

# **A list of the helminth parasite specimens deposited in the Department of Zoology, the University Museum, the University of Tokyo**

**Takeshi Shimazu<sup>1)</sup> and Jun Araki<sup>2)</sup>**

<sup>1)</sup>Nagano Prefectural College, 8-49-7 Miwa, Nagano, 380-8525 Japan

<sup>2)</sup>Meguro Parasitological Museum, 4-1-1 Shimomeguro, Meguro-ku, Tokyo, 153-0064 Japan

## **Introduction**

A large number of old vials of helminth parasite specimens was found deposited in the collection of the Department of Zoology, the University Museum, the University of Tokyo. Many of the vials appeared to have once dried out and to have subsequently been refilled with a new preservative fluid. Some others were still in a dried condition. The collection did not include any whole-mounted or sectioned specimens. Shimazu *et al.* (1996) have already published a list of part of the vials found.

The vials with even a few pieces of data written on their label(s), even those containing no specimens, have been registered under new vial or specimen numbers and left in the collection. The remaining vials, with no data, have been thrown away together with any specimens they contained. The retained specimens contained have been transferred into new glycerin-alcohol (5 parts of glycerin plus 95 parts of 75% ethanol) in new vials. All the labels of the old vials retained have been filed in the museum archives.

The following is a list of the helminth parasite specimens left in the collection. They are classified into the class Monogenea, the subclasses Aspidogastrea and Digenea of the class Trematoda, the class Cestoda, the phylum Nematoda, and the phylum Acanthocephala. For each of these large taxa, arranged in the above order, the specimens are listed in alphabetical order, first according to their generic or common names and then according to their specific names. The data given on the label(s) of their old vials are cited as accurately as possible. Some of the labels were written in Japanese, and these are translated into English in quotation marks (“ ”). Some explanatory words are added in brackets ([ ]). The scientific name given originally is followed by the present-day one, if present, in the brackets. A plus sign (+) indicates the presence of illegible word(s) or letter(s). In the last parentheses (( )) for each parasite species, the original vial number, when present, is given, followed by the new vial number in brackets ([ ]). A minus sign (–) shows the absence of any original vial number. Some of the old vials contained no specimens, which is indicated by the words “No specimen.”

None of the specimens have been designated as any sort of type though some

investigators, e.g. Seitaro Goto, Yoshimasa Ozaki, Kaoru Morishita, et al., deposited many of their type specimens in the collection of the Zoological Institute, Science Faculty, Tokyo Imperial University, or now the collection of the Department of Zoology, the University Museum, the University of Tokyo, (see also Shimazu *et al.*, 1996).

The following specimens may be of taxonomic or medical importance: monogeneans, *Diclidophora elongata* [UMUTZ-HlmPrst-90], *Hexacotyle acuta* [UMUTZ-HlmPrst-49], *Microcotyle caudata* [UMUTZ-HlmPrst-70], *M. caudata* [UMUTZ-HlmPrst-72], *M. fusiformis* [UMUTZ-HlmPrst-68], *M. sebastis* [UMUTZ-HlmPrst-69], *UMUTZ-HlmPrst-71*, *Tristomum coccineum* [UMUTZ-HlmPrst-73], and *T. laeve* [UMUTZ-HlmPrst-74]; digeneans, *Echinostoma gotoi* [UMUTZ-HlmPrst-23], *Echinochasmus elongatus* [UMUTZ-HlmPrst-100, UMUTZ-HlmPrst-106], *Metorchis taiwanensis* [UMUTZ-HlmPrst-146], and *Stamnosoma formosanum* [UMUTZ-HlmPrst-102]; cestodes, *Bothriocephalus variabilis* [UMUTZ-HlmPrst-117], *Diphyllobothrium latum* [UMUTZ-HlmPrst-1], and *Plerocercoides prolifer* [UMUTZ-HlmPrst-156]; and nematodes, *Hedruris ijimai* [UMUTZ-HlmPrst-132], *Mecistocirrus tagumai* [UMUTZ-HlmPrst-124, UMUTZ-HlmPrst-133], and *Spiroxys japonicus* [UMUTZ-HlmPrst-55, UMUTZ-HlmPrst-138, UMUTZ-HlmPrst-141]. Kamegai and Araki (2000) have identified the specimen of the vial [UMUTZ-HlmPrst-1] as *Diphyllobothrium nihonkaiense* Yamane *et al.*, 1986. The vials [UMUTZ-HlmPrst-49], [UMUTZ-HlmPrst-68], [UMUTZ-HlmPrst-72]-[UMUTZ-HlmPrst-74], [UMUTZ-HlmPrst-145], and [UMUTZ-HlmPrst-146] contained no specimens.

