1990

Binder 043, Dicrocoelidae B [Trematoda Taxon Notebooks]

Harold W. Manter Laboratory of Parasitology

Brachydistomum Travassos, 1944

Generic diagnosis. — Dicrocoeliidae, Dicrocoeliinae, Brachydistomini: Body lanceolate, with forebody abruptly attenuated. Acetabulum definitely larger than oral sucker, situated within anterior third of body. Esophagus short, ceca not reaching to posterior extremity. Testes round, more or less overlapping each other obliquely immediately behind acetabulum. Cirrus pouch pre-acetabular, enclosing winding seminal vesicle. Genital pore nearer to oral sucker than to acetabulum. Ovary round, immediately behind posterior testis and more or less overlapping it, without being separated by uterine coils. Receptaculum seminis and Laurer's canal present. Vitelline follicles comparatively large, limited in extent, posterior to ovary. Uterine coils filling up most of hindbody, running ventral or lateral to ovary and testes and not passing between these organs; eggs dark, small. Parasitic in bile duct or bladder of birds.

Genotype: *B. microscelis* (Yamaguti, 1933) Trav., 1944 (Pl. 76, Fig. 924), syn. *Lyperosomum m.* Y., in *Microscelis amaurotis;* Japan. Also in *Milvus lineatus lineatus;* India.

Other species:

B. olssoni (Railliet, 1900) [1]), (Pl. 71, Fig. 869), syn. *Distomum clathratum* Deslongchamp of Mühling, 1898; *Olssoniella olssoni* of Travassos, 1944, in *Apus apus*, Europe. Also in *Apus pallidus brehmorum;* Morocco.

B. salebrosum (Braun, 1901) Travassos, 1944 in *Cypselus melba;* Europe.

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[1]) This species designated by Travassos as the type of the genus *Olssoniella* is transferred to *Brachydistomum*, since it agrees with this genus in the disposition of the genitalia, and all the other members included by Travassos in *Olssoniella* are now transferred to *Brachylecithum* Strom, 1940.

Brachydistomum microscelis (Yam., 1933) Travassos, Dicrocoeliidae

Lyperosomum microscelis Yamaguti, 1933

(Fig. over)

Length: 1.5-2.0 mm.

Width: 0.2 mm. Forebody flexed dorsad and attenuated.

Oral sucker: Subterminal, 0.06-0.08 mm. in diameter. Preoral lip present.

Acetabulum: (size:) 0.18-0.25 mm in diameter.
(position): At posterior limit of anterior fourth of body.

Sucker ratio: About 1:3

Esophagus: Slender, terminates about 1/2 way between the two suckeers.
Pharynx: Small, about 0.027-0.038 mm across.

Genital pore (location): About 1/3 distance between oral sucker and acetabulum.

Testes, shape: Transversely oval, obliquely tandem, slightly overlapping.

location: Lie a little obliquely behind the acetabulum.

Cirrus sac (extent): Slightly posterior to intestinal bifurcation.

Ovary, shape: Subglobular.

location: Immediately postero-dorsal to posterior testis, not separated from the latter by the uterine coils.

Vitellaria: The small vitelline follicles grouped like grape bunches are arranged in two lateral rows united in front; they begin at level of shell gland & extend distance of 0.24 mm.

Eggs: Mature eggs extremely dark and thick-shelled, 0.034-0.036 X 0.021-0.023.

Other features:

Host: Microscelis amaurotis

Locality: Prefecture of Sizuoka.

Reference: Japanese Journal of Zoology, Vol. V, No. I, pp.59-61.

Comparisons: Distomum clathratum Deslongchamps of Muhling
Lyperosomum salebrosum Braun, 1901
L. donicum Issaitschikoff, 1919

Life cycle:

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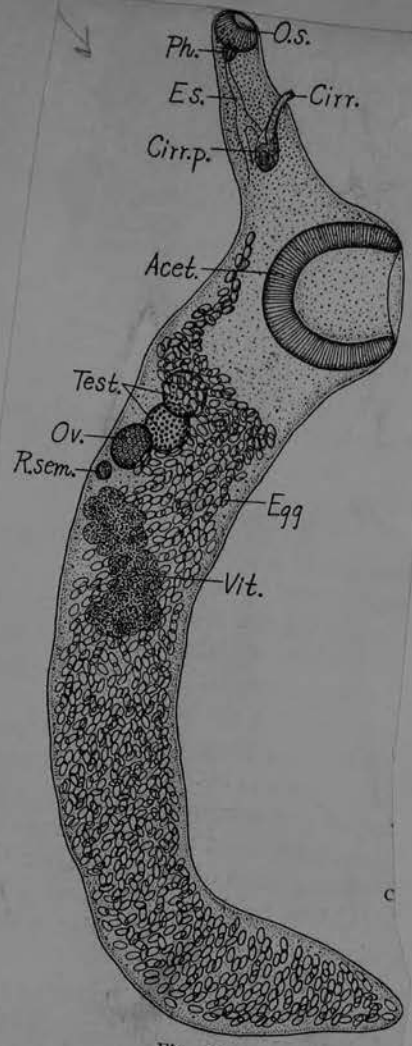


Fig. 25.
Lyperosomum microscelis; lateral view.
Type 1.68 × 0.2 mm.

3. *Brachydistomum (Olssoniella) olssoni* (Railliet, 1900)

Wirt/Herkunft. *Apus a. apus* L., Mauersegler (Apodiformes, Apodidae) /Berlin, Sektion am 9. 7. 1963 (1 Exemplar).

Lokalisation. Gallenblase.

Präparat-Nr. kT 16/52 (17 Exemplare).

Beschreibung (vgl. Abb. 3 und Tabelle 2).

Cuticula mit sehr feinem Spitzchen- oder Papillenbesatz; Körper länglich-lanzettförmig, 2,3—3,2 mm lang, maximale Breite 0,5—0,8 mm, meist in der vorderen Körperhälfte in der Region des Bauchsaugnapfs; Bauchsaugnapf wesentlich größer als Mundsaugnapf; Pharynx kräftig; Oesophagus kurz, etwa von gleicher Länge wie Pharynx; Darmgabelung etwas vor der Mitte der Entfernung zwischen Vorderrand des Bauchsaugnapfes und Pharynx; Darmschenkel enden stets vor der Mitte der Entfernung zwischen hinterer Grenze der Dotterstöcke und Körperhinterende, meist nur ein kurzes Stück hinter den Dotterstücken; Genitalporus auf der Höhe der Darmgabelung; Cirrusbeutel gut entwickelt; Dotterstocke hinter dem Ovarium, aus 8—12 großen rundlichen Follikeln jederseits bestehend, bisweilen einen die gesamte Körperbreite einnehmenden geschlossenen Dotterkomplex bildend; Testes unmittelbar hinter dem Bauchsaugnapf, kleiner als Ovarium, meist glattrandig, querelliptisch, meist diagonal gegeneinander versetzt oder geradlinig hintereinander, selten parallel nebeneinander gelegen; Ovarium meist querliegend bohnen- oder nierenförmig, glattrandig, direkt hinter dem hinteren Testis gelegen; Eigröße 0,030—0,035 × 0,016—0,019 mm.

