

**SEASONAL CHANGE IN NUMBER AND MOVEMENT PATTERN OF SPOTTED SEALS
(*Phoca largha*) MIGRATING AROUND THE SEA OF JAPAN**

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Recently, a large number of spotted seal has been migrating sea of JAPAN from November to May of next year, but at least the fishermen and residents except Rishiri Island said they hardly to observe these seals from 20~30 years ago. And area of distribution has spread and the number of spotted seal tends to increase year after year.

Spotted seals of Okhotsk surely increase the number of individual recently because of reducing human impacts. And movement patterns of these seals have changed recently, too. One side, it is said that drift ice is decreasing rapidly under the influence of global warming. Decreasing of drift ice means that those seals will be hard to seek adequate drift ice for birth and care their pups. Then some individuals may not finish taking pups due to melt of the drift ice, and the other individuals birth their pups in the water due to can not find adequate drift ice. On the other hand, predations of seal pups have been easily for their predators. Such situation is based on using same ice by many pups. It also has been lead by the decreasing of drift ice. As these assumptions conduct to increase initial deaths of spotted seals, then population dynamics will change in the future.

Spotted seals depend heavily on drift ice physically and biologically, so we must extend the time to monitor both of this species and drift ice.