Ann. Naturhist. Mus. Wien	86	B	225–227	Wien, November 1984

Results of the Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands: Part VIII: The whirligig beetles (Gyrinidae) of the Andaman Islands

By PER BRINCK[1])

Manuskript eingelangt am 9. Mai 1983

The Andaman islands, located in the the eastern Bay of Bengal, form a narrow island chain of late Cretaceous and Paleocene rocks which have geological affinities with the Arakan Yoma Mountain ridge of the Burma mainland. The topography is dominated by north – south running hills and mountains which rise to about 700 m. The main islands are covered by a dense tropical forest which has locally been cleared. The rugged terrain, the humid climate and a seasonal rainfall of about 2,500 mm maintain numerous habitats suitable for Gyrinidae. Most streams are small and shallow: the width varies from 1–10 m and the depth is usually less than 20 cm except after rain. The water is usually neutral, pH about 7 and its temperature in the mornings 23–25° C and in the afternoons about 25–29° C (STARMÜHLNER in litt.).

The water beetle fauna of the islands includes a number of widespread species and a few endemic taxa. One reason for the paucity may be the small area, but another reason may be that a volcanic ash layer covered the islands about 75,000 years ago, originating in an eruption of Toba, north Sumatra (NINKOVICH et al. 1978).

Several insect collectors have visited the islands. So far three species of Gyrinidae have been recorded, as listed below. *Gyrinus smaragdinus* RÉG. is widespread in South East Asia and belongs to a genus the species of which readily disperse by flight. *Orectochilus andamanarum* OCHS is very closely related to *O. scalaris* RÉG. which occurs in its typical form in Java, Sumatra and the eastern parts of Further India (Peninsular Malaysia, Cambodia, Vietnam), and has a subspecies in Burma: Tenasserim. The wide distribution of *O. scalaris* indicates flight ability which was confirmed by OCHS for the Java population (OCHS, 1937). *O. andamanarum* OCHS is an example of fairly recent area-effect speciation. *O. andamanicus* RÉG. was described from the islands but has later been found to be widely distributed.

---

[1]) Author's address: Dr. PER BRINCK, Ecology Building, Univ. of Lund, Sweden.

List of species

The main part of the material listed below was collected by Professor F. STARMÜHLNER, Vienna and I am much indebted to him for sending the specimens for study.

Besides the original description, only references relating to records from the Andamans have been included. Records or specimens without precise locality data have not been listed.

1. *Gyrinus smaragdinus* RÉGIMBART, 1891

G. smaragdinus (RÉG.) VAZIRANI 1972.

South Andamans: Port Blair, 1 specimen, 1. 4. 1969 (VAZIRANI l. c.).

Geographical distribution – South East Asia. India: Assam; Burma, incl. Tenasserim; Vietnam (Upper Tonkin); China: Yunnan; and Andaman Islands.

2. *Orectochilus andamanicus* RÉGIMBART, 1883

O. andamanicus RÉGIMBART 1883: 435, pl. 12; 1886: 265, pl. 4.
O. andamanicus (RÉG.) OCHS 1924: 238; 1929: 403; 1930: 20.

South Andamans: River Nayachal at Mongelutonge Village on the S. E. coast. Fairly broad and shallow river, fairly fast running between pools. 6. 12. 1976: 2 ♂ (loc. 6), 20. 12. 1976: 1 ♂ + 3 ♀ swept by net at night (loc. 18).

Geographical distribution. – Peninsular Malaysia; Burma (Tenasserim) and India.

3. *Orectochilus andamanarum* OCHS, 1925

O. scalaris (parte) RÉGIMBART 1883: 430, pl. 134 a; 1892: 705.
O. scalaris (parte) ZIMMERMANN 1917: 168.
O. scalaris subsp. *andamanarum* OCHS 1925: 200.
O. andamanarum OCHS 1927 a: 118; 1927 b: 244; 1930: 19.

South Andamans: River Nayachal at Mongelutonge Village on the S. E. coast. Fairly broad and shallow river, fairly fast running between pools. 6. 12. 1976: 1 ♂ +2 ♀ loc. 6) and 20. 12. 1976: 3 ♀ swept by net at night (loc. 18).

North Andamans: River Kalimpong, 4 km upstream Digplipur, just below the forest region. Shallow river branches, fast running, bottom stones, gravel and sand. 13. 12. 1976: 22 ♂ + 16 ♀ (loc. 2). – Stream between R. K. Nagar and Keralapuram (Gneriannalam), 4 km E Diglipur. Exposed in cultivated land, mostly slowly running and fairly deep with bottom covered by silt and vegetable debris, at places shallow and faster, 14. 12. 1976: 3 ♂ + 3 ♀ (loc. 5).

Geographical distribution: – Andaman Islands.

References

NINKOVICH, D., SHACKLETON, N. J., ABDELMONEM, A. A., OBRADOVICH, J. D. & IZETT, G. (1978): K-Ar age of the late Pleistocene eruption of Toba, north Sumatra. – Nature **276:** 574–577, 5 figs. London.

OCHS, G. (1924): Über neue und interessante Gyriniden aus dem British Museum in London. – Ent. Bl. **20:** 228–244. Berlin.

– (1925): Descriptions of new Asiatic Gyrinidae. – Rec. Indian Museum **28:** 193–204. Calcutta.

– (1927 a): Gyrinidae. In Fauna Sumatrensis. – Suppl. Ent. **15:** 113–122. Berlin.

– (1927 b): On the Gyrinidae of the Malay Peninsula. – J. Fed. Malay St. Mus. **13:** 242–245.

– (1929): Additional notes on the Gyrinidae. – J. Fed. Malay St. Mus. **14:** 401–403.

– (1930): Gyrinoidea. Part 19 of Catalogue of Indian Insects. 39 pp. Calcutta.

– (1937): Nachtrag zur Gyriniden-Fauna Javas und der benachbarten Sunda-Inseln. Arch. Hydrobiol. Suppl. Vol. **15:** 109–118.

RÉGIMBART, M. (1883, 1886, 1892): Essai monographique de la famille des Gyrinidae. – Ann. Soc. ent. France. Sér. 6, **2:** 379–458 (1883), **6:** 247–272 (1886), **60:** 663–752 (1892).

– (1891): Enumération des Dytiscidae et Gyrinidae recueillis par M. Leonardo Fea dans ses voyages en Birmanie et régions voisines: – Ann. Mus. Civico Storia Naturale, Genove. Ser. 2, **10:** 538–554. Genova.

VAZIRANI, T. G. (1972): Contributions to the study of aquatic beetles (Coleoptera). 11. On a collection of Gyrinidae, Dytiscidae and Hydrophilidae from Andaman Islands. – Rec. Zool. Survey India **67:** 81–85. Calcutta.

ZIMMERMANN, A. (1917): Der derzeitige Bestand der Gyrinidensammlung des Deutschen Entomologischen Museums in Berlin-Dahlem und die wissenschaftlichen Ergebnisse ihrer Durcharbeitung (Col.). – Ent. Mitt. **6:** 135–170. Berlin.