Bemerkungen.

Dollfus (1957) nennt 4 Funde dieser Art: Olsson (1876) — Schweden, Mühling (1898) — Königsberg = Kaliningrad, Railliet (1900) — Frankreich, und Dollfus (1951) — Marokko. Bychovskaja-Pavlovskaja (1962) führt sowjetische Funde aus dem Gebiet von Leningrad und dem Fernen Osten der UdSSR an. Als Wirte wurden bisher nur *Apus*-Arten gemeldet. Baer (1959) beschrieb die Art *Brachydistomum* (*Olssoniella*) *megalocotyle* aus einer *Apus*-Art Zentralafrikas. Bei dem mir vorliegenden Material fällt die geringe Größe der Testes im Vergleich zu den bisherigen Beschreibungen auf.

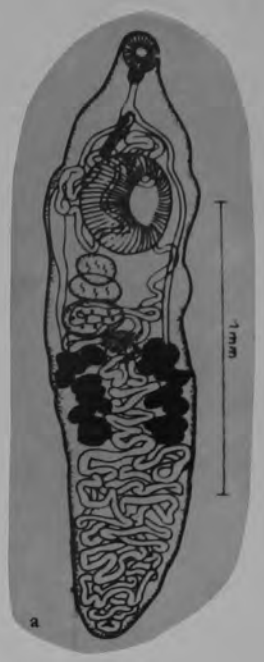


Tabelle 2. Brachydistomum (Olssoniella) olssoni, Maße von 10 Exemplaren in mm

Körperlänge	3,1	3,2	2,5	2,5	2,8	3	2,3	2,5	2,5	3
Maximale Körperbreite	0,8	0,8	0,8	0,7	0,6	0,7	0,5	0,6	0,5	0,8
Mundsaugnapf										
Länge	0,125	0,125	0,110	0,110	0,110	0,110	0,139	0,088	0,103	0,125
Breite	0,117	0,125	0,110	0,117	0,125	0,110	0,117	0,117	0,103	0,110
Bauchsaugnapf										
Länge	0,382	0,396	0,396	0,411	0,382	0,396	0,338	0,418	0,389	0,375
Breite	0,352	0,316	0,345	0,330	0,338	0,330	0,338	0,345	0,345	0,345
Pharynx										
Länge	0,088	0,081	0,081	0,081	0,088	0,081	0,081	0,073	0,081	0,088
Breite	0,073	0,073	0,066	0,073	0,073	0,073	0,066	0,066	0,073	0,073
Oesophaguslänge	0,147	0,139	0,066	0,147	0,059	0,132	0,139	0,037	0,081	0,088
Testes										
Länge	0,110 bis 0,139	0,117 bis 0,161	0,117 bis 0,132	0,103 bis 0,132	0,110 bis 0,132	0,095 bis 0,125	0,110 bis 0,132	0,103 bis 0,132	0,110 bis 0,125	0,110 bis 0,139
Breite	0,169 bis 0,184	0,139 bis 0,198	0,169 bis 0,191	0,147 bis 0,206	0,264 bis 0,279	0,169 bis 0,184	0,169 bis 0,198	0,169 bis 0,184	0,147 bis 0,176	0,176 bis 0,184
Ovarium										
Länge	0,147	0,169	0,147	0,132	0,147	0,161	0,139	0,132	0,132	0,147
Breite	0,220	0,198	0,220	0,206	0,228	0,191	0,213	0,220	0,198	0,213
Dotterstöcke, Länge	0,433 bis 0,573	0,609	0,308 bis 0,440	0,492 bis 0,551	0,352 bis 0,477	0,316 bis 0,426	0,338 bis 0,367	0,418 bis 0,558	0,367 bis 0,492	0,308 bis 0,455
Cirrusbeutel, Länge	0,389	0,272	0,294	0,294	0,161	0,330	0,345	0,184	0,213	0,367

From Odening, 1964

Dicrocoelidae

Brachydistomum salebrosum (Braun,1901) Trav.,1944

Lyperosomum salebrosum Braun,1901

Length: 1.5 to 1.7

Width:

Oral sucker: 0.05 to 0.06

Acetabulum: (size:) 4 times oral
(position):

Sucker ratio: 1:4

Esophagus:
Pharynx:

Genital pore (location):

Testes, shape: round, large
location: tandem, preovarian close to acetabulum
Cirrus sac (extent):
Ovary, shape: round

location:

Vitellaria: weakly developed

Eggs: 32 to 37 by 14 to 19 μ

Other features:

Host: Cygnus melba

Locality:

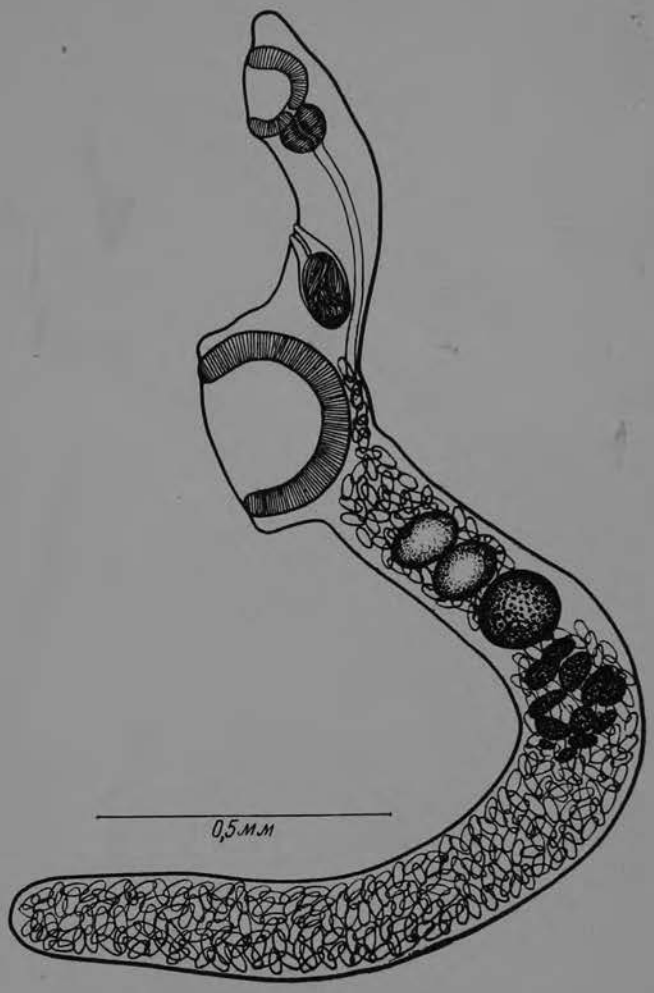
Reference: Central. Bakt., 29, p. 946

Comparisons:

