

Results of the Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands: Part X: List of Aquatic Hemiptera collected in the inland waters of the Andaman Islands

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Abstract

In the inland waters of the Andaman-Islands (South-Andaman, vicinity of Port Blair and North-Andaman, vicinity of Diglipur) 19 species of Aquatic Hemiptera were recorded: *Ptilomera harpyia* SCHMIDT; *Calyptobates* nov. spec.; *Limnogonus nitidus* MAYR; *L. fossarum* (F.); *Tenagogonus nicobarensis* ANDERSEN; *Neolardus typicus* (DISTANT); *Microvelia douglasi* SCOTT; *Strongyvelia* sp.; *Rhagovelia andamana* nov. spec.; *Rh. sumatrensis* LUNDBLAD; *Mesovelia vittigera* HORVATH; *Hydrometra maindroni* HUNGERFORD & EVANS; *Enithares rogersi* DISTANT; *Anisops bouvieri* KIRKALDY; *Anisops nivea* (FABRICIUS); *Anisops* sp.; *Ranatra parmata* MAYR; *R. distanti* MONTANDON; *Laccotrephes* sp.

Zusammenfassung

In den Binnengewässern der Andamanen-Inseln (Süd-Andaman, nahe Port Blair und Nord-Andaman, nahe Diglipur) wurden 19 Arten aquatischer Hemipteren nachgewiesen: *Ptilomera harpyia* SCHMIDT; *Calyptobates* nov. spec.; *Limnogonus nitidus* MAYR; *L. fossarum* (F.); *Tenagogonus nicobarensis* ANDERSEN; *Neolardus typicus* (DISTANT); *Microvelia douglasi* SCOTT; *Strongyvelia* sp.; *Rhagovelia andamana* nov. spec.; *Rh. sumatrensis* LUNDBLAD; *Mesovelia vittigera* HORVATH; *Hydrometra maindroni* HUNGERFORD & EVANS; *Enithares rogersi* DISTANT; *Anisops bouvieri* KIRKALDY; *Anisops nivea* (FABRICIUS); *Anisops* sp.; *Ranatra parmata* MAYR; *R. distanti* MONTANDON; *Laccotrephes* sp.

The Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands has collected in different running water systems of South- and North-Andaman between headwaters and the mouth-zones. In South-Andaman also some pools were investigated. A preliminary report, with description of the stations, was given by STARMÜHLNER (1977). Other reports are given by RÜTZLER (1978: Spongillidae); MALICKY (1979: Trichoptera); PRETZMANN (1984: Brachyura); STARMÜHLNER (1980, 1984 a: Freshwater Gastropods); COSTA (1984: Decapoda-Caridea); MALICKY

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(1984: Trichoptera); STARMÜHLNER (1984 b: Fishes); BRINCK (1984: Gyrinidae); WEWALKA (1982: Dytiscidae); HUBBARD (1984: Ephemeroptera, Genus *Povilla*); KALTENBACH (1979: Saltatoria); STARMÜHLNER (1982: Distribution of Freshwater Gastropods).

The determination of the recorded Aquatic Hemiptera was done by Dr. J. T. POLHEMUS, the ecological data of the stations are contributed by F. STARMÜHLNER.

List of the stations²⁾

South-Andaman:

A) Running waters:

Aa) Headwaters and Upper Courses (200 m–100 m altitude):

No. 1: S-AND / 19 / 21. 12. 1976: Rivulet near Allahmajid; affluent of the Dhanikari-reservoir (with dam): flowing through dense primary forest, very shady. Alt.: 200 m; Br.: 3–10 m; D.: 10–20 cm (pools: 50 cm); C.: 20–30 cm/sec (cascades: 50–70 cm/sec; banks, pools: 0–10 cm/sec); Gr.: serpentine rocks, boulders (Ø: 10–50 cm), gravel (Ø: 2–5 cm) from vulkanite, quartzitic-limonitic breccie, porphyrit; banks and pools: sand, mud, organic debris; Alg.: *Nostoc* sp.; *Compsopogon caeruleus*; *Nostochopsis lobatus*; cf. *Bostrychia radicans*; *Hydrosera whampoensis*; Te.: 24.6° C (10^h)–25.1° C (12^h); Che: Cond.: 136–148 µS; pH: 6.8–7; Tot. H.: 2.6° dH; Car. H.: 2.6°; Alc.: 1; SiO₂: 18; Na: 10.7; Ca: 10–13; K: 1; Mg: 10; Tot. Fe: 0.06; Cl: 11–18; Col.: clear.

