

Pompiloidea (Hymenoptera Aculeata) in Lancashire & Cheshire

by R. R. Askew

Willoughby Gardner's list of the aculeate Hymenoptera of Lancashire and Cheshire, published in 1901 in the Transactions of the Liverpool Biological Society, provides a very useful basis for study, but an updated account of our fauna is now desirable following the finding of several species new to the counties and recent nomenclatural changes.

Pompiloids are solitary wasps that provision their nests with spiders, or behave asinquilines in the nests of other Pompilids. All British species belong to the family Pompilidae. They are mostly red and black or black wasps with long, spiny legs, extremely active, spending a great deal of time running over the ground and females may quite often be seen dragging paralysed spiders to their nest burrows. Males are sometimes found feeding at flowers. Areas of light sandy soil with plenty of sunshine and a sparse vegetation cover are particularly favoured by Pompilids, and in our counties they are most abundant on the coastal dunes of Lancashire and the sandy heaths of Cheshire.

This review is based upon specimens and records in the Manchester Museum, records published in the Reports of the Fauna Committee and elsewhere, and a few of my own observations. Nomenclature follows the second edition of Kloet and Hincks (1978) and Day (1979). Many of the specimens in the Manchester Museum were collected by Harry Britten and these are indicated by his initials in the following list.

Dipogon variegatus (L.)

Added to the fauna list by Britten in the 15th Report of the Fauna Committee (1928) on the basis of a single female from Delamere, Ches. (5/8/1928, H.B.) now in the Manchester Museum. It was included in the Lancashire list by Britten in the 27th Report (1943-'46) on one male from Grange over Sands (19/6/1945, A. E. Wright) *teste* O. W. Richards.

Priocnemis perturbator (Harris)

This large species, easily distinguished from our other *Priocnemis* species by its densely hairy propodeum, flies early in the year. There are two males from Delamere (14/5/1941, H.B.) in the Manchester Museum and I have two females from Abbots Moss, Ches. taken on 10th and 23rd May, 1978. It has not been previously recorded from the region.

P. exaltata (F.)

Characterised by the sharply-angled posterior border of the pronotum and by the long postnotum. Recorded by Willoughby Gardner from Bowden and Delamere, Ches. and from Delamere (1922) by Halkyard in the 9th Report (1923). A male in the Manchester Museum is from Cotterill Clough, Ches. (25/7/1944, H.B.) and the records list Cuddington, Ches. (20/7/1941, H.B.), Goyt Valley, Ches. (7/7/1940, H.B.) and Grange over Sands, Lancs. (20/6/1940, 24/6/1942, 25/7/1942, A. E. Wright).

P. parvula Dahlbom (= *minor* auctt.)

Females may be separated from the species that follow by the absence of a clearly-defined apical hyaline spot on the forewing and by the relatively long postnotum. It is a species most typical of inland localities and the Manchester Museum houses specimens from Goyt Valley (8/8/1946, H.B.) and Abbots Moss (31/8/1941, H.B. *minor teste* O. W. Richards; 12/9/1941, H.B. *teste* M. C. Day) in Cheshire. I took a female at the last locality on 15th June, 1976. Further records in the Manchester Museum are for Grange over Sands (6/6/1942, A. E. Wright, probably the basis of its addition to the Lancashire list in the 26th Report (1944)) and Delamere (31/8/1922, H. Halkyard, 9th Report (1923)).

P. agilis Shuckard (= *obtusiventris* Schioedte)

P. agilis has extensively reddish legs and an unconstricted postnotum. It was added to the fauna list by Britten in the 27th Report (1943-'46) on a female taken by J. R. Hardy in 1905 at Mereton, Ches. This specimen is in the Manchester Museum and carries a label determining it as *obtusiventris* by G. M. Spooner.

P. schioedtei Haupt

Represented in the Manchester Museum by quite a large number of specimens from Lancs. and Ches. captured in June, July and August. Localities are Marple, Delamere, Goyt Valley, Cotterill Clough, Sinderland and Arden Hall in Cheshire, and Guelder Clough (nr. Norden, Rochdale). Three specimens carry labels indicating their identification in 1943 by O. W. Richards as *schioedtei* but many others had been determined previously as *P. pusilla* Schioedte. *P. schioedtei* was described in 1927; previously it and *pusilla* had been confused. The addition of *P. pusilla* to the fauna list (8th Report (1922)) by Ferris Neave, from Rainow, Ches. where it was stated to be 'fairly common', and its addition to the Lancashire list by Halkyard (9th Report) from Parkbridge, predate the recognition of *schioedtei* and almost certainly refer to this species. *P. schioedtei* was recorded from Lancs. (Guelder Clough, 1/8/1950, H.B.) by S. Shaw in the 30th Report (1954) and the identification of this material has been confirmed by M. C. Day.

