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Results of the Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands:

Part III: Brachyura from the Andaman Islands

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(Mit 12 Abbildungen)

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Summary

The Museum of Natural History in Vienna got from Univ.-Prof. Dr. F. STARMÜHLNER a further collection of interesting Brachyura, collected at his researchwork 1976 (Austrian-Indian Mission to Andaman). The crabs are members of the Family Grapsidae, a Family advancing far into freshwater regions. New described are *Geosesarma starmühlneri* in *Ptychognathus glaber andamanensis*.

Varuninae ALCOCK 1900

Varuna litterata (FABRICIUS)

1 juv., River Kalimpong, middlepart, (N.-And./3a1/13. 12.) NHMW Nr. 4186.

Ptychognathus riedelii pilosus DE MAN 1892

1 ♂, 5.4 mm Carapace length, brook in Chidatop-region, south coast (S.-And./4/5. 12.) NHMW Nr. 4187.

Ptychognathus glaber andamanensis nov. subsp.

Difference to *Pt. g. glaber* s. str.: Epigastric lobes absent. The cervical groove is slightly marked by a small crossgroove. The longitudinal grooves beneath it are missing. The exorbital tooth is sharper. Carapace surface is covered with uniform small, dark setae. Externally the palm bears a tuft of hair, the remaining part being smooth. No lateral teeth, no incision. The palm is higher, the movable finger shorter and the frontal triangle is flat. It differs from *P. hachijyoensis* SAKAI 1955 in the following featur: smaller exognaths (perhaps as broad as ischium), merus of mxp. III not strongly arched, absence of epigastric lobes, more converging post-eriolateral borders and shorter dactyli of p V. The tuft of hairs on the palm surface extends as far as the center and even to the immovable finger.

P. g. andamanensis seems to be a smaller form than *P. g. glaber* s. str.

Holotypus: ♂, 4.2 mm carapace length, NHMW Nr. 4118.

terra typica: June-Creek at Corbyns Love (S.-And./1/3. 12. 1976).

Sesarminae DANA 1852

Labunanum finni (ALCOCK 1900)

4 ♂, 18, 12.6, 12, 9.5 mm Cpxlg., 2 ♀, 15.5, 10 mm Cpxlg., 2 juv., Woodbrook at Bambooflat, North Bay (S.-And./15 b2/19. 12. 76) NHMW Nr. 4190. The largest male (18 mm Carapace length) has remarkably big claws (22 × 16 mm), the fingers (without teeth) very strong, gaping (5 mm), the movable finger forms a quarter-circle. The left claw is 3 mm shorter. 1 ♂, 7.8 mm Cpxlg., 2 ♀, 15, 8.5 mm Carapace length, 1 juv., primeval forest brook running into Dthinkari-barrage-lake. (S.-And./19/21. 12. 76) NHMW Nr. 4191.

Geosesarma starmühlneri nov. spec.

Diagnosis: GO I with slender, straight, apical process, apico-laterally directed. No spreading at the tip. Dactyli as long as propodi, posterolateral edge a little diverging, and slightly concave. Front as broad as back border. Basal segment of antennule much swollen, globose. A big tooth is present behind exorbital tooth. No crest at the upper edge of palm, some sharp granules at the upper edge of the movable finger. Outer and inner surface of palm nearly smooth, coarsely granulated. Merus of P 4 : 2.47 as long as broad. Legs without hairs. The lobes of the front well developed and well separated, the inner lobes broader than the outer. Front sinuous.

Description: The carapace is almost squarish, nearly as long as broad. The lateral edges are a little concave and diverging posteriorly. The carapace is smooth in the middle and back, and granular behind the front and at the sides, some granules behind the front are comparatively bigger. Oblique ridges lateral. The exorbital tooth is sharp, a little outward directed, reaching a little beyond the epibranchial tooth. The notch between them is deep and conspicuous. The outer edges of the second tooth is straight, slightly longer than the edge of the exorbital tooth. Behind the second tooth there is a little notch at the edge. The back edge of the orbit is somewhat oblique. The front is noticeably concave in upper view, the frontal concavity is smaller than the dimension of the outer lobes. The outer lobes have straight, a little oblique frontal edges, the frontal surface of the lobes are high, vertical. All the four lobes are distinctly separated. A small crest is present at the edge. The gape between the middle lobes is broader as the gape between middle- and lateral lobes, continuing in a groove. The frontal edge of the external lobes is a little oblique. Behind the external lobe there are some lines at the level of the suborbital edge. The mesogastric region is oval, more broad as long, well marked and has a slender, sharp frontal finger. The intestinal region is indistinct. The font is, seen from front, nearly straight, a little curved downward. The epistome has a small oblique crest. The antennae enter the orbit. The basal joints are little broader than long. The basal joint of the antennulae are globose, at their outer part. The interantennular septum is not very broad. The mouth is converging upwards, the ischia of the mxp III are not exactly as broad as long, the merus is distinctly longer than broad. The abdomen of the male is not too broad, covering

