

PIXE analysis of trace elements in otoliths of the alfonsino,
Beryx splendens, in waters of Japan

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Abstract

This study suggests the behavior ecological study of the alfonsino, *Beryx splendens*, by analysis of trace elements in otoliths. We analyzed 90 otoliths of the alfonsino in the water of Japan by PIXE method. 29 Elements were detected in otoliths of the alfonsino, 3 Elements were detected from all sample. Sr/Ca ratio of otoliths from Aogashima area was higher than those from Hachijojima area and Okinotorishima. This result suggests that the alfonsino from Aogashima area have inhabited in deeper area than those from Hachijojima and Okinotorishima. There were positive correlation between the concentration of Si in otolith and the body length in waters of Hachijojima. This result suggests that habitat areas of alfonsino has moved into deeper waters as alfonsino ages.