Found species: *Ranatra parmata*, *R. distanti*; *Laccotrephes* sp.

No. 2: S-AND / 3 / 4. 12. 1976: River Nayachal; effluent of the Dhanikhari-reservoir (with dam): flowing in a deep eroded valley with steep slopes; bordered by shrub and rests of primary forest, partly shady. Alt.: 120 m; Br.: 3–8 m; D.: 5–10 cm; C.: 50 cm–1 m/sec (banks and pools: 10–20 cm/sec); Gr.: sandstone-boulders (Ø: 5–20 cm), sand, organic debris; Alg.: *Compsopogon caeruleus*; *Stigeoglonium* sp.; *Oedogonium* sp.; Te.: 29.2° C (15^h)–28.8° C (16.30^h); Cond.: 59–63 µS; pH: 6.1; Tot. H.: 1° dH; Car. H.: 1°; Alc.: 0.4; Na: 5.9; K: 1.1; Ca: 2.5–4; Mg: 3; Tot. Fe: 0.26; Cl: 7–11; SiO₂: 11; Col.: clear.

Found species: *Rhagovelia sumatrensis*.

²⁾ Abbreviations in the list: Alt.: Altitude (in m above mean sea-level); Br.: Breadth of the rivulet or river (in m); D.: Depth of the rivulet or river (in cm or m); C.: velocity of the surface-current (in cm/sec or m/sec); Col.: Colour of the water; Gr.: conditions of the Ground (mud, sand, gravel, boulders, rock); Ø: diameter of stones; Alg.: growth on Algae; Te.: Temperature of the water (in ° C, Celsius degrees); Che.: Chemistry of the water-samples: Cond.: electrolytic Conductivity (in µ Siemens at 20° C); Tot. H.: Total Hardness (in °dH, German Hardness degree); Car. H.: Carbonate Hardness (in °KH, Carbonate Hardness degree); Alc.: Alkalinity (in mval/l); Na: content on N-ions (in mg/l); Mg: content on Magnesium-ions (in mg/l); K: content on Kalium-ions (in mg/l); Ca: content on Calcium-ions (in mg/l); Cl: content on Chloride-ions (in mg/l); SiO₂: content on Silicate (in mg/l); Tot. Fe: Total content on iron (Fe) (in mg/l).

No. 3: S-AND / 12 / 8. 12. 1976: Rivulet near Asmadabad; lefthand a steep slope, covered with dense forest; at righthand meadows and plantations; partly shady. Alt.: 80 m; Br.: 1–5 m; D.: 1–4 cm (pools: to 50 cm); C.: 30 cm/sec (bank, pools: 0–10 cm/sec); Gr.: boulders (\varnothing : 5–20 cm), gravel (\varnothing : 1–3 cm), banks and pools: sand, mud, organic debris; Alg.: floating *Compsogon caeruleus*; *Cladophora* sp.; banks and pools: *Spyrogyra* cf. *setiformis*; *Oedogonium* sp.; cf. *Valisneria* sp., Te.: 29.2° C (15^h)–28.8° C (16³⁰); Che.: Cond.: 59–53 μ S; pH: 6.1; Tot. H.: 1° dH; Car. H.: 1°; Alc.: 0.4; Na: 5.9; K: 1.1; Ca: 2.5–4; Mg: 3; Tot. Fe: 0.26; Cl: 7–11; SiO₂: 11; Col.: clear.

