

RECORDS OF OHIO FLEAS (SIPHONAPTERA)^{1, 2}

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ABSTRACT

A check list of Ohio Siphonaptera is presented, with species distribution records listed by city or county. Twenty species and four subspecies are recorded from Ohio. *Chaetopsylla lotoris* (Stewart), *Conorhinopsylla stanfordi* Stewart, *Doratopsylla blarinae* C. Fox, *Epitedia wenmanni testor* (Rothschild), *Stenoponia americana* (Baker), *Peromyscopsylla scotti* I. Fox, and *Oropsylla arctomys* (Baker) are new state distribution records.

Early studies of fleas in Ohio are few. Fox (1940), in his comprehensive study, *Fleas of the Eastern United States*, listed 8 species from Ohio. Hughes, in an unpublished report (dated 1938), records 5 species. These records, plus occasional records from other authors, provide a list of 12 species of fleas from the state.

During this study, six hundred and five Siphonaptera from 20 species of mammals and 1 bird were examined. Four hundred and thirty-three specimens were collected by the author from mammals live-trapped during the period of March through December, 1964. The remaining specimens were either contributed by various individuals (60 specimens) or are in the entomological collections at The Ohio State University (110) or Ohio University (2). These specimens together with literature records on North American fleas provide a total of 20 species and 4 subspecies from Ohio. Seven species are reported for the first time from the state.

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SPECIES LIST

The siphonapteran nomenclature used herein follows Hopkins and Rothschild (1953, 1956, 1962). Mammalian nomenclature is from Miller and Kellogg (1955). Collections are abbreviated as follows: Ohio University (OU); The Ohio State University (OSU), literature record (author, year); all records with no collection cited are in possession of the author. F = female; M = male.

FAMILY PULICIDAE

Cediopsylla simplex (Baker):

ex. *Felis catus* L.

ATHENS CO. 7-IV-1965, 1M.

ex. *Sylvilagus floridanus mearnsi* (Allen)

ATHENS CO. 7-IV-1936, 2M (OU); 10-VI-1964, 1M; 2-VII-1964, 5F & 7M; 17-VII-1964, 2F & 2M; 23-VII-1964, 4F & 2M; 23-VII-1964, 1F.

JACKSON CO. 16-XI-1963, 1F & 1M.

ex. *Vulpes fulva* (Desmarest)

MEIGS CO. 18-VI-1938, 2F (Hughes, 1938).

ex. No host given

JACKSON CO. IV-1964, 1F & 1M.

OHIO. Pratt and Wiseman (1962).

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Ctenocephalides canis (Curtis):

ex. *Canis familiaris* L.

ATHENS CO. 19-VII-1938, 60 specimens; 26-VII-1938, 20 specimens (Hughes, 1938).

JACKSON CO. 18-VI-1938, 1F; 24-VII-1938, 20 specimens (Hughes, 1938). Summer-1964, 17F & 1M.

FRANKLIN CO. 17-II-1917, 2F (OSU).

ROSS CO. 28-VI-1923, 1F (OSU).

ex. *Gallus gallus* L.

LONDON. 18-VI-1897, 1F (OSU).

ex. *Vulpes fulva* (Desmarest)

MEIGS CO. 18-VII-1938, 1F (Hughes, 1938).

ex. No host given

AKRON. 18-IX-1936, 2F & 2M (Fox, 1940).

AKRON, Cincinnati, Geneva, Loveland. Trembly & Bishopp (1940).

JACKSON CO. IV-1964, 2F.

Ctenocephalides felis felis (Bouche):

ex. *Canis familiaris* L.

ATHENS CO. 30-VII-1964, 1F & 1M; VII-1964, 2F & 1M.

FRANKLIN CO. 3-X-1897, 1F (OSU).

JACKSON CO. Summer-1964, 33F & 4M.

NEWARK. 29-VIII-1927, 4F & 1M (OSU).

ex. *Didelphis marsupialis virginiana* Kerr

ATHENS CO. 21-IV-1964, 2F; 13-X-1964, 28F & 5M.

ex. *Felis catus* L.

BRUNSWICK. 27-V-1929 (Fox, 1940).

ATHENS CO. 19-VII-1938, 4 specimens (Hughes, 1938); 30-VII-1964, 6F & 5M; 25-I-1965, 1F.

FRANKLIN CO. 14-IV-1921, 1F & 1M (OSU).

ex. *Homo sapiens* L.

BRUNSWICK. 27-V-1929 (Fox, 1940).

JACKSON CO. 18-X-1964, 1F.

ex. No host given

AKRON. 18-IX-1936, 2F & 2M (Fox, 1940).