Life cycle:

f3568plb

33



34

B. sabebrosum

BRACHYDISTOMUM

Brachylecithini ~~n. trib.~~ YAMAGUTI, 1958

Tribe diagnosis. — Dicrocoeliidae, Dicrocoeliinae: Body slender. Suckers equal or subequal, close to each other; ceca reaching to posterior extremity or not. Testes tandem, more or less diagonal, immediately or a little posterior to acetabulum. Cirrus pouch preacetabular; genital pore bifurcal or postbifurcal. Ovary median or slightly submedian, posttesticular. Vitellaria postovarian, variable in extent. Uterus occupying most of hindbody.

Key to genera of Brachylecithini of Mammals

Vitellaria limited in extent, postovarian; ceca terminating at some distance from posterior extremity ..... *Brachylecithum*

Vitellaria extending whole length of middle third of body; ceca terminating at posterior extremity ..... *Corrigia*

See generic diagnosis of Brachylecithum for Key to genera of Brachylecithini of Birds

F. Tribus Brachylecithini YAMAGUTI, 1958; char. emend.

Diagnosis.

Dicrocoeliinae mit zwei oder nur einem Darmschenkel, deren Gonaden sämtlich hinter dem Bauchsaugnapf liegen (bzw. vorderer Testis oder Testes diesen höchstens etwas überlappend); mit in beiden Körperseiten ausgebildeten Dotterstöcken, die jedoch zu einem ungetrennt erscheinenden einheitlichen Dottermassiv zusammengelagert sein können; Dotterbereich insgesamt fast die Hälfte oder mehr der Körperbreite einnehmend; Dotterfollikel groß. Parasiten der Leber (Gallengänge) oder Gallenblase von Vögeln.

Typische Gattung: *Brachylecithum* ŠTROM, 1940.

FROM ODENING, 1964

Key to genera of Brachylecithini of Birds

Body extremely long and slender; testes and ovary far apart one from another ..... *Skrjabinosomum*

Body not so extremely long and slender; testes and ovary not far apart one from another ..... *Brachylecithum*

Brachylecithum Strom, 1940

Syn. *Orthorchis* Travassos, 1944

Olssoniella Travassos, 1944, partim

Lyperosomum Looss, 1899, partim

Generic diagnosis. — Dicrocoeliidae, Dicrocoeliinae, Brachylecithini: Body slender. Suckers usually equal or subequal, close to each other. Esophagus short, ceca terminating short of posterior extremity. Testes tandem or somewhat diagonal. Cirrus pouch pre-acetabular. Genital pore usually bifurcal. Ovary median, a short distance in front of midbody. Receptaculum seminis present. Uterus filling up most of hindbody. Vitellaria occupying small lateral area posterior to ovary, sometimes commencing at level of ovary. Parasitic in biliary ducts and bladder of birds and mammals.

Genotype: *B. filum* (Duj., 1845) Strom, 1940, in *Passer* sp.; Rennes. Also in *Passer hypsaniolensis hypsaniolensis;* Russia; *Passer domesticus;* Lausanne.

FROM BIRDS:

B. lari (Travassos, 1917) (Pl. 71, Figs. 864 & 865), in ***Larus dominicanus;*** Brazil.

B. laymani (Travassos, 1944), syn. *Lyperosomum transversogenitalis donicum* Layman, 1926, in *Cotyle riparia, Hypotriorchis subbuteo subbuteo;* Russia.

B. lobatum (Railliet, 1900), ? syn. of *B. alfortense* (Raill. MS) in Dollfus, 1954, in *Accipiter nisus, Garrulus glandarius, Corvus cornix, C. corone, Pica pica, Coloeus monedula;* Palearctic region. Also in *Pica pica;* Provence — Timon-David (1953).

B. lobatum *glandarii* (Semenow, 1927) in *Garrulus glandarius, Streptopelia orientalis;* Russia.

B. lobatum *strixi* Oschmarin, 1952, in *Strix uralensis;* Russia.

B. loossii (Layman, 1926) in *Cotyle riparia* Russia.

B. megastomum (Johnston, 1916) in *Sterna bergii* Australia.

B. moorei Denton et Byrd, 1951, in *Bubo virginianus* U.S.A.

B. mosquense (Skrj. et Issaitsch., 1927) in *Pringilla coelebs* Russia. Also in *Emberiza variabilis;* Japan.

B. nanum Denton et Byrd, 1951, in *Pipilo erythrophthalmus* and *Zonotrichia albicollis;* U.S.A.

B. papabejani (Skrjabin et Udinzev, 1930) in *Caccabis chukar, Alectoris graeca;* Armenia.

B. parvum (Johnston, 1916) in *Strepera versicolor;* Australia.

B. petrovi (Kassimov, 1952), syn. *Dicrocoelium p.* K., in *Alectoris graeca caucasica;* Russia.

B. pici Oschmarin, 1952, in *Picus canus;* Russia.

B. platynosomoides Potekhina, 1948 (Pl. 75, Fig. 912), in *Parus major ferganensis, P. cyanus tianschanicus;* Kirgizskaia, Russia.

B. praetenue Oschmarin, 1952, in *Apus pacificus;* Russia.

B. rarum (Travassos, 1917) in *Celeus flavescens flavescens, Dacnis cayana cayana, Calospiza cyanocephala cyanocephala, Cacicus haemorrhous;* Brazil. Also in *Pipilo erythrophthalmus;* U.S.A.