## A list of the helminth parasite specimens

### Monogenea

- 1) *Acanthocotyle Lo Bianchi* Monticelli, Skin of ventrum of *Raja clavata*, Exchanged by Prof. Monticelli, (7, [UMUTZ-HlmPrst-48]). No specimen.
- 2) *Calicotyle kroyeri* Diesing, Cloaca of *Raja* (various species), Exchanged by Monticelli, (8, [UMUTZ-HlmPrst-52]). No specimen.
- 3) *Dactylogyrus* sp., Suzaki, Tokyo, May 26, 1892 (52, [UMUTZ-HlmPrst-80]).
- 4) *Dendrocoelum lacterum*, Germany, Ijima, (-, [UMUTZ-HlmPrst-44]). Possibly this is a free-living turbellarian.
- 5) *Diclidophora elongata* Goto, 1894, Mouth cavity of *Pagrus tumiformis*, (Ko-Dai), Mogi, Hizen, Coll. Goto, July 20, 1889, (9, [UMUTZ-HlmPrst-90]).
- 6) *Discocoelis figrina*, 72, (+,[UMUTZ-HlmPrst-79]). Possibly this is a free-living turbellarian.
- 7) *Epibdella sciaenae* Van Beneden, Body (Skin) of *Umbrina cirrhosa*, Exchanged by Prof. Monticelli (12, [UMUTZ-HlmPrst-81]). No specimen.
- 8) *Hexacotyle acuta* Goto, 1894, Gill of *Thynnus sibi*, Hagi, Nagato [Yamaguchi Pref.], Coll. Goto, Aug. 1, 1889, (17, [UMUTZ-HlmPrst-49]). No specimen.

- 9) *Hexacotyle acuta* Goto, 1894, Gill of *Thynnus sibi*, Osatsube [Hokkaido?], Nozawa, (18, [UMUTZ-HlmPrst-82]).
- 10) *Microcotyle caudata* Goto, 1894, Gill of *Sebastes* sp. sp. (Kin-mebaru & mebaru), Mitsugahama, Iyo [Ehime Pref.], Coll. Goto, Aug. 26, 1889, (15, [UMUTZ-HlmPrst-70]).
- 11) *Microcotyle caudata* Goto, 1894, Gill of *Sebastes* sp. (Mebaru), Mitsugahama, Iyo [Ehime Pref.], Coll. Goto, Aug. 27, 1889, (14, [UMUTZ-HlmPrst-72]). No specimen.
- 12) *Microcotyle fusiformis* Goto, 1894, Gill of *Centronotus rubulosus* (Gimpo), Mitsugahama, Iyo [Ehime Pref.], Coll. Goto, Aug. 25, 1889, (13, [UMUTZ-HlmPrst-68]). No specimen.
- 13) *Microcotyle sebastis* Goto, 1894, Gill of *Sebastes* sp. (Nagara-zoi), Hakodate, Coll. Goto, Aug. 14, 1890, (16, [UMUTZ-HlmPrst-69]).
- 14) *Microcotyle sebastis* Goto, 1894, Gill of *Sebastes* sp. (Mazoi), Hakodate, Coll. Goto, Aug. 18., 1895, (-, [UMUTZ-HlmPrst-71]).
- 15) *Polystoma ocellatum* Rud., aus Oesophagus des *Clemmys j.*, Ozaki, (-, [UMUTZ-HlmPrst-157]).
- 16) Polystomes from Urinary bladder of *Kinosternon pennsylvanicum*, Borvie, Prince George Co. Md., 1895, +, (-, [UMUTZ-HlmPrst-83]).
- 17) *Polystomum ocellatum* Rud. [now *Polystoma*], Mouth cavity of *Emys*, Tokyo, May 25, 1884, (53, [UMUTZ-HlmPrst-51]). No specimen.
- 18) *Pseudocotyle squatinae* v. Beneden et Hesse, Skin of ventrum of *Squatina angelus*, Exchanged by Prof. Monticelli, (22, [UMUTZ-HlmPrst-50]). No specimen.
- 19) *Sphyrnura osleri* R. Wright, Gill of *Nectunus latualis*, Cambridge, Coll. S. Goto, (24, [UMUTZ-HlmPrst-47]).
- 20) *Tetraonchus uncinatus* Diesing, Gill of *Lucioperca sandra*, Leipzig, Germany, Ijima, (22, [UMUTZ-HlmPrst-77]). No specimen.
- 21) *Tristomum biparasiticum* Goto, 1894 [now *Tristoma*], Carapace of a copepod on gill of *Thynnus albacora* (Kiwada-Sibi), Misaki, Coll. Goto, Aug. 9., 1891, (5, [UMUTZ-HlmPrst-46]). No specimen.
- 22) *Tristomum coccineum* Cuvier [now *Tristoma*], (Syn. *T. rotundum* Goto), Habitat, Gill of *Histiophorus* sp. (Kajiki), Coll. Kuma Aoki, Aug. 1891, (6, [UMUTZ-HlmPrst-45]).
- 23) *Tristomum coccineum* Cuvier, 1819 [now *Tristoma*], Syn. of *T. rotundum* Goto, 1894, Gill of *Xiphias gladius*, Misaki, Coll. Goto, Aug. 1891, (2, [UMUTZ-HlmPrst-73]). No specimen.
- 24) *Tristomum laeve* Verill, 1875 [now *Tristoma*], Syn. of *Trist. ovale* Goto, 1894, Mouth cavity of *Histiophorus* sp. (Kajiki), Misaki, Coll. S. Goto, Aug. 1891, (3, [UMUTZ-HlmPrst-74]). No specimen.
- 25) *Tristomum molae* Blanchard [now *Tristoma*], On *Orthagoriscus molae*, Naples, Coll. Ijima, (+, [UMUTZ-HlmPrst-76]). No specimen.
- 26) *Tristomum nozawae* Goto, 1894 [now *Tristoma*], Fin of *Thynnus sibi*, Osatsube

[Hokkaido?], Nozawa, (3+, [UMUTZ-HlmPrst-75]). No specimen.

