

# CONTRIBUTIONS FROM THE LOS ANGELES MUSEUM - CHANNEL ISLANDS BIOLOGICAL SURVEY

## No. 20 THREE NEW FLEAS (SIPHONAPTERA)

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Preliminary work on the ectoparasite material collected by members of the Channel Island Biological Survey has uncovered fleas apparently new to science, which are here described and illustrated. All illustrations were completed with the aid of a camera lucida, all measurements with an ocular micrometer.

The writer at this time wishes to express his appreciation to all members participating in this survey, particularly to Dr. John A. Comstock, Dr. W. D. Pierce, and Mr. J. C. von Bloeker, for their considerate cooperation and constant aid.

### DOLICHOPSYLLIDAE

#### OPISODASYNS NESIOTUS n. sp.

Male (Holotype)

HEAD. Frons somewhat angulate, frontal notch weakly indicated. Preantennal region with two rows of bristles, 7 irregular medium bristles in upper row, 3 much larger bristles in the lower row. Postantennal region with one row of 4 subequal, medium bristles, and one much larger between the first bristle of the above row and the antennal groove. Labial palpi slightly shorter than fore coxa.

BODY AND LEGS. Pronotum with 10 ctenidia on a side. Two antepygial bristles, the medial two-thirds longer than the outer. All tarsal segments, as well as rest of all leg segments, as in other members of the genus.

MODIFIED ABDOMINAL SEGMENTS. Best identified by accompanying illustrations of modified abdominal segments composing the genitalia (Plate 6, figs. 4 and 5). This species differs here from the closely related *O. keeni* in that the movable finger is of shorter length compared to the height of the process of the clasper; in that the anterior face of the finger is more deeply concave, and upper and lower posterior angles of same are more evenly rounded; and in that the lower spiniform of the finger is more attenuated and somewhat curved downward; and in that the VIII sternite has 2 terminal bristles, and a bifurcated membranous flap.



## Female (Allotype)

HEAD. Frons more evenly rounded than in male, frontal notch as in male. Upper row of preantennal bristles 5 only, lower row as in male. Postantennal region with one row of 2 medium bristles and one weaker bristle, with large bristle between row and antennal groove as in male.

BODY AND LEGS. Three antepygial bristles, the upper one-third that of the middle, the latter slightly longer than the lower. Pronotum and legs as in male.

MODIFIED ABDOMINAL SEGMENTS. Sternite VII differing from that of *O. keeni* in the much deeper sinus, protruded lower lobe, and in the number and arrangement of the bristles (Plate 6, fig. 3).

Holotype: Male, number 1939-582 L. A. M., from *Peromyscus maniculatus elusus* Nelson and Goldman; collector, J. C. von Bloeker; location, Santa Barbara Island, California, May 28, 1939. Deposited in the Los Angeles County Museum, Los Angeles, California.

Allotype: Female, number 1939-1120 L. A. M., from *Peromyscus maniculatus sanctaerosae* von Bloeker; collector, J. C. von Bloeker; location, Santa Rosa Island, Santa Barbara County California, August 8, 1939. Deposited by the Los Angeles County Museum, Los Angeles, California.

Type Host: *Peromyscus maniculatus elusus* Nelson and Goldman.

Type Locality: Santa Barbara Island, Los Angeles County, California.

Paratypes: 35 males, 28 females in the Los Angeles County Museum Collection. 5 males, 6 females in author's collection (distribution and host records to follow in a later report).

Measurements: length, male (holotype) 3 mm.; length, female (allotype), 2.4 mm.

Discussion. The wide distribution over the Channel Islands gives this parasite its name from the Greek word for "Islander."