B. seiuricum Denton et Byrd, 1951, in *Seiurus aurocapillus;* Virginia.

B. strigis (Yamaguti, 1939) in *Strix uralensis hondoensis* and *Milvus migrans lineatus;* Japan.

B. strigosum (Looss, 1899) in *Merops apiaster;* Egypt. Also in *Parus cyanus tianschanicus;* Russia.

B. stunkardi (Pande, 1939) in *Garrulus lanceolatus;* India. Also in *Cyanocitta cristata;* U.S.A.

B. tetraogalli Gvosdev, 1953, in *Tetraogallus himalayensis;* Russia.

B. tuberculatum Denton et Byrd, 1951, in *Wilsonia canadensis;* Virginia.

-OVER-

Representatives from birds:

B. americanum Denton, 1945, in *Cassidix mexicanus prosopidicola, Quiscalus versicolor, Sturnella magna, Corvus brachyrhynchos* and *Cyanocitta cristata;* U.S.A. Also in *Buteo lineatus;* Georgia. Xiphidiocercaria with flame cell pattern of 2×6×2 type develops in *Polygyra texasiana* and *Practicollela berlandieriana*. Experimentally also in *Stenotrema, Mesodon, Anguispira, Bulimulus, Deroceras*. Larvae of chrysomelid beetles serve as second intermediate hosts. Adult is a common parasite of Corvidae and Icteridae — Denton (1945); *Gastroidea cyanea* and *Diabrotica duodecimpunctata* as vectors — Jolivet and Theodorides (1950).

B. amurense (Shcherbovich, 1946), syn. *Lyperosomum a.* S., in *Lanius cristatus;* Russia.

B. asovi (Layman, 1926) in *Lanius collurio minor, Upupa epops;* Russia.

B. baskakowi (Ivanizky, 1926) in *Muscicapa grisola;* Russia.

B. burjatmongolicum Oschmarin, 1948, in *Tetrastes bonasis;* Russia.

B. capilliforme Oschmarin, 1952, in *Turdus dauma;* Russia.

B. chivosca (Pratt et Cutress, 1949) Skrj. et Evranova, 1952, syn. *Olssoniella c.* P. et C., in *Hesperiphona vespertina brooksi;* Oregon.

B. coturnixi Oschmarin, 1952, in *Coturnix coturnix;* Russia.

B. cuculi Oschmarin, 1952, in *Cuculus canorus;* Russia.

B. delicatum Denton et Byrd, 1951, in *Pipilo erythrophthalmus;* N. Carolina.

B. emberizae (Yamaguti, 1941) in *Emberiza variabilis;* Japan.

B. eophonae (Yamaguti, 1941) in *Eophona personata personata;* Japan.

B. eugenium Oschmarin, 1948, in *Nucifraga caryocatactes, Corvus corone orientalis;* Russia.

B. exochocotyle Denton et Byrd, 1951, in *Toxostoma rufum;* Georgia.

B. filiforme (Skrjabin, 1913) in *Circus cyaneus, Pyrrhula pyrrhula pyrrhula, Hypotriorchis subbuteo subbuteo,* Russia.

B. filiforme biologicum Semenow, 1927, in *Pyrrhula pyrrhula;* Russia.

B. gorbunovi (Strom, 1935) in *Cotyle riparia;* Turkestan.

B. gruis Denton et Byrd, 1951, in *Grus canadensis tabida;* Texas.

B. halcyonis (Yamaguti, 1941) in *Halcyon coromanda major;* Japan.

B. harrisoni (Johnston, 1916) in *Ninox boobook;* Australia.

B. kirghisense Evranova, 1952, in *Montifringilla alpicola prosvirowi;* Russia.

B. laniicola (Layman, 1926) in *Lanius collurio, Upupa epops;* Russia.

B. uigurica Evranova, 1952, in *Eremophila penicillata albigua, Parus cyanus tianschanicus;* Russia.

B. vanellicola (Layman, 1922) in *Vanellus leucurus,* Russian Turkestan; *Charadrius dubius,* W. Siberia.

B. alfortense (Raill. MS) in Dollfus, 1954, in *Pica pica mauritanica;* Morocco.

B. microtesticulatum Timon-David, 1955, in *Larus argentatus michaellis;* France.

Representatives from mammals:

B. aetechini Dollfus, 1951 (Pl. 102, Fig. 1234), in *Erinaceus* (*Aetechinus*) *algirus;* Rabat.

B. rodentini Agapova, 1955, in *Clethrionomys rufocanus;* Kasakhstan.

BRACHYLECITHUM Shtrom

Denton (1945) stated that *Brachylecithum* spp. were very delicate worms that showed considerable morphological variation as a result of host, habitat, age and hereditary factors [sic] and because of different methods of handling. He also noted that essential taxonomic characters were lacking for many species which were inadequately described, or described from poor material. The genus then contained 35 species and subspecies. The number is now over eighty and the observations of Denton still apply. It seems certain that when a thorough revision is made many species will be found to be synonymous. In the meantime it is not possible to compare adequately the Australian species with all previously recorded species. We have compared our species with any which occur in birds of the same or closely related genera in other parts of the world. Since only three species have been recorded previously from mammals, we have compared *B. insulare* n.sp. and *B. hydromyos* n.sp. with all three.

Brachylecithum and *Lyperosomum* are very similar genera which have caused taxonomists confusion. From the diagnoses of Skrjabin & Evranova (1953) after Shtrom (1940) and of Yamaguti (1971), it seems that the only consistent character used to separate them is the vitellaria, consisting of a small number of large follicles, occupying a small part of the body length in *Brachylecithum*, and in *Lyperosomum* of numerous small follicles occupying a greater distance in relation to body length.

Yamaguti separated *Brachylecithum* into two subgenera, *Brachylecithum* and *Brachylecithoides* on the presence or absence of the uterus between the testes and between the testes and ovary. This is a character which varies in specimens from one host (compare Figs 1 and 2), so that we have not used it. Further, the size and even the shape of the testes and, to a lesser extent, of the ovary, vary from one specimen to another. Both characters may depend on the maturity of the trematode or on its state of extension when fixed.

Specific characters used are size, width/length ratio, position of acetabulum, presence or absence of papillae on surface of body, and size of eggs. In view of the variability of acetabular shape we have not considered it advisable to compare sucker ratios.

Key to Australian species of *Brachylecithum*

1. Width/length ratio of body greater than 1/9 ... *B. latius*
   Width/length ratio of body less than 1/9 ... 2
2. Width/length ratio of body between 1/10 and 1/23 ... 3
   Width/length ratio of body between 1/24 and 1/30 ... 5
3. Acetabulum between anterior 1/4–1/5 of body; without papillae on body surface; eggs 36 x 20 μm ... *B. hydromyos*
   Acetabulum within anterior 1/5 of body ... 4
4. Acetabulum between anterior 1/5–1/6 of body; without papillae on body surface; eggs 43 x 22 μm ... *B. insulare*
   Acetabulum between anterior 1/6–1/7 of body; with papillae on body surface; eggs 39 x 23 μm ... *B. parvum*
5. Acetabulum between anterior 1/4–1/6 of body; with papillae on body surface; eggs 39 x 24 μm ... *B. dacelonis*
   Acetabulum between anterior 1/7–1/10 of body; without papillae on body surface; eggs 47 x 24 μm ... *B. podargi*

Characters from the type host in all cases.

