

## SIPHONAPTERA (FLEAS) COLLECTED FROM SMALL MAMMALS IN MONTANE SOUTHERN UTAH

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Recent collections from various small mammals of southern Utah have helped to elucidate the distribution of fleas (Siphonaptera) within the state. Of special interest were fleas of mammals found in forested, high-mountain areas of the southernmost part of Utah—an area of complex topography containing habitat varying from low desert to subalpine coniferous forests. In particular, we sampled the small mammal flea fauna of the Abajo Mountains (San Juan County), the La Sal Mountains (Grand/San Juan counties), and the Pine Valley Mountains (Washington County). These ranges have been sparsely surveyed in this respect, as evidenced by review of the seminal work of Stark (1959). After excluding 22 records (13 ♂♂, 37 ♀♀) of the ubiquitous deer mouse flea *Aetheca wagneri* (Baker), which occurs in all counties of Utah (Beck 1955), we present and discuss the significance of 42 new records of 12 species of fleas. A parallel survey of fleas found in mammal nests will be presented elsewhere (Haas and Kucera, in preparation).

Mammal nomenclature is that of Hall (1981). However, designations of long-tailed vole subspecies should be considered tentative because of the present confused state of their taxonomy. Mammals were collected with Sherman live-traps at all localities except Pines campground, Pine Valley Mountains, and snap-traps were used at all three localities in the Pine Valley Mountains and at Oowah Lake campground, La Sal Mountains. An asterisk (°) denotes that the host specimen (or at least one host specimen) was deposited in the mammal collection of the University of Utah Museum of

Natural History. Flea specimens are retained by the authors.

*Hystrichopsylla dippiei truncata*  
Holland, 1957

*Peromyscus maniculatus rufinus*. San Juan Co.: Abajo Mts., Dalton Springs campground, 2560 m, 8 September 1991; 1 ♂. *Microtus longicaudus alticola*°. idem, 1 ♀.

*Hystrichopsylla occidentalis sylvaticus*  
Campos & Stark, 1979

*Peromyscus boylii utahensis*°. Washington Co.: Pine Valley Mts., North Juniper Park campground, 2122 m, 10 November 1991; 3 ♀♀. *Peromyscus maniculatus sonoriensis*. Washington Co.: Pine Valley Mts., Pines campground, 2079 m, 12 June 1991; 1 ♀.

Fleas of the genus *Hystrichopsylla* are found on a variety of small mammals in mesic to moist habitats. These are the first records of *H. dippiei truncata* from southeastern Utah. Campos and Stark (1979) record *H. o. sylvaticus* from San Juan Co., but our records of this taxon are the first from southwestern Utah.

*Corrodopsylla curvata curvata*  
(Rothschild, 1915)

*Sorex palustris navigator* (Baird)°. Grand Co.: LaSal Mts., meadow at Oowah Lake, 2769 m, 15 June 1991; 1 ♂, 1 ♀ from each of two shrews.

The only previous published records from Utah of *C. c. curvata* are both from northern Utah: Rich Co. (Bear Lake; collection by Stanford published by Tipton and Allred [1951: 107]) and Salt Lake Co. (Wasatch Mts.; Egoscue 1988). These records are from unidentified

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*Sorex* spp. Records of *C. c. obtusata* ex water shrews are given from Tooele Co. by Egoscue (1966, 1988). Published records of *C. c. curvata* from southwestern states are sparse: Haas et al. (1973) record it from New Mexico. Additional collecting may reveal its presence in the Abajo Mts., since water shrews are known to occur there (Schafer 1991).

*Rhadinopsylla sectilis sectilis*  
(Jordan & Rothschild, 1923)

*Peromyscus maniculatus sonoriensis*. Washington Co.: Pine Valley Mts., North Juniper Park campground, 2119 m, 10 November 1991; 1 ♂.

This species is known from only one area of southern Utah (Garfield Co., vic. Panguitch, Stark 1959), but not previously from southwestern Utah. This specimen possesses 5 spines in the genal comb, as do other Utah specimens (Stark 1959, and unpublished data), but characters of the genitalia are clearly referable to *R. s. sectilis* rather than *R. s. goodi* (Hubbard 1941). Stark (1959) noted that the genal spine number of Utah specimens is not consistent with the original description of *R. s. sectilis*.