### **Aspidogastrea**

- 1) *Aspidogaster ijimai* Kawamura, Stomach of Koi [*Cyprinus carpio*], Lake Biwa, Aug. 1923, K. Morishita Coll., (51, [UMUTZ-HlmPrst-95]).

### **Digenea**

- 1) *Amphistomum conicum* [now *Paramphistomum*], Habitat-Magen des *Bos taurus*, (61, [UMUTZ-HlmPrst-85]).
- 2) *Amphistomum* sp. [now *Paramphistomum* sp.], Magen von *Bos taurus*, (60, [UMUTZ-HlmPrst-84]).
- 3) *Amphistomum* sp. [now *Paramphistomum* sp.], Reticulum of Sheep, Japan, (59, [UMUTZ-HlmPrst-86]).
- 4) *Clonorchis sinensis* Cobb., Liver of man, Okayama-ken, (26, [UMUTZ-HlmPrst-30]). No specimen.
- 5) *Clonorchis sinensis* Cobb., Liver of cat, Tokyo, Dec. 12th, 1885, (27, [UMUTZ-HlmPrst-31]).
- 6) *Clonorchis sinensis* Cobb., Liver of man, from Yôikuin [in Tokyo], present. by Dr. Usui, Dec. 9, 1909, (29, [UMUTZ-HlmPrst-32]).
- 7) *Clonorchis sinensis* Cobb., Liver of man (Ushimats Ôkawa, 54 aged.), Coll. in Yôikuin of Tokyo, Jun. 12, 1917, (31, [UMUTZ-HlmPrst-33]). No specimen.
- 8) *Clonorchis sinensis* Cobb., Liver of pig, Terashima slaughter house, Tokyo, Coll. by K. Morishita, Nov. 30, 1920, (33, [UMUTZ-HlmPrst-34]). No specimen.
- 9) *Clonorchis sinensis* Cobb., Liver of man, Patholog. Inst. med. College, Tokyo Imp. Univ., (+, [UMUTZ-HlmPrst-35]). No specimen.
- 10) *Clonorchis sinensis* Cobb., Liver of cat, Yanaizu, Suhô [Yamaguchi Pref.], Aug. 1889, (35, [UMUTZ-HlmPrst-36]). No specimen.
- 11) *Clonorchis sinensis* Cobb., Liver of Pig, Minowa-slaughter house, Tokyo, Coll. by Mr. S. Taguma, Feb. 1921, (28, [UMUTZ-HlmPrst-93]).
- 12) *Clonorchis sinensis* Cobb., Liver of Man, Coll. at Pathol. Inst. Med. College, Tokyo Univ., present by Dr. Usui, (34, [UMUTZ-HlmPrst-94]). No specimen.
- 13) *Clonorchis sinensis* Cobb., Liver of Cat, Okayama, Bizen, (32, [UMUTZ-HlmPrst-96]). No specimen.
- 14) *Clonorchis sinensis* (Cobbold) = *Distomum spathulatum* Lkt., Malacotylea, Trematoda, "Okayama," Human Liver, (146, [UMUTZ-HlmPrst-97]). No specimen.
- 15) *Cyclocoelum distomatum* Morishita [now *Morishitium distomatum* (Morishita, 1924) Witenberg, 1928], *Phasianus scintillaus* (Yamadori), 1884, (43, [UMUTZ-HlmPrst-91]). No specimen.
- 16) *Cyclocoelum vagum* Morishita [now *Morishitium vagum* (Morishita, 1924) Witenberg, 1928], Ductus naso-lacrymalis of Golden Pheasant (*Chlosorophus picta*), Coll. by Yoneyama, March 12, 1900, (42, [UMUTZ-HlmPrst-105]). No

