A NEW SPECIES OF HALACARID MITES FROM THE ANTARTIC OCEAN [1]

BY

Taiji IMAMURA [2]

The new halacarid mite dealt with here was picked-up by Assoc. Prof. Takasi TOKIOKA, Séto Marine Biological Laboratory of Kyoto University, from the bottom sample No. 11 of the Fifth Japanese Antarctic Research Expedition 1961, collected from the deep sea bottom of 190 meters at 68°53'S × 30°56'E in the Southern Sea by Dr. Hiroshi FUKUSHIMA, on aboad the Research Ship Sôya and one of the members of the Expedition.

Before proceeding further, I wish to express here my hearty thanks to Assoc. Prof. T. TOKIOKA for his kind offer of these valuable materials for my study and to Dr. H. FUKUSHIMA for his great troubles in collecting the precious samples. I would also like to express here my gratitude to the following persons : Prof. I. M. NEWELL, Prof. E. SCHULZ, Assoc. Prof. T. TOKIOKA and Dr. W. BESCH for their kind sending to me papers or bibliographical references.

Lohmannella fukushimai n. sp.

Male. Body of almost rhomboid in shape, 500 μ long, excluding anal hump, and 340 μ wide, including epimera. Skin thin, colorless and finely striated. Anterior body margin saw-toothed. Dorsal plates all with no reticular figure, having minute conical papillae partially. Antero-dorsal plate pentagonal in shape, 176 μ long and 224 μ wide, having a pair of glandularia near the postero-lateral margins and with a pair of minute hairs. Ocular plates almost ovoidal in shape, 136 μ long and 96 μ wide, each having eye pigment and an ocular lens. Postero-dorsal plate almost triangular in shape, roundly curved in its anterior margin, 296 μ long and 264 μ wide, having a pair of minute hairs and with no U-shaped porous figure. Capitulum 504 μ long, including a very long and slender rostrum, 320 μ long, and

1. Contributions from the Hinuma Hydrobiological Station, Ibaraki University, No. 27, and was financed partly by the Grant from the Scientific Research Fund of the Ministry of Education, Japan.

2. Biological Institute, Ibaraki University, Mito, Japan.

168 μ high in its basal portion. Palps also very long and slender. Extensor length of the palpal segments are : P. I 40 μ, II 312 μ, III 12 μ, IV 104 μ. P. I short and absence of spines. P. II longest, almost 3 times long to P. IV and bent dorsally a little, having two hairs on the dorsal surface. P. III shortest and with a bristle on the ventral surface. P. IV claw-shaped, having a bristle on the ventral surface. Epimera in three groups. Anterior group largest, 156 μ long in middle and 342 μ wide, and with two pairs of minute hairs. Posterior groups each with three short