Found species: *Ranatra parmata*, *Hydrometra maindroni*, *Microvelia douglasi*, *Strongyvelia* sp., *Calyptobates* nov. sp., *Limnogonus nitidus*, *Tenagogonus nicobarensis*.

No. 4: S-AND / 15 / 19. 12. 1976: Torrential rivulet with 1–2 m high cascades; in the forest-hills near Bambooflat (North-Bay); V-shaped, steep sloped valley in a dense forest; cascades change with deep pools, very shady. Alt.: 50 m; Br.: 2–5 m; D.: 3–10 cm; C.: 30–50 cm/sec; cascades: 1 m/sec; pools: 0–10 cm/sec; Gr.: rock, boulders, (\varnothing : 20–50 cm), gravel; pools: sand, mud, organic debris; Te.: 25° C (9^h); Che.: Cond.: 84–91 μ S; pH: 6.5; Tot. H.: 0.8° dH; Car. H.: 0.8°; Alc: 0.5; SiO₂: 18; Na: 10; K: 1.2; Ca: 2–6; Mg: 4; Tot. Fe: 0.04; Cl: 10–18.

Found species: *Enithares rogersi*, *Strongyvelia* sp., *Rhagovelia andamana* nov. sp.

No. 5: S-AND / 11 / 8. 12. 1976: Rivulet near Doligung; flowing through dense secondary forest, very shady (drying out during the dry season). Alt.: 30 m; Br.: 20 cm–1 m; D.: 2–10 cm (pools: 50 cm); C.: 10–20/30 cm/sec; (banks, pools: 0–10 cm/sec); Gr.: boulders, gravel (\varnothing : 5–20 cm); between mud and organic debris; Te.: 25.2° C (16^h); Che.: pH: 6; Tot. H.: 2° dH; Car. H.: 2°; Col.: turbid.

Found species: *Ranatra parmata*, *Limnogonus nitidus*, *Tenagogonus nicobarensis*.

No. 6: S-AND / 10 / 8. 12. 1976: Rivulet near the village of Bimblton; flowing through paddy-fields, bordered by some trees and shrub, sunny; in deeper pools watering-places for buffalos. Alt.: 30 m; Br.: 2–10 m; D.: cascades: 3–5 cm; banks and pools: 50 cm–1 m; C.: 30–50 cm/sec; banks and pools: 0–10 cm/sec; Gr.: muddy gravel (\varnothing : 3–5 cm); banks and pools: mud, organic debris; Alg.: cascades: *Cladophora* sp.; banks and pools: paddings of *Rhizoclonium* sp., *Oedogonium* sp.; *Hydrosera whampoensis*; cf.: Characea gen. sp., and from the border *Tradescantia* sp.; Te.: 25.7° C (10^h)–28.5° C (17^h); Che.: Cond.: 222–224 μ S; pH: 7.3; Tot. H.: 5.9° dH; Car. H.: 5.9°; Alc.: 2.2; SiO₂: 26; Na: 10.8; K: 0.7; Ca: 14–23; Mg: 14; Tot. Fe: 0.22; Cl: 102; Col.: turbid (visibility: 20 cm).

Found species: *Hydrometra maindroni*, *Limnogonus fossarum*.

No. 7: S-AND / 6 / 6. 12. 1976: Rivulet near the village of Mongelutonge; downstream of the River Nayachel (Dhanikhari-reservoir); flowing through secon-

dary forest and plantations, partly shady. Alt.: 25 m; Br.: 5–10 m; D.: 5 cm; banks and pools: 50 cm; C: 30 cm/sec; banks and pools: 0–10 cm/sec; Gr.: muddy gravel (\emptyset : 3–5 cm); bank and pools: mud, sand, organic debris; Te.: 26.8° C (15^b)–25.8° C (16³⁰); Che.: Cond.: 107–141 μ S; pH: 7.9; Tot. H.: 1.6° dH; Car. H.: 1.6°; Alc.: 0.75; SiO₂: 12; Na: 8.3; K: 1; Ca: 8; Mg: 6; Tot. Fe: 0.26; Cl: 9.

