## 外部発表業績

## Fisheries Science

Age validation and growth variability of Japanese flounder *Paralichthys olivaceus* off the Pacific coast of northern Japan

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This study examined age and growth of Japanese flounder *Paralichthys olivaceus* off the Pacific coast of northern Japan, and determined whether the growth patterns of male and female fish in northern (40-41°N) and southern (37-38°15'N) waters differ. In total 8095 specimens were collected between January 1999 and December 2005. Zonation consisting of opaque and translucent bands on otolith was evident. Within each opaque band a thin and clear check (ring mark) was observed in all specimens examined. Monthly change in the frequency of appearance of a ring mark on the outer margin of the otolith indicates that ring marks form between July and August. The von Bartalanffy growth model showed a sexual dimorphism in growth, as females grew faster and reached a lager size than males. The growth patterns obtained by tracking the observed total length for monthly collections showed a rapid increase in total length between August and October. Spatial variation in the growth pattern of male and female fish between northern and southern waters was evident, as southern fish were significantly larger than northern counterpart during 1.25-3.00years post hatch.

## Applied and Environmental Microbiology

Persistence of Caliciviruses in Artificially Contaminated Oysters during Depuration

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The fate of calicivirus in oysters in a 10-day depuration was assessed. The norovirus gene was persistently detected from artificially contaminated oysters during the depuration, whereas feline calicivirus in oysters was promptly eliminated. The prolonged observation of norovirus in oysters implies the existence of a selective retention mechanism for norovirus within oysters.