

**A New Digenetic Trematode, *Paradiscogaster aluteri*
(Fellodistomidae), from the Leatherjacket,
Aluterus monoceros in Japan**

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A survey was made on parasites of the sea fishes at Fukaura, on the southern coast of the Bungo Channel, Ehime Prefecture, Shikoku Island, Japan, in May, 1972. In this survey, a new digenetic trematode belonging to the family Fellodistomidae was obtained from the small intestine of the leatherjacket, *Aluterus monoceros*. The specimens were fixed in acetic sublimate under cover glass pressure, stained with Heidenhain's hematoxylin and mounted in balsam. All specimens are deposited in the Department of Zoology, National Science Museum, Tokyo.

***Paradiscogaster aluteri* n. sp.**

(Figs. 1 & 2)

Host. *Aluterus monoceros* (Linnaeus); family Aluteridae.

Location. Small intestine.

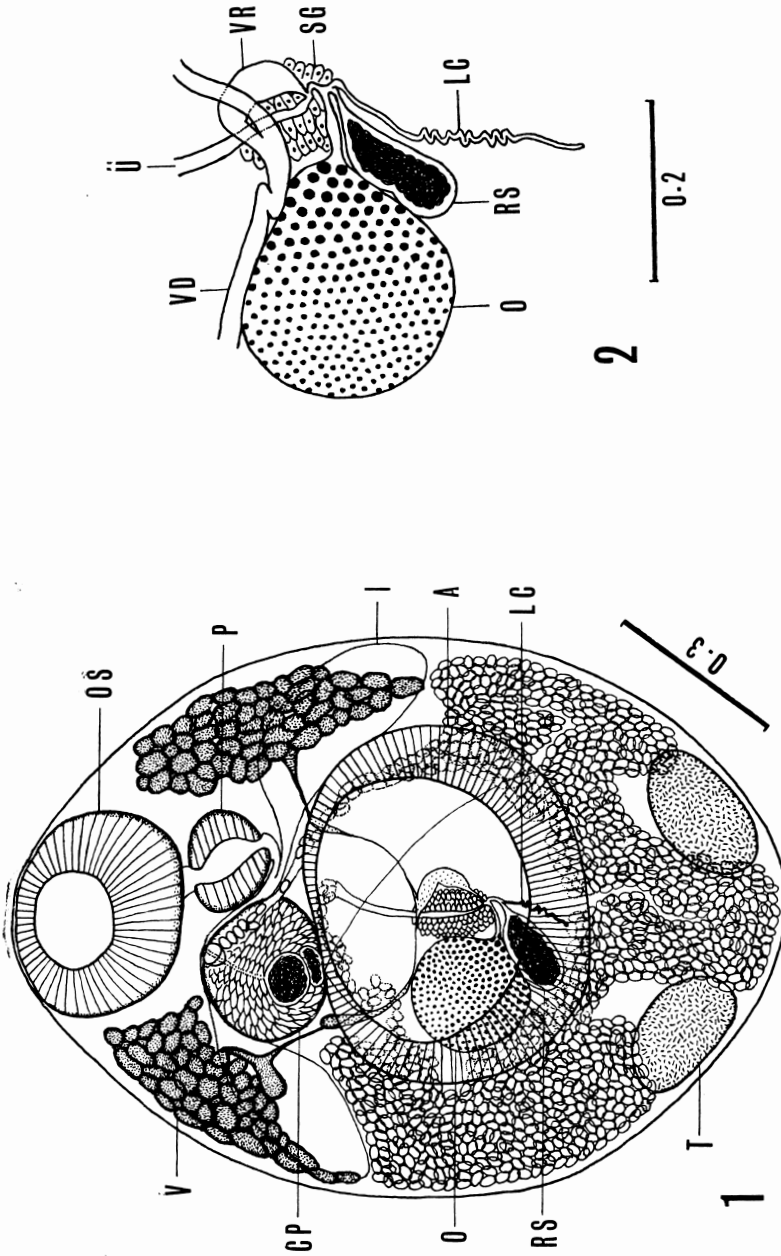
Locality. Southern Bungo Channel, Ehime Prefecture, Shikoku Island, Japan.

Date. May 21 and 24, 1972.

Frequency. Three to 30, in three out of five hosts examined.

Description. Based on ten specimens. Body oval, 1.17-1.62 mm long by 0.91-1.22 mm wide. Cuticle with minute squamules except for posterior part of body. Oral sucker terminal, rounded, 0.243-0.354 × 0.350-0.468 mm; prepharynx short, about 0.1 mm long; pharynx globular, 0.122-0.162 × 0.132-0.278 mm; esophagus short, 0.062-0.075 mm long, bifurcating about middle of anterior half of body; caeca saccular, terminating near equator. Acetabulum very large, rounded, 0.390-0.587 × 0.576-0.830 mm, with

