

Two Trematode Parasites of Copper and Green Pheasants from Kyushu, Japan

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The copper pheasant (*Phasianus soemmeringii* Temminck) and the green pheasant (*P. colchicus versicolor* Vieillot) are well-known endemic representatives of the Japanese birds and chosen as hunting targets in winter. Their trematode parasites were fragmentarily surveyed by several authors such as Morishita (1924, 1929), Ishii (1932), Yamaguti (1935, 1939), etc. up to present. We recently obtained two species of trematodes from these birds and found that those materials were new records for the hosts and the distribution as stated below.

Materials and Methods

The trematodes obtained were flattened, fixed with Bouin's fluid, and stained with alum carmine.

Measurements were performed by the following two methods. Uterine eggs were measured under a microscope by using a micrometer. Other organs were directly measured on the accurate $\times 100$ images enlarged by a profile projector (Nikon 6CT2) except the body length and width which were measured on $\times 10$ images.

Results and Discussion

After examining the stained specimens,

Contributions to the trematode fauna of Japan-IX
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the two species of trematodes were identified as follows. Because no remarkable difference was observed in the morphology against the previous descriptions made by the above-mentioned authors, only the results of measurements are quoted in the present paper.

Brachylaimidae

Postharmostomum gallinum (Witenberg, 1923) (Fig. 1).

Harmostomum (*Postharmostomum*) *gallinum* Witenberg, 1923.

Harmostomum horisawai Ozaki, 1925.

Harmostomum gallinum: Yamaguti, 1933.

This species had been discovered from Japan by Horisawa (1914) and lately named as *Harmostomum horisawai* by Ozaki (1925). Later then, Yamaguti (1933) obtained many materials from chicken in Kyoto and synonymized this with the species mentioned above. Some other authors also found this species from the domestic fowl of various localities such as Hyogo, Hiroshima, Yamaguchi (Honshu), Fukuoka and Nagasaki (Kyushu) Prefectures in Japan and Taichu in Formosa (cf. Morishita, 1929) and several names were synonymized as enumerated by Yamaguti (1971). We obtained seven specimens of which data are as follows.

Host: *Phasianus soemmeringii soemmeringii* (Temminck), 2 exx. (Aves: Galliformes: Phasianidae)

Habitat: Caecum.

Locality: Yufuin and Shōnai, Oita Prefecture (Kyushu).

Date: December 11, 1970 and February 12, 1978.

One female host collected at Shōnai on February 12, 1978, harbored 3 examples of this trematode. Another host did only one

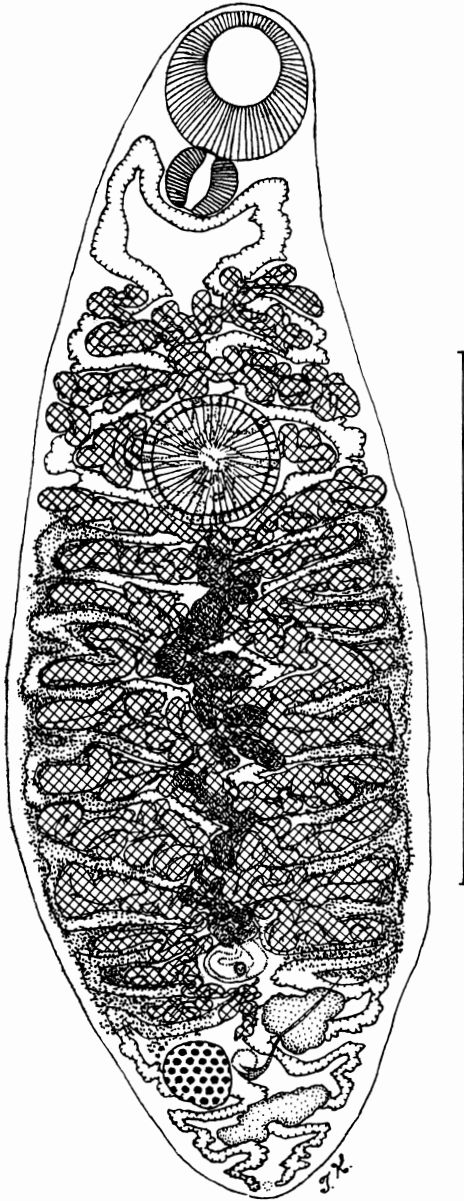


Fig. 1 *Postharmostomum gallinum* (Witenberg, 1923) from *Phasianus s. soemmerringii*.
Scale: 5 mm.