AKRON, Cincinnati, Cleveland, Columbus, Lima, Lorain, Marietta, Mayfield, Heights, Painesville, Steubenville, Tiltonsville, Willoughby, Wyoming. Trembly and Bishopp (1940).

CELINA. 17-VIII-1932, 2F & 4M (OSU).

CLEVELAND. 9-IX-1936, 1F & 2M (OSU).

CUYAHOGA CO. 8-X-1940, 7F & 2M (OSU).

CUYAHOGA FALLS. 3-XI-1931, 3F (OSU).

JACKSON CO. IV-1964, 1F & 2M.

OHIO. Pratt and Wiseman (1962).

Pulex irritans L.:

ex. *Canis familiaris* L.

JACKSON CO. 18-IV-1938, 1M (Hughes, 1938).

ex. *Felis catus* L.

FRANKLIN CO. 9-II-1918 (OSU).

ex. *Sus scrofa* L.

OHIO. IX-1895, 2F (OSU).

ex. No host given

CINCINNATI. 28-VI-1915 (Ewing, 1931).

CINCINNATI, Fremont, Pandora. Trembly and Bishopp (1940).

FRANKLIN CO. 3-X-1943, 1F & 1M (OSU).

SOMERFIELD. 21-VII-1943, 1F (OSU).

OHIO. VI-1923 (Ewing, 1931); Fox (1940); Pratt and Wiseman (1962).

Xenopsylla cheopis (Rothschild):

ex. *Canis familiaris* L.

JACKSON CO. 11-VI-1938, 1F (Hughes, 1938).

ex. *Rattus norvegicus* (Berkenhout)

ATHENS CO. 21-VI-1938, 4F & 6M; 23-VI-1938, 100 specimens; 24-VI-1938, 20 specimens (Hughes, 1938).

COLUMBUS. 1940. Runner (1941).

ex. No host given

YOUNGSTOWN. 10-VII-1938, 3F & 3M (Ewing and Fox, 1938); 12-VII-1938, 13F (OSU); Trembly and Bishopp (1940).

OHIO. Fox (1940); Pratt and Good (1954); Pratt and Wiseman (1962).

FAMILY VERMIPSYLLIDAE

- Chaetopsylla lotoris* (Stewart): Reported for the first time from Ohio.
 ex. *Procyon lotor* (L.)
 JACKSON CO. 17-X-1964, 6F.

FAMILY HYSTRICHOPSYLLIDAE

- Conorhinopsylla stanfordi* Stewart: Reported for the first time from Ohio.
 ex. *Glaucomyces volans* L.
 ATHENS CO. 10-X-1964, 3F & 2M.
 ex. *Procyon lotor* (L.)
 JACKSON CO. 17-X-1964, 1F & 1M.
- Ctenophthalmus pseudagyrtis pseudagyrtis* Baker:
 ex. *Blarina brevicauda* (Say)
 ATHENS CO. 25-VIII-1964, 1M.
 FAIRFIELD CO. 2-IV-1935, 1F (Fox, 1940).
 ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 20-III-1964, 2F; 11-V-1964, 1F.
 JACKSON CO. 30-III-1964, 3F & 3M.
 ex. *Scalopus aquaticus* L.
 FRANKLIN CO. X-1895, 1M (OSU); 29-VII-1900, 1F (OSU).
 OHIO. Jordan (1928); IX-1895, 1M (OSU).
 ex. *Synaptomys cooperi* Baird
 JACKSON CO. 21-III-1964, 1F.
 ex. *Tamias striatus* L.
 FRANKLIN CO. 10-III-1917, 1F (OSU).
- Doralopsylla blarinae* C. Fox: Reported for the first time from Ohio.
 ex. *Blarina brevicauda* (Say)
 ATHENS CO. 12-X-1964, 1M.
 JACKSON CO. 24-IV-1964, 2F.
- Epitedia wenmanni testor* (Rothschild): Reported for the first time from Ohio.
 ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 20-III-1964, 1F; 21-III-1964, 2F & 2M; 12-IV-1964, 1F; 26-X-1964, 1M;
 30-XII-1964, 1F; 30-XII-1964, 2F.
 JACKSON CO. 30-III-1964, 3F & 2M.
- Stenoponia americana* (Baker): Reported for the first time from Ohio.
 ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 11-I-1952, 1M; 20-III-1964, 2M; 15-XI-1964, 1M.
 ex. No host given
 OHIO. Jellison (1965). Jellison reports that Ohio specimens of this species were deposited in the USNM during 1964.