(over)

The eggs measured in this study have been the largest mature specimens from balsam mounts. For eggs of *Brachylecithum parvum* (Johnston), Johnston's measurements are used, as the eggs in his slides are now unsuitable for accurate measurement.

Generic diagnosis: *Dicrocoeliidae, Dicrocoeliinae*. Body slender, filiform or lanceolate, flat or cylindrical; maximum width/length ratio not less than 1:45; with pre-oral lobe. Body surface with or without spines or papillae. Suckers usually subequal, not far apart. Caeca not reaching to hind end of body. Testes tandem or sometimes diagonal, contiguous or separate, immediately or a little posterior to acetabulum, occasionally underlying latter. Cirrus pouch pre-acetabular. Ovary round or oval, slightly behind testes. Vitellaria post-ovarian, commencing near ovary, limited in extent, consisting of small number of large follicles.

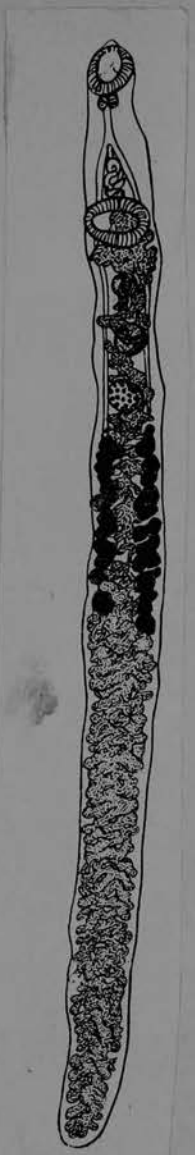
Parasitic in liver, gall bladder, pancreas or intestine of birds, mammals and reptiles.

Only three species of *Brachylecithum* have been described previously from Australia (Johnston 1917). Johnston assigned them to *Lyperosomum*, but Skrjabin & Evranova (1953) and Yamaguti (1971) placed all three in *Brachylecithum*. The species are *B. parvum* from *Strepera versicolor*, *B. megastomum* from *Sterna bergii* and *B. harrisoni* from *Ninox novaeseelandiae* (syn. *N. boobook*). We have examined the types of these species. In addition, in T. Harvey Johnston's collection is a slide of *B. parvum* and two of *B. megastomum* with S. J. Johnston's name, and other particulars on each showing them to be from S. J. Johnston's original material, as well as a mounted specimen complete, except for oral sucker and a small part of the anterior end, which bears a Zoological Laboratory, University of Sydney, label written in T. H. Johnston's hand "? *Lyperosomum*, Boobook owl". We have compared measurements of all of these, and find it impossible to differentiate between the three species. There is some variation between individuals of each species, such as the presence of coils of the uterus between the gonads. The specimen of *B. harrisoni* designated as type is incomplete and is in three pieces; the anterior end (oral sucker to beginning of vitellaria) is not a good preparation, the gonads being largely, and the acetabulum partly, obscured by eggs. S. J. Johnston stated that *B. harrisoni* was closely related to *B. parvum*—"indeed, all three species are closely related to one another". With the material available to us, we hesitate to synonymise these three species.

FROM ANGEL AND PEARSON, 1977

Brachylecithum filum (Dujardin,1845) Strom & Sondak,1935

Host: Passer hispaniolensis hispaniolensis



35

Brachylecithum accipiteri ~~n. sp.~~ BHUTTA AND KHAN, 1975

(Fig. 43)

The following description is based on 25 specimens recovered from the liver of one specimen of *Accipiter badius*, shot at the foot of Makra Mountain, near Shogran (Kaghan Valley).

The flukes have an elongated ribbon shaped body with bluntly rounded extremities. Maximum breadth is obtained at the acetabular level. The tegument is devoid of any armature. The oral sucker is subterminal and spherical. The ventral sucker is slightly bigger than the oral sucker and is situated at about one sixth of the body length from the anterior extremity. A very short prepharynx is present. The pharynx is almost spherical. The oesophagus is short. The intestinal bifurcation lies a little in front of the ventral sucker. The caeca terminate near the posterior extremity. In gravid worms the distal ends of the caeca are obscured by the dense coils of uterus in that region.

43

The testes are comparatively large and lie close behind the ventral sucker, disposed in a tandem fashion with a very short intertesticular area. They are oval in outline and roughly equal in size. The cirrus sac is elongated, extending from the level of the anterior one third of the ventral sucker to the genital aperture. It encloses vesicula seminalis, a ductus ejaculatorius, pars prostatica and a short cirrus. The common genital aperture is bifurcal in position and is nearer the ventral sucker than the oral sucker. The ovary is smaller than the testes and lies close behind the posterior testis. It is subspherical in outline and slightly submedian in position. The Mehlis' gland lies a short distance behind the ovary. The vitellaria are in the form of about 18 follicles, situated behind the ovary distributed irregularly and occupy about one seventh of the total body length. The uterus is occupyin almost the entire space behind the ventral sucker. The eggs are numerous, oval i outline, brown in colour, operculate and embryonated. The excretory vesicle is lon and tubular.

MEASUREMENTS

(All measurements in millimetres)

Body length	2.272 – 3.666
Body breadth	0.212 – 0·272
Oral sucker	0.137 – 0.208 × 0.117 – 0.186
Ventral sucker	0.166 – 0.245 × 0.166 – 0.235
Pharynx	0.056 – 0.063 × 0.051 – 0.063
Ovary	0.098 × 0.098
Anterior testis	0.147 – 0.245 × 0.156 – 0.205
Posterior testis	0.127 – 0.254 × 0.156 – 0.205
Cirrus sac	0.152 – 0.176
Eggs	0.022 – 0.038 × 0.017 – 0.022

Host: *Accipiter badius*
Location: Liver
Locality: Shogran (Kaghan Valley)

–over

Discussion

In shape of the body, absence of tubercles on the cuticle, absence of acetabular auricles, in the disposition of the gonads and in having an ovary smaller than the testes, the fluke under study resembles most closely *Brachylecithum sayeedi* Jaiswal, 1958; *B. skrjabini* Jaiswal, 1958 and *B. indicum* Singh, 1962. However, it differs from *B. sayeedi* in having asymmetrical vitellaria, in the position of the ventral sucker relative to the intestinal bifurcation, in the extent of the cirrus sac relative to the ventral sucker, in having a relatively bigger ventral sucker and in having relatively smaller eggs, from *B. skrjabini* in its ventral sucker being larger than the oral, extent of the cirrus sac relative to the ventral sucker, position of the ventral sucker relative to intestinal fork and in the size of the ovary relative to the testes and from *B. indicum* it differs in its ventral sucker being larger than oral, position of ovary which lies at the equator in *B. indicum* and much in front in the present species, in the extent of the vitellaria and in having comparatively larger eggs. These differences are of sufficient importance to justify the creation of a new species for the present fluke for which the name *Brachylecithum accipiteri* is proposed.

