

A NEW SPECIES OF *BOVICOLA*
(MALLOPHAGA: TRICHODECTIDAE) FROM THE
FORMOSAN SEROW, *CAPRICORNIS CRISPUS SWINHOEI*
(ARTIODACTYLA: BOVIDAE)

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Abstract. A new species of chewing louse, *Bovicola orientalis*, is described and illustrated from specimens taken off the bovid *Capricornis crispus swinhoei* on the island of Taiwan and is compared with *B. thompsoni* and *B. dimorpha*, the other known species in the *B. thompsoni* group.

We have received several series of *Bovicola* lice from the Formosan Serow, *Capricornis crispus swinhoei* Gray (Bovidae), which represent a new species. It is our intent to describe and illustrate this new species here. Measurements and setal counts given below represent those from 10 specimens of each sex.

***Bovicola orientalis* Emerson & Price, new species**

Fig. 1-3

Type-host: *Capricornis crispus swinhoei* Gray.

♂. External morphology and chaetotaxy as in Fig. 1. *Head* with medioanterior indentation; width greater than length. Antenna with very large basal segment, remaining 2 segments slender, shorter. Numerous short setae scattered on dorsal surface. Temples angular, slightly wider than preantennal region. Head width 0.59-0.64 mm, length 0.45-0.48 mm. *Prothorax* short, narrow, with few short marginal setae. Pterothorax slightly larger, with row of short setae on dorsal posterior margin. *Abdomen* elongate, oval-shaped, with 6 pairs of spiracles. Single row of short setae on tergites I-VIII, with numbers as follows: I, 9-12; II, 24-30; III, 28-40; IV, 30-40; V, 35-40; VI, 30-37; VII, 22-34; and VIII, 24-33. Single row of short setae on sternites II-VIII, with numbers as follows: II, 10-13; III, 22-28; IV, 25-34; V, 25-33; VI, 24-29; VII, 16-25; and VIII, 15-17. Pleurites well developed on II-VIII, with mostly short setae. Small median plate on tergites III-VI and sternites III-IV. Terminal segment with patch of numerous short setae dorsally, without setae ventrally. Genitalia with symmetrically tapered parameres and prominent armed sac, as in Fig. 2. Abdominal width 0.83-0.89 mm. Total length 1.89-1.97 mm.

♀. External morphology and chaetotaxy as in Fig. 3. *Head* with medioanterior indentation; width greater than length. Antenna slender, shorter than for ♂. Lateral margin of preantennal region slightly curved, each side variably with even to slightly indented margin. Temples rounded, somewhat wider than preantennal portion. Fewer small setae scattered on dorsal surface than for ♂. Head width 0.55-0.64 mm, length 0.47-0.53 mm. *Prothorax* short, narrow, with few short marginal setae. Pterothorax larger, with row of short setae on dorsal posterior margin. *Abdomen* elongate, oval-shaped, with 6 pairs of spiracles. Single row of short setae on tergites I-VIII, with numbers as follows: I, 5-8; II, 22-30; III, 28-34; IV, 22-40; V, 26-38;

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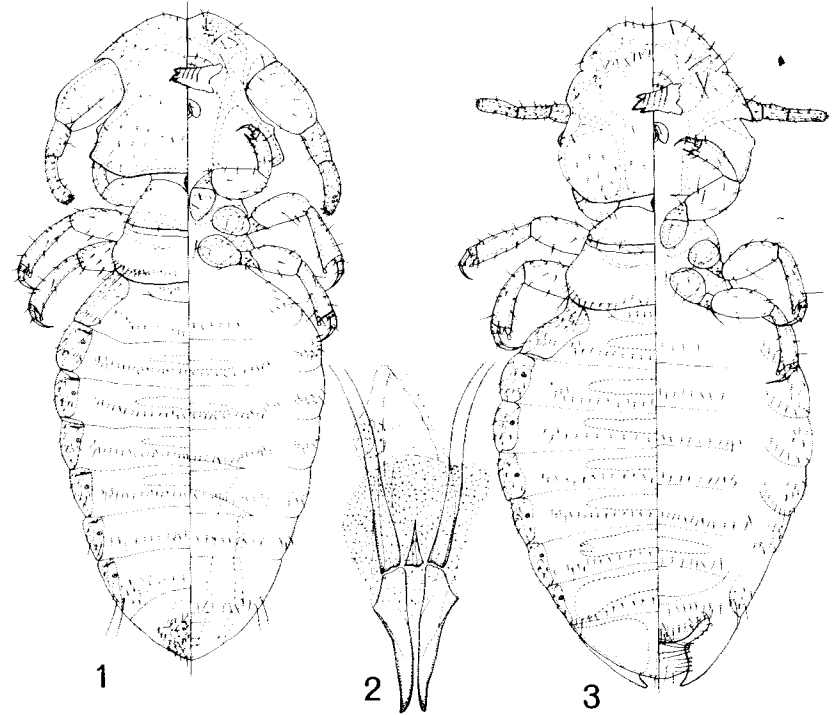