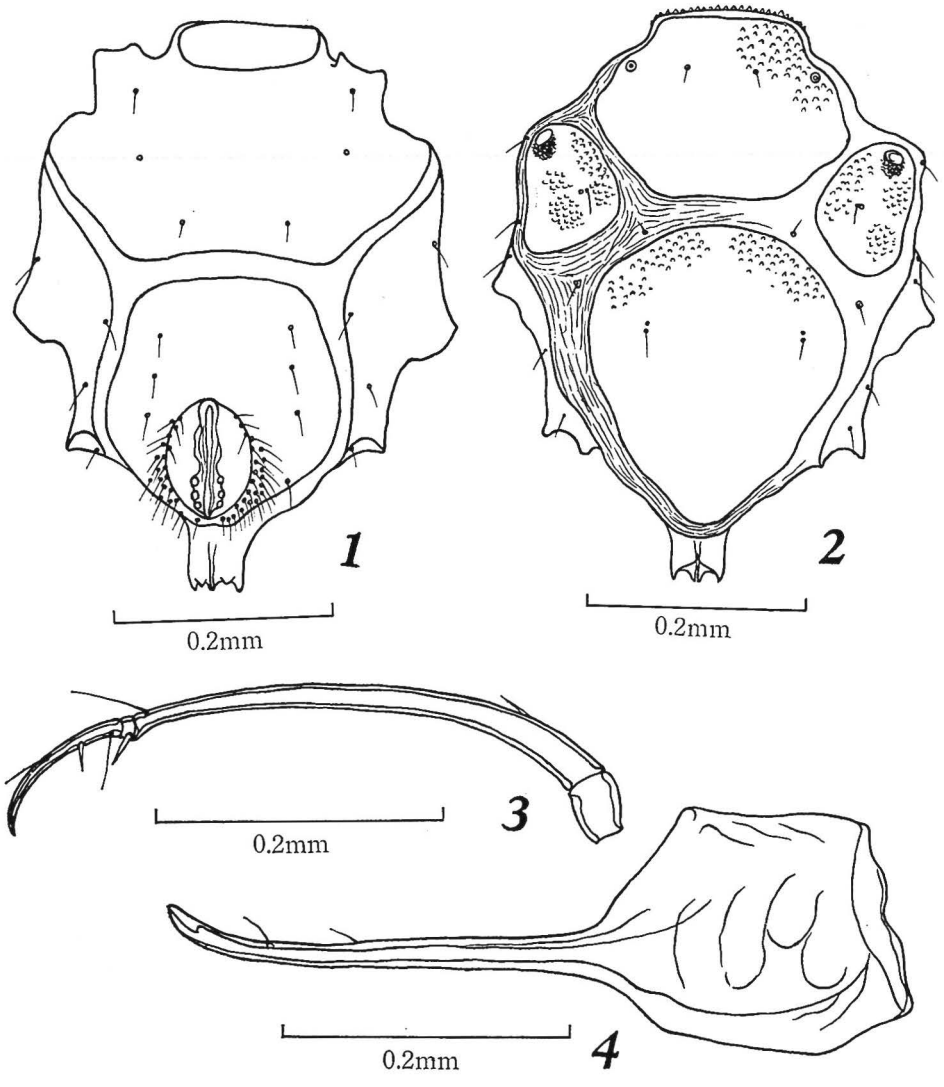

PLATE I.

FIG. 1-4. : *Lohmannella fukushimai* n. sp., male.

1. — Ventral view ; 2. — Dorsal view ; 3. — Left palp ; 4. — Capitulum, lateral view.

hairs. Claws of all legs with no tooth but with a very minute accessory branch on the outer surface near its terminal end. Segment 5th of each leg with two to four feathered spines as shown in Pl. II, 1 et 2. Genital plate divided from the anal hump and almost pentagonal in shape, 228 μ long and 234 μ wide, having

