MESSAGE FROM THE EDITORIAL BOARD

For the first issue of 2011 (Volume 5, Number 1), the Natural History Museum publishes 7 articles and 2 short notes. Of these 7 articles, there is one new genus description and three new species, including the type species of the new monotypic genus. Besides a new genus and new species, there are new records for Thailand and new locality records which have become the theme for this issue.

The new genus described in one of the articles, which is also a new species, has been given its generic name in honour of the former Director of the Thailand Natural History Museum, Dr. Jarujin Nabhitabhata and is only the second known reptile species with two forelegs and no hind-legs. A new insular cyrtodactyline gecko is one of the other species described in this issue. A new montane lygosomine skink is yet another species described. The first record for an apodid sea cumber in the Gulf of Thailand, a re-description is given for the species and a lectotype is assigned at the beginning of the issue. New records two *oletreutine* butterflies in peninsular Thailand, one of which is a new species for Thailand, ends the section of original articles. An inventory of reptiles and amphibians from islands/coastal areas as well as a monitoring survey herpetofauna of south-eastern Thailand are articles in this issue.

Additional new localities for a species of frog once only known from one island and for a legless skink previously only known from beach forests make up the section of short notes for this issue.

Pichai Sonchaeng

(President of NSM)

The Thailand Natural History Museum Journal 5(1): 1-5, May 2011.

First Record of the Apodid Sea Cucumber *Anapta gracilis* Semper, 1868 (Holothuroidea: Synaptidae) in the Gulf of Thailand

Arom Mucharin[*1] Yves Samyn[2] Bang-on Changlom[1] and Wanchai Sukkasem[1]

1 *Natural History Museum, National Science Museum, Thailand, Technopolis, Khlong 5, Khlong Luang, Pathum Thani 12120 Thailand*
2 *Royal Belgian Institute of Natural Sciences, Vautierstraat 29 B-1000 Brussels, Belgium*

ABSTRACT: The first record of the anpodid sea cucumber *Anapta gracilis* in the Gulf of Thailand is herein recorded. A redescription of *Anapta gracilis* is given and its taxonomic status is clarified. In the absence of a lectotype, we herein assign a lectotype.

KEY WORDS: *Anapta gracilis*, Gulf of Thailand, taxonomy, lectotype.

INTRODUCTION

Putchakarn and Sonchaeng (2004) have recently given a comprehensive account of the echinodermata of Thailand, listing 94 holothuroids belonging to four orders and eight families. A recent survey in the mangrove forests of Chanthaburi Province in Eastern Thailand (figure 1) revealed an apodid that has not previously been recorded from the Gulf of Thailand: *Apodida gracilis* Semper, 1868.

The present paper provides a full redescription of this species gives an overview of its known distribution and clarifies its taxonomic status by lectotypification.

MATERIALS AND METHODS

Specimens were collected by A. Mucharin and B. Changlom on 13 May 2008 by hand-picking in the mud of the Ban Ngong Chim, Bang Chan subdistrict, Leam Sing district, Chanthaburi Province. In total 19 specimens were collected. These were anaesthetized in 10% magnesium sulphate for 12 hours, transferred to 95% buffered alcohol for two days and then transferred to 70% buffered alcohol for permanent storage. Ossicles were removed in household bleach, washed in three changes of distilled water, photographed with a digital camera, and drawn using a camera lucida.

*Corresponding author.
E-mail: arom@nsm.or.th

Figure 1. The mangrove forest mud of Chanthaburi Province in Eastern Thailand is home to *Anapta gracilis* Semper, 1868.

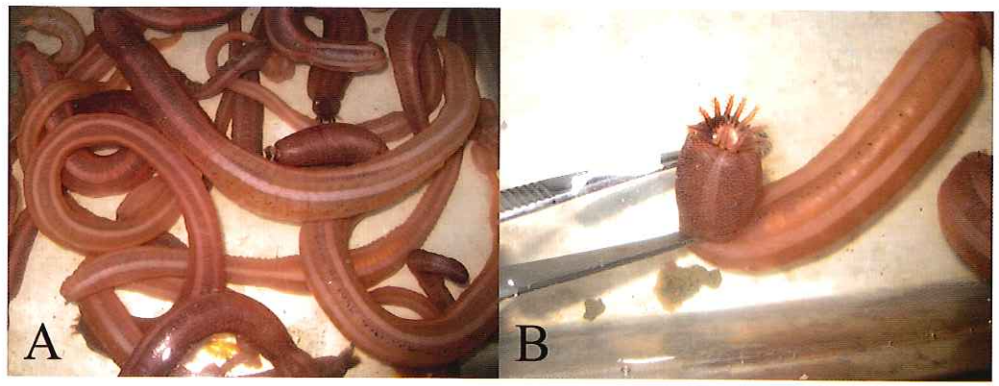

Figure 2. *Anapta gracilis* Semper, 1868. A. Living specimens. B. Anterior view: the mouth is surrounded by 12 pinnate tentacles.