example.

Host: *Phasianus colchicus versicolor* Vieillot, 3 exx.

Habitat: Caecum.

Locality: Ohno and Naoiri, Oita Prefecture (Kyushu).

Date: November 24, 1976 to February 2, 1978.

Each of these three hosts harbored only one example.

The results of measurements are compared with those by the previous reports in Table 1. The gonad are of various forms as shown in Fig. 2. The bird genus *Phasianus* is already found to be a host of this trematode in the Asian Continent (cf. Yamaguti, 1971), but the present hosts, *P. soemmerringii* and *P. colchicus versicolor* are the first record for this trematode and the locality (Oita Prefecture) is also new.

Cyclocoelidae

Cyclocoelum (Hyptiasmus) dollfusi Timon-David, 1950, stat. nov. (Fig. 3).

Cyclocoelum (Pseudhyptiasmus) Dollfusi Timon-David, 1950.

Morishitium dollfusi: Yamaguti, 1958.

Cyclocoelum (Hyptiasmus) elongatum: Dubois, 1959 (partim, nec Harrah, 1921).

We obtained three specimens of which data are as follows.

Host: *Phasianus soemmerringii soemmerringii* Temminck, 1 ♀,

Habitat: Abdominal cavity.

Locality: Yufuin, Oita Prefecture (Kyushu).

Fig. 2 Variations of the shape and mutual position of the gonads of *Postharmostomum gallinum*.

A-D: From *Phasianus soemmerringii soemmerringii*.

A: Yufuin, December 11, 1970; the same specimen in Fig. 1.

B-D: Shōnai, February 12, 1978.

E-G: From *P. colchicus versicolor*.

E: Ohno, November 24, 1976.

F: Naoiri, December 9, 1976.

G: Detailed locality unknown, February 2, 1978.

O: ovary T: testis Scale: 1 mm.

Table 1 Measurements of *Postharmostomum gallinum* (mm)

Authority	Ozaki (1925)	Miyata (1938)	Present authors
Host	<i>Gallus gallus domesticus</i>	<i>Gallus gallus domesticus</i>	<i>Phasianus soemmerringii soemmerringii</i> <i>P. colchicus versicolor</i>
Habitat Locality	Caecum Tokyo(?)	Caecum Kobe	Caecum Oita Pref.
Body	(L 11.7 W 2.7)	15.68 13.68	11.3 -15.5 2.8 - 4.2
Oral sucker	D 1.2	(L 1.568 W 1.68)	1.23- 1.53 1.29- 1.48
Acetabulum	D 1.0	(L 1.28 W 1.36)	1.05- 1.33 1.05- 1.37
Pharynx	D 0.58	(L 0.72 W 0.82)	0.54- 0.77 0.61- 0.84
Anterior testis	(L 0.8 W 0.65)	1.36 1.04	0.72- 1.00 0.50- 0.82
Posterior testis	(L 1.1 W 0.7)	1.04 1.44	0.40- 0.71 0.62- 1.12
Ovary	(L 0.45-0.80 W 0.45)	0.72 0.576	0.64- 0.82 0.46- 0.62
Eggs	(L 0.035-0.038 W 0.021-0.022)	0.0338 0.0182	0.032- 0.035 0.021- 0.022