Braebyilithum alaudae (Layman,1926)

Host: Alauda arvensis

36

BRACHYLECITHUM AMERICANUM Denton, 1945

FIGURE 38, *a*

Brachylecithum americanum DENTON, Journ. Parasitol., vol. 31, pp. 131–140, figs. 1–8, 1 pl., 1945.

As recently as September 1948, 18 specimens of a form identifiable as *Brachylecithum americanum* Denton, 1945, were removed from the liver of an immature red-shouldered hawk, *Buteo lineatus* (Gmelin), from Athens, Ga. This material agrees remarkably well with that from crows, *Corvus brachyrhynchos* Brehm, from the same locality in

(1) size, shape, and relative position of suckers; (2) ratio of sucker sizes (1:1.0 to 1.1); (3) position of genital pore; (4) size, shape, and relative position of the genital organs; (5) number and size of vitelline follicles; and (6) the course of the uterus in ascending to genital pore. In general, specimens from the crow are slightly wider and thicker in proportion to length than specimens from birds of the family Icteridae (blackbirds). The material from the hawk is still wider and thicker in proportion to the length than are those from the crow. There seems, then, to be some evidence to indicate that there is a definite correlation between the size of the host (and its bile ducts) and the size of the specimens of this species that parasitize it.

The specimens from the hawk measure 2.28 to 2.90 mm. long by 0.38 to 0.52 mm. wide. The cuticle of some specimens shows fine transverse striations. The weakly muscular acetabulum shows a shallow, saucerlike lumen in some specimens, while in others the center is protruded so as to obliterate the lumen. The vasa efferentia arise from the dorsomedial surfaces of the testes and unite just in front of the anterior testis, at the caudal margin of acetabulum, to form a short vas deferens. A specimen has been deposited in the United States National Museum, Helm. Coll. No. 37123.

Since *B. americanum* has not been reported previously from any species of hawk, it is considered to be a rare parasite of this avian group. Denton and Rausch (1949) failed to find a single specimen of the species in 160 hawks, 8 of which were of the red-shouldered variety.

a

46

DENTON

ton & Bryd, 1951

Brachylecithum americanum DENTON, 1945 (Fig. 46)

Hosts: *Agelaius phoenicus* (Linn.), red winged blackbird, and *Cassidix mesamexicanus*, (Gmelin), boat-tailed grackle (new host record).

Location: Liver.

Locality: Bonnet Carre Spillway, Louisiana (new locality record).

Discussion. DENTON (1945) named, described, and elucidated the life history of *Brachylecithum americanum*, commonly parasitic as adults in corvid and icterid birds. DENTON and BYRD (1951) subsequently reported this trematode from a red-shouldered hawk, *Buteo lineatus* (GMELIN), noting that specimens from the hawk and crows (*Corvus brachyrhynchos* Brehm) were thicker-bodied than material from blackbirds. Our specimens of *B. americanum* from *Cassidix mesamexicanus* are larger and more robust-appearing (average length 4.766, average width 0.353) than specimens of this form from *Agelaius phoenicus* (average length 4.243, average width 0.177) collected at the same Louisiana locality. DENTON and BYRD (1951) have suggested that the size of *B. americanum* may be correlated with the size of the host's bile ducts.

FROM LUMSDEN + ZISCHKE, 1964

Brachylecithum americanum Denton, 1945

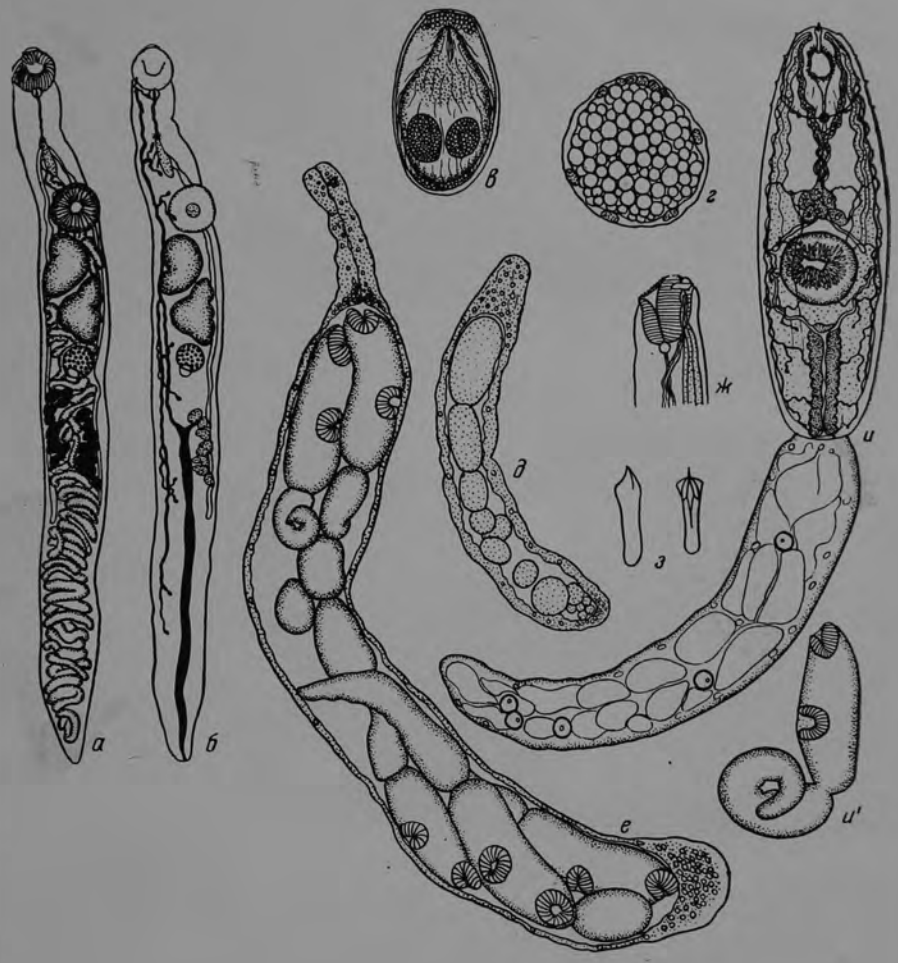
(Рис. 37)

Хозяева: птицы — *Cassidix mexicanus prosopidicola*; *Quiscalus versicolor*, *Sturnella magna*, *Corvus orachyrhynchus*, *Cyanocitta cristata*.

Локализация: печень.

Место обнаружения: США.