SYSTEMATIC ACCOUNT

Apodida Brandt, 1835
Synaptidae Burmeister, 1837
Synaptinae Östergren, 1898
***Anapta* Semper, 1868**
***Anapta gracilis* Semper, 1868**

Anapta gracilis Semper, 1868: 17, pl. 3 fig.1, pl. 4 figs 10-15; Lampert, 1885: 229, H.L. Clark 1908: 110, pl. 2, fig. 1, pl. 7 figs. 19-23; Sluiter, C.P., 1914; H.L. Clark, 1924: 501, pl 12, figs.8; Heding, 1931: 663, fig. 8, pl. 11, fig. 1; Sane & Chhapgar: 1962: 673, 674, pl1, fig f; Clark & Rowe 1971: 184: Liao & Clark, 1995: 525, fig. 321; Liao 1997: 253, fig. 150.

Type locality: Manila, Philippines.
Type data: lectotype ZMMSU H-134.
Material Examined: THNHM-Ec-05196 (17 specimens)

Description: The specimens are 98-213 mm long and 10-16 mm in diameter. The complete body is purplish-brown with numerous white spots and 5 brownish longitudinal lines. There is a terminal mouth and anus with surrounding tentacles that are a uniform brown (figure 2A). The skin is thin, translucent, and not sticky to the touch. There are 12 tentacles with 11 digits (figure 2B).

The calcareous ring is normal and very small, 0.78 mm high by 4 mm in diameter. There are several polian vesicles (4-7) and a single stone–canal.

Vestigial ossicles are scattered everywhere in the skin. The plates are very small, 30-38 µ long (figure 3) and 6-12 µ thick, with granuliform surfaces.

Ecology: the species is nocturnal, being fully exposed on mud during low tide at night in mangrove forests. During the day and at high tide they remain hidden in the mud.

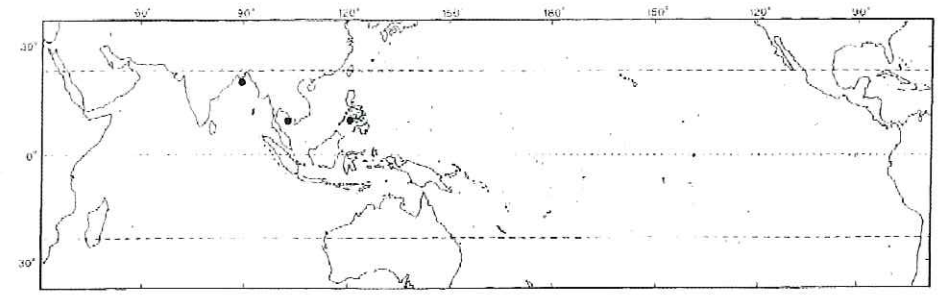

Figure 3. The known distribution of *Anapta gracilis* Semper, 1868. Geographic distribution: Bay of Bengal (Mombai), East Indies (Thailand) and the Philippine Islands (Manila = type locality).

DISCUSSION

This new addition to the fauna of Thailand shows conclusively that the holothuroid fauna of Thailand remain poorly studied, especially in habitats such as mangrove forests, which are not always easily accessible for sampling.

The original description of *A. gracilis* Semper, 1868 does not indicate the number of type specimens. Heding, in 1931, wrote that he found one specimen in the collection of the Zoological Museum of Hamburg (ZMH E. 2978) that originated from the type locality. He thought that this specimen might belong to the type series. In 1981, Rowe (pers. comm.) visited the ZMH and found specimen ZMH E. 2978, which he treated as the holotype: however, in 2008, Massin, Samyn and Van den Spiegel (unpublished) re-visited the ZMH collection and did not find specimen ZMH E. 2978 even though it is indicated in the original ZMH catalogue. On the other hand, a search through the collection of the Zoological Museum of Moscow State University turned up one specimen of *A. gracilis* from Manila (ZMMSU H-134) that was labelled 'type'. There are thus at least two specimens in the type series. (see also Heding 1931: 663). The designation by monotypy as mentioned in Liao (1997) can thus not be upheld.

