

AN ANNOTATED CHECKLIST OF THE IRISH HEMIPTERA AND SMALL ORDERS

compiled by

James P. O'Connor and Brian Nelson



The Irish Biogeographical Society

ARTICLE

Checklisting the Irish insects

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Fig. 1. Cover of *An annotated checklist of the Irish Hemiptera and small orders*.

The basic checklisting of the Irish insect fauna was finished in 2012 with the publication of *An annotated checklist of the Irish Hemiptera and small orders* (O'Connor & Nelson, 2012).

This volume completed a project which had commenced over twenty-nine years ago. Robert Nash, then the entomologist in the Ulster Museum (now National Museums Northern Ireland), Belfast, suggested to Mike Boston and the author that we should co-operate in compiling a checklist of the Irish insects. At the time, Mike was employed on contract entomological work in the Ulster Museum while I was the entomologist in the National Museum of Ireland. We agreed with Robert's idea and as a result, "A proposal for a checklist of Irish insects" was published in the *Irish Naturalists' Journal*, inviting assistance from anyone interested in the project (Nash, Boston & O'Connor, 1983). Unfortunately, Mike left the Museum before any of the checklists were finalised.

Robert had been inspired by A. H. Haliday's *Catalogue of Irish insects*

preserved in the National Museum of Ireland. Haliday (1806-1870) is the most famous of the Irish entomologists. He is primarily known for his work on the Hymenoptera, Diptera and Thysanoptera but he worked on all insect orders (Nash & O'Connor, 2011).

John Curtis's *A guide to an arrangement of British Insects; being a catalogue of all the named species hitherto discovered in Great Britain and Ireland* was published in London between 1829 and 1831. A second edition published in 1837 incorporated substantial additions and name-changes. James Francis Stephens' *A systematic catalogue of British Insects* was also published in 1829. Over a hundred years later, G. S. Kloet and W. D. Hincks' *A check list of British insects* appeared in 1945. Subsequently, numerous authors contributed to the Royal Entomological Society's five part revision of Kloet and Hincks' work, the first part of which was published in 1964 and the last in 1978. There

was no distinction between the insects of Britain and those of Ireland in these works. Sometimes, insects only known in Ireland were included in the lists while others were omitted without explanation or for any obvious reason.

As a result, it was decided that all the Irish checklists should enable the reader to trace why a species was on the Irish list. Although, it would be impossible to check the identities of all the listed species, all relevant synonymies and references would be included. The lists were to be for the island of Ireland ignoring man-made political boundaries. It was also decided, for convenience, to divide the work into five volumes similar to those published by the Royal Entomological Society. The first of the new checklists, *Irish Coleoptera. A revised and annotated list*, was published by the *Irish Naturalists' Journal* as a Special Entomological Supplement (Anderson, Nash & O'Connor, 1997). It updated the classic work of Johnson and Halbert (1902). Roy Anderson, the senior author, was then employed by the

THE
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IRISH COLEOPTERA

A REVISED AND ANNOTATED LIST

by R. ANDERSON, R. NASH AND J. P. O'CONNOR

SPECIAL ENTOMOLOGICAL SUPPLEMENT 1997

Fig. 2. Cover of *Irish Coleoptera. A revised and annotated list.*

AN ANNOTATED CHECKLIST
OF THE IRISH TWO-WINGED
FLIES (DIPTERA)

compiled by

Peter J. Chandler, James P. O'Connor and Robert Nash



The Irish Biogeographical Society
in association with
The National Museum of Ireland

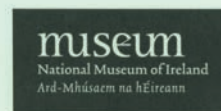


Fig. 3. Cover of *An annotated checklist of the Irish two-winged flies (Diptera).*

A CATALOGUE OF THE IRISH ICHNEUMONIDAE
(HYMENOPTERA: ICHNEUMONOIDEA)

by

J. P. O'Connor, R. Nash and M. G. Fitton



Occasional Publication of the Irish Biogeographical Society

Number 10, 2007

Fig. 4. Cover of *A catalogue of the Irish Ichneumonidae (Hymenoptera: Ichneumonoidea).*

Occ. Publ. Ir. biogeog. Soc. No. 7 (2004)

***Leptacis tipulae* (Kirby, 1798)**

synonym *Synopeas scutellaris* (Nees, 1834)

DOWN: Holywood, on willows *Salix*, AHH (Walker, 1835: p. 232 as *Platygaster scutellaris*); WEXFORD: Killoughrim, ♀ 16.vi.1982, swept in mixed woodland, JPOC (NMI) (O'Connor, 2003: p. 280).

