

The Fleas (Insecta: Siphonaptera) of Plummers Island, Maryland

Author(s): Ralph P. Eckerlin

Source: Bulletin of the Biological Society of Washington, 15(1):158-159.

Published By: Biological Society of Washington

DOI: [http://dx.doi.org/10.2988/0097-0298\(2008\)15\[158:TFISOP\]2.0.CO;2](http://dx.doi.org/10.2988/0097-0298(2008)15[158:TFISOP]2.0.CO;2)

URL: <http://www.bioone.org/doi/full/10.2988/0097-0298%282008%2915%5B158%3ATFISOP%5D2.0.CO%3B2>

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

The Fleas (Insecta: Siphonaptera) of Plummers Island, Maryland

Ralph P. Eckerlin

Natural Sciences Division, Northern Virginia Community College,
Annandale, Virginia 22003, U.S.A.,
e-mail: reckerlin@nvcc.edu

Abstract.—The published records of the fleas (Siphonaptera) known to occur on Plummers Island, Montgomery County, Maryland are reviewed. *Peromyscopsylla scotti* is reported for the first time, bringing the total number of species known from the Island to ten.

Key words.—Karl Jordan, new record, mammal hosts, Ctenophthalmidae, Ceratophyllidae, Leptopsyllidae, Ischnopsyllidae, Pulicidae.

Karl Jordan was one of the paramount entomologists of the 20th century. He worked with the Rothschild brothers at the Tring Museum in England. With Walter Rothschild he studied and described butterflies, and with Nathan Charles Rothschild he studied and described fleas. After the death of N. C. Rothschild, Jordan continued to work on Siphonaptera at Tring until his death at age 98. The Rothschild collection was merged with, and is now housed at, The Natural History Museum (BMNH), London, formerly the British Museum of Natural History.

In the spring of 1927, Jordan made a trip to the United States to study flea specimens in the U.S. National Museum of Natural History (USNM) collection and to do a little flea collecting. In the company of Herbert S. Barber in May 1927, he visited Plummers Island several times to collect fleas (Jordan 1928). He collected 2 species, *Ctenophthalmus pseudagyrtis* Baker, 1904 and *Orchopeas leucopus* (Baker, 1904), the specimens of which are deposited in the BMNH collection. While at the USNM, Jordan probably became acquainted with Albert K. Fisher, Raymond C. Shannon, and Alexander Wetmore, all members of the Washington Biologist's Field Club. It was primarily these gentlemen who collected flea specimens from Plummers Island and gave them, or sent them, to Jordan.

Fleas of the eastern United States were treated in a monograph by Fox (1940) who listed 7 species from Plummers Island based on specimens in the USNM collection. Two species found in the BMNH were reported by Hopkins & Rothschild (1962, 1966). One additional species deposited in the Robert Traub flea collection, now at the Carnegie Museum of Natural History (CMNH), is reported for the first time. Thus, a total of 10 species is known from Plummers Island. The purpose of this paper is to present an annotated list of those 10 species. Mammal names of the hosts follow Kays & Wilson (2002).

Family Ctenophthalmidae

Ctenophthalmus pseudagyrtis Baker, 1904

Specimens of this species were collected by Jordan on 14 May 1927 from the woodland vole, *Pitymys* (= *Microtus*) *pinetorum* (Jordan 1928). Three slide-mounted males and numerous females in alcohol are in the BMNH collection (Hopkins & Rothschild 1966). There also are 2 ♀, ex nest of white-footed deermouse, *Peromyscus leucopus*, 14 May 1927, K. Jordan (Hopkins & Rothschild 1966). Both of these records are erroneously listed as from Virginia by Hopkins & Rothschild (1966:536). There also is 1 ♀, in nest probably of "*Scalopus aquaticus*," the eastern mole, 3 September 1921; 1 ♂, 1 ♀, ex *Microtus* sp., H. S. Barber (Fox 1940); and 1 ♂, "in leaf litter," 2 March 1924, Shannon, in the Robert Traub collection (CMNH).

Stenoponia americana (Baker, 1899)

This is a large winter flea on mice and voles. All the Island records were taken during the cold months of the year, including 1 ♀, ex *Peromyscus leucopus*, 22 February 1928, A. Wetmore; 1 ♀, ex *P. leucopus*, 6 February 1927, H. S. Barber; 1 ♂, ex *P. leucopus*, 1 January 1930, A. K. Fisher; 2 ♂, 1 ♀, ex house mouse, *Mus musculus*, 30 December 1915, R. C. Shannon (Fox 1940). Additional records are 2 ♀, ex *P. leucopus*, received from A. K. Fisher; and 1 ♀, ex house mouse, 5 December 1905, H. S. Barber (BMNH) (Hopkins & Rothschild 1962).