anteriorly with straight borders. The subterminal segment has little lateral borders, the last segment is sharply arched, the lateral borders near the base are subparallel. The last joint does not sink into the subterminal segment. The anterior corner of the subterminal segment is nearly straight, a little curved backward. Legs are long, not too slender, the merus has straight borders behind and a little curved upper border, with a sharp subapical spine. The posterior borders are not armed. The dactyli are little longer than the outer border of the propodi. The claws are nearly smooth, coarsely granulated, without crests or rows of granules. At the upper border of the movable finger 8, tipwards more isolated, granules. The fingers are not gaping and have good developed teeth. The tips are spooned, not broken. The GO I have apical a long, slender, outward directed process, ending slender. By this character this species is near *G. peraccae* NOBILI 1903, from what it is differing by missing remarkable hairy legs, u. o.

Measureings:

Exorbital distance: 15.1 mm.

Epibranchial distance: 51.2 mm.

Frontal breath: 8 mm.

Backedge breath: 8.3 mm.

Merus of p4: 12.9×5.2 mm.

Dactylus of p4: 8.2 mm.

Propodus of p4: 5.5 mm.

Mxp. III, merus: 2.7×2.9 mm.

Ischium Mxp. III: 2.7×2 mm.

Holotypus: ♂, 15 mm Carapace length, NHMW Nr. 4189.

Terra typica: Wood brook at Bambooflat, North-Bay (S.-And./15 b2/19. 12.).

Biotope types

S.-And./1/3. 12. 76: South Andaman, June Creec, S of Port Blair, near Corbyns Cove. perh. 2 Km from coast. Alt.: 5–10 m; crossing a swampy meadow. Influence of tide. Br. 5 m, bottom sand, mud. Deep 2–3 cm; current speed 30–50 cm/sec (pools to 50 cm, speed 0–10 cm/sec); Temp.: More as 30° C, 470 μ Siemens (28° C) pH 7, 4° dH, 5.1° KH i. e 1.9 mval; Alk.: 1.4 mval/1 Cl 44 mg/l; Labor: pH 7.3, 401 Siemens Na 45.0, K 3.0, Ca 31, Mg 12; tot. Fe: 0.51, Cl 39 mg%/l SiO₂, 12 mg/l (*Ptychognathus riedelii pilosus*; *Ptychognathus glaber andamanensis*).

S.-And./15/19. 12. 76: South Andaman, wood-rivulet at Bambooflat, North Bay in a shadowy, V-shaped Vally, falls (50 cm – 1 m), 1–2 m Ø; br. 50 cm – 1 m, deep 3 cm–5/10 cm, 30 cm – more than 1 m, bottom: pebbles 20–50 cm Ø, muddy sand, leafs, no algae. Temp.: 25° C (9^b), 100 Siemens (28° C) pH 6.9, 0.8° dH; 1.1 dH; Ca: 2 mg/l; Alk.: 0.5 mval/l, Cl 18 mg/l; Labor: 91 μ Siemens; pH 6.5, Na 10, K 1.2, Ca 6, Mg 4; tot. Fe: 0.04, Cl 10 mg/l SiO₂, 18 mg/l (*Labuanium finni*; *Geosesarma starmühlneri*).

S.-And./19/21. 12. 76: South Andaman, rivulet going to Dinkari-barrage much shadow in primeval forest, at Allahmajid; altitude 150–200 m; br. 3–10 m, deep 10–20 cm, to 50 cm. current speed 50–75 cm/sec, sometimes 20–30 cm, at pools 0–10 cm/sec. Color: clear; temp. 24.6° C (10^b) – 25.1° C (12^b); bottom: Rocky, stones (10–50 cm Ø), pebbles 2–5 cm Ø; Shore: Sand, Mud, leaves, pH more as 6.5, 4° dH, 3° KH; Labor: pH 6.8, 148 μ Siemens, Na 10.7, K 1, Ca 13, Mg. 10; tot. Fe: 0.06, Cl 11, SiO₂, 18 mg/l (*Labuanium finni*).

