



## Biodiversity assessment of the Lower Mekong Basin: A new species of *Corvospongilla* (Porifera: Spongillina: Spongillidae) from Thailand

NISIT RUENGSAWANG<sup>1</sup>, NARUMON SANGPRADUB<sup>1,2</sup>, CHUTIMA HANJAVANIT<sup>1,2</sup> & RENATA MANCONI<sup>3</sup>

<sup>1</sup>Department of Biology, Faculty of Science, Khon Kaen University, Khon Kaen, 40002 Thailand. E-mail: tongkku@windowslive.com

<sup>2</sup>Applied Taxonomic Research Center, Faculty of Science, Khon Kaen University, Khon Kaen, 40002 Thailand. E-mail: narumon@kku.ac.th, chuhan@kku.ac.th

<sup>3</sup>Department of Science for Nature and Environmental Resources, Sassari University, Sassari, 07100 Italy. E-mail: r.manconi@uniss.it

### Abstract

Only six species (four genera, one family) of freshwater sponges are known until now from Thailand. A first record of the genus *Corvospongilla* Annandale, 1911 with the description of a new species is here reported from the Pong River in the Lower Mekong Basin. The taxonomic status of *Corvospongilla siamensis* **nov. sp.** is discussed in comparison to the 18 species assigned to the genus. The new species is characterised by *i*) alveolate, paucispicular skeletal network with scanty spongin, thick ascending tracts towards the sponge surface to support conules; *ii*) skeleton of stout microspined strongyles, and extremely rare, abruptly pointed oxeas usually with a few tubercles, plus micropseudobirotules with smooth shaft; *iii*) gemmules belonging to a single gemmular morph, typically sessile; *iv*) gemmular cage notably stout, of tangentially arranged strongyles of variable length from tubercled to spiny; *v*) gemmular theca with abundant laminar compact spongin, lacking pneumatic layer, armed by short, tubercled to spiny strongyles tangentially embedded; *vi*) larvae armed by spiny oxeas. *Corvospongilla siamensis* **nov. sp.** differs from all the other known species of the genus in its unique combination of diagnostic traits, particularly a) acanthostrongyles (megascleres), b) gemmuloscleres, both in the cage and in the theca, as strongyles showing the tendency towards ring-shape and button-like shape, and c) larval spiny oxeas.

**Key words:** Porifera, Freshwater sponges, *Corvospongilla siamensis* **nov. sp.**, Oriental Region, Pong River, Taxonomy, Biogeography, SEM

### Introduction

The knowledge on taxonomic richness and geographic distribution of freshwater sponges (Haplosclerida: Spongillina: Spongillidae) in the Oriental Region is poor and scarcely reported in the literature (Potts, 1887; Weltner, 1895; Evans, 1901; Kirkpatrick, 1908; Annandale, 1908, 1910, 1911, 1918a, b; Gee, 1930a, b, 1932; Arndt, 1936; Suvatti, 1950; Penney & Racek, 1968; Khera & Chaturvedi, 1976; Rützler, 1978; Soota *et al.*, 1983; Manconi & Pronzato, 2002, 2007, 2009; Masuda, 2004; Sangpradub & Boonsoong, 2006). Freshwater Spongillina fauna of Thailand until now recorded belong exclusively to the family Spongillidae with four genera and six species, namely *E. carteri* (Bowerbank, 1863), *Eunapius potamolepis* (Annandale, 1918b), *Spongilla alba* Carter, 1849, *S. lacustris* (Linnaeus, 1759), *Stratospongilla indica* (Annandale, 1908), and *Umborotula bogorensis* (Weber, 1890). In the framework of a biodiversity assessment in the Lower Mekong Basin focused on mapping taxonomic richness and distribution of freshwater invertebrates we discovered rich assemblages of sponges. We report here on the discovery of a new species belonging to the genus *Corvospongilla* Annandale, 1911 from northeastern Thailand.

### Materials & methods

Collection of sponges was carried out during visual census by wading, snorkelling and SCUBA diving in the Pong River (Mekong Hydrographic Basin, Khon Kaen Province, NE Thailand) (Fig. 1). The most representative speci-