

A New Species of Amphipod from Mt. Kinabalu, North Borneo

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(Plate V)

In July, 1934 I received from the Raffles Museum and Library, Singapore, Straits Settlements, through the courtesy of its director, Mr. F. N. Chasen, a small collection of amphipods taken by him and H. M. Pendlebury on Mt. Kinabalu, British North Borneo at elevations of 6,000 to 10,000 feet. The specimens, about 30 in number, unfortunately all females, belong to the *Talitridae*, and upon examination were found to be representatives of the genus *Parorchestia*, which has not heretofore been recorded from Borneo, the nearest record coming from the island of Luzon, Philippine Islands. There is no information on the labels accompanying the specimens as to the nature of the habitat from which they came, but judging from the very much reduced and weakened condition of the pleopods they are undoubtedly terrestrial.¹

The descriptions of some of the species of *Parorchestia* are rather inadequate and many are insufficiently figured, nevertheless from the combination of characters possessed by the present specimens I believe them to represent a new species which I here designate as *Parorchestia kinabaluensis*.

The specimens were collected in 1929 on Mt. Kinabalu at Pakka, 10,000 feet; Marei Parei, 6,000 feet; and Kamborangah, 7,200 feet. The altitude of 10,000 feet is the highest yet recorded for this genus.

Parorchestia kinabaluensis, new species. Plate V.

Description of female.—Eye of medium size, nearly round, black. Antenna 1 projecting very slightly beyond the fourth peduncular joint of antenna 2, peduncular joints subequal in length and dorso-ventrally flattened, flagellum of five joints, the last being very small. Antenna 2 slender, fifth peduncular joint longer than fourth, third bearing at the lower distal corner a long conspicuous spine and one or two shorter ones, flagellum longer than peduncle and composed of about 14 joints. Mandible with well-developed accessory plate, four spines in spine-row, a short, stout plumose seta at front end of molar and a long slender plumose seta at the back edge of molar. Maxilla 1, the long slender inner plate bearing two plumose setae, the outer

1. These small and very active, reddish amphipods were found under stones and among fallen leaves: this mountain-shrimp can jump as elusively as its seashore relatives. F.N.C.

