

BASEODISCUS HEMPRICHII (PHYLUM NEMERTEA) FROM PHUKET, THAILAND

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ABSTRACT: A single specimen of the nemertean *Baseodiscus hemprichii* (Ehrenberg, 1831), collected intertidally at a rocky shore near the Phuket Marine Biological Center, Thailand, represents the first record of the phylum Nemertea identified to the species level from Thai waters. A comprehensive synonymy of *B. hemprichii*, provided with locality data from primary sources, is given.

INTRODUCTION

The fauna of the phylum Nemertea in Thailand is completely unknown. Frith *et al.* (1976) listed six forms of nemerteans obtained from a mangrove shore in Phuket Island, but these were not identified to species and are listed as Palaeonemertine sp., Heteronemertine sp., Monostiliferous hoplonemertine sp. A, Monostiliferous hoplonemertine sp. B, Monostieliferous hoplonemertine sp. C, and Nemertine sp. Chatananthawej and Bussarawit (1987: 17) also reported the existence of nemerteans in Thai waters, which, however, were identified only to the phylum level.

A single specimen of the heteronemertean, obtained as a part of an invertebrate survey of Phuket Bay, was readily identified as *Baseodiscus hemprichii* (Ehrenberg, 1831) on the basis of the external body coloration and pattern. The present paper comprises the first record of the nemertean identified to species level from Thai waters. A comprehensive synonym list is provided, with the locality information in case of the primary literature. The voucher specimen is deposited in Phuket Marine Biological Center, Thailand (PMBC).

Pilidiophora Tholleson and Norenburg, 2003

***Baseodiscus* Diesing, 1850**

***Baseodiscus hemprichii* (Ehrenberg, 1831)**

(Fig. 1)

Nemertes hemprichii Ehrenberg, 1831: 12, Red Sea.

Borlasia hemprichii: Örsted, 1844: 83; Diesing, 1850: 240; Diesing, 1862: 249.

Eupolia brockii Bürger, 1890: 22, fig. 10, Ambon Island, Indonesia; Joubin and François, 1892: 163, pl. 6, figs 1a–1d, Noumea, New Caledonia; synonymized by Bürger (1895a: 26).

Eupolia mediolineata Bürger, 1893: 230, pl. 8, figs 1, 1a–b, Mauritius; Bürger, 1895a: 27; Bürger, 1895b: 603; synonymized by Gibson (1979: 146).

Eupolia hemprichi: Bürger, 1895a: 26, Bawi Island and Tumbatu Island, Tanzania; Caroline Islands (represented as two body fragment without head); Upolu Island, Samoa; Ibo Island, Mozambique; New Guinea; Bürger, 1895b: 603; Punnett, 1900: 575, pl. 60, fig. 32, Lifou Island, New Caledonia; Staub, 1900: 97, pl. 47, figs 11, 11a, Ambon Island, Indonesia; Punnett, 1903: 104, pl. 4, figs 2–3, Maldive Islands, Republic of Maldives; Lakshadweep Islands, India; Puri, 1942: 72, Karachi, Pakistan; Gravelly, 1927: 53, one figure, Krusadi Island, India; Patel *et al.*, 1976: 663, Gujarat, India.

Taeniosoma hemprichi: Coe, 1905: 57; Coe, 1906: 978.

?*Baseodiscus edmondsoni* Coe, 1934: 1, fig. 1, Wake Island and Hawaii Islands (Oahu Island and Kauai Island); Coe, 1947: 102; uncertainly synonymized, with some reservation, by Gibson (1979: 146).

Baseodiscus hemprichi: Yamaoka, 1939: 283, figs 1–2, Suao and Gueischan Island, Taiwan; Iwata, 1954a: 30, Kagoshima, Japan; Iwata, 1954b: 37, Wakayama, Japan.

Baseodiscus hemprichii: Punnett and Cooper, 1909:
7, Coëtivy Island, Republic of Seychelles;
Gibson, 1979: 146, figs 4, 5A–5D, 5a–
5d, 6A–6F, 7A–7B, Great Barrier Reef,

Australia (Hayman Island, Heron Island
and Lodestone Reef); Kazmi and Gibson,
1994, fig. 1, Karachi, Pakistan; Boyko,
2001: 41, fig. 1, Easter Island, Chile.

