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Northern Distribution Records for Some Nearctic Pompilidae (Hymenoptera)

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NORTHERN DISTRIBUTION RECORDS FOR SOME NEARCTIC POMPILIDAE (HYMENOPTERA)

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ABSTRACT

Distributional records and nomenclatural changes are presented for 20 species of Nearctic Pompilidae. The records extend the species' ranges northward in North America, are peripheral on the northern boundaries of the ranges, or fill in sizeable gaps in the distributions. Flower records, habitat notes, and remarks on the prey are given for some of the species.

Adult pompilids are mostly solitary, rather secretive insects. The females are rapid runners, fast fliers, have a propensity for not walking upward into an insect net, and often fly out of the net once netted; their potent sting rivals that of the eusocial Vespidae. The males, likewise, are fast on foot and in flight, are difficult to discern because of their mostly small sizes, and live for only a few weeks. The opportunity for collecting particular species of Pompilidae arises only once every several years, probably due to a variety of stochastic environmental factors such as variations in temperature and amounts of rainfall and snowfall, severity of parasitic and predatory "pressure," and relative abundance or scarcity of host spiders of suitable size.

Virtually nothing has been published on the Nearctic Pompilidae since the classical taxonomic studies of Bradley (1944), Evans (1950, 1951a, b, 1966) and Townes (1957), the monumental comparative behavior paper by Evans and Yoshimoto (1962), and the host record and discussion of prey selection factors papers by Wasbauer and Powell (1962) and Kurczewski and Kurczewski (1968a, b, 1972, 1973). Geographic distribution records presented by Evans, Hurd, and Townes in Muesebeck, et al. (1951), Krombein (1958), and Krombein and Burks (1967) were extended for the Nearctic species north of Mexico by Krombein in Krombein et al. (1979). Despite these rather extensive records, sizeable gaps related to the lack of collecting in certain parts of the United States remain in the distributional maps of some of the species. Because of such informational blanks, the following collecting records which introduce new distributional and ecological data are worth noting as part of the picture of the biology of the Nearctic spider wasps.

The species of Pompilidae are presented in phylogenetic order, following Krombein in Krombein et al. (1979). The records are based, in part, upon the collection during 1959–1986 of more than 15,000 specimens of Pompilidae from the northeastern U.S. and Ontario and on the examination of several hundred other specimens from the northern U.S. and Canada. Unless otherwise indicated, the specimens were collected by the authors. All specimens have been placed in the S.U.N.Y. College of Environmental Science and Forestry Insect Museum.

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Subfamily PEPSINAE
Tribe PEPSINI

Chirodamus fortis (Cresson). 4 ♀♀, 42♂♂; PENNSYLVANIA: Crawford County, Cambridge Springs, Meadville, Saegerstown, Woodcock; 25 June–5 July 1960–1961, on flowers of *Pastinaca sativa* alongside PA 86 at edge of woodlands. This species was seen commonly on the above-mentioned flowers but could not be found in the adjoining woodlands. Its host spider(s) remain(s) unknown.

Priocnemis (Priocnemis) aequalis (Banks). 1 ♂; ALBERTA: Jasper-Edson County, near Whitecourt; 20 July 1971 (N. B. Elliott).

Priocnemis (Priocnemis) notha (Cresson). 1 ♀; MAINE: Lincoln County, Damariscotta; 10 Sept. 1936 (F. Fletcher). This is the first published record from Maine and the easternmost record in the U.S. for this species.

Calicurgus hyalinatus (Fabricius). We have collected three subspecies, *alienatus* (Smith), *borealis* (Banks) and *rupex* (Cresson), at a single locality (PENNSYLVANIA: Crawford County, Cambridge Springs), thus casting doubt on Townes' original subspecific designations.

Tribe AUPLOPODINI

Auplopus architectus (Say). 1 ♀, 1 ♂; MAINE: Lincoln County, Damariscotta; 20 June 1936 (F. Fletcher). This is the easternmost record in North America for this species.

Ageniella (Leucophrus) fulgifrons (Cresson). 2 ♀♀, 1 ♂; NEW YORK: Tompkins County, North Lansing; 24 July 1963 (for associated host record see Kurczewski and Kurczewski 1968a); PENNSYLVANIA: Erie County, Wintergreen Gorge Cemetery; 6 Aug. 1968; PENNSYLVANIA: Erie County, Erie; 25 July 1961; on flowers of *Daucus carota*. This species is collected uncommonly in fields and meadows.

Ageniella (Ageniella) partita Banks. 1 ♀; NEW YORK: Oswego County, Selkirk Shores State Park; 15 July 1971, on bare sand at edge of open woodlands. The abdomen of this female is more heavily infuscated than in others we have examined.

