi-vii; 2 reared from *Pachynematus* sp. (Hym., Tenthredinidae) on *Lolium pratense* (A. Barker). Var.2: 20♀, 9♂. Scotland (V.C. 88, 92, 96, 99, 101, 105, 106), England (V.C. 7, 11, 22, 23, 57, 63, 70), Wales (V.C. 46, 52), Ireland (V.C. H.30). Specimens collected in v-viii.

*Eridolius bimaculatus* (Holmgren, 1856). 14♀, 6♂. Scotland (V.C. 87, 108), England (V.C. 22, 23, 29), Wales (V.C. 46, 52). Specimens collected in vi-ix.

*Eridolius curtisii* (Haliday, 1839). 1♀, Scotland, West Lothian, Drumshorland (V.C. 84), 21.viii.1915 (W.E. Evans); 1♂, England, Oxfordshire, Barrow Farm Fen, SU 468976 (V.C. 22), Malaise trap 19.vii-17.viii.1990 (K. Porter).

*Eridolius dorsator* (Thunberg, 1822) (= *mitigosus* (Gravenhorst, 1829) = *lineola* (Stephens, 1835)). 2♀, 45♂. England (V.C. 7, 12, 22, 27, 29). Specimens collected in (v)vi-viii(ix). There was a particular abundance of males in one Malaise trap sample from Wiltshire, Savernake Forest, SU 229656 in the period 13.vi-4.vii.1990 (K. Porter).

*Eridolius elegans* (Stephens, 1835). 1♀, England, Wiltshire, Savernake Forest, SU 205676 (V.C. 7), Malaise trap 26.v-16.vi.1993 (K. Porter).

*Eridolius ermolenkoi* Kasparyan, 1990. New to Britain. 1♂, England, Warwickshire, Bently Park Wood, SP 2895 (V.C. 38), 4.v.2002 (B. Mitchell).

*Eridolius flavomaculatus* (Gravenhorst, 1829) (= *praeustus* (Holmgren, 1857) = *ustulatus* (Holmgren, 1857)). 1♀, Scotland, Perthshire, Flanders Moss (V.C. 87), 11.vi.1981 (M.R. Shaw); 1♀, Scotland, Inverness-shire, Kincaig (V.C. 96), 1909; 1♂, Scotland, Dumfriess-shire, Lochmaben (V.C. 72), 9.vii.1982 (M.R. Shaw); 1♀, 1♂, England, Hampshire, Damerham (V.C. 8), ex. larvae of *Pachynematus* sp. (Hym., Tenthredinidae) on *Lolium pratense* coll. 13 and 14.vi.1995 (A. Barker); 1♀, England, Dorset, Holt Heath NNR, SU 057051 (V.C. 9), Malaise trap 22-25.viii.1988 (S. Roberts).

*Eridolius gnathoxanthus* (Gravenhorst, 1829). 1♀, Scotland, Dunbartonshire, Caldaran, NS 448838 (V.C. 99), Malaise trap 17-31.viii.1983 (I.C. Christie); 1♀, 1♂, Scotland, Aberdeenshire, Morrone Birkwood NNR (V.C. 92), Malaise trap 23.ix-4.x.1983 (1♀), 17-30.viii.1984 (1♂) (B.D. Batty); 1♂, Scotland, Wester Ross, Beinn Eighe NNR, NH 0064 (V.C. 105), Malaise trap ix.1988 (I. MacGowan); 1♂, Scotland, Perthshire, Fealar Gorge, NN 9977 (V.C. 89), 28.viii.1990 (K.P. Bland).

*Eridolius lineiger* Thomson, 1883 (= *nordstromi* Kerrich, 1952). New to Britain. 1♀, Scotland, Dunbartonshire, Caldaran, NS 450836 (V.C. 99), Malaise trap 27.vi-7.vii.1983 (I.C. Christie). The British specimen is form *nordstromi*, with black metasomal tergites.

*Eridolius pictus* (Gravenhorst, 1829). 14♀, 21♂. Scotland (V.C. 83, 88, 96, 99, 105), England (V.C. 23, 69), Wales (V.C. 52). Specimens collected in v-vii(viii); presumably univoltine.

*Eridolius rufilabris* (Holmgren, 1857). 1♀, Scotland, Ayrshire, Dalrymple Wood (V.C. 75), 12.vii.1982 (M.R. Shaw).

*Eridolius rufonotatus* (Holmgren, 1857). 3♀, Scotland, Inverness-shire, Glen Strathfarrar, NH 330391 (V.C. 96), Malaise trap viii.1988 (I. MacGowan); 1♂, Scotland, Easter Ross, Amat, NH 4689 (V.C. 106), Malaise trap vii.1989 (I. MacGowan). Both sites are native pine woods.