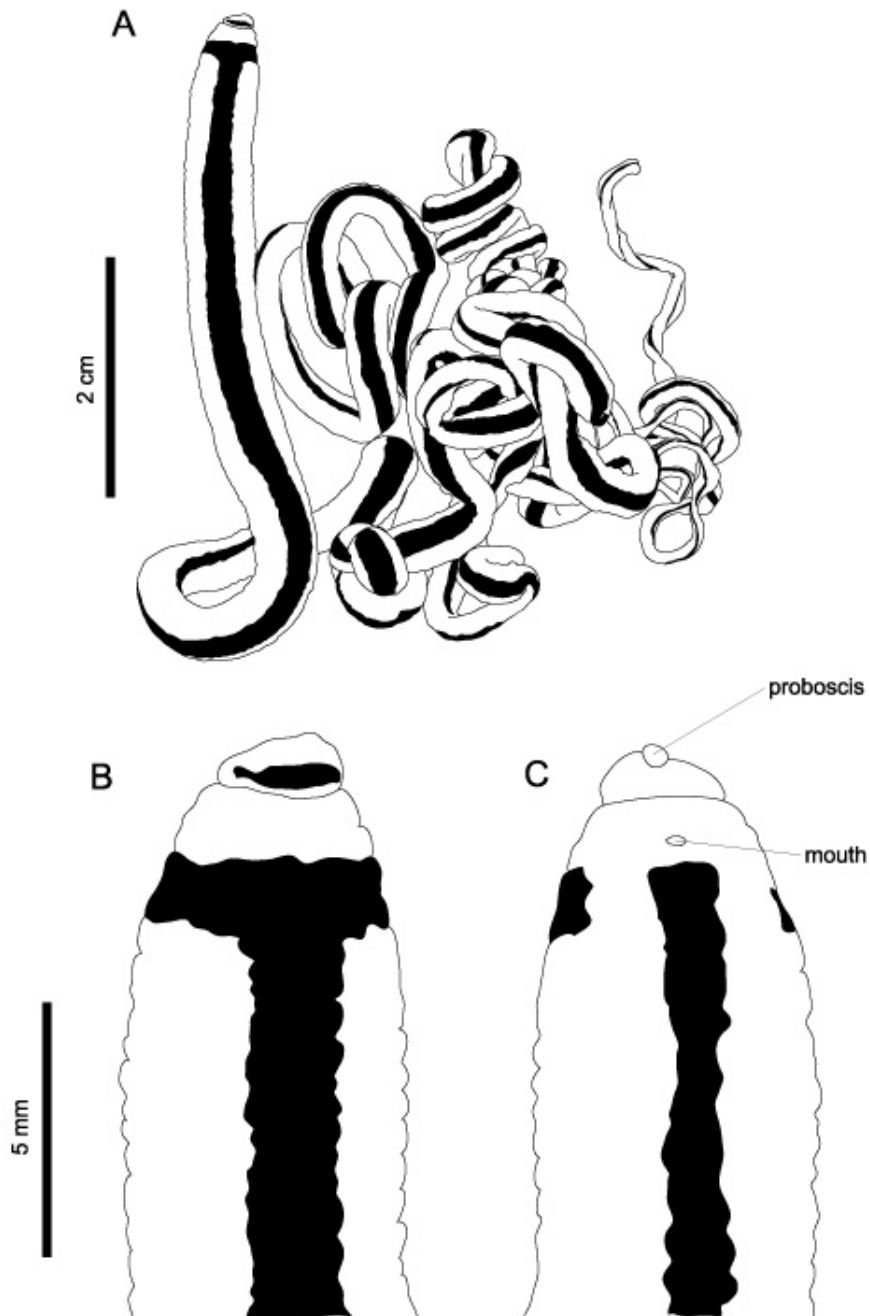


Figure 1. *Baseodiscus hemprichii* (Ehrenberg, 1831), PMBC 23769. Entire specimen, drawn from preserved animal (A); enlargement head viewed dorsally (B) and ventrally (C).

Baseodiscus hemprichii (Phylum Nemertea) from Phuket, Thailand

Material examined: PMBC 23769, collected by Tetsuya Kato on 7 February 2004 at an intertidal rocky shore near PMBC, fixative uncertain, preserved in 70% EtOH.

Description: The preserved specimen attained 5 mm in maximum width at the foregut region and tapered to 1 mm wide at the tail. The length of the specimen could not be measured since it was tightly coiled, though it could have reached over 1 m in length when fully extended in life. The head is demarcated from the body by a transverse furrow. Numerous ocelli are arranged along the margin of the head. The body color was not recorded in the living state. The basement body color in the preserved specimen is whitish, though tinged with light brown due to the preservation. The body is patterned by a dark purplish brown cephalic patch and a single mid-dorsal and mid-ventral longitudinal stripe. The dorsal stripe begins slightly behind the cephalic furrow, with its anterior end T-shaped. The ventral stripe, narrower than the dorsal, commences behind the mouth opening. Both stripes run posteriorly to the hind end of the body. The specimen slightly protruded the proboscis during fixation (Fig. 1).

Remarks: *Baseodiscus hemprichii* (Ehrenberg, 1831) is one of the few species of nemerteans that can be identified reliably by only the external appearance even after preservation. The species is widely distributed in the tropical Indo-Pacific region from eastern Africa to western South America, although a detailed genetic comparison may reveal cryptic species in future studies.

The diagnostic external features of the species include whitish body, with head demarcated from the body by a transverse furrow encircling the neck; minute secondary furrows may be present in life, running anteriorly from the

main transverse furrow, difficult to confirm in preserved state; numerous ocelli arranged along the margin of the head; a single dark-colored (purplish, dark brown, or black) cephalic patch situated at the posterior portion of the dorsal surface of the head; and a dorsal and ventral stripe of the same coloration as the cephalic patch; the anterior end of the dorsal stripe laterally widened to form a T-shaped collar as mentioned in the original description (Ehrenberg, 1831). The variation of these color patterns so far reported as intra-specific are: 1) the cephalic patch, usually represented as a single transverse bar as in the present specimen, may be broken up into separate patches, and rarely is missing altogether (Gibson, 1979); 2) the T-shaped collar may be complete (Yamaoka, 1939; Gibson, 1979), or ventrally interrupted as in the present specimen; 3) the ventral longitudinal stripe may begin from just behind the mouth as in the present specimen, or from much posterior portion in the foregut region (Yamaoka, 1939; Gibson, 1979); and 4) the mid-dorsal stripe may be discontinuous and regularly interrupted (Kazmi and Gibson, 1994), as was not observed in the present specimen. The last character state has been also reported in *Baseodiscus edmondsoni* Coe, 1934, a species that may be conspecific with *B. hemprichii* (Gibson, 1979; Kazmi and Gibson, 1994).

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Baseodiscus hemprichii (Phylum Nemertea) from Phuket, Thailand

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