The position and diagnosis of fleas of the genus *Opisodasys* has recently been greatly strengthened by Dr. William Jellison's excellent report, "Opisodasys Jordan 1933, A Genus of Siphonaptera," Jour. of Parasitology, Oct., 1939, Vol. XXV, No. 5, pages 413-420, plates I-III. Also by Dr. I. Fox's still more recent "A New Opisodasys From Idaho (Siphonaptera: Dolichopsyllidae)," Ent. News, Vol. LII, No. 2, pages 45-46, 4 figs. The latter in-



cludes a key (males only) into which *O. nesiotus* can be incorporated as follows (last portion only):

- 5. Sternal plate VIII with one apical bristle ..... *O. keeni*  
Sternal plate VIII with two apical bristles ..... *O. nesiotus*  
Sternal plate VIII without an apical bristle ..... *O. enoplus*

## HYSTRICHOPSYLLIDAE

### CATALLAGIA VONBLOEKERI n. sp.

#### Male (Holotype)

Frons well rounded, the peglike frontal notch prominent. Preantennal region with two rows of bristles, 4-5 medium bristles in the upper row, 3 much stouter bristles in the lower. Postantennal region with three rows of bristles 4-6 in each, all at an oblique angle to the occiput. Pronotum with 13 ctenidia. Labial palpi six segmented, not reaching apex of fore coxa. Three antepygidial bristles, the outer two subequal, one-half the length of the middle. Best identified by the modified abdominal segments. Sternite IX close to *C. chamberlini*, differing in the blunt, not curved, first tooth of the apical group, presence of a spine like bristle in this group, and a small plateau area (Plate 6, fig. 1).

#### Female (Allotype)

Chaetotaxy of head as in male, frons more gently rounded. Pronotum with 13 ctenidia. Three antepygidial bristles, the one most proximal to the medial line one-half the length of one most distal, which in turn is one-half the length of the middle bristle. Style tapering slightly from base to apex, the total length exceeding the width of the base by two and one-half times. Sternite VII close to that of *C. decipiens*, differing in the weaker upper lobe and in the number of bristles on a side—*C. decipiens* having 6-7 large bristles in the posterior row, 12-14 small bristles in the anterior row, *C. vonbloekeri* with 5-6 in posterior row, and only 3-4 in the anterior row (Plate 6, fig. 2).

Holotype: Male, number 1939-1120 L. A. M., from *Peromyscus maniculatus sanctaerosae* von Bloeker; collector, J. C. von Bloeker; location, Santa Rosa Island, California; August 8, 1939. Deposited in the Los Angeles County Museum, Los Angeles, California.

Allotype: Female, number 1939-1120 L. A. M. (as above). Deposited in the Los Angeles County Museum, Los Angeles, California.

Type Host: *Peromyscus maniculatus sanctaerosae* von Bloeker.

Type Locality: Santa Rosa Island, Santa Barbara County, California.

Paratypes: 1 male, 1 female, number 1939-1120 L. A. M. (as above). Deposited in the Los Angeles County Museum, Los Angeles, California.



Measurements: length, male (Holotype) 1.7 mm.; length, female (Allotype) 2.2 mm.

Discussion: The species is named in honor of Mr. J. C. von Bloeker, Mammalogist, Los Angeles Museum. To facilitate comparison of this new *Catallagia* and other west coast members of the genus the reader is referred to Dr. C. A. Hubbard's fine review "West Coast *Catallagias*" *Pac. Univ. Bull.*, Vol. XXXVII, No. 3, May, 1940.

## ISCHNOPSYLLIDAE

### MYODOPSYLLOIDES new genus

Head like that of *Myodopsylla*; differing in the slightly attenuate frons with a weak indentation above the oral flaps, the single row of four bristles in the postantennal region, and the fewer number of small bristles in the preantennal region. Maxilla truncate. Labial palpi six segmented. Metaepimerum longer than high, with only two stout bristles and one medium bristle on the posterior margin, making a total of seven bristles in all on a side; with only a single vertical bar. Metanotum with six minute teeth on its dorsal, posterior margin. Six similar teeth on first abdominal tergite, four on second, and two on third. Other vestiges of ctenidia lacking. Abdominal tergites with internal incrassations, particularly evident in segments two and three of females and one to seven inclusive in males. Abdominal sternites without incrassations. Clasper of males knob-like posterior to manubrium. Spermatheca of females with globular head not much thicker than curved tail (Plate 7).

Genotype: *Myodopsyllodes piercei* Augustson.