D: Diameter L: Length W: Width

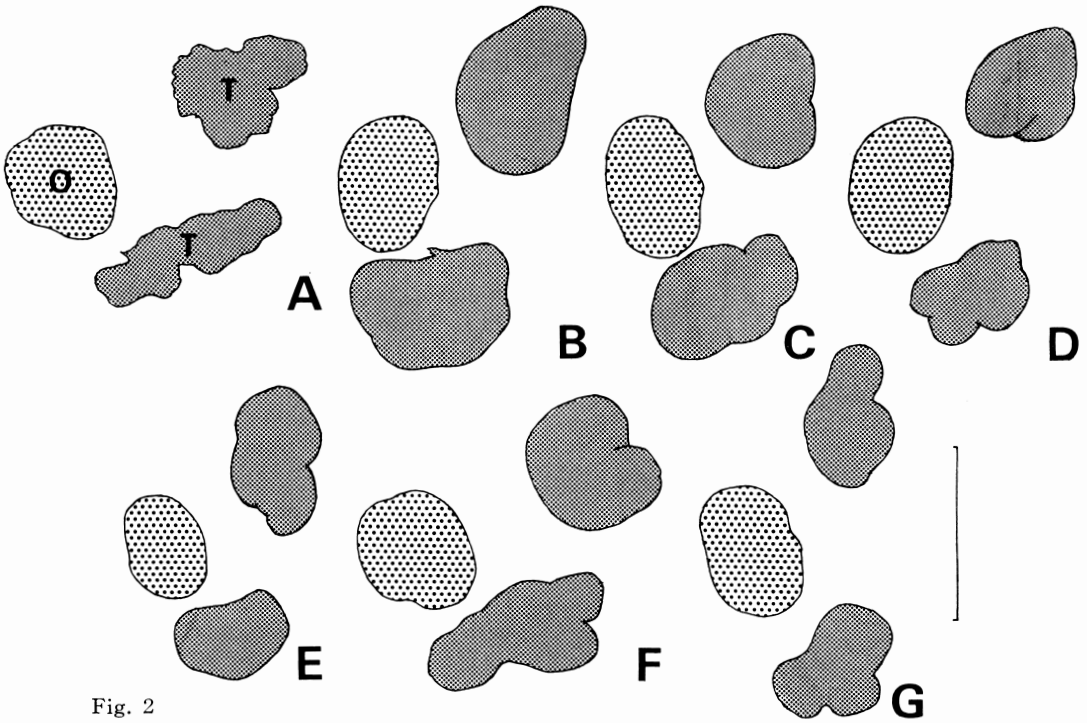


Fig. 2

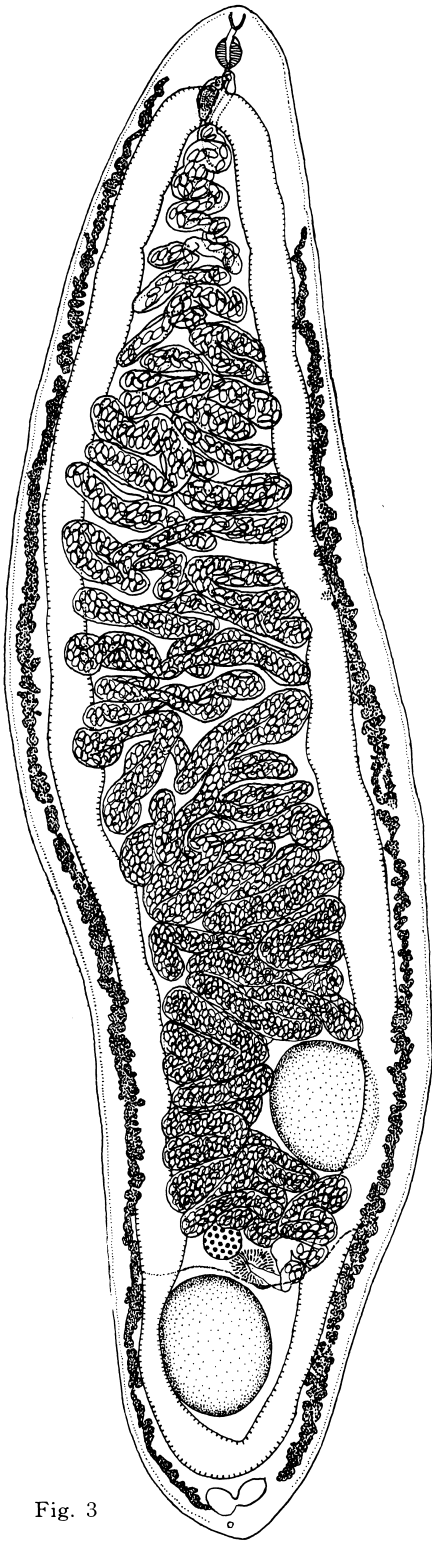


Fig. 3

Date: February 12, 1975.

This species was discovered from *Pica pica* Linnaeus collected in Tholonet, France. Dubois (1959) synonymized this with *Cyclocoelum (Hyptiasmus) elongatum* Harrah, 1921, which had been discovered from a magpie (*Cyanopoliis (=Cyanopica) cyanus* (Pallas)) collected in Nanking, China. We, however, cannot agree with his opinion of such specific synonymization because Timon-David's *dollfusi* has the broader body and apparently larger testes and ovary than Harrah's *elongatum*. These differences of sizes of the genital organs may be sufficient to separate these two species. Our Japanese specimens are identical to *dollfusi* in the morphological characteristics though their host and locality are quite different from the French specimen as shown in Table 2. According to Yamaguti's generic classification (1971), this species apparently belongs to the genus *Morishitium* Witenberg (1928), and is easily distinguishable from the Japanese congeners, *M. vagum* (Morishita, 1924) or *M. distomatium* (Morishita, 1924), by the egg size being twice as large as the latters.

This is the first record of *C. (H.) dollfusi* from the *Phasianus* bird as well as from Asia.

Summary

