Short Paper

On Worm Cataract of Rainbow Trout in Japan^{*1}

The present paper deals with a worm cataract of cultured rainbow trout, *Salmo gairdnerii*. In foreign countries, cataract of fishes caused by a larval trematode belonging to the genus *Diplostomum* is well known (HUGHES,¹⁾ LA RUE *et al.*²⁾ and etc.³⁾), but there has been no report on the worm cataract in Japan as far as we know.

The senior author obtained diseased fishes suffering from a worm cataract in the December of 1974 in Shizuoka prefecture. The following observation is based on the materials, and the report may be the first record in Japan.

The majority of the rainbow trout (body length 10.7–16.0 cm) reared in a concrete pond (water temperature 16.0°C) were found showing the cloudy eyes. Microscopical observation proved that the eyes were invaded by a species of metacercaria (Fig. 1). The disease incidence was 90%

Fig. 1. *Diplostomum* sp., a parasite in the eye of *Salmo gairdnerii*: a fresh specimen.

(1,552 infected out of 1,726 fishes examined). The number of the worms found per one eye was 30–40 in the case of slightly or partially clouded eye and reached up to 120 in the case of severely or entirely clouded. The diseased fishes were somewhat thin and dark, however they were active in taking food and the mortality was hardly observable. Besides the above-mentioned symptoms, corneal haemorrhage was found in about 15% of the infected fishes. All the worms were observed in the cortex lentis, but not observed

in the epithelium lentis and the nucleus lentis. They possess no cyst membranes formed by themselves, and are surrounded by a thin membrane of the host origin. The total preparations fixed in Schaudinn and stained with haematoxylin-eosin showed the oval or long elliptical form having 324–667 μ by 229–449 μ in size. The terminal oral sucker is 38–78 μ by 31–76 μ . The lateral suckorial organs are 33–53 μ by 10–22 μ .

The pharynx lies just behind the oral sucker, being 29–38 μ by 27–38 μ in size. The esophagus is short, and the ceca extends to near the posterior end of the body. The ventral sucker lies at about posterior third of the body, being 46–53 μ by 38–72 μ . The holdfast organ is situated in the posterior of the ventral sucker, being 91–174 μ by 73–211 μ . The coniform rudiment of the posterior body is observable at the posterior end of the body. The excretory tubes developed well.

According to YAMAGUTI,⁴⁾ the present form was classified as a member of the genus *Diplostomum*, the identification of the species will be decided in further studies.

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