Epitedia wenmanni testor (Rothschild, 1915)

This is a widespread parasite on mice, voles, shrews, and moles in the eastern United States. Records from Plummers Island include 1 ♂, 1 ♀, ex *Peromyscus* sp., A. K. Fisher (Hopkins & Rothschild 1962) (BMNH).

Doratopsylla blarinae C. Fox, 1914

As suggested by the common name, this is the common flea on the northern short-tailed shrew, *B. brevicauda*. Records from Plummers Island include 1 ♂, 1 ♀, ex northern short-tailed shrew, *Blarina brevicauda*, 10 March 1918, A. Wetmore (BMNH) (Hopkins & Rothschild 1966).

Family Ceratophyllidae

Orchopeas howardi (Baker, 1895)

This is the common flea on sciurids in eastern North America. Plummers Island records include 1 ♀, ex "man," 25 April 1915, R. C. Shannon; 3 ♂, ex "Woodchuck" (= *Marmota monax*), 19 May 1913, H. S. Barber (Fox 1940).

Orchopeas leucopus (Baker, 1904)

This species was collected by Jordan in May 1927 from *Peromyscus leucopus*, the white-footed deer-mouse, its true host (Jordan 1928). The specimens are deposited in the BMNH collection. Fox (1940) lists 1 ♀, 2 ♂, ex *Peromyscus leucopus*.

Orchopeas pennsylvanicus (Jordan, 1928)

It is believed that the population of woodrats on Plummers Island has been extirpated, so it is unlikely that this host-specific flea still exists on the Island. Records include 1 ♂, ex *Neotoma pennsylvanica* (= *Neotoma magister*), the eastern woodrat, 26 April 1921, A. Wetmore (Fox 1940).

Family Leptopsyllidae

Peromyscopsylla scotti I. Fox, 1939

This is the first report of this species from Plummers Island. The record is 1 ♀, ex nest of *Peromyscus* sp., 22 February 1915, Barber and Shannon. It is cataloged as Number 5926 in the Robert Traub collection at the CMNH.

Family Ischnopsyllidae

Myodopsylla insignis (Rothschild, 1903)

Bats of the genus *Myotis* are the normal hosts of this common species in eastern North America. Plummers Island records include 3 ♂, 2 ♀, ex "bat," 1 August 1923 (Fox 1940).

Family Pulicidae

Cediopsylla simplex (Baker, 1895)

This is the characteristic flea of cottontail rabbits in eastern North America. Records include a specimen "on man," 5 August 1915, H. S. Barber (Fox 1940); 2 ♂, 1 ♀, ex *Sylvilagus floridanus mallurus*, the eastern cottontail, 10 December 1919, A. Wetmore, a gift from E. A. Chapin to the Tring collection now in the BMNH (Hopkins & Rothschild 1953).

Acknowledgments

I thank the Washington Biologists' Field Club for support of this project. Two reviewers provided helpful comments on the manuscript.

Literature Cited

- Fox, I. 1940. Fleas of eastern United States. Iowa State College Press, Ames, 191 pp.
- Hopkins, G. H. E., & M. Rothschild. 1953. An illustrated catalogue of the Rothschild collection of fleas (Siphonaptera) in the British Museum. Volume I Tungidae and Pulicidae, Cambridge University Press, London, 361 pp.
- , & ———. 1962. An illustrated catalogue of the Rothschild collection of fleas (Siphonaptera) in the British Museum. Volume III Hystrichopsyllidae, Cambridge University Press, London, 560 pp.
- , & ———. 1966. An illustrated catalogue of the Rothschild collection of fleas (Siphonaptera) in the British Museum. Volume IV Hystrichopsyllidae concluded, Cambridge University Press, London, 549 pp.
- Jordan, K. 1928. Siphonaptera collected during a visit to the eastern United States of North America in 1927.—*Novitates Zoologicae* 34:178–188.
- Kays, R. W., & D. E. Wilson. 2002. *Mammals of North America*. Princeton University Press, Princeton, New Jersey, 240 pp.