



Deep-water Ascidiacea from the Sea of Japan

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Abstract

Four solitary ascidians are recorded in the deep-water material from the Sea of Japan. Two species, *Agnezia orthenteron* and *Pelonaia bursaria* are recorded for the first time since original descriptions, a third species, *Styela squamosa*, is a widely distributed deep-water species not known previously from the Sea of Japan. A fourth species was identified only to a genus level.

Key words: Ascidiacea, Sea of Japan, SoJaBio

Introduction

Deep-sea basin of the Sea of Japan is well isolated from adjacent deep-sea areas by rather shallow straits; its deep-water fauna is poorly studied but the species diversity is expected to be low (Zenkevich, 1963). Redikorzev (1941) described two ascidians from the depths greater than 1000m in the Sea of Japan: *Agnezia orthenteron* (Redikorzev, 1941) and *Pelonaia corrugata bursaria* Redikorzev, 1941 (the latter taxon is raised to a species level in the present work and redescribed as *Pelonaia bursaria*). Nishikawa (1990) added a third species, *Aplidium rhabdocormi* Nishikawa 1990 to a list of deep-water species of the Sea of Japan. There is also a record of Zenkevich (1963), who mentioned *Goniocarpa rustica* (= *Styela rustica* (Linnaeus, 1767)) at the depths greater than 2000m in this sea, although the source of this record it is not known and the identification probably not correct (it could be misidentified *Styela squamosa* for instance, a species recorded in the present study).

The present study is based on the material collected by joint Russian-German expedition *SoJaBio* (Sea of Japan Biodiversity Studies) on the board of RV Akademik Lavrentjev in 2010. The material contains only four solitary species of Ascidiacea but gives an opportunity to redescribe poorly known species. Expected low species diversity is confirmed. It is interesting to note total absence of minute styelids which are diverse and numerous in other deep-water basins (especially in Atlantic). Their absence appear to be real rather than a result of inadequate sampling – the material collected by the expedition contains numerous small species of other taxons (e.g. edwardsiid anemones, minute holothurians) so it is hardly possible that small ascidians were overlooked by collectors.

List of stations

St. A6-7, Gear: EBS- S, 16.08.2010, 2511–2534m, 44°00.2607N, 137°31.1584E - 44°19.2650N, 137°24.1206E.

St. A6-8(1), Gear: EBS-Epi, 16.08.2010, 2545–2555m, 44°18.6270N, 137°24.4079E–44°18.4712N, 137°24.3985E.

St. A6-8(2), Gear: EBS-Supra, 16.08.2010, 2545–2555m, 44°18.6270N, 137°24.4079E–44°18.4712N, 137°24.3985E.

B2-6, Gear: small bottom trawl, 20.08.2010, 1705m, 42°33.9916N, 136°16.1348E–42°33.8376N, 136°16.6237E.

St. B5-8, Gear: EBS- Supra, 23.8.2010, 2609–2655m, 43°01.3064N, 135°05.9562E–43°00.9363N, 135°06.5366E.

St. B5-10, Gear: AGT, 24.08.2010, 2676m, 43°01.7149N 135°04.5451E–43°01.5378N 135°04.3950E.

St. B5-11, Gear: AGT, 24.08.2010, 2651m, 43°01.7306N, 135°05.0794E–43°01.6169N, 135°04.9673E.