- specimen.
- 17) *Dicrocoelium lanceatum* S. & H. [syn. of *Dicrocoelium dendriticum* (Rud., 1819) Dujardin, 1845], +*stomum lanceolatum* M., Malacotylea, Trematoda, "Komaba," Pancreas, Sheep and Cattle, (147, [UMUTZ-HlmPrst-107]).
  - 18) *Diplodiscus subclavatus*, Rectum of *Rana*, (67, [UMUTZ-HlmPrst-78]).
  - 19) *Echinochasmus elongatus* Miki, Obtained 20-30 days after feeding mouse with tadpole (int. host), by Mr. Miki, 1923, (55, [UMUTZ-HlmPrst-100]).
  - 20) *Echinochasmus elongatus* Miki, 1913, Experimentally obtained from intestine of mouse fed with intermediate host (tadpole) by Mr. Miki, 1923, (56, [UMUTZ-HlmPrst-106]).
  - 21) *Echinostoma gotoi*, Obtained from the albino rat giving the larva which found in *Paludina*, Ando, (-, [UMUTZ-HlmPrst-23]).
  - 22) *Echinostoma revolutum* Fröhlich, Blind Sac and large intestine of fowl, Taihoku, Formosa, (-, [UMUTZ-HlmPrst-104]).
  - 23) *Echinostoma* sp., Obtained from the albino rat, Coll. Ando, 1923, (57, [UMUTZ-HlmPrst-22]).
  - 24) *Enodiotrema rugocaudatum* [now *Glypthelmins rugocaudata* (Yoshida, 1916) Yahata, 1934], Intestine & Duodenum of *Rana nigromaculata* & *R. rugosa*, Lake Biwa, Summer, 1920, (66, [UMUTZ-HlmPrst-103]).
  - 25) *Eurytrema pancreat.*, Distomum, In Pancreas of *Bos taurus*, Hot sublim., Loc. Tokyo, Dat. March 13-14, 1916, (-, [UMUTZ-HlmPrst-110]). No specimen.
  - 26) *Eurytrema pancreaticum*, *Bos taurus*, Coll. Katsurada, (62, [UMUTZ-HlmPrst-26]).
  - 27) *Eurytrema parvum* Seno, Pancreas of Cattle, Hachijōjima, [-, (UMUTZ-HlmPrst-109)]. No specimen.
  - 28) *Fasciola gigantica* (Cobb.), Egypt, H. Kobayashi, (47, [UMUTZ-HlmPrst-21]).
  - 29) *Fasciola hepatica* L., 1758, Liver of *Bos taurus*, Okayama, Bizen, Coll. by Mr. H. Senō, Sept. 1904, (46, [UMUTZ-HlmPrst-89]).
  - 30) *Fasciola hepatica* L. 1758, Liver of *Bos taurus*, Terashima (Tokyo), Coll. by Mr. S. Taguma, Dec. 12, 1920, (1, [UMUTZ-HlmPrst-108]).
  - 31) *Fasciola magna* (Bassi) Stiles, 1894, Liver of cattle, Texas, from Mark Francis (Goto ded.), (49, [UMUTZ-HlmPrst-29]).
  - 32) *Fasciolopsis buski* (Lank), 149, = *Distomum crassum* Busk, Malacotylea, Trematoda, Aug. 1906, Dr. Fukuda, (-, [UMUTZ-HlmPrst-28]).
  - 33) *Fischoederius siamensis*, "cattle, stomach," (-, [UMUTZ-HlmPrst-40]).
  - 34) *Gordodera cygnoides* Zed., Bladder of *Rana esculenta*, +, 1885, (64, [UMUTZ-HlmPrst-101]).
  - 35) *Halipegus occidualis*, *Rana nigromaculata*, Tamagawa, 1921, Morishita, (63, [UMUTZ-HlmPrst-24]).
  - 36) *Metagonimus yokogawai* Kats., Intestine of man, Tokyo (Icho-Byoin), 1923, (70, [UMUTZ-HlmPrst-43]).
  - 37) *Metorchis taiwanensis* Morishita et Tsuchimochi 1925, Gall bladder of domestic

- duck, Taihoku, Formosa, (–, [UMUTZ-HlmPrst-146]). No specimen.
- 38) *Opisthorchis felineus* Rivolta., Syn. *Dist. sibilicum*, Liver(?) of man, Tomscu, Coll. Dr. Winogradoff, 1896, Pres. by Dr. Kurimoto, (39, [UMUTZ-HlmPrst-41]). No specimen.
- 39) *Paragonimus*, Encysted in the liver of pig, Nov. 1921, “Minowa, Morishita,” (69, [UMUTZ-HlmPrst-25]).
- 40) *Paragonimus westermani* [now *westermanii*], Lung of Pig, Minowa, 1923, Taguma, (68, [UMUTZ-HlmPrst-39]).
- 41) *Paragonimus westermani* Kerbert [now *westermanii*], Encysted in Lung of pig, Minowa slaughter house, Coll. K. Morishita, Nov. 1921, (36, [UMUTZ-HlmPrst-27]).
- 42) *Paragonimus westermani* Kerbert [now *westermanii*], Lung of pig, Minowa-slaughter house, Tokyo, K. Morishita, + 20, 1927, (37, [UMUTZ-HlmPrst-37]).
- 43) *Paragonimus westermani* Kerbert [now *westermanii*], Encysted in lung of Dog, Okayama, Present. from Mr. M. Matsuzaki, May, 1898, (+, [UMUTZ-HlmPrst-38]). No specimen.
- 44) *Pneumonoeces variegatus* (Rud.) [now *Haematoloechus variegatus* (Rud., 1819) Looss, 1899], Trematodes, Lung of *Rana nigromaculata*, Kurashiki, Prefect. Okayama, (–, [UMUTZ-HlmPrst-92]).
- 45) *Prostogonimus japonicus* Braun [[sic, correctly *Prosthogonimus*, syn. of *P. pellucidus* (von Linstow, 1873) Lühe, 1899], Three specimens from a single hen's egg, Tokyo, Jan. 1893, presented by Mr. Nagasaka, (41, [UMUTZ-HlmPrst-88]).
- 46) *Prostogonimus japonicus* Br.(?) [syn. of *P. pellucidus*], Hen's egg, K. Fujita, 1/VI, 1896, (40, [UMUTZ-HlmPrst-87]).
- 47) *Schistosoma japonicum* Katsurada, Portal vein of pig, Taichu, Formosa, 1926, (–, [UMUTZ-HlmPrst-99]).
- 48) *Schistosomum japonicum* Katsurada [correctly *Schistosoma*], Habit. Mesenteric veins of a cat, Loc. Yamanasiken, Coll. Tsuchiya, Sept. 1904, (44, [UMUTZ-HlmPrst-42]). No specimen.
- 49) *Schistosomum japonicum* Katsurada [correctly *Schistosoma*], Habit.-dog, Loc.-Yamanashiken, present by Dr. Tsuchiya, Jan. 2, 1905, (45, [UMUTZ-HlmPrst-98]).
- 50) *Stamnosoma formosanum* Yokogawa [syn. of *S. caninus* Leiper, 1913], (–, [UMUTZ-HlmPrst-102]).
- 51) [Trematode], Lung of *Rana nigr.*, Akabane, near Tokyo, June 1923, K. Morishita coll., (–, [UMUTZ-HlmPrst-168]). No specimen.
- 52) [Trematode], +, “Nagai Kamehiko +, Ryukyu,” (–, [UMUTZ-HlmPrst-169]).