Subfamily POMPILINAE
Tribe APORINI

Aporus (Aporus) niger (Cresson). 12 ♀♀; PENNSYLVANIA: Erie County, Wintergreen Gorge Cemetery; 19 July–6 Aug. 1967–1968. All specimens were collected in sunlit areas in open woodlands. The series of 12 females averaged only 9.3 mm (range, 6.5–11.0 mm) in body length, which is nearly 1/5 smaller in size than an "average-sized" female of this species (see Bradley 1944). It would be enlightening to know which spider(s) is (are) preyed upon by this species of pompilid in the Northeast. *Aporus (Plectraporus) hirsutus* (Banks) nests in sand dunes and preys upon trapdoor spiders in the western U.S. (Williams 1928), but trapdoor spiders do not occur in the area where we collected *A. niger*.

Tribe POMPILINI

Evagetes crassicornis (Shuckard). 1 ♀, 1 ♂; ALBERTA: Jasper-Edson County, near Whitecourt; 20 July 1971 (N. B. Elliott).

Evagetes subangulatus (Banks). 1 ♀, 1 ♂; ALASKA: Mount McKinley National Park; 4–5 July 1971 (N. B. Elliott).

Episyron snowi (Viereck). 1 ♀; PENNSYLVANIA: Erie County, Wintergreen Gorge Cemetery; 19 July 1967; searching on gravelly soil in sunlit area of open woodlands.

Poecilopompilus interruptus (Say). 1 ♀; NEW YORK: Cayuga County, Auburn, 8 Sept. 1962 (see Kurczewski and Kurczewski 1968a); 1 ♂; NEW YORK: Tompkins County, Groton; 17 July 1960; on flowers of *Daucus carota* at edge of gravel pit.

Anoplius (Lophopompilus) cleora (Banks). One male (PENNSYLVANIA: Erie County, Presque Isle State Park, 17 Aug. 1966) shows ferruginous coloration laterally on the first three abdominal tergites. Others examined from this locality and elsewhere are entirely black.

Anoplius (Arachnophroctonus) relativus (Fox). 1 ♀; VERMONT: Orange County, Orange; 22 Aug. 1937 (G. M. Day).

Anoplius (Anoplius) depressipes Banks. 6 ♀♀, 1 ♂; PENNSYLVANIA: Crawford County, Meadville; Erie County, Presque Isle State Park, 23 June–25 July 1960–1962. All seven specimens were collected either near a swamp or a lagoon. See Kurczewski and Kurczewski (1968a) for associated host record.

Anoplius (Anoplius) nigerrimus (Scopoli). 2 ♀♀, 1 ♂; PENNSYLVANIA: Crawford County, Cambridge Springs, Saegerstown; 2–5 July 1960–1961, on flowers of *Pastinaca sativa* along PA 86. This is actually a southerly record for this species which occurs mostly in the Hudsonian and Canadian Zones (Krombein, in Krombein, et al. 1979).

Aporinellus taeniolatus (Dalla Torre). 7 ♀♀; ONTARIO: Norfolk County, Long Point Provincial Park, 30 June 1964; NEW YORK: Jefferson County, Southwick State Park, 22 Aug. 1972 (R. C. Miller); PENNSYLVANIA: Erie County, Presque Isle State Park, 28 June–22 Sept. 1969–1978. All collections were made on bare sand near water. The correct name for *Aporinellus taeniatus* Kohl is *Aporinellus taeniolatus* (Dalla Torre). *A. taeniatus* was renamed while in homonymy and the new name stands even though homonymy no longer exists. *A. taeniatus* Kohl was a junior homonym while in *Pompilus*. (A. S. Menke, pers. comm., 1980).

Aporinellus wheeleri Bequaert. 10 ♀♀, 10 ♂♂; NEW YORK: Tompkins County, Groton; Cayuga County, Auburn, Onondaga County, Bridgeport (R. E. Acciavatti); PENNSYLVANIA: Erie County, Wintergreen Gorge Cemetery, 2–5 km SE of Erie; 24 May–2 Oct. 1961–1986. All collections were made on gravelly soil, away from water. Although Evans (1951b) considered *wheeleri* to be a subspecies of *taeniatus* (= *taeniolatus*), there is evidence for separating the two taxa in the eastern United States based upon the rufous abdomen and legs, dark pubescence and short foretarsal rake, and habit of the former of nesting in gravelly soil. This suite of characters breaks down in the extreme southern U.S. and Mexico.

Subfamily CEROPALINAE
Tribe MINAGENIINI

Minagenia congrua (Cresson). 1 ♀; PENNSYLVANIA: Erie County, Wintergreen Gorge Cemetery; 30 June 1967, in sunlit area in open woodlands.

Minagenia montisdorsa Dreisbach. 1 ♀; PENNSYLVANIA: Erie County, Presque Isle State Park; 25 June 1969, on vegetation at edge of open woodlands.

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