A new parasitic mite (Astigmata: Ewingidae) from the gills of fresh-water crab in Japan

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Abstract: A new species of parasitic mite, Ewingia potamona n. sp., collected from a Japanese fresh-water crab, Potamon dehaani (White), is described and illustrated. Ewingid mites have not been found in any part of the world since Ewingia cenobitae Pearse, was described in 1929. The new species, therefore, constitutes the second member of this family.

Among the Astigmatic mites parasitic on invertebrates, species belonging to the Cohrt Ewingidia Yunker, 1955, have scarcely been found because of their small size and rarity. The family Ewingidae Pearse was proposed for a single genus and a species, Ewingia cenobitae Pearse, 1929, found on the gills of land hermit crab, Cenobita diogenes (Latreille), collected at Loggerhead Key, Dry Tortugas, Florida.

The 2nd species of the genus Ewingia is described below, based on a male and seven female specimens found on the gills of a fresh-water crab, Potamon dehaani (White, 1847) from Aichi-Pref., Japan.

Ewingia potamona n. sp.

Female (Fig. 1). Body 520 µ long, inclusive of gnathosoma, and 290 µ wide in holotype; 535 (510-560) µ long by 298 (275-325) µ wide in five paratypes.

Dorsum: Cuticle soft, without propodosomal shield or punctate striation. Four setae arising from dorsal surface at level of leg II. Outer pair of setae flagellate, 221 (200-238) µ long; inner pair much shorter. Idiosoma with three setae medially anterior to coxa III; central pair flagelliform, 150 (138-163) µ long. Hysterosoma with twelve setae; distal two longer than others.

Venter: All coxae fused to ventral surface. Apodemata I fused medially and V-shaped. Vulva situated between levels of coxae III and IV, with two sclerotized longitudinal valves and fairly conspicuous epigynium. Two pairs of small genital discs and two simple setae present on each side. Anus opening subterminally, 75 µ in length, and surrounded with three simple and a conspicuously long setae, 229 (213-250) µ long, antero-laterally.

Legs: All legs with five free segments. Legs I and II almost equal in length, and with stout spines on distal three segments. Leg III less developed than leg IV; tarsal claw much smaller than that on tarsus IV. Coxae I, III and IV, trochanters I-III and femora I, II and IV each with a single seta. Genua I and II each with a stout spine and simple setae; genu III with two setae. Tibiae I and II each with two stout spines ventrally and a slender seta dorsally; tibia III with a stout spine and a slender seta. Tarsus I with a solenidion on its subapex; tarsi I and II each with four spines and two setae ventrally, and three spines, two setae and a filiform seta dorsally; tarsus III with four spines and a seta ventrally; two spines and two filiform setae dorsally; tarsus IV with five spines, two filiform setae and a massive talon-like claw.

Male (Fig. 2). Body 530 µ long, inclusive
Fig. 1  *Ewingia potamona* n. sp., female
Dorsal (right) and ventral (left) halves

Fig. 2  *Ewingia potamona* n. sp., male
Dorsal (right) and ventral (left) halves
of gnathosoma, and 260 μ wide in allotypes. General characters similar to female, but opisthosoma bilobed posteriorly, and genital and anal regions formed differently.

**Dorsum:** Chaetotaxy as in female.

**Venter:** Leg III and IV stronger than those of female. Genital opening situated between coxae III, with two pairs each of valves and discs. Anus longitudinal, flanked on each side with a strong spine and a projecting anal sucker. Posterior quarter of idiosoma distinctly bilobed; each lobe ventrally with a short spine, dorsally with a simple seta and caudally with two ornate flanges.

**Gnathosoma:** Palpus composed of two segments; distal segment with a simple seta and a palpal apotele. Chelicera well developed; basal segment with granular cuticle; fixed digit harpoon-shaped, with three or four minute teeth; movable digit with four or five small ones.

**Remarks:** This new species can be separated from *E. cenobitae* by the differences in the form of the legs III in both sexes. *E. cenobitae* has the legs III and IV modified for grasping the gills of hosts, fused tibia and tarsus, and the coxa of leg IV situated somewhat laterally to that of III. The male of the new species has distinctly bilobed posterior end of body.

**Types:** Holotype female, allotype male, and five paratype females from *Potamon dehaani* (White, 1847), Aichi Pref., Japan, 2 May, 1977, coll. K. Kaneko. The holotype and allotype are deposited in the collection of the National Science Museum of National History, Tokyo, and all the paratypes in the Department of Parasitology, Aichi Medical University, Aichi-gun, Aichi Prefecture, Japan.

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**REFERENCES**


**日本産サワガニの竃に寄生する1新種

Ewingia potamona (Astigmata: Ewingidae) の記載**

本種は Suborder Astigmata, Family Ewingidae Pearse, 1929 に該当するが，既知種とは異なるので Ewingia potamona n. sp. カニエラダニとして形態的特徴を記載し図を付した。この科に属するダニは今日まで，フロリダ産のヤドカリ *Cenobitae diogenes* の竃から採集された *Ewingia cenobitae* Pearse, 1929 1属1種が知られているだけなので，この報告が属 Ewingia の2種目の報告である。