N.-And./3/13. 12. 76: North Andaman, Diglipur-district, River Kalimpong, at Diglipur; br: more than 10 m; deep: 10–30 cm to 1 m, current speed 30–50 cm/sec, pert. 0–20 cm/sec. (shoresinus); bottom: Pebble, sand, mud. Temp.: 26.7° C (16^b); in a broad valley, free pebble-banks, (low phase) partial clayey cliffs; shores: rice-fields, meadows, settlements. 239 μ Siemens, (28° C) pH: 7.8, 9° dH, 8.1° KH, Ca 6, Cl 12 mg/l; Alk.: 2.8 mval. Labor: pH 6.9, 293° Siemens; Na 4.2, K 0.6, Ca 10 mg/l, Mg 39; tot. Fe: 0.04, Cl 5, SiO₂, 24 mg/l (*Varuna litterata*).

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Part III: Brachyura from the Andaman-Islands

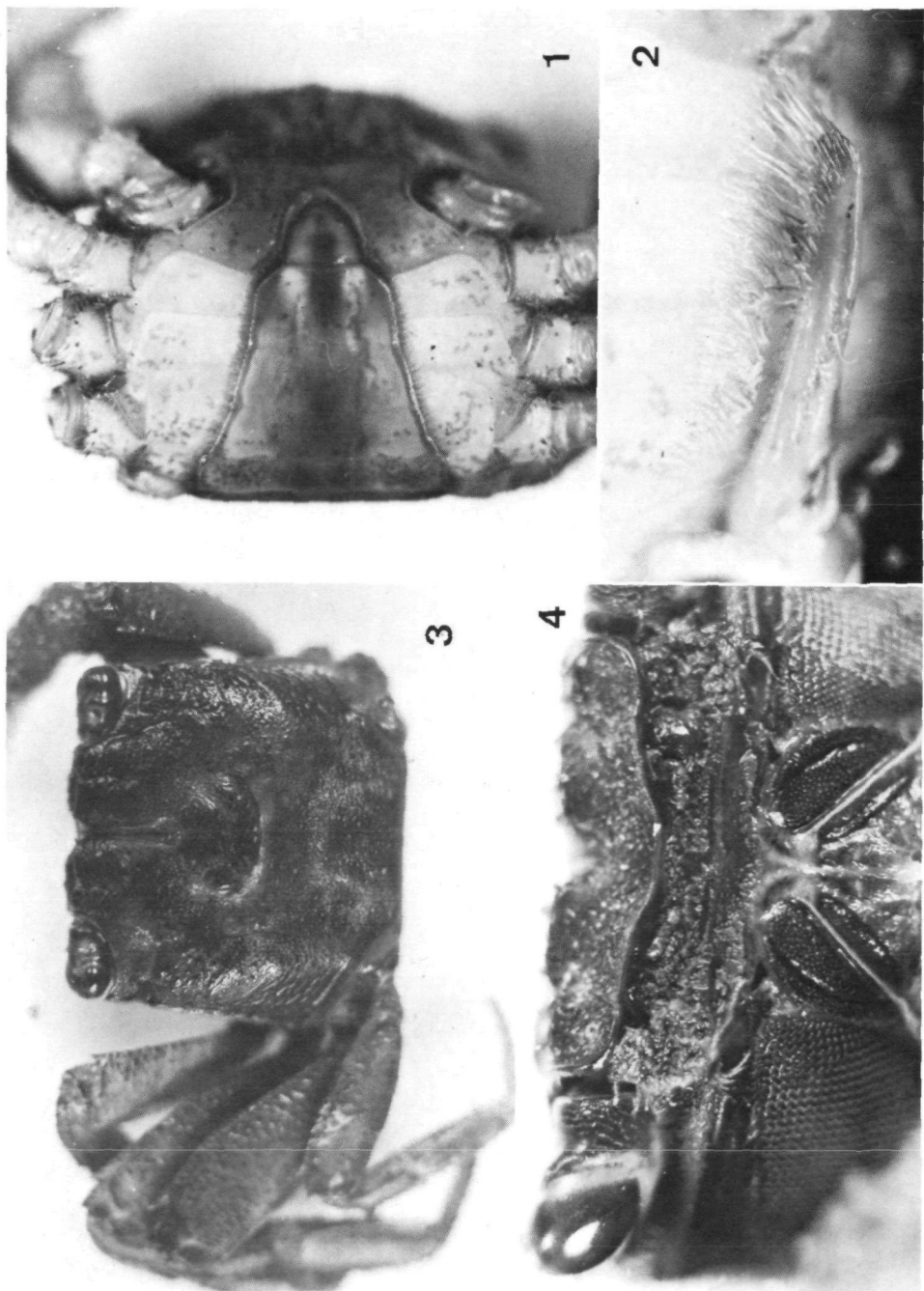


Fig. 1. *Geosesarma starmühlneri* nov. spec., Holotypus, Abdomen, 4x. - Fig. 2. *Geosesarma starmühlneri* nov. spec., Holotypus, right Gonopod, 3.3x. - Fig. 3. *Geosesarma starmühlneri* nov. spec., Holotypus, dorsal view, 3.3x. - Fig. 4. *Geosesarma starmühlneri* nov. spec., Holotypus, frontal view, 8x