Two species of the digenetic trematodes were discovered from *Phasianus soemmerringii* Temminck, one of the endemic birds in Japan, collected in Oita Prefecture (Kyushu), Japan. Those are *Postharmostomum gallinum* (Witenberg, 1923) (Brachylaimidae) and *Cyclocoelum (Hyptiasmus) dollfusi* Timon-David, 1950 (Cyclocoelidae). The former species was found from *P. colchicus versicolor* Vieillot also. All of these host records are new to science and the occurrences of *P. gallinum* in Oita Prefecture and of *C. (H.) dollfusi* in Asia are also new records. Dubois' synonymization of *C. (H.) dollfusi* with *C. (H.) elongatum* Harrah, 1921, is

Fig. 3 *Cyclocoelum (Hyptiasmus) dollfusi* Timon-David, 1950 from *Phasianus s. soemmerringii*.
Scale: 5 mm.

Table 2 Measurement of *Cyclocoelum (Hyptiasmus) dollfusi* and *C. (H.) elongatum* (mm)

Species	<i>C. (H.) elongatum</i>		<i>C. (H.) dollfusi</i>
Authority	Harrah (1921)	Timon-David (1950)	Present authors
Host	<i>Cyanopolius cyanus</i> (?)	<i>Pica pica</i>	<i>Phasianus soemmerringii soemmerringii</i>
Habitat	Unknown	Air sac	Abdominal cavity
Locality	Nanking China	Tholonet nr. Aix-en-Provence France	Yufuin Oita Pref.
Body	(L 12-16.5 W 1.5-3)	15.5-20 2.9- 4	15.3-16.5 3.2-4.3
Pharynx	(L 0.265-0.330 W 0.215-0.280)	0.25 0.25	0.25-0.30 0.26-0.28
Anterior testis	(L 0.640-0.820 W 0.480-0.545)	} L 0.910-1.350	1.18-1.38 1.16-1.24
Posterior testis	(L 0.415-0.975 W 0.415-0.570)		1.32-1.55 1.24-1.32
Ovary	D 0.330-0.375	0.32-0.40	(L 0.39-0.41 W 0.44-0.51)
Eggs	(L 0.112-0.117 W 0.051-0.066)	0.120-0.130 0.058-0.060	0.120-0.125 0.065-0.075