*Catallagia decipiens* Rothschild, 1915

*Peromyscus maniculatus rufinus*. San Juan Co.: Abajo Mts., Dalton Springs campground, 2560 m, 8 September 1991; 1 ♂. *P. m. rufinus*. idem, 1 ♂. *Tamias* sp. idem, 2 ♂♂. *P. m. rufinus*. Grand Co.: LaSal Mts., Oowah Lake campground, 2682 m, 15 June 1991; 1 ♂, 2 ♀♀.

These are apparently the first specific records published for that part of Utah south of the Colorado River. Beck (1955: Table 3) lists it as occurring in San Juan County.

*Peromyscopsylla selenis* (Rothschild, 1906)

*Peromyscus maniculatus rufinus*. San Juan Co.: Abajo Mts., Dalton Springs campground, 2560 m, 8 September 1991; 1 ♂. *Microtus longicaudus alticola*°. idem, 1 ♂. *M. l. alticola*. idem, 1 ♀. *M. l. latus*. Washington Co.: Pine Valley Mts., Pines campground, 2079 m, 12 June 1991; 2 ♂♂, 1 ♀.

This species was not previously known from Utah south of the Colorado River. Johnson and Traub (1954) give a record from Iron County, bordering Washington County to the north. This species is most commonly collected from *Microtus* spp., but also from other small mammals sympatric with the voles.

*Peromyscopsylla hesperomys adelpha*  
(Rothschild, 1915)

*Peromyscus maniculatus rufinus*. Grand Co.: LaSal Mts., Oowah Lake campground, 2682 m, 15 June 1991; 1 ♂, 2 ♀♀.

Johnson and Traub (1954) record this species from Beaver, Box Elder, Millard, San Juan, and Washington counties.

*Opisodasys keeni* (Baker, 1896)

*Peromyscus maniculatus sonoriensis*. Washington Co.: Pine Valley Mts., N Juniper Park campground, 2119 m, 10 November 1991; 1 ♀ from each of three hosts. *Peromyscus boylii rowleyi*. idem (2122 m.), 3 ♀♀. *P. m. sonoriensis*. Washington Co.: Pine Valley Mts., Pines campground, 2079 m, 11 June 1991; 1 ♀. *P. m. sonoriensis*. idem, 12 June 1991, 1 ♀. *P. m. sonoriensis*. idem, 1 ♂. *Peromyscus crinitus* ssp. Washington Co.: below dam at Baker Dam Reservoir, foothills of Pine Valley Mts., 1463 m, 12 May 1991; 1 ♀.

No known records of this species from southern Utah are published other than that of Hubbard (1947:111, Garfield Co.). Stark (1959) noted that this species is collected only in mountainous areas or moist habitats. We have also found this to be true (unpublished data). *Peromyscus* spp. are the usual host.

*Malaraeus telchinus* (Rothschild, 1905)

*Peromyscus maniculatus sonoriensis*. Washington Co.: Pine Valley Mts., N Juniper Park campground, 2119 m, 10 November 1991; 2 ♂♂, 1 ♀. *P. m. sonoriensis*. idem, 1 ♂, 1 ♀. *P. m. sonoriensis*. idem, 2 ♀♀. *P. m. sonoriensis*. idem, 1 ♀. *Peromyscus boylii rowleyi*. idem, 1 ♀.

*Malaraeus sinomus* (Jordan, 1925)

*Peromyscus crinitus* ssp. Washington Co.: below Baker Dam Reservoir, foothills of Pine Valley Mts., 1463 m, 11 May 1991, 1 ♂, 4 ♀♀. *P. crinitus* ssp. idem, 12 May 1991, 1 ♂, 2 ♀♀. *P. crinitus* ssp. idem, 1 ♂, 4 ♀♀. *Peromyscus truei truei*. idem, 3 ♀♀. *P. t. truei*. idem, 1 ♂, 2 ♀♀. *P. boylii rowleyi*. idem, 1 ♂. *P. boylii rowleyi*. idem, 2 ♀♀.

Beck (1955: Table 3) lists *Malaraeus telchinus* as occurring in Washington County. Hubbard (1947: 200) gives the only specific record from southern Utah (Garfield Co.). However, several records of *M. sinomus* from desert areas of southern Utah are given by Stark



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