Сем. DICROCOELIIDAE



37. *Brachylecithum americanum* Denton, 1945 (по Дентону, 1945)

а — общий вид; *б* — расположение экскреторной системы; *в* — яйцо с мирацидием; *г* — молодая спороциста; *д* — спороциста; *е* — спороциста с церкариями; *эс* — передний конец церкария; *з* — строение стилета церкария; *и*, *и'* — церкарии

Brachylecithum asovi (Layman, 1926)

Синонимы: *Lyperosomum asovi* Layman, 1926; *Olssoniella asovi* (Layman, 1926) Travassos, 1944

(Рис. 38)

Хозяева: чернолобый сорокопут (*Lanius minor*), жулан (*Enneoctonus collurio*), удод (*Upupa epops*).

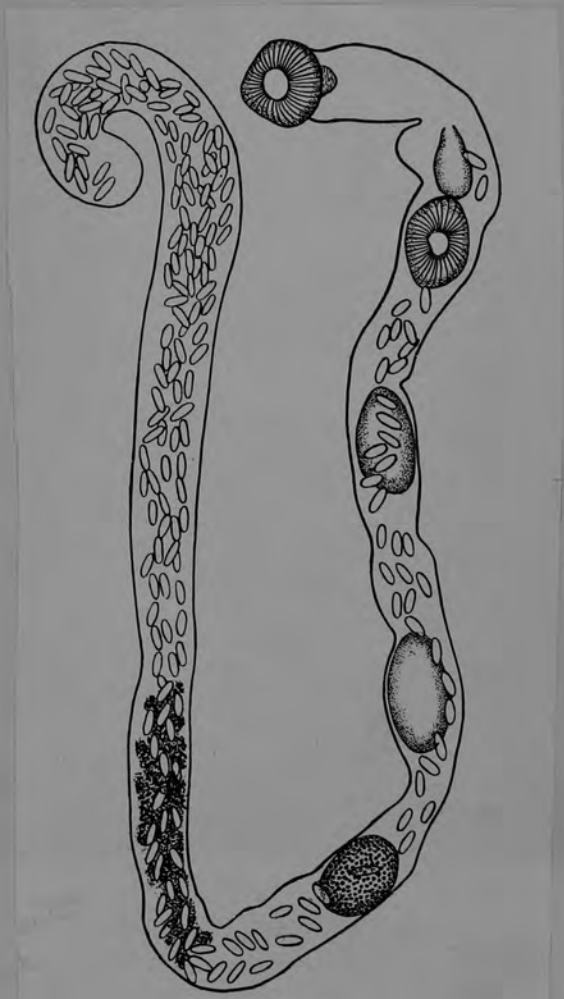
Локализация: желчные протоки печени и желчный пузырь.

Место обнаружения: СССР (Ростовская область).

Описание вида (по Ляйману, 1926). Длина тела 2,964 мм, ширина 0,114 мм; передний и задний конец тупые. Ротовая присоска круглая, ее диаметр 0,114 мм; брюшная присоска продольно-овальная 0,114 мм длины и 0,103 мм ширины. Половая бурса лежит впереди брюшной присоски. Семенники и яичник продольно-овальные. Оба семенника одинаковой величины: 0,137 мм длины, и 0,0684 мм ширины. Они крупнее яичника, длина которого 0,103 мм, а ширина 0,080 мм. Передний семенник лежит немного отступя позади брюшной присоски. Желточники в виде скученной массы позади яичника; длина области желточников 0,3493 мм. Начиная от брюшной присоски и кончая задней частью тела, матка набита яйцами.

Длина яиц 0,038—0,043 мм при ширине 0,018—0,020 мм.

Литература: Ляйман, 1926, стр. 65; Travassos, 1944, стр. 220.



38

Brachylecithum attenuatum (Dujardin, 1845)

Синонимы: *Distoma* (*Dicrocoelium*) *attenuatum* Dujardin, 1845; *Dicrocoelium attenuatum* (Duj., 1845), Railliet, 1900; *Lyperosomum attenuatum* (Duj., 1845), Travassos, 1919; *Lutztrema attenuatum* (Duj., 1845), Travassos, 1944

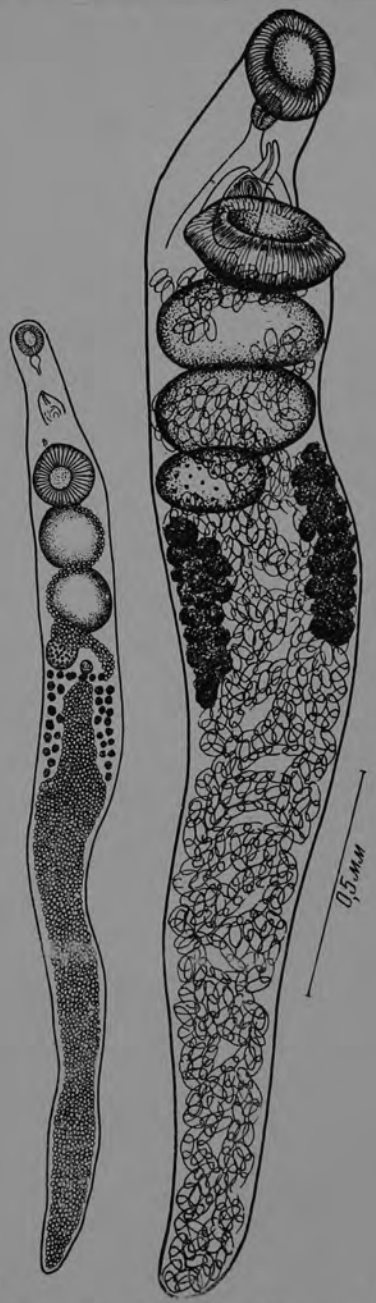
(Рис. 39)

Хозяева: дрозды (*Merula merula* и *Merula obscura*).

Локализация: желчный пузырь.

Места обнаружения: Франция, Япония и СССР (Абхазия).

Описание вида (по Дюжардену, 1845). Длина тела достигает 3—4 мм, при ширине 0,28—0,50 мм. Тело веретеновидное, очень удлиненное, суженное на обоих концах. Передняя часть сужена в виде шейки. Кутикула поперечно исчерчена. Брюшная присоска отстоит на 0,45 мм от ротовой присоски, достигая в диаметре 0,27 мм. Ротовая присоска сферическая, субтерминальная, достигает в диаметре 0,167 мм. Соотношение между присосками 1 : 1,61. Фаринкс достигает 0,08 мм; пищевод 0,25 мм.



