Press Release

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Japan Fisheries Research and Education Agency (FRA)

Pacific bluefin tuna (*Thunnus orientalis*)
Successful collection of large quantity of larval fish from the Sea of Japan

- A larval survey of bluefin tuna in the Sea of Japan was conducted and as many as 3,330 larvae were successfully collected, some 40 times that of the largest surveys in the past.
- After a thorough analysis of larval samples, evaluation of the survival process of this species during larval stage will be expected.

The current stock status of Pacific bluefin tuna (i.e., bluefin tuna) in the North Pacific Ocean is estimated to be close to historically low level. Because population dynamics in bluefin tuna resources are thought to be affected by the annual recruitment fluctuation, it is important to predict of the recruitment size.

The Sea of Japan is a major spawning ground for Bluefin tuna as well as in the waters around the Nansei Islands. Since 2011, the Japan Fisheries Research and Education Agency (FRA) and some Prefectural research institutes have been conducting a survey of newly born larval fish in the Sea of Japan to estimate the spatial-temporal characteristics of the spawning ground. Beginning this year, these cooperative institute focus on the understanding the survival mechanism of this species related to recruitment. Among the surveys conducted between July 24 and August 5, the July 31 survey succeeded in catching a large quantity of bluefin tuna larvae (about 3,330) in one towing. This number significantly updates the largest amount of 85 larvae in 1984.

The collected larvae were about 3 mm in length, considered to be individuals just a few days old after hatching, and all were identified to be bluefin tuna larvae genetically. The reason for this large quantity will be that (1) the time of the survey was delayed more than usual based on past experience, or (2) there may have been more spawning in the Sea of Japan, but this is unclear at present.

In the future, through the analyses on the daily growth rate and nutritional conditions of the larvae sampled, it is expected that the survival process of this species and the spawning ground and environment can be extensively understood. This will lead to significant advances in the research on the predicting the recruitment of bluefin tuna in the Sea of Japan. Regarding the relationship between amount of larvae collected and recruitment level will be continued to monitor by juvenile survey in the Sea of Japan in September of this year. Concurrently, juveniles catch in Tsushima and Goto Islands beginning in November will also be carefully analyzed.

* These results were made available by the following project sponsored by the Fisheries Agency: "International Fishing Resources Survey and Information Provision Project".

Photo: Bluefin tuna larvae collected from the Sea of Japan