its center somewhat behind middle of body, sometimes with ripple orifice which reddish in colour in life. Sucker ratio 1:1.56-1.85. Testes oval or elliptical, 0.20-0.33 × 0.111-0.162 mm, situated symmetrically at variable levels in hindbody, i.e., in holotype they situated at posterior end of body, while in some paratypes they located at level of posterior margin of acetabulum; each vas efferens running into seminal vesicle at posterior end of cirrus pouch; cirrus pouch oval, well developed, 0.202-0.405 × 0.233-0.314 mm, lying pre-equator, containing bipartite seminal vesicle, pars prostatica and prostatic cells; short cirrus, 0.080 × 0.060 mm, always protruded into a fairly wide genital atrium; genital pore situated almost median at level of posterior end of pharynx. Ovary rounded, 0.125-0.243 × 0.101-0.223 mm, submedian, postequatorial, pretesticular; receptaculum seminis elliptical, 0.091-0.22 × 0.071-0.162 mm, obliquely posterodexter to ovary; Laurer's canal winding and opening medially at posterior margin of acetabulum dorsad. Vitellaria consisting of many irregularly lobed small follicles, extending symmetrically from level of posterior part of oral sucker to caecal termination; vitelline ducts united with each other at middle of body to form short tubular vitelline reservoir. Uterus first ascending to near caudal end of cirrus pouch, descending on right side towards posterior extremity of body, then ascending on left side of body to form short metraterm which opens into genital atrium along with cirrus. Eggs oval, embryonated, relatively thick-shelled, 0.026-0.036 × 0.015-0.019 mm in balsam. Excretory



Figs. 1 & 2 *Paradiscogaster aluteri* n. sp. -1. Entire worm, ventral view. -2. Ovarian complex, ventral view. A, acetabulum; CP, cirrus pouch; I, intestine; LC, Laurer's canal; O, ovary; OS, oral sucker; P, pharynx; RS, receptaculum seminis; SG, shell gland; T, testis; U, uterus; V, vitellarium; VD, vitelline duct; VR, vitelline reservoir. Scales in mm.

vesicle Y-shaped, extending to posterior margin of acetabulum, pore terminal.

Discussion. The genus *Paradiscogaster* contains seven species: *P. pyriformis* Yamaguti, 1934; *P. chaetodontis* Yamaguti, 1938; *P. manteri* Kurochkin, 1970; *P. eniwetokensis* Martin et Hammerich, 1970; *P. farooqii* Hafeezullah et Siddiqi, 1970; *P. yamagutii* Hafeezullah et Siddiqi, 1970 (= *P. chaetodontis okinawaensis* Yamaguti, 1971); *P. drepanei* Mamaev, 1970. The present new species differs from all of them in having larger pharynx, small sucker ratio and in the vitellaria being extended more anteriorly. The vas efferens does not unite with each other to form vas deferens before entering into the cirrus pouch, though there are no descriptions of the vas efferens except for *P. pyriformis*, *P. chaetodontis* and *P. yamagutii*.

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豊後水道のウスバハギから得た二生吸虫 *Paradiscogaster aluteri* n. sp. (Fellodistomidae) について

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1972年5月、愛媛県南宇和郡深浦で海産魚の寄生虫を調査した際、ウスバハギ *Aluterus monoceros* (Linnaeus) の小腸から Fellodistomidae 科 *Paradiscogaster* 属に属する二生吸虫の未記録種を採集した。本属にはすでに *P. pyriformis* Yamaguti, 1934; *P. chaetodontis* Yamaguti, 1938; *P. manteri* Kurochkin, 1970; *P.*

eniwetokensis Martin et Hammerich, 1970; *P. farooqii* Hafeezullah et Siddiqi, 1970; *P. yamagutii* Hafeezullah et Siddiqi, 1970; *P. drepanei* Mamaev, 1970 の7種が知られているが、今回得られた *P. aluteri* n. sp. は咽頭が大きく、吸盤比が小さく、卵黄巣が体前部まで達する点などで、7既知種とは区別される。

References

- 1) Hafeezullah, M. and Siddiqi, A. H. (1970): Digenetic trematodes of marine fishes of India. Pt. 2 Fellodistomatidae. J. Parasit., 56, 932-940.
- 2) Kurochkin, Yu. V. (1970): New trematode species of Discogasteroidinae (Trematoda, Fellodistomatidae) from marine fishes of Australia. Parazitologiya, 4, 111-115. (In Russian with English summary)
- 3) Martin, W. E. and Hammerich, B. (1970): *Paradiscogaster eniwetokensis* n. sp. (Fellodistomidae: Trematoda) from Eniwetok, Marshall Islands. Pacific Sci., 24, 379-380.
- 4) Mamaev, Yu. L. (1970): Helminths of some commercial fishes of the Tongking Bay. in Helminths of animals in southeastern Asia, 127-190. Nauka, Moscow. (In Russian)
- 5) Yamaguti, S. (1934): Studies on the helminth fauna of Japan. Pt. 2 Trematodes of fishes, I. Jap. J. Zool., 5, 249-541.
- 6) Yamaguti, S. (1938): *Ditto*. Pt. 21 Trematodes of fishes, IV. Pp. 1-139, pl. 1. Pub. by author.
- 7) Yamaguti, S. (1942): *Ditto*. Pt. 39 Trematodes of fishes mainly from Naha. Trans. biogeogr. Soc. Japan, 3, 329-398.
- 8) Yamaguti, S. (1971): Synopsis of digenetic trematodes of vertebrates. Pp. 1-1074, pls. 1-349. Keigaku Pub., Tokyo.