### Cestoda

- 1) *Ancistrocephalus microcephalus* [sic, correctly *Ancistrocephalus*], No. 1, *Ortagoriscus mola*, Misaki, 16/V, 1897, Kuma Aoki, (–, [UMUTZ-HlmPrst-4]).

- 2) *Anoplocephala mamillata* (Mehlis) [syn. of *Anoplocephaloides mamillana* (Mehlis, 1831) Rausch, 1976], Intestine of horse, Germany (Zool. Inst. Leipzig), (1, [UMUTZ-HlmPrst-118]). No specimen.
- 3) *Anoplocephala perfoliata* (Goez), No. 3, Intestine of horse, Tokyo (Terashima slaughter house), 27/XI, 1920, Coll. S. Taguma, (–, [UMUTZ-HlmPrst-10]).
- 4) *Anoplocephala perfoliata* (Goez.), Intestine of horse, Germany (Zool. Inst. Leipzig.), Coll. Ijima, (1, [UMUTZ-HlmPrst-12]).
- 5) *Bothriocephalus variabilis* [syn. of *Diphyllobothrium hians* (Diesing, 1850) Cobbold, 1858], *Phoca cristatus*, Europe, Coll. Dr. Krabbe, Presented by Dr. Kurimoto, 1900, (–, [UMUTZ-HlmPrst-117]).
- 6) *Caryophyllaeus*, Monozoa, Cestoda, Intestine of “Funa” [*Carassius* sp.], (152, [UMUTZ-HlmPrst-123]).
- 7) *Caryophyllaeus* sp., Intestine of Funa [*Carassius* sp.], (–, [UMUTZ-HlmPrst-6]).
- 8) [Cestode], Aus Peritoneal Höhle von *Theragra chalcogramma*, “Echigo [Niigata Pref.] from Mr. Yamada,” (–, [UMUTZ-HlmPrst-167]).
- 9) [Cestode], “*Lateolabrax japonicus*, Tokyo Market, 2 June 1919, Shigeho Tanaka,” (–, [UMUTZ-HlmPrst-9]).
- 10) [Cestode], Man, Tokyo City poor house, (–, [UMUTZ-HlmPrst-15]).
- 11) *Coenurus serialis*, Merozoa, Cestoda, Hare, “Atami,” Prest. [sic] by Mr. +, (161, [UMUTZ-HlmPrst-18]).
- 12) *Cysticercus cellulosa*, Larva of *Taenia solium* L., Abdominal muscle of Man, Dr. Fukushima, July, 1907, (1, [UMUTZ-HlmPrst-115]).
- 13) *Cysticercus fasciolaris* Rud., Larva of *Taenia crassicolis* Rud., No. 1, Liver of Rat, Tokyo, (–, [UMUTZ-HlmPrst-13]).
- 14) *Cysticercus pisiformis* Zeder, Larva of *Taenia serrata* Goeze, No. 1, Viscera of hare, Atami, Prov. Izu [Shizuoka Pref.], Jan. 1889, (–, [UMUTZ-HlmPrst-7]).
- 15) *Cysticercus tenuicollis*, Larva of *Taenia marginata*, No. 1, Body cavity of sheep, Tokyo (Osaki), 14/II, 1921, S. Taguma, (–, [UMUTZ-HlmPrst-16]).
- 16) *Diphyllobothrium latum* (L.) [correctly *D. nihonkaiense* Yamane *et al.*, 1986], No. 1, obtained 22 days after swallowing the larva, by Ijima, April–June, 1886, (1, [UMUTZ-HlmPrst-1]).
- 17) *Diphyllobothrium mansonii* (Cobb.) [syn. of *Spirometra erinaceieuropaei* (Rudolphi, 1819) Faust *et al.*, 1929], Larva, Thigh muscle of a frog, Tokyo, (4, [UMUTZ-HlmPrst-17]).
- 18) *Hymenolepis murina*? [?syn. of *Vampirolepis nana* (Siebold, 1852) Spassky, 1954], Intestine of mouse, Tokyo, Nov. 1921, (–, [UMUTZ-HlmPrst-121]). No specimen.
- 19) *Hymenolepis* sp., Intestine of *Corvus corone*, Tokyo, Aug. 1885, (–, [UMUTZ-HlmPrst-2]). No specimen.
- 20) *Hymenolepis* sp., Intestine of *Gallus gallus*, Tosa, Coll. by Morisita, (–, [UMUTZ-HlmPrst-155]).
- 21) *Ligula simplissima* [syn. of *L. intestinalis* (Linnaeus, 1758) Bloch, 1782], No. 1, body cavity of Funa [*Carassius* sp.], Lake Suwa, X, 1911, Coll. Denzo Ushiyama,

