

Results of the research cruise to investigate ecology of the freshwater eel in the spawning area

The Fisheries Research Agency and the Fisheries Agency conducted surveys to investigate ecology of the freshwater eel in the spawning area by dispatching the RV *Shoyo Maru* and RV *Kaiyo Maru* in the northwest Pacific.

1. Research vessels and periods

(1) Vessels

Research vessel of the Fisheries Agency: RV *Shoyo Maru* (2,214 tons)

Research vessel of the Fisheries Agency: RV *Kaiyo Maru* (2,630 tons)

(2) Periods

Shoyo Maru: July 5 to August 23, 2010

Kaiyo Maru: July 28 to September 22, 2010

2. Methods and results of the survey

(1) *Shoyo Maru*

*Ultrasonic transmitters were applied to silver stage Japanese eel (*Anguilla japonica*) caught in the estuary of Tone River. These eels were released and tracked in the spawning area and its adjacent waters. The fishes were successfully tracked for several days to more than one week, and were found to swim at depths of 150 to 250 m at night and at 350 to 650 m during the daytime.

*Five eel larvae estimated to be one month after hatching were captured about 500 km west of the estimated spawning area.

(2) *Kaiyo Maru*

*One male *A. japonica* (43 cm long) and one male *A. marmorata* (xx cm long) were captured near the estimated spawning area.

*Five larvae of *A. japonica* estimated to be about 3 weeks to 2 months after hatching were captured near the estimated spawning area, about 500 km west, and about 800 km northwest of the area.

*Many oceanographic and biological data were collected over a wide area in the northwest Pacific (the data is being analyzed).

Note: Adult and larval eels were morphologically identified on board, and subsequently DNA analysis was performed in the laboratory to confirm the species identity.

Data collected in the surveys may be valuable information not only for understanding spawning ecology of the freshwater eel but also for developing better aquaculture technology.

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