

## MORPHOLOGY OF THE MARINE BENTHIC DIATOM GENUS *HYALOSIRA* KÜTZING IN JAPAN

Yurika Mikame<sup>1</sup>, Hidekazu Suzuki<sup>1</sup>, Tamotsu Nagumo<sup>2</sup> & Jiro Tanaka<sup>1</sup>

<sup>1</sup>The Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology

<sup>2</sup>Department of Biology, The Nihon Dental University

The genus *Hyalosira* belonging to the order Striatellales was established by Kützing (1844) and is composed of 5 species. They have been reported from various parts of the world. The main morphological features of the genus are the follows: 1) zig-zag or ribbon-like colonies, 2) numerous copulae, 3) internal costae, and 4) septa at one side of valve. But the description of this genus is indistinct because of few morphological researches until now.

In the present study, the fine structures of the frustules were observed using light and scanning electron microscopies (SEM) on *H. interrupta*, *H. tropicalis*, *Hyalosira* sp. 1 and *Hyalosira* sp. 2 which were collected from the several coasts of Japan.

These taxa can be distinguished from each other by 1) shape and size of valves, 2) length of septum and 3) density of striae. Because some species which have short or no septum are similar in girdle views, their taxonomy are confusable. However in SEM, the following fine structures seem to be very useful for the classification in this genus, 1) shape and size of areolae, 2) number of rimoportulae, and 3) row of areolae on copulae. Therefore, these taxa can be divided into two main categories. *H. interrupta* and *Hyalosira* sp. 1 have septum extending to the center of the copulae and two rimoportulae near the apices per valve. *H. tropicalis* and *Hyalosira* sp. 2 have short or no septum and a rimoportula per valve.