- (-, [UMUTZ-HlmPrst-5]).
- 22) *Ligula simplissima* Rud. [syn. of *L. intestinalis*], Abdominal cavity of Funa, Akita-ken, Coll. Nagai, March, 1901, (2, [UMUTZ-HlmPrst-119]).
  - 23) *Ligula simplissima* Rud. [syn. of *L. intestinalis*], Germany, Ijima, (3, [UMUTZ-HlmPrst-120]).
  - 24) *Moniezia planissima* St. & Has. [syn. of *M. benedeni* (Moniez, 1879) Blanchard, 1891], No. 2, (-, [UMUTZ-HlmPrst-8]).
  - 25) *Multiceps*, 2 specimens from hares shot in the neighbourhood of Atami, Pres. by K. Saiohji; a. Jan. 1889, Abdominal wall; b. Jan. 1893, Dorsal region of abdomen, (-, [UMUTZ-HlmPrst-3]). No specimen.
  - 26) *Multiceps*, Cheek muscle of hare, Tokyo, March, 1899, Coll. Yasuda, (-, [UMUTZ-HlmPrst-11]).
  - 27) *Phyllobothrium salmonis* Fujita, Intestine of Salmon (Sake) [*Oncorhynchus keta*], Tokyo, Sept. 25, 1886, (1, [UMUTZ-HlmPrst-113]). No specimen.
  - 28) *Phyllobothrium salmonis* Fujita, No.2, Rectum of Sake, 19/X, 1889, (-, [UMUTZ-HlmPrst-114]).
  - 29) *Plerocercoides prolifer* Ijima 1905, Homo (Tanaka Yaë), Tokyo, Coll. Prof. Ijima, July 24, 1904, (1, [UMUTZ-HlmPrst-156]).
  - 30) *Taenia coenurus* Küchm., Intestine of dog, Germany, from Zool. Inst. Leipzig, (2, [UMUTZ-HlmPrst-116]).
  - 31) *Taenia crassicollis* Rud., Stomach of a domesticated cat, Tokyo, Coll. T. Iwakawa, May 12, 1916, (2, [UMUTZ-HlmPrst-14]).
  - 32) *Taenia crassicollis* Rud. = *Cysticercus fasciolaris* Rud., Merozoa, Cestoda, Liver of rat, "Tokyo," (158, [UMUTZ-HlmPrst-19]).
  - 33) *Taenia saginata* Goeze [syn. of *Taeniarhynchus saginatus* (Goeze, 1782) Weinland, 1858], Tetrphyllidae, Cestoda, (-, [UMUTZ-HlmPrst-122]).
  - 34) *Taenia serrata* Goeze [syn. of *Taenia pisiformis* (Bloch, 1780) Gmelin, 1790] = *Cysticercus pisiformis*, Merozoa, Cestoda, Viscera of hare, 18+, "Atami," (159, [UMUTZ-HlmPrst-20]).
  - 35) *Tetrarhynchus*, Liver of Mejirozame [*Carcharhinus plumbeus*], Tokyo, Oct. 1885, (-, [UMUTZ-HlmPrst-111]).
  - 36) *Tetrarhynchus* sp., Merozoa, Cestoda, Liver of Mejirozame [*Carcharhinus plumbeus*], Tokyo, Oct. 1885, (-, [UMUTZ-HlmPrst-112]).

## Nematoda

- 1) *Ancylostoma caninum* (Ercolani), Nematoda, Small intestine of dog, (-, [UMUTZ-HlmPrst-148]).
- 2) *Ancylostoma caninum* (Ercolani) [now *Ancylostoma*], Nematoda, Small intestine of the Dog, (448, [UMUTZ-HlmPrst-139]).
- 3) *Ancylostoma duodenale* Dubini [now *Ancylostoma*], Nematoda, Small intestine of Man, (447, [UMUTZ-HlmPrst-142]).
- 4) *Ascaris, Felis domestica*, Stomach & Intestine, (-, [UMUTZ-HlmPrst-147]).