Ireland (Walker, 1835: p. 221 as *Platygaster*. Mr Haliday has found the female on *Cerealia*, in...Ireland; Kieffer, 1926: p. 639; Kieffer, 1926: p. 684 as *Synopeas scutellaris*).

***Metaclisis areolatus* (Haliday in Walker, 1835)**

DOWN: Holywood, on grass in drains of the seacoast, AHH (Walker, 1835: p. 272 as *Inostemma*. Sometimes, like *Ino. Menippus*, infested by a small red parasite; Vlugg and Graham, 1984: p. 133 lectotype female...in NMI: "H. Wood"; green label; "1223-4"; "Haliday N.M.I. 20-2-82"; "Box 16"; det. and type labels (H. J. Vlugg, 1982). Two females are glued together on one card; nos 1223 and 1224; the right female, no. 1224, has been chosen as lectotype. Four males and ten females in NMI are paralectotypes (nos 1121, 1210, 1211 and 1213-1223). The female in the Vienna Museum is considered to be a paralectotype; Vlugg, 1995: p. 40). Ireland (Kieffer, 1926: p. 570).

***Piestopleura catilla* (Walker, 1835)**

DOWN: Holywood, once, under the shade of trees, AHH; GALWAY: Galway, once, under the shade of trees, AHH (Walker, 1835: p. 220 as *Platygaster*; Kieffer, 1926: p. 629; Vlugg and Graham, 1984: p. 120).

***Piestopleura mamertes* (Walker, 1835)**

DOWN: Holywood, September, on willows *Salix*, AHH (Walker, 1835: p. 227 as *Platygaster*; Vlugg and Graham, 1984: p. 120 lectotype male...in NMI; white label; "mamertes"; "953"; "lectotype" (handwritten by Graham); "Box 23. Stood in original Haliday collection under *Platygaster mamertes*"; det. and type labels (H. J. Vlugg, 1982)).

Ireland (Kieffer, 1926: p. 654 as *Ectadius*).

****Piestopleura seron* (Walker, 1835)**

Ireland (no locality, specimen (badly damaged) with green label stating "seron" and green-headed pin, AHH (NMI, Haliday Collection) (det. HJV)).
New to Ireland.

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Fig. 5. Sample page from *A catalogue of the Irish Platygastroidea and Proctotrupoidea (Hymenoptera)* showing why species are on the Irish list.

CERATACIS THOMSON 1859+*flavipes* (Thomson, 1859)

Footnote: added from Co. Clare by Buhl and O'Connor (in press).

EUXESTONOTUS FOUTS, 1925+*clavicornis* Buhl, 1995

Footnote: added from Co. Wexford by Buhl and O'Connor (in press).

+*error* (Fitch, 1861)

Footnote: added from Co. Kilkenny by Buhl and O'Connor (2008).

+*hasselbalchi* Buhl, 1995

Footnote: added from Co. Cork by Buhl and O'Connor (2008).

FIDIOBIA ASHMEAD, 1894*synergorum* (Kieffer, 1921)**INOSTEMMA HALIDAY, 1833**+*boscii* (Jurine, 1807)

Footnote: added from Co. Clare by Buhl and O'Connor (2009).

curtum Szélnyi, 1938*favo* Walker, 1838*hyperici* Debauché, 1947+*melicerta* Walker, 1835

Footnote: added from Co. Clare by Buhl and O'Connor (2009).

spinulosum Kieffer, 1916*walkeri* Kieffer, 1914Footnote: *boscii* (Jurine, 1807)

misidentification.

