



Convolutidae (Acoela) from the Andaman Sea

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Abstract

Convolutidae from shallow marine sediments, including three new species, are reported from the Andaman Sea: *Amphiscolops* sp., *Amphiscolops potocani* sp. nov., *Convoluta schueli* sp. nov., *Convoluta niphoni* sp. nov., and *Picola renei*.

Key words: Turbellaria, flatworms, meiofauna, Thailand, Myanmar

Introduction

To date we lack any knowledge about the diversity of acoel flatworms from the coasts of Thailand and Myanmar, the closest bodies of water investigated being the Molucca Sea (Dörjes 1970) and the Philippine Sea (Bush 1984). Therefore it was a special pleasure for me to have the opportunity to conduct research in this area during spring 2007. I was invited to join the Mergui-Archipelago-Excursion from the 19th to the 29th of March organized by ECoSwiss (www.ecoswiss.org) in Myanmar, and afterwards I investigated the acoel fauna at the southern shores of Phuket Island as a visiting scientist at the Phuket Marine Biological Center, Thailand from the 1st to the 20th of April.

My sampling was restricted by limitations of the sampling sites available to me (mud flats at the mouths of rivers, coral reefs, and sandy beaches) and of the season, namely at the time of the change between the wet (green) and the dry seasons during which visibility was so reduced in near-shore waters by suspended inorganic matter that snorkeling and diving were impractical. Nevertheless, by sampling in tide pools and other shallow-water sites, I discovered many new and some known species of acoel flatworms. Here I focus on those species belonging to the family Convolutidae.

Material and methods

Geographic coordinates for sites were obtained using a Garmin Gecko 110 GPS portable receiver.

Sediment was sampled in 1-L beakers and stored at room temperature overnight. Subsequently, specimens were extracted from the top-most sediment layer using magnesium-chloride anesthetization (Sterrer 1971).

Live animals were viewed with an Olympus SZ40 stereomicroscope and an Olympus CX41 compound microscope and photographed with a DFK 31AF03 fire-wire camera (The Imaging Source).

Specimens processed for serial sectioning were relaxed with magnesium-chloride isotonic to seawater and fixed and stored in 4% glutaraldehyde in 0.2 M cacodylate (pH 7.2) containing 0.1 M NaCl and 0.35 M