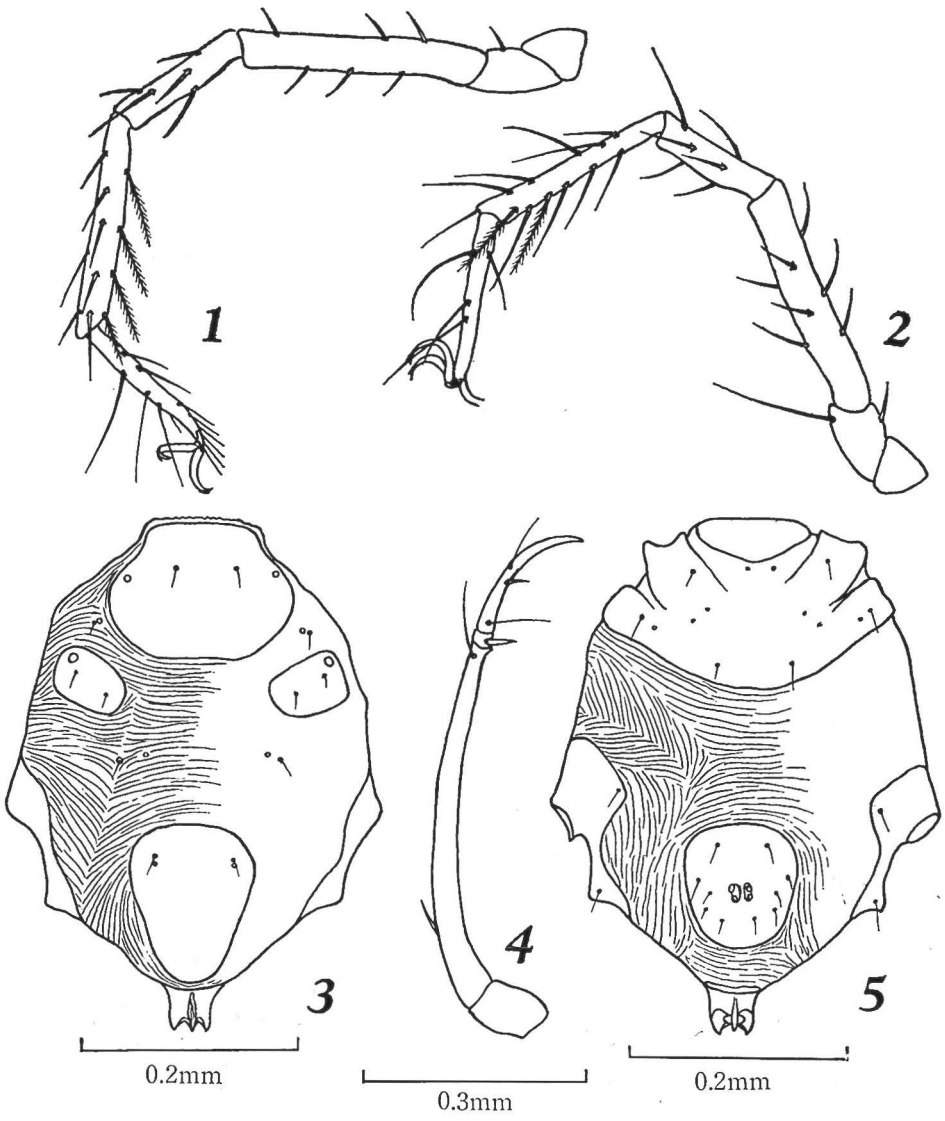

PLATE II.

FIGS. 1-2. : *Lohmannella fukushimai* n. sp., male.
1. — Left first leg ; 2. — Left second leg.

FIGS. 3-5. : *Lohmannella fukushimai* n. sp.; deutonymph.
3. — Dorsal view ; 4. — Left palp ; 5. — Ventral view.

four pairs of small hairs. Genital aperture elliptical in shape, 105 μ long, 78 μ wide and surrounded by many small hairs in the lateral outer margins. Three pairs of genital acetabulae presented in the posterior portion of genital lips as shown in Pl. I, 1. Penis fairly large, 230 μ long and 190 μ wide. Anal hump protruded at the posterior body margin.

Deutonymph. The body smaller and the body sclerites also relatively smaller than the adult. Body 408 μ long, excluding caudal appendage, and 324 μ wide. The measurements are as given below : Antero-dorsal plate 120 μ long and 156 μ wide. Ocular plate 72 μ long and 48 μ wide. Postero-dorsal plate 138 μ long and 114 μ wide. Length of palpal segments in extensor surface : P. I 36 μ, II 240 μ, III 8 μ, IV 92 μ. Capitulum 128 μ high and 388 μ long, including rostrum of 240 μ long. Anterior epimeral plate 84 μ long in middle portion and 222 μ wide. All legs each with six segments. Provisional genital plate 120 μ long and 96 μ wide. Two pairs of acetabula and ten minute hairs presented on the plate as shown in Pl. II, 5.

Locality. Each one male and deutonymph were picked-up by Dr. T. TOKIOKA from the bottom sample No. 11 collected by Dr. H. FUKUSHIMA on March 1, 1961 from 190 m deep bottom at 68°53'S × 30°56'E in the Southern Ocean.

Specimens. Holotype : Prep. No. 1647, male ; Paratype : Prep. No. 1648, deutonymph. Both specimens will be preserved at the collection of the Japanese Antarctic Research Expedition in the National Science Museum, Tokyo.

Remarks. There have till now been recorded five species of the genus *Lohmannella*, including a sub-species, from the Sub-Antarctic and Antarctic sea waters as follows :

Lohmannella bihamata Viets 1950.
L. falcata (Hodge 1863).
L. gaussi kerguelenensis Lohmann 1907.
L. reticulata Viets 1950.

Though the present new species resembles most *L. falcata*, distinguished from it by having one eye lens on each ocular plate and by the length of P. II, which is almost three times long to P. IV. The present species is also distinguished from *L. gaussi* by the relatively broader antero-dorsal plate and by the shapes of postero-dorsal and genital plates. *L. fukushimai* n. sp. is also different from *L. reticulata* in the shapes of ocular and genital plates, and also in the shapes of rostrum and palps.

REFERENCES

LOHMANN (H.), 1907 *a*. — Über einige faunistische Ergebnisse der Deutschen Südpolar Expedition, unter besonderer Berücksichtigung der Meeresmilben. — Schr. Naturw. Ver. Schleswig-Holstein, **XIV** (1) : 1-14.

LOHMANN (H.), 1907 *b*. — Die Meeresmilben der Deutschen Südpolar-Expedition 1901-1903. — Deutsche Südpolar-Exped. 1901-1903, 9, Zool., **I** : 361-413.

TROUESSART (E. L.), 1914. — Acariens. Deuxième Expédition Antarctique Française (1908-1910). — Sci. natur. : Doc. Sci., Paris : 1-16.

VIETS (K.), 1950. — Die Meeresmilben (Halacaridae, Acari) der Fauna Antarctica. — Further Zoological Results of the Swedish Antarctic Expedition 1901-1903, **IV** (3) 1-44.