IPHITRACHELUS HALIDAY, 1835*lar* Haliday, 1835**ISOCYBUS FOERSTER, 1856***erato* (Walker, 1835)*walkeri* Kieffer, 1926Synonymy: *ruficornis* (Latreille, 1805) *sensu* Walker, 1835.**ISOSTASIUS FOERSTER, 1856***punctiger* (Nees, 1834)Synonymy: *scrutator* (Walker, 1835).**LEPTACIS FOERSTER, 1856***buchi* Buhl, 1997*laodice* (Walker, 1835)+*orchymonti* (Debauche, 1947)

Footnote: added from Co. Waterford by Buhl and O'Connor (2009).

ozines (Walker, 1835)*tipulae* (Kirby, 1798)Synonymy: *scutellaris* (Nees, 1834).**METACLISIS FOERSTER, 1856***areolatus* (Haliday, 1835)**PIESTOPLEURA FOERSTER, 1856***catilla* (Walker, 1835)*mamertes* (Walker, 1835)*seron* (Walker, 1835)**PLATYGASTER LATREILLE, 1809***abisares* Walker, 1835+*acrisius* Walker, 1835

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Fig. 6. Sample page from *An annotated checklist of the Irish Hymenoptera*.

Department of Agricultural and Environmental Science of The Queen's University of Belfast. An index was omitted but one was subsequently compiled by Roy and is still available from him. Additions since Johnson and Halbert were indicated by a + sign in the left-hand margin. This convention was continued in the later volumes to indicate additions since the source references. An on-line version of the coleopteran checklist was later provided (Anderson, Nash & O'Connor, 2005). Altogether, 2154 Irish species were included in these lists.

The second volume was *An annotated checklist of the Irish butterflies and moths (Lepidoptera)* (Bond, Nash & O'Connor, 2006). It was published by the Irish Biogeographical Society in association with the National Museum of Ireland which sponsored the printing costs. The senior author, Ken Bond, was carrying out research on Lepidoptera in the Department of Zoology and Animal Ecology in University College Cork. Updating Beirne (1941) and Baynes (1964), it contained information on 1412 species and common names were given. A comprehensive index was included. In 2008, an on-line version was made available (Bond, Nash & O'Connor, 2008). In the same year, the third

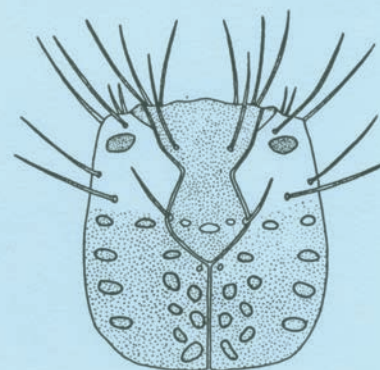
volume appeared. *An annotated checklist of the Irish two-winged flies (Diptera)* was also published by the Irish Biogeographical Society in association with the National Museum of Ireland and contained 3313 valid Irish species (Chandler, O'Connor & Nash, 2008). The senior author, Peter Chandler, had previously compiled a checklist of the Diptera of the British Isles which unusually had indicated the Irish species (Chandler, 1998). This work was an invaluable aid in compiling the Irish publication.

The next planned volume was to be on the Hymenoptera. This presented special problems as there were few older works which could be used as source references for the new checklist. It was necessary therefore to prepare and publish a series of individual checklists dealing with separate groups. The larger ones (Braconidae, Chalcidoidea, Ichneumonidae, Platygastroidea & Proctotrupeoidea) were covered by volumes in the Occasional Publication series of the Irish Biogeographical Society (O'Connor, Nash & Achterberg, 1999; O'Connor, Nash & Bouek, 2000; O'Connor, Nash, Notton & Fergusson, 2004; O'Connor, Nash & Fitton, 2007). These contained precise bibliographic references to included species as well as numerous additions to the Irish fauna.

A Checklist of Irish Aquatic Insects

by

P. Ashe, J. P. O'Connor & D. A. Murray



Series Editor: J. P. O'Connor

Date of Publication: 30 July 1998

Occasional Publication of The Irish Biogeographical Society
Number 3, 1998Fig. 7. Cover of *A checklist of Irish aquatic insects*.

In addition, checklists of the smaller groups were published in various journals. Wonderful help was provided by British and Continental hymenopterists. As a result, it was possible for the Irish Biogeographical Society to publish *An annotated checklist of the Irish Hymenoptera* in association with the National Museum of Ireland based on these works (O'Connor, Nash & Broad, 2009). A total of 3194 Irish species and a comprehensive index were included. Fortunately, Gavin Broad of the Natural History Museum, London, agreed to assist with the compilation and provided essential advice and expertise.