Found species: *Ranatra parmata*, *Strongyvelia* sp., *Rhagovelia sumatrensis*.

No. 8: S-AND / 13 / 18. 12. 1976: Repulsion of a very slow flowing creek with large, deep pools near Mithrakhrui; situated in a dense forest and very shady. Alt.: 20 m; Br.: 2–5 m; D.: 30 cm–1 m; C: 0–10 cm/sec; Gr.: muddy sand, some stones and organic debris; Te.: 25.4° C (15^b); Che.: Cond.: 152–160 μ S; pH: 6.9; Tot. H.: 2.8° dH; Car. H.: 2.8°; Alc.: 1.4; Na: 11; K: 2.4; Ca: 16; Mg: 7; Tot. Fe: 0.15; Cl: 10.

Found species: *Hydrometra maindroni*, *Strongyvelia* sp., *Limnogonus nitidus*, *Tenagogonus nicobarensis*.

No. 9: S-AND / 16 / 19. 12. 1976: Rivulet near Matra; flowing through paddy-fields; sunny. Alt.: 20 m; Br.: 2–3 m; D.: 5–10 cm; banks and pools: 50 cm–1 m; C.: 30–50 cm/sec; Gr.: banks and pools: muddy sand, on the borders floating roots from the vegetation of the borders; Te.: 25.1° C (13^b); Che.: After a heavy rain the rivulet was overflowed, no water-sample was taken; collected only by net from the border:

Found species: *Mesovelia vittigera*.

No. 10: S-AND / 8 / 7. 12. 1976: Rivulet near Guptapara; flowing through plantations; sunny. Alt.: 10 m; Br.: 3–10 m; D.: 5–10 cm; pools: 50 cm; C.: 30–50 cm/sec; cascades: 75 cm – >1 m/sec; banks and pools: 0–10 cm/sec; Gr.: boulders (\emptyset : 10–20 cm); gravel; banks and pools: sand; Alg.: paddings of *Spirogyra* sp.; Te.: 24.2° C (10^b)–25° C (12^b); Che.: Cond.: 74–80 μ S; pH: 6.8; Tot. H.: 1° dH; Car. H.: 1°; Alc.: 0.7; SiO₂: 14; Na: 9.1; K: 1; Ca: 4; Mg: 5; Tot. Fe: 0.02; Cl: 10.

Found species: *Rhagovelia andamana* nov. sp., *Rhagovelia sumatrensis*.

No. 11: S-AND / 5 / 5. 12. 1976: Rivulet near Bhatrapur; flowing through secondary forest and coconut-plantations; partly shady. Alt.: 10 m; Br.: 2–3 m; pools: to 10 m; D.: 10–20 cm; banks and pools: to 1 m; C.: 20–30 cm/sec; cascades: 30–50 cm/sec; bank and pools: 0–10 cm/sec; Gr.: boulders (\emptyset : 10–15 cm); gravel (\emptyset : 1–5 cm); bank and pools: mud, organic debris; Te.: 26.4° C (15^b); Che.: Cond.: 129–158 μ S; pH: 7.1; Tot. H.: 3° dH; Car. H.: 2.9°; Alc.: 1.1; SiO₂: 14; Na: 10.7; K: 1; Ca: 11; Mg: 8; Tot. Fe: 0.16; Cl: 9.

Found species: *Hydrometra maindroni*, *Strongyvelia* sp., *Limnogonus nitidus*.