Given that specimen ZMH E. 2798 can at present not be located we have decided to designate specimen ZMMSU H-134 as the lectotype.

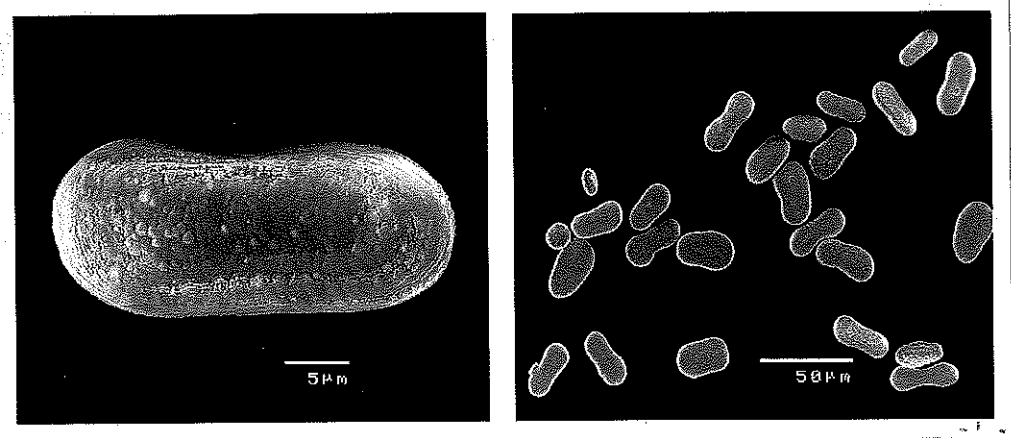

Figure 4. *Anapta gracilis* Semper, 1868: irregularly shaped ossicles from the body wall.

REFERENCES

Clark, A.M. and Rowe, F.W.E. 1971. *Monograph of the Shallow Water Indo-West Pacific Echinoderms*. Trustees of the British Museum (Natural History), London. 234 pp.

Clark, H.L. 1908. The Apodous Holothurians: A monograph of the Synaptidae and Molpadiidae, including a Report on the representatives of these families in the Collections of the United National Museum. *Smithsonian Contributions to Knowledge.* 35: 1-231.

Clark, H.L. 1924. The holothurians of the museum of comparative zoology. The Synaptidae. *Bulletin of the Museum of Comparative Zoology at Harvard College*. 65 (13): 459-501.

Heding, S.G. 1931. Über die Synaptiden des zoologisches Museums zu Hamburg. *Zoologische Jahrbücher, Systematik*. 61 (5/6): 637-696.

Lampert, K. 1885. Die Seewalzen. Eine systematische Monographie. In: Semper, C., ed., Reisen im Archipel den Philippinen, Teil 2. Wissenschaftlichen Resultaten. 4: 310 pp. Wiesbaden.

Liao, Y. 1997. *Fauna Sinica. Phylum Echinodermata: class Holothuroidea*: Science Press, Beijing. 334 pp.

Liao, Y and A.M. Clark. 1995. *The echinoderms of southern China*.Science Press, Beijing, New York. 614 pp.

Putchakarn S. and P. Sonchaeng. 2004. Echinoderm Fauna of Thailand: History and Inventory Reviews. *Science Asia.* 30: 417-428.

Sane, S. And B.F. Chhapgar. 1962. Intertidal Echinodermata of Bombay. *Journal of the Bombay Natural History Society*. 59: 672-676.

Semper, C. 1868. Reisen im Archipel der Philippinen. Holothurien. 2. Wissenschaftliche Resultate. Erster Band, Holothurien. Wilhelm Engelmann, Leipzig. 288 pp.

Sluiter, C.P. 1914. Die von Dr. P.N. Kamper während seines Fahrten mit dem Regierungs-dampfer „Gier" 1906-1909 im indischen Archipel gesam-melten Holothurien. Buitensorg Contrib. *Faune Indes Neerlandaiises*. 1: 1-28.