As stated above, the final volume, *An annotated checklist of the Irish Hemiptera and small orders*, was published by the Irish Biogeographical Society in 2012 (O'Connor & Nelson, 2012). Due to the current economic situation, the Museum was unable to sponsor the publication but the Society managed to fund the printing costs from its own resources. This proved to be a particularly difficult checklist to compile due to the diversity of orders included and the ever changing nomenclature which necessitated innumerable revised drafts. Although no longer considered insects, the Entognatha (Collembola, Diplura and Protura) were included for

completeness. The Insecta were represented by the Dermaptera, Dictyoptera, Ephemeroptera, Hemiptera, Mecoptera, Megaloptera, Microcoryphia, Neuroptera, Odonata, Orthoptera, Phasmatodea, Phthiraptera, Plecoptera, Psocoptera, Siphonaptera, Strepsiptera, Thysanoptera, Trichoptera and Zygentoma. The volume was dedicated to the memory of the late Dr Courtenay Smithers (1925-2011) in recognition of his research on the Irish Psocoptera. Excepting the included migrants and importations, 1583 species were recorded. There was also a comprehensive index. Robert Nash having retired, Brian Nelson (then also in the National Museums Northern Ireland) became a co-author. Brian is now with the National Parks and Wildlife Service in Dublin.

The Irish Biogeographical Society checklist volumes were produced on good quality paper and thread sewn so that they would be durable. The print run was 200 copies. Since it had been so difficult to annotate the Royal Entomological Society's checklists due to the A5 format, the Irish volumes were printed on A4 paper leaving ample space for annotations, corrections and updates. With the exception of the coleopteran one, the cover illustrations of the main checklists were by the British natural history artist Sean Milne and are taken from *Irish indoor insects* (O'Connor & Ashe, 2000). Copies of the checklists have been deposited in libraries in Ireland, Great Britain and many other countries for future consultation by anyone interested in Irish insects. The basic checklisting is now completed and the Irish insect (*sensu lato*) fauna recorded in the checklists total 11,656 species. However, new additions are constantly being added often after consultation of the new checklists. As a result, Peter Chandler regularly updates the Irish dipteran checklist in the *Dipterists Digest* and that total has now reached 3359 species, an increase of 46 species (Chandler, 2012). In addition, since publication of the lepidopteran checklist, 68 species have been added to the Irish fauna (Bond & O'Connor, 2012). Regan *et al.* (2010) noted that the number of undiscovered Irish species is certainly sufficient to increase the total fauna to more than 12,000 species. Indeed, it may be over 13,000 species as, for instance, many parasitic Hymenoptera and Cecidomyiidae