### MYODOPSYLLOIDES PIERCEI n. sp.

#### Male (Holotype)

HEAD. Eye vestigial, anterior lower portion with a small hook like process. Preantennal region with one very long bristle just above the eye, three medium bristles continuing row obliquely toward outer angle of frons. Anterior to this row 4-5 scattered small bristles. Postantennal region with one row of four bristles. Posterior margin of occiput with six medium bristles and two small bristles. In addition three bristles of different sizes on the process of the union of the margin of the occiput and antennal groove. Genal process sharply pointed, heavily pigmented. Oral flaps large, subequal, the inner slightly longer and more pointed than the outer (Plate 7, fig. 4).

BODY AND LEGS. Pronotal ctenidium of ten slender spines on a side. A single antepygidial bristle. Outer surface of all tibiae with a single row of subequal bristles. Hind tarsus V with six pair lateral plantar bristles, the first pair dislocated toward the medial line, the last pair slender.



MODIFIED ABDOMINAL SEGMENTS. Base of sternite VIII very broad; outer portion acutely rounded, with many long bristles curved at their ends, and two patches of small stout bristles along the outer ventral boarder of same. Clasper greatly constricted at its union with manubrium forming a knot-like structure. Finger small, completely hidden by clasper. Base of sternite IX weak, fusing with that of VIII, divided into two posterior processes, the ventral short with an outer row of many short bristles, the upper long with a single normal bristle.

Female (Allotype)

HEAD. As in male.

BODY AND LEGS. Pronotum as in male. Tibia as in male. A single antepygial bristle as in male. Hind tarsus as in male.

MODIFIED ABDOMINAL SEGMENTS. Sternite VII somewhat sharply angulate, without sinus. Bursa copulatrix weakly doubled, curved. Sternite VIII with 16-17 stout bristles. Ventral edge of Sternite X not distinctly angulate, with 5-6 stout bristles. Style length about two and one-half times its greatest width, with one long terminal bristle, one much shorter slightly below, and another somewhat longer than the second and slightly below and opposite (Plate 7, fig. 3).

Holotype: Male, number 1939-1068c L. A. M., from *Antrozous pallidus pacificus* Merriam; collector, J. C. von Bloeker; location, Santa Cruz Island, California, August 17, 1939. Deposited in the Los Angeles County Museum, Los Angeles, California.

Allotype: Female, number 1939-1068c L. A. M., (as above). Deposited in the Los Angeles County Museum, Los Angeles, California.

Type Host: *Antrozous pallidus pacificus* Merriam.

Type Locality: Santa Cruz Island, Santa Barbara County, California.

Paratypes: 2 females, number 1939-1068c (as above). Deposited in the Los Angeles County Museum, Los Angeles, California. 3 males in the writer's collection, number 38-6 GA, from *Antrozous pallidus pacificus* Merriam; collector, G. Augustson; location, Santa Cruz Island, California. August 8, 1938. Also one male in writer's collection, number 39-36 GA, from *Corynorhinus rafinesquii intermedius* Grinnell; collector, G. P. Ashcraft; location, Santa Cruz Island, California, August 19, 1939.

Measurements: length, male (Holotype) 2.5 mm.; length, female (Allotype) 3.2 mm.

Remarks: Named in honor of Dr. W. D. Pierce, Senior Curator of Entomology, Los Angeles Museum.