Ab) Lower courses (10 m–1 m altitude):

No. 12: S-AND / 4 / 5. 12. 1976: Rivulet in the Chidiatop-area, approx. 300 m upstream of the mouth in the sea and about 100 m upstream of the influence of brackish water of the recurrent flow during high tide; flowing through plantations, paddy-fields, bordered by scrub and some trees, partly sunny. Alt.: 5 m; Br.: 2–3 m; D.: 5 cm; pools: 15–30 cm; C.: 30–50 cm/sec; bank and pools: 0–10 cm/sec; Gr.: boulders (\varnothing : 10–20 cm), gravel (\varnothing : 2–5 cm); volcanic tuff, quartzitic porphyry and jasper; Alg.: floating *Spyrogyra* cf. *decimina*; from a pool 150 m downstream, in the brackish influenced area: *Thorea ramosissima*; Te.: 25.1° C (9³⁰)–27.6° C (11^b); Che.: Cond.: 275–324 μ S; pH: 7.5; Tot. H.: 10° dH; Car. H.: 10°; Alc.: 3.3; SiO₂: 12; Na: 10.3; K: 0.4; Ca: 21; Mg: 30; Tot. Fe: < 0.01; Cl.: 12; Col.: clear.

Found species: *Limnogonus fossarum*.

No. 13: S-AND / 1 / 3. 12. 1976: June Creek near Corbyn's Bay; downstream of the School-Line creek, near the Air-strip; flowing through swampy meadows, sunny; influence of brackish water of the recurrent flow during high tide. Alt.: 1–2 m; Br.: 5 m; D.: 2–3 cm; pools: 50 cm; C.: 30–50 cm/sec; bank and pools: 0–10 cm/sec; Gr.: sand, mud; Alg.: pools: growth on mud: *Microcoleus* cf. *chthonoplastes* (or *lacustris*), *Lyngbya* sp.; Te.: > 30° C (16^b); Che.: Cond.: 395–401 μ S; pH: 7.3; Tot. H.: 4° dH; Car. H.: 4°; Alc.: 1.4; SiO₂: 12; Na: 45; K: 3; Ca: 31; Mg: 12; Tot. Fe: 0.51; Cl: 39. Col.: clear.

Found species: *Mesovelgia vittigera*.

B) Stagnant Waters:

No. 14: S-AND / 2B / 4. 12. 1976: Small pools on a slope of a hill, right hand of the School Line-Creek. Diameter: 1–3 m; D.: 10–30 cm; Gr.: muddy clay; Col.: turbid; sunny; T.: more than 30° C (!:10^b).

Found species: *Anisops bouvieri*, *A. nivea*, *A. sp.*, *Tenogonus nicobarensis*.

No. 15: S-AND / 7 / 7. 12. 1976: Pools in the swamp SW of Port Blair, bordered with reed-grasses and sedges. Diameter: 1 to some meters; D.: 10–50 cm; Gr.: mud with organic debris, dense paddings of *Spirogyra* sp.; sunny, T.: 26.6° C (17^b).

Found species: *Anisops bouvieri*.

No. 16: S-AND / 9B / 7. 12. 1976: Pools in swamps near Tayaledrabad (near the rivulet of Tayaledrabad), S of Port Blair; bordered by reed-grasses and sedges. Diameter: 1 to some meters; D.: 20–50 cm; pH: 7; Tot. H.: 13° dH; Gr.: mud with organic debris, dense paddings of *Spirogyra* sp.; sunny, T.: 26.6° C (16^b).

Found species: *Hydrometra maindroni*, *Limnogonus nitidus*.

No. 17: S-AND / 14 / 18. 12. 1976: Pool in the swamps near the road to the Mithrakai-Creek in the NW of Port Blair. Diameter: some meters; D.: 10–30 cm; dense growth of water-plants and algae.

Found species: *Limnogonus nitidus*.

C) Light-catch during night:

No. 18: S-AND / 18 / 20. 12. 1976: Light-catch with a lamp between 18^h–20^h near the border of the rivulet near the village of Mongelutonge (No. 7).

Found species: *Anisops bouvieri*, *Limnogonus nitidus*.