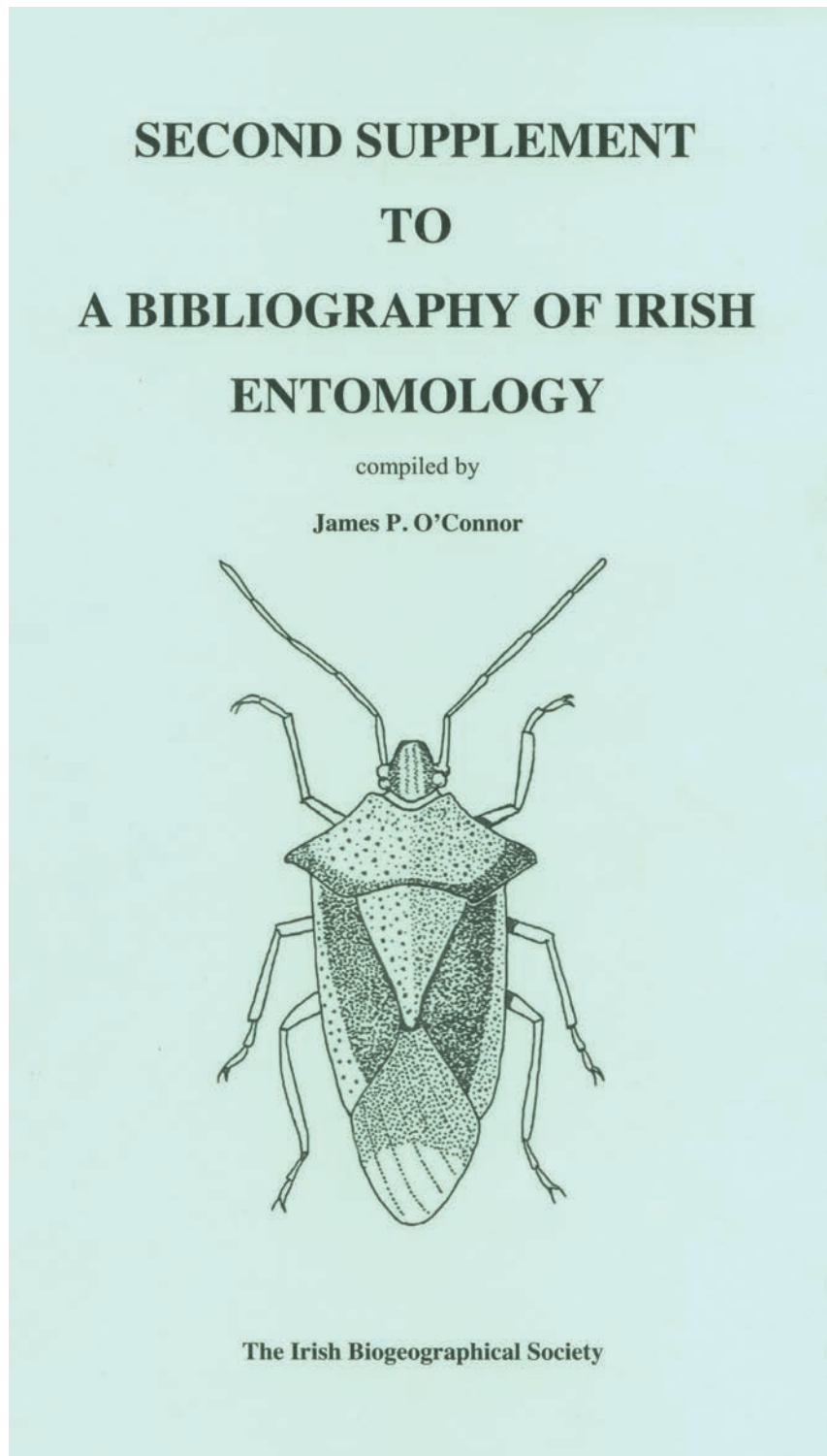


Fig. 9. Cover of *Second supplement to A bibliography of Irish Entomology*.

(Diptera) undoubtedly await discovery on the island.

Two other projects assisted in the compilation of the checklists. To celebrate the holding of the XXVII Congress of the International Association of Limnology in University College, Dublin, in August 1998, *A checklist of Irish aquatic insects* was published (Ashe, O'Connor & Murray,

1998). Bibliographic support was provided by *A Bibliography of Irish Entomology* and its two supplements (Ryan, O'Connor & Beirne, 1984; O'Connor, Ashe & Walsh, 2005; O'Connor, 2012). This work has now also been completed. The Second (and final) Supplement contains an author index to all three volumes.

