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The Robber Flies (Diptera: Asilidae) of the Albany Pinebush

Timothy L. McCabe
New York State Museum

Christine N. Weber
University of California

THE ROBBER FLIES (DIPTERA: ASILIDAE) OF THE ALBANY PINEBUSH[1]

Timothy L. McCabe[2] and Christine N. Weber[3]

ABSTRACT

The Albany Pinebush, a pitch pine-scrub oak sand barrens, was examined for robber flies and the results compared to historical records found in the New York State Museum, Albany. Thirty-six species were recorded of which seventeen were new records. Two species, *Cyrtopogon laphriformis* and *Promachus bastardii,* last recorded in 1914 and 1931, respectively, were not located in the survey.

Scrub oak-pitch pine (*Quercus ilicifolia-Pinus rigida*) barrens occur from Virginia to Maine, but only about 20 large sites exist. Not all of these are sand barrens; a few are ridge-top barrens (Wheeler, 1991). Pitch pine barrens are fire-dependent communities growing on nutrient-poor acid soils. Albany's barrens are near the fork of the Hudson and Mohawk rivers. In early postglacial times, the Hudson-Mohawk valley provided a corridor for Coastal Plain species to reach the Great Lakes (Shapiro, 1971). Albany's pine barrens, therefore, should possess relicts of this post-glacial migration.

Around the turn of the century, the Albany pine barrens were the site of intensive collecting by museum entomologists. A trolley ran from Albany to Karner, N.Y., formerly Centre, N.Y., which is now within the present-day Albany city limits and at the heart of the remaining pine barrens. The Albany pine barrens has been heavily urbanized, and only six of the original 40 square miles of barrens remain. The recent loss of 28 species of Lepidoptera has been documented (McCabe, et. al., 1993). Concern for the preservation of the remaining habitat has led to inventory work.

Scrub oak-pitch pine barrens have remarkable insect diversity (Wheeler, 1991). We recorded 36 species of robber flies from an area of approximately one square mile. By comparison, Bromley (1946) recorded 33 species from the Connecticut township encompassing Stamford, an area of 60 square miles, during a nearly 20-year period. The township took in a much greater and more diverse area than the Albany pine barrens.

Two species known from historical records, *Cyrtopogon laphriformis* Curran and *Promachus bastardii* (Macquart), were last recorded in 1914 and 1931, respectively. They are apparently extirpated. These two species have southeastern distributions. The Albany pine barrens' Lepidoptera that have been extirpated (McCabe, et al., 1993) are evenly split between those that are now found to be more northerly or more southerly in distribution. We believe that the witnessed changes in the fauna result from normal fluctuations in a given

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[1]Contribution number 732 of the New York State Science Service.

[2]Biological Survey, New York State Museum, State Education Department, Albany, NY 12230.

[3]Entomology Department, University of California, Davis, CA 95616.

species' distribution when at the periphery of their range, rather than a warming or cooling event.

Seventeen species of robber flies were collected on Albany's barrens for the first time, based on New York State Museum records, but ten of these were represented by less than six records and may have been missed by earlier collectors. *Cyrtopogon lutatius* (Walker), *Ommatius tibialis* Say, *Proctacanthus rufus* Williston, and *Machimus snowii* (Hine) are common species and thought to be recent colonizers. An introduced European species, *Dioctria baumhaueri* Meigen, is also common. *Cyrtopogon lutatius* (Walker), *Laphria cinerea* (Back), *L. virginica* (Banks), and *Proctacanthus rufus* Williston are all pitch pine ecological associates according to Bromley (1946). The loss of any of these four species would be indicative of a decline in the quality of habitat.

The records presented here are gleaned from the New York State Museum, the Albany Pine Barrens Entomological Project (supported by The Nature Conservancy), and the individual collecting efforts of the authors. All 1992 records were netted, the other recent records were taken by Malaise trap and historical records were presumably netted. The following list gives the earliest to latest dates of capture followed by the oldest to most recent year of capture, including collections through 1992. Females of some *Laphria* were not included because of the lack of identifying characters. Nomenclature follows Wood (1981).

List of the species of Asilidae from the Albany pine barrens.

Asilidae

Leptogastrinae

Leptogaster flavipes Loew. 8 records: 17 June–21 July; 1991-1992.
Leptogaster glabrata (Wiedemann). 9 records: 15 June–11 August; 1984–1992.

Dasypogoninae

Ceraturgus cruciatus (Say). 3 records: 28 June–19 July; 1931–1991.
Cyrtopogon falto (Walker). 48 records: 14 May–5 July; 1912–1992.
Cyrtopogon laphriformis Curran. 1 record: 11 June 1914.
Cyrtopogon lutatius (Walker). 32 records: 14 May–7 July; 1982–1992.
Cyrtopogon marginalis Loew. 38 records: 12 May–23 June; 1903–1992.
Dioctria baumhaueri Meigen. 57 records: 10 June–21 July; 1982–1992. An introduced species first recorded from Boston in 1916 (Bromley, 1946).
Diogmites basalis (Walker). 3 records: 20 July–30 August; 1984–1987.
Diogmites umbrinus Loew. 1 record: 1 September 1992.
Holopogon guttulus (Weidemann). 120 records: 25 May–22 July; 1912–1992.
Lasiopogon currani Cole & Wilcox. 21 records: 19 May–4 June; 1912–1992.
Lasiopogon terricola (Johnson). 3 records: 18 May–12 June; 1982–1992.

Laphriinae

Atomosia puella (Wiedemann). 5 records: 20 June–20 August; 1985–1992.
Cerotainia macrocera (Say). 3 records: 30 June–20 July; 1985–1986.
Laphria aktis McAtee. 4 records: 28 May–23 June; 1983–1992.
Laphria cinerea (Back). 3 records: 18 June–2 July; 1902–1985.
Laphria divisor (Banks). 3 records: 17 June–16 July; all 1992.

Laphria flavicollis Say. 3 records: 3 June–5 July; 1931–1992.
Laphria franciscana Bigot. 7 records: 23 June–7 August; 1991–1992.
Laphria index McAtee. 13 records: 11 June–19 July; 1981–1992.
Laphria posticata Say. 12 records: 11 June–1 August 1992; 1902–1992.
Laphria sadales Walker. 4 records: 25 June–21 July; 1983–1991.
Laphria thoracica Fabricius. 7 records: 9 June–11 July; 1931–1992.
Laphria virginica (Banks). 4 records: 3 June–4 August; 1923–1992.

Asilinae

Asilus erythrocnemius Hine. 3 records: 13 June–2 July; 1931–1991.
Efferia aestuans (Linnaeus). 20 records; 17 June–22 August; 1907–1992.
Machimus notatus (Wiedemann). 173 records: 13 June–11 August; 1912–1992.
Machimus sadyates (Walker). 6 records: 7 August–28 August; 1985–1991.
Machimus snowii (Hine). 102 records: 16 July–11 September; 1985–1992.
Neoitamus flavofemoratus (Hine). 151 records: 11 June–16 August; 1902–1992.
Neoitamus orphne (Walker). 1 record: 8 June 1981.
Ommatius tibialis Say. 24 records: 24 June–10 August; 1984–1992.
Proctacanthus philadelphicus Macquart. 31 records: 2 July–6 September; 1901–1992.
Proctacanthus rufus Williston. 10 records: 25 June–17 August; 1981–1992.
Promachus bastardii (Macquart). 1 record: 2 July 1931.

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