

Topography and sedimentary structure of coastal area around Notsuke-zaki, Nemuro strait based on acoustic profile

Yasuhito Uchida[1]; Kazuya Suga[1]; Tsumoru Sagayama[2]; Yasuji Murayama[3]

[1] Marine, Geol.Surv.Hokkaido; [2] Marine Geosci., Geol. Surv. Hokkaido; [3] GSH

<http://www.gsh.pref.hokkaido.jp>

Notsuke-zaki, well known as the typical compound recurved sand spit, develops from the mouth of pon-chashikotsu river to the southeast direction located in the central part of Nemuro strait (between east coast of Hokkaido and Kuril islands, and characterized by shallow seawater depth on an average 20-30m). Many surveys and researches were carried out in this area to reveal historical development of submarine topography up to the present, however, it is not still clear that the marine geological and topographic informations about the Nemuro strait.

In order to clarify submarine topography and sedimentary structure, an acoustic survey was carried out at coastal area around Notsuke-zaki in 2003. Sub-bottom profiler (SBP) and side scan sonar was used in this survey. Sea cauldron and many sand bank formed by the recent tidal currents are observed on the bottom surface of Notsuke-suido. The shoreline curvature of the spit gradually increases from near Ryujin bay. Many filled valley structures were observed off Ryujin cape and under the sea cauldron in acoustic records. It is inferred that the filled valley was made in lower sea level stage. In the coastal area off the tip of the spit, acoustic records divide into two groups. The lower layer has many inclined internal reflections and is overlain unconformably by the upper modern sediments.