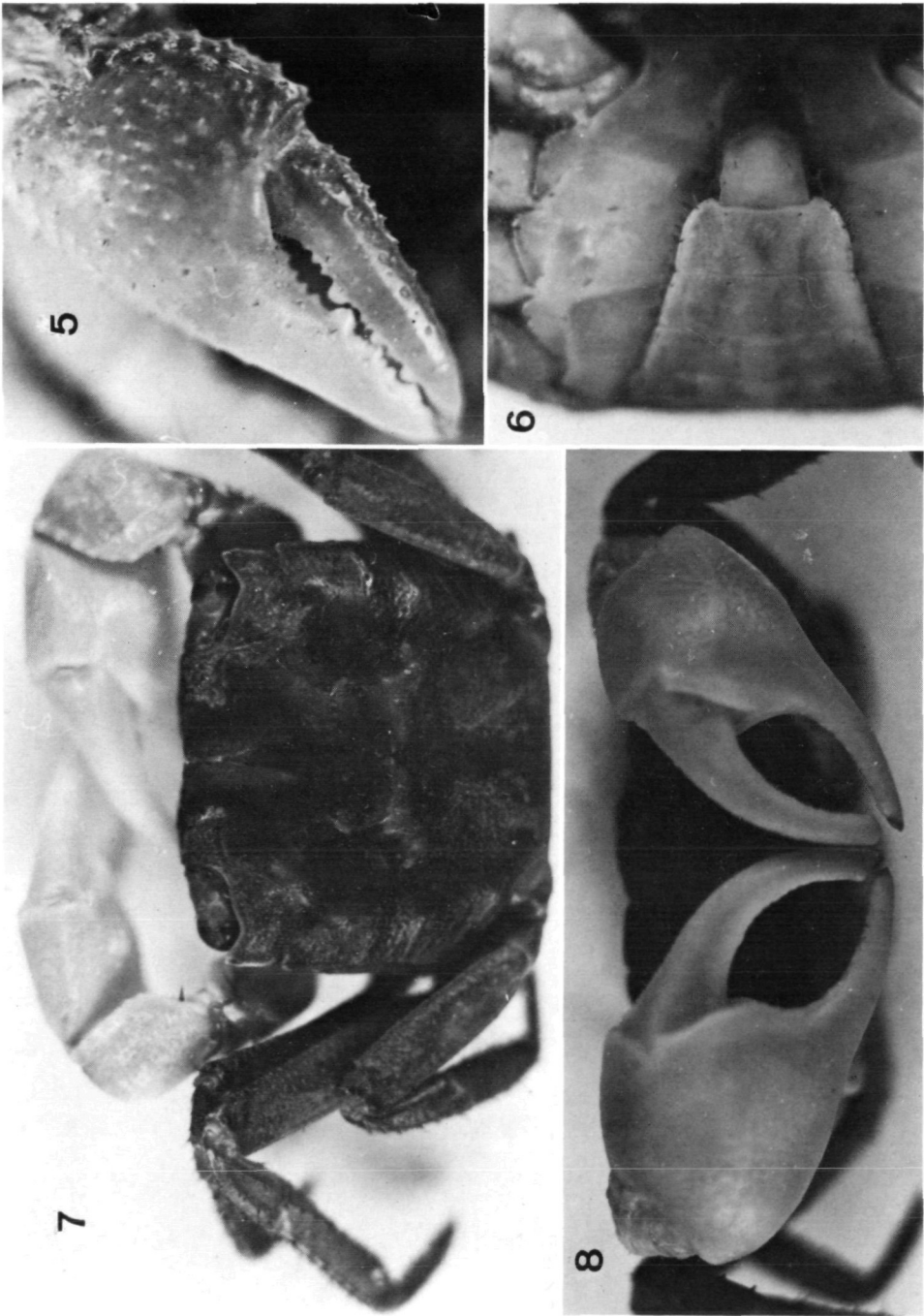


Fig. 5. *Geosesarma starmühlneri* nov. spec., Holotypus, right claw 10×. – Fig. 6. *Labuanum finni* (ALCOCK) Abdomen, 4×. – Fig. 7. *Labuanum finni* (ALCOCK) dorsal view. 3×. – Fig. 8. *Labuanum finni* (ALCOCK) claws, 4×

