

Research Note

Natural Infection with *Angiostrongylus cantonensis* in
Ampullarius canaliculatus (Lamarck) in the Ryukyu Islands, Japan

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Ampullarius canaliculatus (Lamarck), is a freshwater snail belonging to the Family *Ampullariidae*. The original habitat of the snail is said to be Argentina and it was brought to Japan for food in 1981. Recently, the snails which have since grown wild, have propagated in various places of Kyushu and begun to harm aquatic plants such as the rice plant by eating them.

By artificial digestion kept in a solution containing 1% pepsin and 1% HCl at 37°C for 2 hours, more than 100 metastrongylid third-stage larvae were found in a total of the 30 snails collected from Onna-son in the central part of Okinawa. The larvae agreed morphologically with descriptions of the infective larvae of *Angiostrongylus cantonensis*. The same larvae, 5 in number, were also recovered from the 30 snails collected from Hijigawa in the central part of Okinawa. In the material collected from Ishigaki Island, 15 larvae were found in a total of the 20 snails. Fifty larvae recovered from the snails collected from Onna-son were fed to each of 2 rats. At autopsy 43 days after the infection, the rats showed 35 and 10 living adult worms of *A. cantonensis* in the pulmonary

artery, respectively. In addition, 5 larvae recovered from the material collected from Hijigawa were fed to one rat, and 15 larvae recovered from that of Ishigaki Island were fed to another. The rats showed 3 and 6 adult worms of *A. cantonensis*, respectively. All 4 rats infected with *A. cantonensis* showed typical features of the lung pathology in murine angiostrongylosis.

Concerning natural infection with *A. cantonensis* in *A. canaliculatus*, Chen¹⁾ mentioned the name of *Ampullarium canaliculatus* as a natural intermediate host in Taiwan, at the First Seminar on Parasitic Diseases held in September 30 – October 4, 1985. However, no details of the result have yet been published. According to Habe²⁾, *Ampullarium canaliculatus* is a synonymous with *Ampullarius canaliculatus*. To the authors' best knowledge, no other reports on natural infection with *A. cantonensis* in *A. canaliculatus* have been published up to the present. This report constitutes a new natural intermediate host record for *A. cantonensis* in Japan. Moreover, the finding suggests that *A. canaliculatus* is not only an important pest for aquatic plants, but is also important from a medical viewpoint as a potential source of human eosinophilic meningoencephalitis.

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References

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- 2) Habe, T. (1986): Personal communication.

短 報

琉球産スクミリンゴガイに於ける広東住血線虫の自然感染

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スクミリンゴガイ (俗称ジャンボタニシ) は淡水産の貝で, その原産地はアルゼンチンとされている。1981年より, わが国で, 食用として養殖され始めた。本種は繁殖力が強く, 現在, 野性化した個体が九州の各地に分布し, 水生植物に被害を与えており, その被害が顕在化している。著者らは, 沖縄本島なら

びに石垣島のスクミリンゴガイから広東住血線虫の感染幼虫を証明した。今回の知見により, スクミリンゴガイは, 農業害虫であるばかりでなく, 医学上からも, 広東住血線虫の中間宿主として重要な貝であることが判明した。