P. pusilla is a rather smaller insect than *P. schioedtei* with stronger and denser propodeal sculpture. The postnotum in both species is strongly constricted. *P. pusilla* is usually associated with coastal dunes and although not certainly known from the region, its reinstatement in our list may perhaps be anticipated.

Another species that must be deleted from the fauna list is *P. gracilis* Haupt. In the 22nd Report (1936) Harry Britten introduced the species on the basis of his own record from Arden Hall, Ches. (26/7/1919). There are two female *Priocnemis* in the Manchester Museum taken by Britten at Arden Hall on this date. Both are *P. schioedtei*; one bears no determination label and the other is labelled *P. pusilla* by Britten. The record card for *P. gracilis* referring to these captures has been amended in Britten's own handwriting to read *P. schioedtei*.

Pompilus cinereus (F.) (= *plumbeus* F.)

This widespread, small wasp with black body, darkened wing tips and copious, silvery pubescence was stated by Willoughby Gardner to occur on the 'Wallasey sandhills, exceedingly abundant some years; Southport sandhills'. Specimens in the Manchester Museum are from Delamere (20/8/1922, 5/8/1928, H.B.) and Abbots Moss (31/8/1941, H.B.) (I have found it here, 13/7/1978), Cheshire, and Freshfield (17/7/1932, 29/9/1920, H.B.; 4/9/1960, W. D. Hincks), Ainsdale (30/7/1938, L. Nathan; 24/8/1930, H.B.) and Birkdale (29/7/1923, H.B.) on the Lancashire coast. Additional museum records give Newchurch Common (3/8/1941, H.B.) and Delamere (1922, H. Halkyard, 9th Report), Ches.

Arachnospila anceps (Wesmael)

Willoughby Gardner undoubtedly confused this and the next species under the name *Pompilus gibbus* F. which he states to be 'common in district'. Three species of *Arachnospila* having an angulate posterior margin to the pronotum and a complete pecten of spines on the female front tarsus are known from the region; *anceps*, *trivialis* and *wesmaeli*.

A. anceps is represented in the Manchester Museum by specimens from Delamere (20/8/1922, H.B.), Abbots Moss (12/9/1941, H.B.) and Marple (27/6/1943, 11/6/1950, H.B.), Ches. The specimen from Abbots Moss, a female, was determined as *Pompilus consobrinus* Dahlbom by Britten and as such recorded in the 27th Report as new to the faunal area. *A. consobrinus* has extensive pilosity on the head, thorax and propodeum; Britten's specimen is rather more hairy than normal but its identity as *anceps* was confirmed by M. C. Day (1979). *A. consobrinus* must be removed from the fauna list.

Further localities for *anceps* recorded in the Manchester Museum under *trivialis* (under which name the present species has for long been incorrectly known) are Rainow, Sinderland and Goyt Valley, Ches. Halkyard (9th Report) records *Pompilus gibbus* from Delamere (1/8/1922).

A. trivialis (Dahlbom) (= *unguicularis* auctt.)

Very similar to *A. anceps* but with the propodeum more weakly sculptured and shining, the eyes of *trivialis* are usually more separated on the vertex and the metanotum tends to be shorter. In contrast to *anceps*, which is mainly an inland species, our records of *trivialis* are from the Lancashire coast. Two females in the Manchester Museum are from Ainsdale (24/8/1930, 11/10/1931 H.B.), the first of these being identified as *unguicularis* by G. M. Spooner (1939), and the records give Freshfield (15.18/5/1948, H. W. Daltry, 29th Report) as another locality.

A. wesmaeli (Thomson)

The male of this species is easily recognised by a long 'spike' on the ventral surface of the genital plaque. A male in the Manchester Museum was taken at Freshfield (14/5/1946, H.B.) and recorded as new to the region in the 29th Report (1950). The records refer also to both sexes at Freshfield, 15.18/5/1948 (H. W. Daltry).

A. spissa (Schioedte)

This and the next species differ from the three preceding in that females have no pecten on the front tarsi. *A. spissa* has the third cubital cell quadrilateral with its anterior edge longer than that of the second cubital cell. The male genital plaque is keeled and pointed. The Manchester Museum contains several specimens from Delamere, Ches. (5/8/1928, 17/6/1934, 1/7/1934, H.B.) and the records give 20/8/1922 (H.B.) as an additional date at this locality, and list also Freshfield (1/8/1936, L. Nathan) and Grange over Sands (8/6/1942, A. E. Wright), Lancs. I have taken *spissa* at Abbots Moss, Ches. (19/6/1978). The species was first recorded from Cheshire in the 21st Report (1935) and from Lancashire in the 23rd Report (1937).