FAMILY LEPTOPSYLLIDAE

- Peromyscopsylla hesperomys hesperomys* (Baker):
 ex. *Peromyscus* sp.
 HOCKING CO. (Johnson & Traub, 1954).
 ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 11-I-1952, 1M; 18-III-1964, 4F & 2M; 18-III-1964, 3F & 1M; 20-III-1964, 3F & 8M; 20-III-1964, 5F & 3M; 21-III-1964, 2F; 25-V-1964, 1M; 26-V-1964, 1F; 25-IX-1964, 1M; 30-XII-1964, 2F.
- Peromyscopsylla scotti* I. Fox: Reported for the first time from Ohio.
 ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 6-IX-1964, 1F & 1M; 26-X-1964, 1F & 2M; 31-X-1964, 1M; 15-XI-1964, 1F & 1M; 15-2I-1964, 1F & 1M.
- Odontopsyllus multispinosus* (Baker):
 ex. *Vulpes fulva* (Desmarest)
 MEIGS CO. 18-VII-1938, 1F & 1M (Hughes, 1938).

FAMILY ISCHNOPSYLLIDAE

- Myodopsylla insignis* (Rothschild):
 ex. *Eptesicus fuscus* (Beauvois)
 CEDAR POINT. 5-VIII-1904, 2F; 5-VIII-1904, 2F & 2M (OSU).
 ex. *Myotis lucifugus* (LeConte)
 DELAWARE CO. VII-1952, 2F & 1M (Hopkins & Rothschild, 1956).
- Nycteridopsylla chapini* Jordan:
 ex. *Eptesicus fuscus* (Beauvois)
 HOCKING CO. 2-III-1951, 1F, (Lane, 1953).

FAMILY CERATOPHYLLIDAE

Nosopsyllus fasciatus (Bosc):

- ex. *Rattus norvegicus* (Berkenhout)
 CHILLICOTHE. 13-VII-1923, 15F & 9M (OSU).
 LANCASTER. 30-V-1935, 1F; 26-XI-1935, 1F (Fox, 1940).
 OHIO. 28-X-1886, 2F & 1M (OSU).
 ex. *Sciurus* spp.
 OHIO. Katz (1938).
 ex. No host given
 OHIO. Pratt and Good (1954); Pratt and Wiseman (1962).

Orchopeas howardii howardii (Baker):

- ex. *Glaucomyz volans* L.
 ATHENS CO. 10-X-1964, 10F & 4M.
 SCIOTO CO. 12-IV-1964, 4F.
 ex. *Sciurus carolinensis carolinensis* Gmelin
 ATHENS CO. 18-II-1964, 4F & 2M; 18-II-1964, 4F & 3M; 19-II-1964, 1F & 1M; 2-IX-1964, 1F & 2M; 11-IX-1964, 1F.
 VINTON CO. 24-I-1964, 1F & 3M; 24-I-1964, 1F; 28-I-1964, 3F & 3M; 30-I-1964, 1M; 24-IV-1964, 4F & 3M; 29-IV-1964, 10F & 17M; 29-IV-1964, 17F & 8M; 30-IV-1964, 14F & 3M; 30-VI-1964, 3F & 2M.
 ex. *Sciurus niger rufiventer* Geoffroy-Saint-Hilaire
 AKRON. 6-VI-1897, 1F (OSU).
 ATHENS CO. 30-X-1964, 3F.
 VINTON CO. 24-I-1964, 1F & 3M; 29-IV-1964, 11F & 1M; 29-IV-1964, 21F & 9M.
 ex. *Tamias striatus* L.
 SCIOTO CO. 29-III-1964, 1F.
 ex. No host given
 OHIO. Pratt and Wiseman (1962).

Orchopeas leucopus (Baker):

- ex. *Peromyscus leucopus noveboracensis* (Fischer)
 ATHENS CO. 18-III-1964, 1F; 20-III-1964, 1F; 24-III-1964, 1F; 26-III-1964, 1M; 12-IV-1964, 1F & 1M; 12-IV-1964, 6F; 13-IV-1964, 2F; 14-IV-1964, 1M; 27-V-1964, 1F; 11-V-1964, 2F; 11-VI-1964, 4F & 1M; 6-IX-1964, 1F & 2M; 6-IX-1964, 1F & 1M; 26-X-1964, 1M; 15-X-1964, 2M; 15-X-1964, 1F & 3M; 15-X-1964, 2F & 2M.
 FAIRFIELD CO. 23-IV-1935, 1M (Fox, 1940). London. 30-V-1905, 5F & 2M (OSU).

Oropsylla arctomys (Baker): Reported for the first time from Ohio.

- ex. *Marmota monax monax* L.
 JACKSON CO. 14-VIII-1965, 2F & 1M.
 ex. No host given
 OHIO: Jellison (1965). Jellison reports that specimens of this species were deposited in USNM in 1964.

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