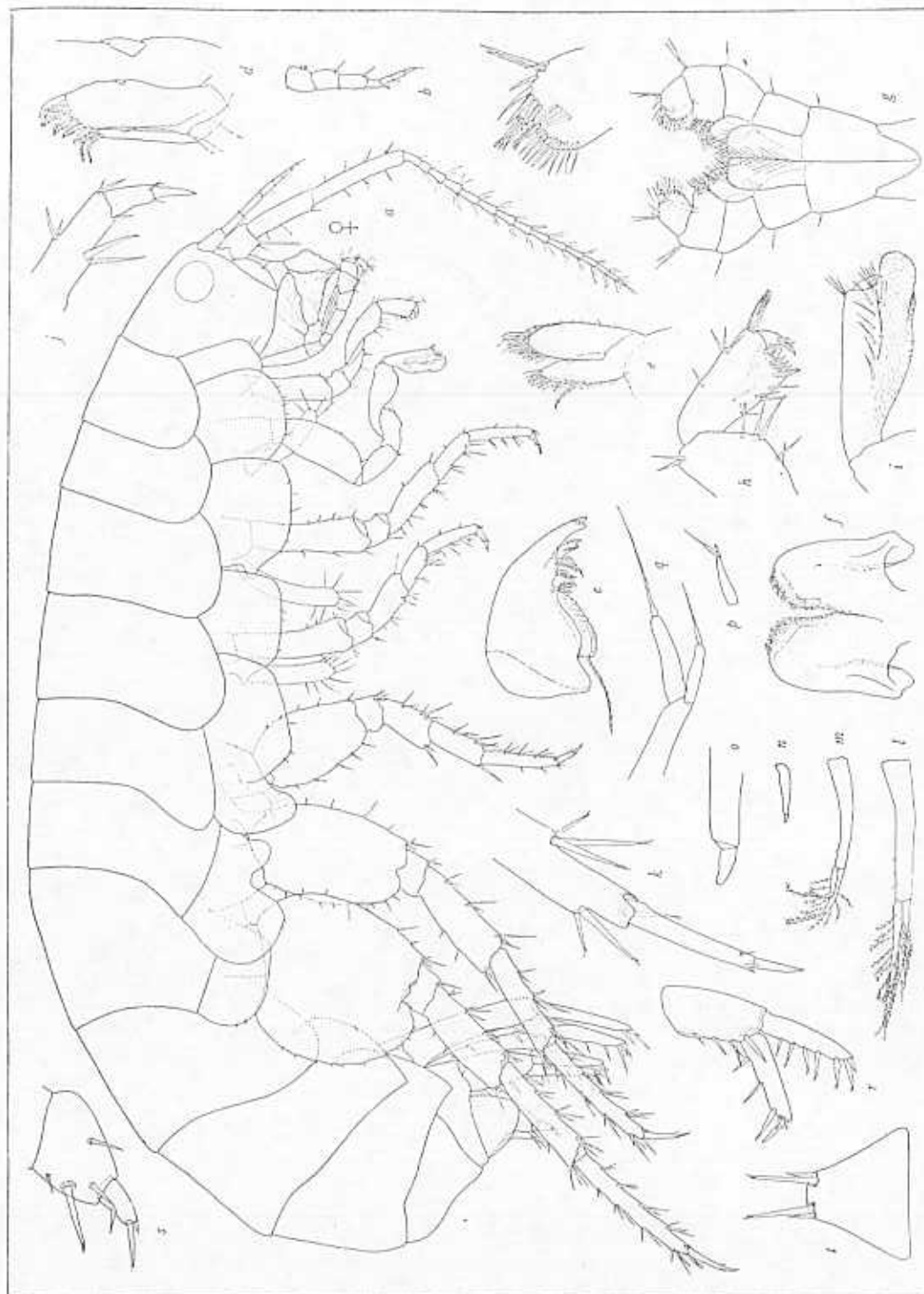


plate with nine serrate spine-teeth, palp very small with second joint minute. Maxilla 2, inner plate with long curved plumose seta about the middle of inner edge. Maxillipeds, inner plate reaching to the middle of outer plate, armed with three stout spine-teeth and many plumose setae, outer plate short, reaching to about the middle of second joint of palp and armed on inner edge with a closely set row of submarginal slender spines, palp short and robust, fourth joint small but distinct and bearing three distal spines. Lower lip without inner lobes, outer lobes long and distally rounding, mandibular processes short and blunt. Gnathopod 1, second joint a little longer than fifth, sixth a little over half as long as fifth, widening distally, palm nearly transverse with a row of submarginal spines on either side. Gnathopod 2, second joint slightly expanded, sixth joint shorter than fifth. Peraeopods 1 and 2 alike except that 1 is a little the longer. Peraeopod 3 about as long as 1 and much shorter than 4 which is shorter than 5. Second joint of peraeopods 3 and 4 moderately expanded, that of 5 greatly expanded. Branchial vesicles much twisted and lobed. Side-plate 1 much narrower than 2. Side-plates 2 to 4 with a posterior point above which hind margin is excavate. Side-plate 5 with front lobe much wider than hind lobe. Pleon segment 1 with postero-lateral angle broadly rounding. Pleon segments 2 and 3 with this angle very slightly produced, and their postero-lateral margins smooth. Pleopods reduced and weak, second shorter than first and third less than half the length of second. The rami of the first and second pleopods are much reduced and bear only a few short plumose setae. In many specimens the third pleopod is reduced to a very short peduncle with a single vestigial ramus, while in others the short peduncle bears two greatly reduced rami each with a single long terminal seta. Uropod 1 without marginal spines on outer ramus. Uropod 2 with about five spines on outer ramus. Uropod 3 with a prominent spine on upper margin of peduncle. In some specimens there are other spines upon this peduncle as shown in plate V, s; ramus rather slender and much shorter than peduncle, armed with a long and a short apical spine, and in some specimens one about the middle of the upper margin. Telson with the slightly concave sides converging to the rather narrow convex hind margin, which bears at either corner one long and one short spine.