FIG. 1-3. *Bovicola orientalis*: 1, ♂; 2, ♂ genitalia; 3, ♀.

VI, 26-35; VII, 24-36; and VIII, 20-26. Single row of short setae on sternites II-VII, with numbers as follows: II, 7-9; III, 16-21; IV, 20-28; V, 20-27; VI, 23-28; and VII, 15-26. Pleurites II-VIII well developed, with mostly short setae. Terminal abdominal segment without dorsal setae. Chaetotaxy of gonapophyses as in Fig. 3, with total of 12-17 setae on median and anterior margin of each. Abdominal width 0.85-0.99 mm. Total length 1.81-2.00 mm.

Holotype ♂, allotype ♀, off *Capricornis crispus swinhoei*, TAIWAN (FORMOSA): Puli, 2.I.1964 (U.S. National Museum of Natural History). Paratypes: TAIWAN (FORMOSA): 64, same data as holotype; 174, same except 24.II.1959; 2, same except 9.VI.1960; 48, 1-Lan, 3.XI.1960; 12, same except 26.X.1960; 46, Chou Sheh, 25.IV.1959; 4, Fu Yaun, 14.IV.1960; 2, Lung Chien, 2.III.1960; 2, Juihui Hualien, 3.IV.1960; 20, Tai Chung, 27.I.1961; and 44, Wu Lai, 26.X.1961. Paratypes will be distributed to other leading museums, including the British Museum (Natural History), Bishop Museum, Oklahoma State University, and University of Minnesota.

Bovicola orientalis belongs to the *Bovicola thompsoni* group, which includes *B. thompsoni* Bedford, 1936, collected off *Capricornis sumatraensis sumatraensis* (Bechstein) (VII.1925, Sumatra: Bukit: Barisan) and *B. dimorpha* Bedford, 1939, collected off a

"Wild goat" (25.V.1934, China: Hangchow). Werneck (1950) suggested that the "Wild goat" host of *B. dimorpha* was probably *Naemorhedus goral* (Hardwicke). Dr C. Y. Liu, who collected the specimens of *B. dimorpha* that Bedford described, has informed us that there are 2 species of wild goats in that region of China: *N. goral* and *C. sumatraensis*. According to Ellerman & Morrison-Scott (1966), the subspecies of each found in that region are *N. goral arnouxianus* (Heude) and *C. sumatraensis argyrochaetes* Heude. Bedford illustrated *B. thompsoni* and *B. dimorpha* when he described them. Werneck (1950) redescribed and illustrated both species, after examining paratypes of each. There are no significant differences between the illustrations and descriptions of Bedford and Werneck.

The female of *B. orientalis* is smaller than that of *B. thompsoni* and has these additional differences: the lateral margins of forehead are even to slightly indented for *B. orientalis* and always even for *B. thompsoni*; the median plates on tergites II-VIII are of different shapes for the 2 species; the chaetotaxy of terminal abdominal segments is different, with each gonapophysis having at least 20 median and anterior setae for *B. thompsoni*; and the posterior margin of the temple of *B. thompsoni* has small projections that are not present for *B. orientalis*. The male of *B. thompsoni* is unknown.

The female of *B. orientalis* is smaller than that of *B. dimorpha* and also differs from it in the same features as *B. thompsoni*. The male of *B. orientalis* does not have small projections on the posterior temple margin, while they are present on *B. dimorpha*; *B. orientalis* has median plates on abdominal sternites III-IV, while *B. dimorpha* has median plates on abdominal sternites V-VII; and the genitalia are symmetrical for *B. orientalis* and asymmetrical for *B. dimorpha*.

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