North-Andaman:

A) Running waters:

Aa) Middle to Lower Courses (30 m to 5 m altitude):

No. 1: N-AND / 4 / 14. 12. 1976: Rivulet Lakshmipur, approx. 5 km SW of Diglipur; meandering through secondary and rests of primary forest; bordered partly by meadows and scrub; sunny. Alt.: 10–20 m; Br.: 2–5 m; D.: 3–5 cm; pools: 50 cm; C.: 30–50 cm/sec; banks and pools: 0–10 cm/sec; Gr.: gravel (Ø: 3–5 cm); banks and pools: muddy sand; Alg.: dense growth of filamentous *Spirogyra* sp. in pools; in cascades: *Compsopogon caeruleus* (on stones); Te.: 25.6° C (10^h)–27.1° C (12^h); Che.: Cond.: 168–185 µS; pH: 7.8; Tot. H.: 4.4° dH; Car. H.: 3.8°; Alc.: 1.5; SiO₂: 13; Na: 10.7; K: 1.5; Ca: 15; Mg: 10; Tot. Fe: 0.05; Cl: 7.

Found species: *Hydrometra maindroni*, *Neoalardus typicus*, *Strongyvelia* sp., *Ptilomera harpyia*, *Calyptobates* nov. spec.

No. 2: N-AND / 5 / 14. 12. 1976: Rivulet between R. K. Nagar and Keralapuram (Cheriannalah); 4 km O of Diglipur on the road to the harbour; meandering through plantations, bordered by single farms, some washing-places; short cascade-zones alternate with 10–30 m long, deep pools; partly sunny. Alt.: 10 m; Br.: 5–10 m; D.: 5–10 cm; pools: up to 1 m; C.: 30–50 cm/sec; banks and pools: 0–10 cm/sec; Gr.: muddy gravel (Ø: 5–10 cm); banks and pools: sand, mud and organic debris; Alg.: banks and pools: *Spirogyra* sp. Te.: 27.2° C (16^h)–26.9° C (17^h); Che.: Cond.: 180–195 µS; pH: 6.9.; Tot. H.: 3.6° dH; Car. H.: 3.6°; Alc.: 1.5; SiO₂: 9; Na: 10.4; K: 1.6; Ca: 19; Mg: 11; Tot. Fe: 0.08; Cl: 6.

Found species: *Hydrometra maindroni*.

No. 3: N-AND / 6 / 15. 12. 1976: River Durgapur, 10 km E of Diglipur; 1.5 km upstream of the mouth-region; meandering through scrub (behind single farms, plantations); short cascade-zones alternate with deeper pool-regions; sunny. Alt.: 5–10 m; Br.: 50 cm–1 m; pools: 2–3 m; D.: 1–5 cm; banks and pools: up to 1 m; C.: 20–30 cm/sec; banks and pools: 0–5 cm/sec; Gr.: gravel (Ø: 2–5 cm; sand, banks and pools: muddy sand and organic debris; Te.: 26.4° C (10^h)–27.3° C (12^h); Che.: Cond.: 223–253 µS; pH: 7.2; Tot. H.: 5° dH; Car. H.: 4.8°; Alc.: 1.5; SiO₂: 14; Na: 12.3; K: 1.8; Ca: 24; Tot. Fe: 0.09; Cl: 9.

Found species: *Hydrometra maindroni*.

List of the found species

Phylum: Arthropoda
 Subphylum: Tracheata (= Antennata)
 Classis: Hexapoda (= Insecta)
 Subclassis: Pterygota
 Superordo: Hemimetabola
 Ordo: Rhynchota (= Hemiptera)
 Subordo: Heteroptera

Familia: Gerridae

Genus: *Ptilomera*

1. *Ptilomera harpyia* SCHMIDT

Locality: North-Andaman: No. 1: 1 ♂, 1 ♀.

Genus: *Calyptobates* nov. gen.

2. *Calyptobates* nov. spec.

Locality: North-Andaman: No. 1: 1 ♂; South-Andaman: No. 3: 3 ♂, 3 ♀.

