

## *Plecoglossus altivelis* as a new fish intermediate host of *Heterophyopsis continua*

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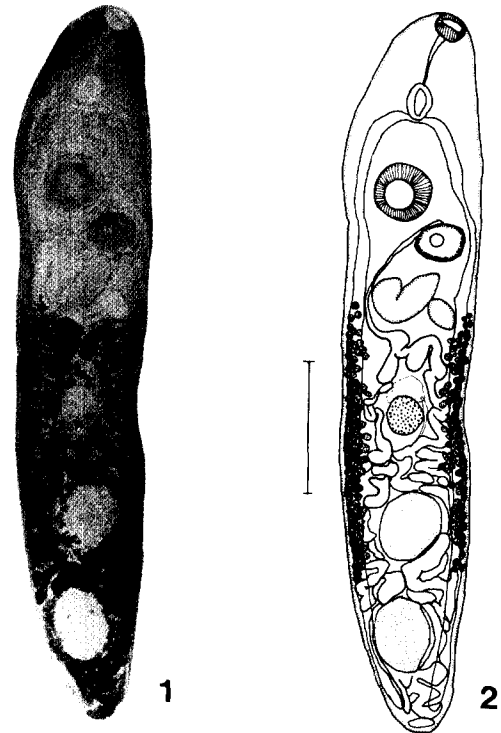
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On November 1984, we purchased 3.75 kg of *Plecoglossus altivelis* (15~30 cm long each) in Jangheung Gun, Chollanam Do, Korea. They were digested to collect naturally infected metacercariae of *Metagonimus yokogawai*. About 1.8 million metacercariae were harvested from them. Two dogs, which were pre-treated with praziquantel and pyrantel pamoate, were infected with 70,000 metacercariae respectively. Each dog was killed on 4 and 8 weeks after the experimental infection.

From the dog killed on the 8th week, 3 elongated heterophyid trematodes were collected, together with 50,560 *M. yokogawai*. One was found at the 4th segment of 6 equal divisions of small intestine; two were at the 5th segment.

The heterophyid trematodes were; 2.71~2.80 mm long, 0.51~0.55 mm in maximum width, oral sucker 0.12~0.16×0.09~0.11 mm, prepharynx 0.16~0.22 mm long, pharynx 0.09~0.10×0.10~0.12 mm, acetabulum 0.21~0.23×0.20~0.21 mm, genital sucker 0.19×0.15~0.16 mm with 92~94 rodlets, ovary 0.12~0.17×0.13~0.16 mm, anterior testis 0.21~0.26×0.22~0.26 mm, posterior testis 0.19~0.23×0.25~0.30 mm (Figs. 1 & 2). Based on our measurement and observation data, we identified them as *Heterophyopsis continua* (Onji et Nishio, 1916).

Though we had not recognized the metacercariae of *H. continua* in the processes of digestion, cleansing and counting metacercariae and experimental infection, our experience indicated evidently that the metacercariae of *H. continua*



**Figs. 1-2.** Adult *Heterophyopsis continua* collected from a dog which was experimentally infected with metacercariae from *Plecoglossus altivelis*. 1. Unstained specimen. 2. Diagram of Fig. 1. (Scale represents 0.5 mm).

were mixed in a very low density among myriad metacercariae of *M. yokogawai*. Probably because we counted them using a Wintrobe tube in mass, rather large sized metacercariae of *H. continua* escaped from the recognition.

According to Seo *et al.* (1984), *Mugil cephalus*,

*Harengula zunasi*, *Dorosoma thrissa*, *Coilia* sp. and *Lateolabrax japonicus* in Japan (Komiya, 1965), *L. japonicus*, *Acanthogobius flavimanus* and *Clupandon punctus* in Korea (Chun, 1960), *Cyprinus carpio*, *M. affinis*, *Gobius nebulosus* and *Boleophthalmus pectinirostris* in southern China have been recorded as intermediate hosts of *H. continua*. Therefore we add here hitherto unrecorded *P. altivelis* in the list of fish intermediate hosts of *H. continua*.

Overwintering and early growth of *P. altivelis* at the brackish water zone of river mouth may provide the chance of low grade contact with cercariae of *H. continua*.

**REFERENCES**

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==우리말요약==

***Heterophyopsis continua*(긴이형흡충)의 제이중간숙주로서 은어의 추가**

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1984년 11월에 전남 장흥군 장흥읍에서 구입한 은어에서 자연감염된 요꼬가와흡충의 피낭유충을 분리하여 개 2마리에 실험감염시키고, 감염 후 4주일 및 8주일에 도살하여 성충을 얻었다.

그 과정에서 감염 제 8주에 도살한 개의 회장에서 *Heterophyopsis continua*로 동정한 충체 3마리를 요꼬가와흡충과 함께 얻었다. 이들 충체는 은어에서 분리하여 감염시킨 피낭유충 140,000개중에 섞여 있었던 것에서 유래하였다고 판단하였다. 따라서 은어를 *H. continua*의 제이중간숙주로 추가하는 것이 타당하다고 생각한다. 은어가 강 하구 반열수대에서 겨울철을 넘기거나 어린시절을 보내므로 그때에 적게나마 감염되는 것으로 생각하였다.

*Heterophyopsis continua*(Onji et Nishio, 1916)의 우리말 이름을 “긴이형흡충”으로 할 것을 제의한다.