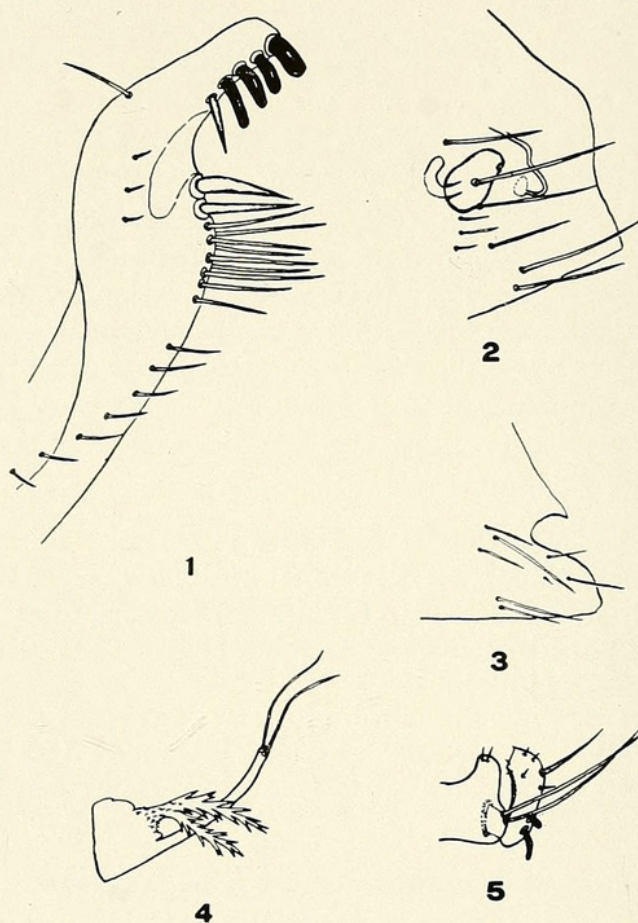


PLATE 6

- Fig. 1. *Catallagia vonbloekeri* Aug., sternite IX, male.  
 Fig. 2. *Catallagia vonbloekeri* Aug., sternite VII, female.  
 Fig. 3. *Opisodasys nesiotus* Aug., sternite VII, female.  
 Fig. 4. *Opisodasys nesiotus* Aug., sternite VIII, male.  
 Fig. 5. *Opisodasys nesiotus* Aug., movable finger, male.



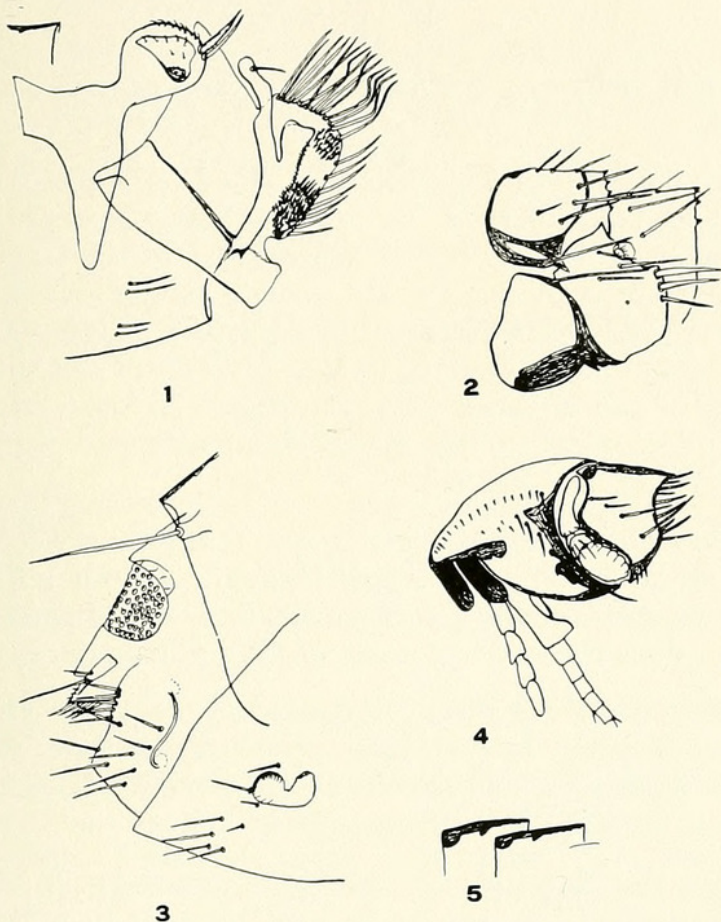


PLATE 7

Fig. 1. *Myodopsylloides piercei* Aug., male genitalia.

Fig. 2. *Myodopsylloides piercei* Aug., metanotum, metaepimerum, first abdominal tergite, male.

Fig. 3. *Myodopsylloides piercei* Aug., posterior extremity of female.

Fig. 4. *Myodopsylloides piercei* Aug., head of male.

Fig. 5. *Myodopsylloides piercei* Aug., abdominal tergites II and III, male.



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