A. minutula (Dahlbom)

Differs from *A. spissa* in having the third cubital cell triangular or with at most a very short anterior edge, and the male genital plaque is broadly rounded and not keeled. There are specimens from Delamere (20/8/1912, H.B.), Goyt Valley (1/8/1944, H.B.) and Bollin Valley (19/5/1945, H.B.), Ches. in the Manchester Museum and an additional record from Delamere (31/8/1922, F. Neave, 9th Report).

Evagetes crassicornis (Shuckard)

Another red and black Pompilid but distinguishable by its rounded posterior pronotal edge and relatively stout antennae. The female has a pecten. It was recorded, under *Pompilus pectinipes* Vander Linden, by Willoughby Gardner from Southport and by Arnold (1909) from the Wallasey sandhills. Specimens in the Manchester Museum are from Abbots Moss, Delamere (9th Report), and Sinderland, Ches., and from Freshfield. Grange over Sands is cited in the records as another locality.

Anoplius concinnus (Dahlbom)

Females of *Anoplius* have spiny hairs on the apical tergum. *A. concinnus* is a black species with the fourth hind tarsomere very short, in the female no longer than the spines it bears and in the male only half the length of the fifth tarsomere. The third cubital cell is quadrilateral. There are twelve specimens in the Manchester Museum, all taken in August 1949 by Britten at Alderley Edge, Ches., and recorded as new to the counties in the 29th Report.

A. nigerrimus (Scopoli)

Another black species, distinguished from the preceding by the much longer fourth hind tarsomere and by the triangular or petiolate third cubital cell. The genitalia of the males are also very different. Listed by Willoughby Gardner (under *Pompilus niger* F.) from Southport and Hazlegrove and recorded by Neave in the 8th Report (1922) from Rainow, Ches. It is apparently widely distributed in the two counties, material in the Manchester Museum being collected at Marple, Delamere, Goyt Valley and Alderley Edge in Cheshire, with additional records from Hopwood Hall, Formby, Grange over Sands and Chat Moss in Lancashire.

A. infuscatus (Vander Linden)

The only red and black *Anoplius* so far recognised in the region. A female in the Manchester Museum was taken at Freshfield (6/8/1946, H.B.) and there are two further

records from Freshfield: 15.18/5/1948 (H. W. Daltry, 29th Report), 15/6/1963 (C. O'Toole).

Episyron rufipes (L.)

This species is recorded from the Southport sandhills by Willoughby Gardner (on the authority of Benjamin Cook who provided much of Gardner's information). There are no Lancs. or Ches. specimens in the Manchester Museum, but the records indicate that H. W. Daltry took the species at Freshfield, (15.18/5/1948).

Ceropales maculata (F.)

Recorded from Southport by Willoughby Gardner. Specimens in the Manchester Museum are from Freshfield, (10/7/1941, 6/9/1947, H.B.) and Abbots Moss, Ches. (31/8/1941, H.B.).

Eighteen species of Pompilidae are recorded from Lancashire and Cheshire out of a total of forty-one British species; some additions to our fauna might therefore be expected. Identification of some species of *Priocnemis* and *Arachnospila* is rather difficult, although the papers by Perkins (1920, 1929) and Spooner (1932) are helpful. I have attempted to indicate diagnostic characters of difficult species in the above notes, but these are inevitably often comparative. Certain identification is possible only with captured material and several species, not recognised as distinct in the field, may be found in one locality. Halkyard (9th Report) lists seven species at Delamere on 31st August, 1922. The capture of Pompilids demands adroitness and a specimen tube is often a more efficient implement than a net. I will be pleased to identify any material submitted from our two counties.

References

- Arnold, G. 1909. Aculeate Hymenoptera and Chrysididae in Cheshire. *Entomologist's mon. Mag.*, **45**: 16-17.
- Day, M. C. 1979. Nomenclatural studies on the British Pompilidae (Hymenoptera). *Bull. Br. Mus. nat. Hist. (Ent.)*, **38**(1): 1-26.
- Kloet, G. S. and Hincks, W. D. 1978. *A check list of British insects*. Second edit. Part 4: *Hymenoptera*. *Hndbks Ident. Br. Insects*, **11**(4). The Royal Entomological Society of London.
- Perkins, R. C. Y. 1920. Notes on British Psammocharidae (Pompilidae). *Entomologist's mon. Mag.*, **56**: 32-38.
- Perkins, R. C. .L. 1929. Notes on some British aculeate Hymenoptera, including five species new to Britain. *Entomologist's mon. Mag.*, **65**: 54-58.
- Spooner, G. M. 1932. Notes on British species of *Priocnemis* related to *P. pusillus* Schdt. *Entomologist's mon. Mag.*, **68**: 121-127.