



Two new species of the genus *Daptonema* Cobb, 1920 (Nematoda: Xyalidae) found in the monospecific *Halophila ovalis* patches within an intertidal mixed-species seagrass bed on the coast of the Andaman Sea, Thailand

CHITTIMA ARYUTHAKA¹ & KENJI KITO²

¹Department of Marine Science, Faculty of Fisheries, Kasetsart University, Bang Khen, Bangkok 10900, Thailand.

E-mail: ffiscta@ku.ac.th

²Division of Liberal Arts and Sciences, Center for Medical Education, Sapporo Medical University, Sapporo 060-8556, Japan.

E-mail: kito@sapmed.ac.jp

Abstract

Daptonema hyalocella sp. n. and *D. setihyalocella* sp. n. are described from the Ban Pa Khlok seagrass bed, Phuket Province, Thailand. These new species are characterized by the epidermal chords consisting of large cells with a transparent appearance, as in *D. conicum* (Filipjev, 1922) and *D. trabeculosum* (G. Schneider, 1906). The key characteristics of *D. hyalocella* sp. n. are the peculiar epidermal chords, loose S-shaped spicules with no proximal cephalation, an indistinct gubernaculum with a lateral piece, and two terminal setae. For *D. setihyalocella* sp. n., the key characteristics are similar peculiar epidermal chords, but in this case with the L-shaped spicules having proximal cephalation, a distinct gubernaculum with dorsal apophysis and lateral piece, and four terminal setae.

Key words: Marine nematodes, *Daptonema hyalocella*, *Daptonema setihyalocella*, new species, taxonomy, seagrass bed, *Halophila ovalis*, Thailand

Introduction

Only nine species of free-living marine nematodes have been described from Thailand; six species from soft sediment habitats in the Gulf of Thailand and the Andaman Sea coasts (Kito & Aryuthaka, 1998, 2006; Hope & Aryuthaka, 2009) and three species on shells of intertidal epibenthic invertebrates from the Andaman Sea coast (Jensen, 1989). During our ecological studies on the seagrass bed communities of the Andaman Sea coast, we also carried out a taxonomic study of free-living nematodes, the dominant meiobenthic taxon (Monthum & Aryuthaka, 2006).

This paper, as the first taxonomic report, describes two new species of *Daptonema* Cobb, 1920, one of the most common genera in the monospecific *Halophila ovalis* patches within an intertidal mixed seagrass species bed in Phuket Island (Fig. 1). Both new species are characterized by peculiar epidermal chords consisting of transparent large cells which extend inwards into the body cavity. Transverse boundaries between the epidermal cells, which join longitudinally in the chords, appear like cytoplasmic bridges between the cuticle and alimentary canal in microscopic examination. These bridge-like structures cause the body cavity to appear subdivided into compartments. Similar epidermal chords have so far been reported in *Daptonema trabeculosum* (G. Schneider, 1906) and *Daptonema conicum* (Filipjev, 1922). We discuss this peculiar feature of epidermal chords as one of the important diagnostic characters of the two new species from Thailand.

Material and methods

Sediment samples were taken in *Halophila ovalis* patches of the Ban Pa Khlok seagrass bed, Phuket Province, using acrylic hand-corers (7 cm²) (cf. Monthum & Aryuthaka, 2006). The study site was located at 8° 01' 20" N, 98°