After POLHEMUS (in lit.) *Calyptobates* is a new genus, as yet undescribed, that he has in manuscript from New Guinea, Australia; species from Ambon, Halmahera and Borneo may also belong to this genus. These will be treated by POLHEMUS in a forthcoming publication.

Genus: *Limnogonus*

3. *Limnogonus nitidus* (MAYR)

Locality: South-Andaman: No. 3: 2 ♂, 1 ♀; No. 5: 1 ♂, 1 ♀; No. 8: 2 ♀; No. 11: 3 ♂, 2 ♀, No. 16: 1 ♀; No. 17: 3 ♀; No. 18: 1 ♀.

4. *Limnogonus fossarum* (F.)

Locality: South-Andaman: No. 6: 3 ♂; No. 12: 1 ♂, 1 ♀.

Genus: *Tenagonus*

5. *Tenagonus nicobarensis* ANDERSEN

Locality: South-Andaman: No. 3: 4 ♂; No. 5: 2 ♂; No. 8: 2 ♂; No. 14: 1 ♀.

Familia: Veliidae

Genus: *Neoalardus*

6. *Neoalardus typicus* (DISTANT)

Locality: North-Andaman: No. 1: 1 ♀.

Genus: *Microvelia*

7. *Microvelia douglasi* SCOTT

Locality: South-Andaman: No. 3: 2 ♂, 2 ♀.

Genus: *Strongyvelia*

8. *Strongyvelia* sp.

Locality: North-Andaman: No. 1: 1 ♂; South-Andaman: No. 3: 1 ♀; No. 4: 1 ♀; No. 7: 1 ♀; No. 8: 1 ♂; No. 11: 2 ♂.

Genus: *Rhagovelia*9. *Rhagovelia andamana* nov. spec.

Locality: South-Andaman: No. 4: 1 ♂, 1 ♀; No. 10: 1 ♂, 2 ♀.

These species will be described by POLHEMUS in a forthcoming publication.

10. *Rhagovelia sumatrensis*

Locality: South-Andaman: No. 2: 1 ♂; No. 7: 4 ♂; No. 10: 4 ♂, 1 ♀.

Familia: Mesoveliidae

Genus: *Mesovelia*11. *Mesovelia vittigera* HORVATH

Locality: South-Andaman: No. 9: 2 ♀; No. 13: 1 ♀.

Familia: Hydrometridae

Genus: *Hydrometra*12. *Hydrometra maindroni* HUNGERFORD & EVANS

Locality: North-Andaman: No. 1: 3 ♂, 3 ♀; No. 2: 1 ♀; No. 3: 5 ♂, 3 ♀;
South-Andaman: No. 3: 10 ♂, 8 ♀; No. 6: 1 ♀, No. 8: 2 ♂; 2 ♀; No. 11: 1 ♂,
1 ♀; No. 16: 1 ♀.

Familia: Notonectidae

Genus: *Enithares*13. *Enithares rogersi* DISTANT

Locality: South-Andaman: No. 4: 1 ♂, 1 ♀.

Genus: *Anisops*14. *Anisops bouvieri* KIRKALDY

Locality: South-Andaman: No. 14: 1 ♂, 1 ♀; No. 15: 1 ♂; No. 18: 2 ♀.

15. *Anisops nivea* (FABRICIUS)

Locality: South-Andaman: No. 14: 1 ♂, 5 ♀.

16. *Anisops* sp.

Locality: South-Andaman: No. 14: 2 ♀, 3 Nymph.

Familia: Nepidae

Genus: *Ranatra*17. *Ranatra parmata* MAYR

Locality: South-Andaman: No. 1: 1 ♂, 1 ♀; No. 3: 1 ♀, No. 5: 1 ♂; No. 7:
1 ♂, 1 ♀.

18. *Ranatra distanti* MONTANDON

Locality: South-Andaman: No. 1: 2 ♂, 2 ♀.

19. *Laccotrephes* sp.

Locality: South-Andaman: No. 1: 1 ♀.

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