*Eridolius taigensis* Kasparyan, 1985. New to Britain. 1♀, Scotland, Dunbartonshire, Caldaran, NS 448838 (V.C. 99), Malaise trap 8-20.vi.1983 (I.C. Christie).

## Eclytini

### *Eclytus* Holmgren, 1857

This is a medium-sized Holarctic genus. We follow Kasparyan & Tolkanitz (2000) for the subgeneric classification. All females of the



subgenus *Eclytus* in NMS have been dissected for identification, but six males remain unidentified and are not listed here. The dissected females had all previously been identified as *E. ornatus* Holmgren (cf. Fitton & Ficken, 1990), but this traditional identification of British material may turn out to be universally incorrect.

*Eclytus (Anoplectus) multicolor* Kriechbaumer, 1869. 2♀, England, Cheshire, Abbots Moss, SJ 5868 (V.C. 58), Malaise trap 27.vi–23.vii.1986 (1♀), 5–25.viii.1986 (1♀) (R.R. Askew).

*Eclytus (Eclytus) difficilis* Kasparyan, 1977. New to Britain. 1♀, Scotland, Banffshire, Cairngorms, Coire Domhain, NH 993027 (V.C. 94), 1000m, 20.viii.1984 (J.M. Nelson)

*Eclytus (Eclytus) egregius* Kasparyan, 1977. New to Britain. 1♀, Scotland, Perthshire, Rannoch, Cerie (V.C. 88), 23.x.1990 (P.J. Chandler).

*Eclytus (Eclytus) haustoriatus* Kasparyan, 1977. New to Britain. 2♀, Scotland, Argyllshire, Taynish NNR, NT 730845 (V.C. 101), Malaise trap 31.viii–21.ix.1984 (1♀), 21.ix–5.x.1984 (1♀) (I.C. Christie); 1♀, Scotland, Inverness-shire, Loch Garten (V.C. 96), Malaise trap ix/x.1982 (J.A. Owen); 1♀, Scotland, Dunbartonshire, Endrick Mouth (V.C. 99), 26/27.ix.1980 (K.P. Bland); 1♀, England, Norfolk, Catfield, TG379201 (V.C. 27), Malaise trap 1–8.ix.1984 (R.T.J. Jarvis); 1♀, England, Devon, Axminster (V.C. 3), 14.viii.1983 (E.C. Pelham-Clinton).

*Eclytus (Zapedias) exornatus* Gravenhorst, 1829. 1♀, 2♂, France, Lot-et-Garonne, Bernac, Malaise trap 27–31.v.1991 (1♀), 26–30.v.1986 (2♂) (R.R. Askew).

### Idiogrammatini

#### *Idiogramma* Foerster, 1869

This is a small Holarctic genus. Only one species is present in NMS.

*Idiogramma euryops* Schmiedeknecht, 1888. 5♀, 17♂, Scotland, Inverness-shire, Loch Garten (V.C. 96), Malaise trap (J.A. Owen); 2♀, 2♂, Scotland, Perthshire, Rannoch, NN 5655 (V.C. 88), Malaise trap (J. MacGowan); 1♀, Scotland, Easter Ross, Amat, NH 4689 (V.C. 106), Malaise trap (J. MacGowan). All sites are native pine woods. Specimens collected in v–vi.

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#### REVIEW

'THE MONARCH BUTTERFLY – BIOLOGY AND CONSERVATION'. Edited by KAREN S. OBERHAUSER and MICHELLE J. SOLENSKY. Cornell University Press (a Comstock Book), Ithaca and London. ISBN: 0-8014-4188-9. 248pp, cloth. 2004. Price \$39.95, £22.95.

The Monarch butterfly, *Danaeus plexipus* (L.), or Milkweed Butterfly as it is perhaps better known by U.K. entomologists, is one of the most widely known and studied butterflies in the world. A total of 46 contributors are credited with the preparation of the book and all aspects of the butterfly's biology are covered in four main sections: Breeding, Migration, Overwintering and Integrated biology. The last section covers modelling the distribution and abundance, the transmission of the protozoan parasite *Ophryocystis elektroscirrha* in Monarch butterfly populations: implications for prevalence and population-level impacts. The book also contains the first publication of data assembled by two established citizen science projects, *Journey North* and the *Monarch Larva Monitoring Project*. There are also the first reports on two major events of long-term importance to the conservation and biology of the Monarch, i.e. the establishment of a larger protected area of over-wintering sites and a weather-related mortality event during the winter of 2002.

This splendid book provides an essential source of information for ecologists, entomologists, naturalists and teachers. — K.G.V. SMITH.