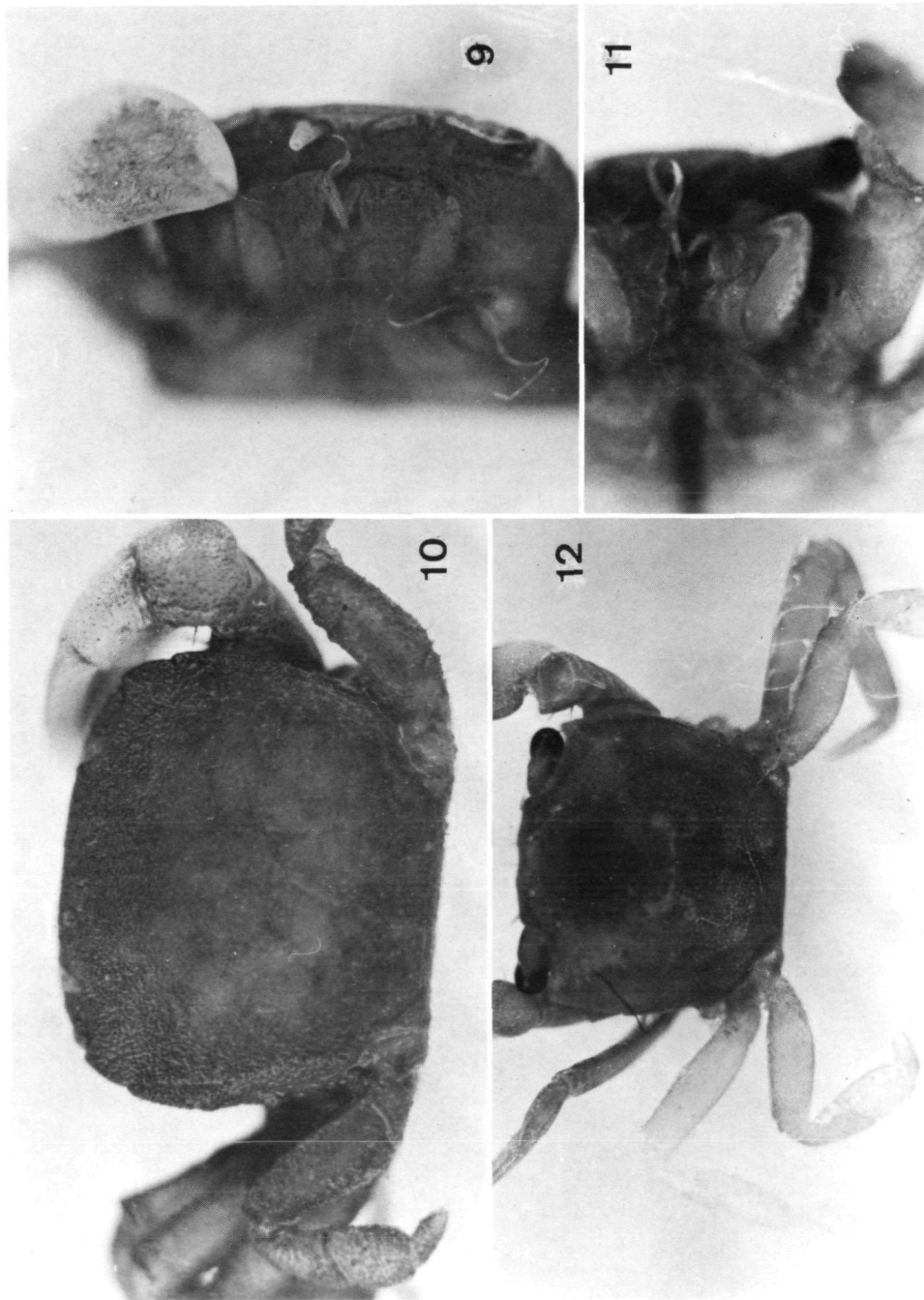


Fig. 9. *Ptychognathus glaber andamanensis* nov. subsp., Holotypus, frontal view, 12 \times . - Fig. 10. *Ptychognathus glaber andamanensis* nov. subsp., Holotypus, frontal view, 12 \times . - Fig. 11. *Ptychognathus riedelii pilosus* DE MAN, frontal view, ~10 \times . - Fig. 12. *Ptychognathus riedelii pilosus* DE MAN dorsal view, ~7 \times .