References

- Anderson, R., Nash, R. & O'Connor, J.P. (1997) *Irish Coleoptera. A revised and annotated list*. Irish Naturalists' Journal Special Entomological Supplement.
- Anderson, R., Nash, R. & O'Connor, J.P. (2005) Checklist of Irish Coleoptera. InvertebrateIreland Online. Ulster Museum, Belfast and National Museum of Ireland, Dublin <<http://www.habitas.org.uk/invertebrateireland/speciesstats.asp?Checklist=1>>.
- Ashe, P., O'Connor, J.P. & Murray, D.A. (1998) *A checklist of Irish aquatic insects*. Occasional Publication of the Irish Biogeographical Society No. 3.
- Baynes, E.S.A. (1964) *A revised catalogue of Irish Macrolepidoptera (butterflies and moths)*. E.W. Classey, Hampton.
- Beirne, B.P. (1941) A list of the Microlepidoptera of Ireland. *Proceedings of the Royal Irish Academy* 47B: 53-147.
- Bond, K.G.M., Nash, R. & O'Connor, J.P. (2006) *An annotated checklist of the Irish butterflies and moths*. Irish Biogeographical Society & National Museum of Ireland, Dublin.
- Bond, K.G.M., Nash, R. & O'Connor, J.P. (2008) *An annotated checklist of the Irish butterflies and moths*. InvertebrateIreland Online. Ulster Museum, Belfast and National Museum of Ireland, Dublin <<http://www.habitas.org.uk/invertebrateireland/speciesstats.asp?Checklist=11>>.
- Bond, K.G.M. & O'Connor, J.P. (2012) Additions, deletions and corrections to *An annotated checklist of the Irish butterflies and moths (Lepidoptera)* with a concise checklist of Irish species and *Elachista biatomella* (Stainton, 1848) new to Ireland. *Bulletin of the Irish Biogeographical Society* 36: 60-179.
- Chandler, P.J. (ed.) (1998) Checklists of insects of the British Isles (New Series). Part 1: Diptera (Incorporating a list of Irish Diptera). *Handbooks for the Identification of British Insects* 12(1): i-xix, 1-234.
- Chandler, P.J. (2012) Changes to the Irish Diptera list (18) – editor. *Dipterists Digest* 18(2): inside rear cover.
- Chandler, P.J., O'Connor, J.P. & Nash, R. (2008) *An annotated checklist of the Irish two-winged flies (Diptera)*. Irish Biogeographical Society & National Museum of Ireland, Dublin.
- Johnson, W.F. & Halbert, J.N. (1902) A list of the beetles of Ireland. *Proceedings of the Royal Irish Academy Third Series* 6: 535-827
- Nash, R., Boston, M. & O'Connor, J. (1983) Checklist – insects. A proposal for a checklist of Irish insects. *Irish Naturalists' Journal* 21: 188.
- Nash, R. & O'Connor, J.P. (2011) Notes on the Irish entomologist Alexander Henry Haliday (1806-1870). *Bulletin of the Irish Biogeographical Society* 35: 64-112.
- O'Connor, J.P. (2012) *Second supplement to A bibliography of Irish Entomology*. Irish Biogeographical Society, Dublin.
- O'Connor, J.P. & Ashe, P. (2000) *Irish indoor insects*. Town House, Dublin.
- O'Connor, J.P., Ashe, P. & Walsh, J. (2005) *First supplement to A bibliography of Irish Entomology*. Irish Biogeographical Society & National Museum of Ireland, Dublin.
- O'Connor, J.P., Nash, R. & Achterberg, C. van (1999) *A catalogue of the Irish Braconidae (Hymenoptera: Ichneumonoidea)*. Occasional Publication of the Irish Biogeographical Society No. 4.
- O'Connor, J.P., Nash, R. & Bouček, Z. (2000) *A catalogue of the Irish Chalcidoidea (Hymenoptera)*. Occasional Publication of the Irish Biogeographical Society No. 6.
- O'Connor, J.P., Nash, R. & Broad, G. (2009) *An annotated checklist of the Irish Hymenoptera*. Irish Biogeographical Society & National Museum of Ireland, Dublin.
- O'Connor, J.P., Nash, R. & Fitton, M.G. (2007) *A catalogue of the Irish Ichneumonidae (Hymenoptera: Ichneumonoidea)*. Occasional Publication of the Irish Biogeographical Society No. 10.
- O'Connor, J.P., Nash, R., Notton, D.G. & Fergusson, N.D.M. (2004) *A catalogue of the Irish Platygastroidea and Proctotrupoidea (Hymenoptera)*. Occasional Publication of the Irish Biogeographical Society No. 7.
- O'Connor, J.P. & Nelson, B. (2012) *An annotated checklist of the Irish Hemiptera and small orders*. Irish Biogeographical Society, Dublin.
- Regan, E., Nelson, B., McCormack, S., Nash, R. & O'Connor, J.P. (2010) Countdown to 2010: can we assess Ireland's insect species diversity and loss? *Biology and Environment: Proceedings of the Royal Irish Academy* 110B: 109-117.
- Ryan, J.G., O'Connor, J.P. & Beirne, B.P. (1984) *A bibliography of Irish entomology*. The Fly Leaf Press, Dublin.