- 5) *Ascaris megalcephala* Cloquet [syn. of *Parascaris equorum* (Goeze, 1782) Yorke and Maplestone, 1926], Nematoda, Horse intestine, Germany, Dr. R. Leuckart, (–, [UMUTZ-HlmPrst-136]).
- 6) *Ascaris mystax* [syn. of *Toxocara cati* (Schrank, 1788) Brumpt, 1927], Dog, Tokyo, (–, [UMUTZ-HlmPrst-130]).
- 7) *Ascaris mystax* Zeder [syn. of *T. cati*], Dog, Tokyo, (–, [UMUTZ-HlmPrst-129]).
- 8) *Dictyocaulus filaria* (Rud.), Lung of Cattle from Korea, Tokyo, 1920, Morishita, (–, [UMUTZ-HlmPrst-64]).
- 9) *Dioctophyme renale* (Goeze) [sic, correctly *Dioctophyme*] = *Eustrongylus gigas* Diesing, Nematoda (–, [UMUTZ-HlmPrst-61]).
- 10) *Dirofilaria immitis* (Leidy) Raill., Nematoda, Heart of *Felis leo*, Zool. Garden, Uyeno, (–, [UMUTZ-HlmPrst-137]).
- 11) *Eustrongylides* sp., immature, Intestine of *Mustela itatsi*, Sayama, Prev. Yamashiro [Kyoto Pref.], June. 1919, Coll. T. Okumura, (–, [UMUTZ-HlmPrst-126]). No specimen.
- 12) *Filaria papillosa* [syn. of *Setaria equina* (Abildgaard, 1789) Vigorg, 1795], [Lung of horse], “Minowa,” Methode 3, (–, [UMUTZ-HlmPrst-62]).
- 13) *Gnathostoma hispidum* Fedchenko, Caused a creeping disease, male Japanese, Coll. Dr. Kinoshita, Tokyo, 1923, (–, [UMUTZ-HlmPrst-54]).
- 14) *Haemonchus contortus*, Fourth stomach of *Ovis aries*, Sapporo, Hokkaido, Coll. Dr. K. Ichikawa, (–, [UMUTZ-HlmPrst-67]).
- 15) *Haemonchus contortus* (Rud 1848), + Cobb 1898, Stomach of sheep, Tokyo, 1921, (–, [UMUTZ-HlmPrst-127]).
- 16) *Haemonchus contortus* (Rud. 1803) Cobb., 1898, Fourth stomach of sheep, Tokyo, Collected by Mr. Taguma, (–, [UMUTZ-HlmPrst-135]).
- 17) *Hedruris ijimai* Morishita, Duodenum of *Rana japonica*, Kônodai, Prov. Chiba, Oct. 1921, Coll. K. Morishita, (–, [UMUTZ-HlmPrst-132]).
- 18) *Heterakis lineata* Schneider [syn. of *Ascaridia galli* (Schrank, 1788) Freeborn, 1923], Intestine of *Gallus gallus*, 1909, (–, [UMUTZ-HlmPrst-153]). The label was broken into pieces when taken out of the old vial.
- 19) *Heterakis maculosa* Rud. [syn. of *Ascaridia columbae* (Gmelin, 1790) Travassos, 1913], “European homing pigeon,” (–, [UMUTZ-HlmPrst-150]).
- 20) *Heterakis maculosa* Rud. [syn. of *Ascaridia columbae*], Nematoda, Intestine of *Clumba livia*, 4/III/ '09, (–, [UMUTZ-HlmPrst-65]).
- 21) *Heterakis perspicillum* (Rud.) [syn. of *H. gallinarum* (Shrank, 1788) Madsen, 1949], from egg of *Gallus gallus*, (–, [UMUTZ-HlmPrst-59]).
- 22) *Mecistocirrus digitatus* (Linstow, 1906), Fourth stomach of *Bubalus bubalus*, Formosa, (–, [UMUTZ-HlmPrst-144]).
- 23) *Mecistocirrus tagumai* Morishita, 1922 [syn. of *M. digitatus*], Stomach of *Bos taurus*, Tokyo, Collected by Morishita 1921 [syn. of *M. digitatus*], (–, [UMUTZ-HlmPrst-124]).
- 24) *Mecistocirrus tagumai* Morishita, 1921, Fourth stomach of *Bos taurus*, Tokyo