D: Diameter L: Length W: Width

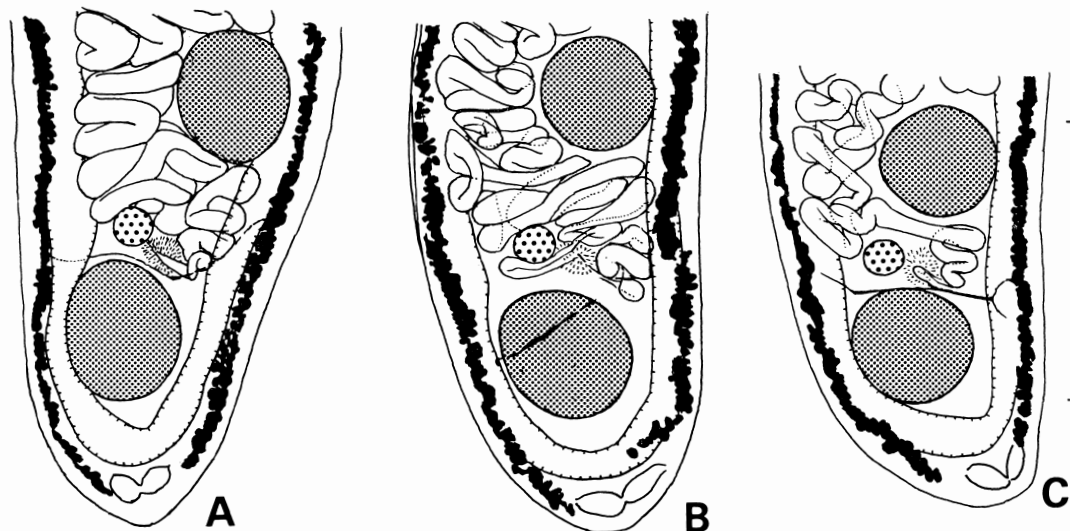


Fig. 4 Variations of the caudal portions of *Cyclocoelum (Hyptiasmus) dollfusi* Timon-David, 1950.

A-C: From *Phasianus s. soemmerringii* collected at Yufuin, February 12, 1975.

A is the same specimen in Fig. 3. Scale: 3 mm.

denied by the differences of sizes of body breadth and genital organs.

The abstract of the present paper was demonstrated at the 45th Annual Meeting of the

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九州産キジ類の寄生吸虫 2 種

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大分県下で採集されたヤマドリ *Phasianus soemmeringii soemmeringii* Temminck とキジ *P. colchicus versicolor* Vieillot 各 3 羽より 2 種の吸虫を見出した。その 1 種は鶏盲腸吸虫 *Postharmostomum gallinum* (Witenberg, 1923) で両宿主の盲腸から見出された。本種は主として西日本のニワトリから見出されているが、大分県からは初めてで、両種とも宿主としては初めての記録となる。もう 1 種はヤマドリ 1 羽の腹腔から 3 隻見出されたもので環腸吸虫科に属する。体の大きさ、精巢・

卵巣の大きさ、卵の計測値をもとに、フランス産カササギより記録された *Cyclocoelum (Hyptiasmus) dollfusi* Timon-David, 1950 と同定した。Dubois (1959) によれば、本種は中国大陸産オナガより記録された *C. (H.) elongatum* Harrah, 1921 の異名とされているが、体幅や精巢・卵巣の大きさにかなり差が認められ、異名とするには疑問があるので、別種として扱った。アジア地域および宿主はともに初記録であり、和名としてはヤマドリカンチョウキュウチュウを提唱する。