Length.—11 mm.

Type taken at Marei Parei, Mt. Kinabalu, British North Borneo at an altitude of 6,000 feet, May 1, 1929. Type in the collection of the United States National Museum, Washington, D. C., Cat. No. 70784.

The fifth side-plate in *Parorchestia kinabaluensis* is much like that of *Talitriator eastwoodae*, *T. sylvaticus* (Haswell), and

T. kershawi (Sayce), but it is excluded from the genus *Talitriator* by the possession of strongly subchelate first gnathopods.

The following twelve species of *Parorchestia* have been heretofore described:

Parorchestia tenuis (Dana) 1852. Recorded from New Zealand, among roots of grass and in a small stream; Campbell Island, at the mouth of a small stream; Sunday Island, from a fresh-water stream; Salt River near Cape Town, South Africa, in brackish pool; East London, South Africa, on beach with *Talorchestia*; Dyer Islands, South Africa; Manukau, Chatham Islands, wet cliffs. "Like so many other *Orchestidae*, it may be also more or less terrestrial in habit."—Chilton.

Parorchestia sylvicola (Dana) 1852. Recorded from New Zealand, from moist soil in the bottom of the extinct volcano of Taiamai far from the sea; Sunday Island, Kermadec Islands, under dead leaves; Wharkauri, among bush on hillside, and Plateau Bush, Owenga, Chatham Islands; Lord Howe Island (terrestrial).

Parorchestia hawaiiensis (Dana) 1853 and 55. Hawaiian Islands (terrestrial?).

Parorchestia maynei Chilton 1909. Norman's Inlet, Auckland Island; Disappointment Island; Adams Island (2,000 ft. alt.).

Parorchestia insularis Chilton 1909. Campbell Island (terrestrial, up to the tops of the highest hills).

Parorchestia parva Chilton 1909. Norman's Inlet, Auckland Island and also under logs on Auckland Island (terrestrial).

Parorchestia improvisa Chilton 1909. The Snares; Stewart Islands and New Zealand (terrestrial).

Parorchestia luzonensis Baker 1915. Laguna Province, Luzon, Philippine Islands, summit of Mount Maquiling, in the extinct crater, under stones (terrestrial).

Parorchestia lagunae Baker 1915. Laguna Province, Luzon, Philippine Islands, shores of Bay Lake, under stones at water margin (terrestrial).

Parorchestia sarasini Chevreux 1915. From forest on Mt. Ignambi, New Caledonia, 800-1000 meters (terrestrial).

Parorchestia pusilla Chevreux 1915. "Lac en 8, sur les ajoncs, près de la rive," New Caledonia.—Chevreux.

Parorchestia dassenensis Barnard 1916. Dassen Island and Hout Bay, west coast, Union of South Africa.

LEECHES FROM BORNEO AND THE MALAY PENINSULA

EXPLANATION OF PLATE V

Parorchestia kinabaluensis, nov. sp. female. *a*, entire animal. *b*, antenna 1, top view. *c*, mandible. *d*, maxilla 1. *e*, maxilla 2. *f*, lower lip. *g*, maxillipeds, *h*, end of gnathopod 1. *i*, end of gnathopod 2. *j*, end of peraeopod 2. *k*, end of peraeopod 5. *l*, pleopod 1. *m*, pleopod 2. *n*, pleopod 3. *o*, end of pleopod 3 greatly enlarged. *p*, pleopod 3 of another specimen. *q*, end of same, greatly enlarged. *r*, uropod 2. *s*, uropod 3. *t*, telson.