- (slaughter house of Minowa), Collector K. Morishita, 1st June 1920, 12th June 1921, (–, [UMUTZ-HlmPrst-133]).
- 25) *Mecistocirrus tagumai* Morishita, 1922 [syn. of *M. digitatus*], Stomach of *Bos taurus*, Kagoshima, Coll. Dr. K. Ichikawa, June, 1921, (–, [UMUTZ-HlmPrst-134]). No specimen.
  - 26) Nematode, From the liver of cat, (–, [UMUTZ-HlmPrst-165]).
  - 27) [Nematode], *Equus*, Intestine, “Terashima,” 27/XI ‘20, (–, [UMUTZ-HlmPrst-57]).
  - 28) [Nematode], “Parasite of digestive tract of *Physeter catodon*, May 1916, Ayukawa, Coll. Kastuya Tago,” (–, [UMUTZ-HlmPrst-63]).
  - 29) [Nematode], *+stoma caninum*, Small intestine, Formosa, Aug., “Smaller one, Dog, Formosa,” (–, [UMUTZ-HlmPrst-66]).
  - 30) [Nematode], Caecum of *Anguilla jap.*, 14/I '21, (–, [UMUTZ-HlmPrst-159]).
  - 31) [Nematode], “Shirokuma [*Ursus maritimus*] from Greenland, Stomach & intestine, Ueno Zool. Garden, Meiji 34 [1901]-Taisho 10 [1921]/6/16,” (–, [UMUTZ-HlmPrst-160]).
  - 32) [Nematode], “Intestine of Azara [species name unknown], Ueno Zoo,” Jan. 1927, (–, [UMUTZ-HlmPrst-161]).
  - 33) [Nematode], In Muskel near Vertebra, Host-Buri (Awo) [*Seriola quinqueradiata*], 1/VIII 1925, (–, [UMUTZ-HlmPrst-162]).
  - 34) [Nematode], From the pyrolic caecum of Otudo [species name unknown], collected at Okinosi, 300 hiro, Sublimate, 29 III, ‘22, (–, [UMUTZ-HlmPrst-163]).
  - 35) [Nematode], Ushi [cattle], (–, [UMUTZ-HlmPrst-164]).
  - 36) [Nematode], *Ascaris*, Intestine, Pig, Oosaki, Tokyo, (–, [UMUTZ-HlmPrst-166]).
  - 37) [Nematode], *Equus*, “Terashima,” 27 XI '90 [1890], (–, [UMUTZ-HlmPrst-170]).
  - 38) *Oesophagostoma dentatum* Rud. [correctly *Oesophagostomum*], Intestine of pig, Taihoku, Formosa, 1924, (–, [UMUTZ-HlmPrst-56]).
  - 39) *Oesophagostomum deustatum* (Rudolphi), Caecum of swine, (–, [UMUTZ-HlmPrst-60]).
  - 40) *Oesophagostomum* sp., Intestine of Onagazaru [*Cercopithecus* sp.], Java, 1910, Dr. Kawamura, (–, [UMUTZ-HlmPrst-128]).
  - 41) *Oswaldocruzia (Bialata) sociale* Morishita, 1926 [syn. of *O. bialata* (Molin, 1861) Travassos, 1917], Intestine of *Rana japonica*, Kanegafuchi, Prov. Musashi, Morishita coll., 1921, (–, [UMUTZ-HlmPrst-145]). No specimen.
  - 42) *Oxyuris vermicularis* L., ♂, Man, Tokyo (Icho-Byoin), (–, [UMUTZ-HlmPrst-58]).
  - 43) *Oxyuris vermicularis* L., (–, [UMUTZ-HlmPrst-154]).
  - 44) *Oxyuris vermicularis* (Linné), Nematoda, Human, (–, [UMUTZ-HlmPrst-152]).
  - 45) *Probstmayria vivipara* (Probstm., 1865) Ransom, 1907, Large intestine of horse, Tokyo, (–, [UMUTZ-HlmPrst-131]). No specimen.
  - 46) *Sclerostomum edentatum* Looss [syn. of *Alfortia edentata* (Looss, 1900) Skryabin,

- 1933], Nematoda, Large intestine of horse, (445, [UMUTZ-HlmPrst-140]).
- 47) *Scl. edentatum*, (-, [UMUTZ-HlmPrst-149]).
- 48) *Scl. equinum*, (-, [UMUTZ-HlmPrst-151]).
- 49) *Spiroxys japonicus* Morishita, Duodenum of *Rana nigromaculata*, Matsuyama, Prov. Yamato [Nara Pref.], Collected by K. Morishita, 1921, (-, [UMUTZ-HlmPrst-55]).
- 50) *Spiroxys japonica* Morishita, Duodenum of *Rana nigromaculata*, Kumamoto, Collected by Kajivara, 1921, (-, [UMUTZ-HlmPrst-125]).
- 51) *Spiroxys japonica* Morishita, Duodenum of *Rana nigromaculata*, Subashiri, Prov. Suruga [Shizuoka Pref.], Collected by K. Morishita, June 1923, (-, [UMUTZ-HlmPrst-138]).
- 52) *Spiroxys japonica* Morishita, 1926, Duodenum of *Rana nigromaculata*, Ôtsu, Morishita coll., 1920, (-, [UMUTZ-HlmPrst-141]).
- 53) *Tetrameres fissispina* (Dies. 1860), Proventriculus of *Gallus domesticus*, Formosa, Collected by Dr. Mukoyama, Feb.? 1923, (-, [UMUTZ-HlmPrst-143]).

#### **Acanthocephala**

- 1) *Echinorhynchus porrigens* Rud. [sic, correctly *porrigens*, syn. of *Bolbosoma balaenae* (Gmelin, 1790) Porta, 1908], Acanthocephala, *Balaenoptera* (Germany), (453, [UMUTZ-HlmPrst-158]).
- 2) *Echinorhynchus* sp., Acanthocephala, Intestine of *Rana japonica* v. *martensii*, Tamagawa, Mr. Morisita, V '23 [1923], (-, [UMUTZ-HlmPrst-53]).

#### **References cited**

- Kamegai, S. and Araki, J. (2000): Re-examination of *Diphyllobothrium latum* of Iijima, 1888. *Parasitology International*, 49 (Suppl.), 41. (Abstract in Japanese.)
- Shimazu, T., Araki, J., and Kamegai, S. (1996): Further notes on the platyhelminth parasites reported by Yoshimasa Ozaki, 1923-1966, with a list of helminth parasite specimens deposited in the Department of Zoology, University Museum, University of Tokyo, Tokyo. *Journal of Nagano Prefectural College*, No. 51, 11-15.

#### **Summary**

A list is given of the helminth parasite specimens deposited in the collection of the Department of Zoology, the University Museum, the University of Tokyo. All the specimens were found preserved in vials. None of them have been designated as any sort of type.