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39. *Brachylecithum attenuatum* (Dujardin, 1845) (по Исайчикову, 1919)
40. *Brachylecithum attenuatum* (Dujardin, 1845) *parinum* Oschmarin, 1952 (по Ошмарину, 1952)

Brachylecithum attenuatum (Dujardin, 1845) *parinum* Oschmarin, 1952[1]

(Рис. 40)

Хозяин: болотная гаичка (*Parus palustris*).

Локализация: печень.

Место обнаружения: СССР (Приморский край, Черниговский район).

Описание вида (по Ошмарину, 1952). Длина тела 2,8 мм. Передняя часть тела достаточно хорошо отделена от задней тем, что она более

Brachylecithum baskakowi (Iwanitzky, 1927)

Синоним: *Dicrocoelium baskakowi* Iwanitzky, 1927

(Рис. 41)

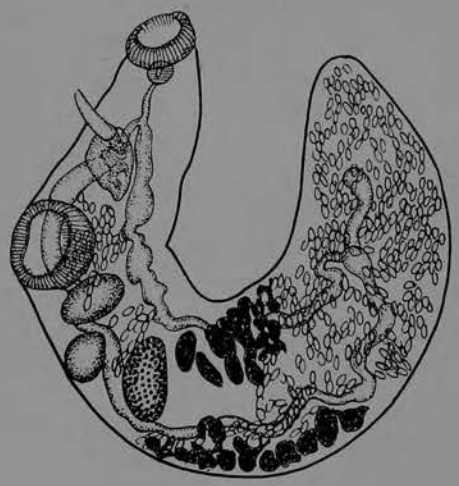
Хозяин: мухоловка (*Muscicapa grisola*).

Локализация: желчные протоки печени.

Место обнаружения: СССР (Днепропетровская обл.).

Описание вида (по Иваницкому, 1927). Тело достигает 2,059 мм длины при максимальной ширине 0,6 мм в области расположения желточников. Ротовая присоска 0,223 мм длины и 0,189 мм ширины. Почти круглая брюшная присоска достигает 0,32 × 0,292 мм. Центр брюшной присоски отстоит от переднего конца тела на расстоянии 0,858 мм. Шаровидный фаринкс 0,074 мм в диаметре. Короткий пищевод 0,137 мм длины. Кишечные стволы заканчиваются в задней трети длины тела, значительно не доходя до заднего конца паразита. Половое отверстие открывается на расстоянии

[1] Публикуется впервые.



41

41. *Brachylecithum baskakowi* (Iwanitzky, 1927) (по Иваницкому, 1927)

Brachylecithum burjatmongolicum Oschmarin, 1947

(Рис. 42)

Хозяин: рябчик (*Tetrastes bonasia* L.)

Локализация: печень.

Место обнаружения: СССР (Бурят-Монголия).

Описание вида (по Ошмарину, 1947). Длина тела 4,012 мм и 0,285 мм максимальной ширины в области семенников. Ротовая присоска своей полостью слабо повернута вперед; ее диаметр равен 0,170 мм. За ротовой присоской следует непосредственно фаринкс; его длина равна 0,075 мм, ширина 0,052 мм; префаринкс отсутствует. Пищевод узкий и короткий, 0,062 мм длины.

Брюшная присоска значительно крупнее ротовой, она сильно выступает вперед, 0,238 мм в диаметре. Передний край брюшной присоски находится на расстоянии 0,425 мм от переднего конца тела.

Семенники почти круглые, очень слабо продольно вытянуты, расположены на небольшом расстоянии от брюшной присоски и друг от друга. Передний семенник имеет 0,222 мм длины и 0,220 мм ширины, задний 0,224 мм длины и 0,220 мм ширины. Передний край переднего семенника находится на расстоянии 0,220 мм от заднего края брюшной присоски.

Бурса цирруса 0,220 мм длины и 0,088 мм ширины. На дне бурсы цирруса расположен круглый семенной пузырек. Половые отверстия расположены на середине расстояния между присосками в области бифуркации кишечника.

Яичник, круглый находится на некотором расстоянии от второго семенника; его диаметр равен 0,155 мм.

Матка образует нисходящее и восходящее колена, состоящие из поперечных петель. Последние заполняют все пространство позади яичника, пространство между семенниками, между брюшной присоской и передним семенником. Метратерм открывается впереди бурсы цирруса.

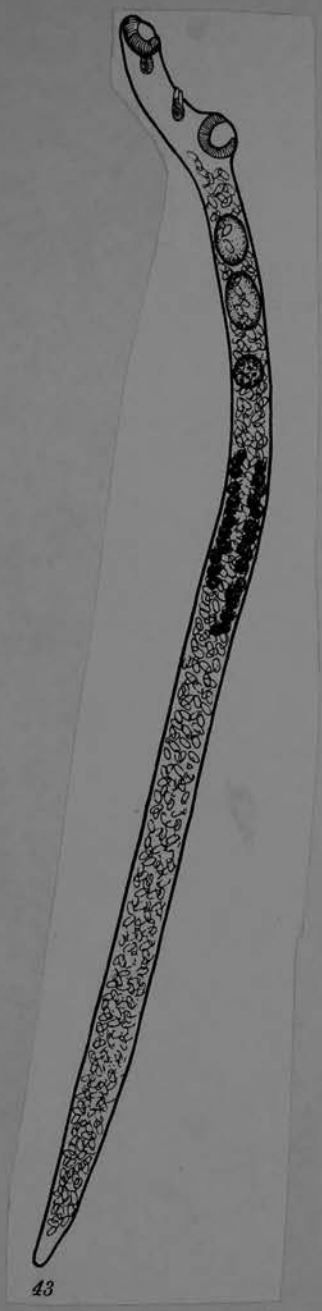
Яйца коричневые, 0,037 мм длины и 0,026 мм ширины. Желточники состоят из небольшого количества довольно крупных фолликулов; они начинаются позади яичника и простираются на 0,45 мм кзади.

Литература: Ошмарин, 1947.

42

Brachylecithum capilliformis Oschmarin,1952

Host: Turdus dauma



43

BRACHYLECITHUM CHAPMANI ~~n.sp.~~ K. S. SINGH, 1962

In April 1960, one Red-billed Blue Magpie, *Kitta erythrorhyncha occipitalis* (Blyth, 1846) (Corvidae) was examined and one complete and five incomplete specimens of a trematode were recovered from the liver. The parasites were fixed in cold Bouin's fluid without pressure and stained with acetic alum carmine. The average measurements are given in parentheses.

The body is very delicate and elongate, measuring 4.272 mm. in length and 0.15-0.223 (0.187) mm. in maximum breadth which is anterior to the ventral sucker. The cuticle is smooth and both the ends are rounded.

The oral sucker is subterminal and rounded, measuring 0.212 mm. in diameter. There is no prepharynx and the comparatively small pharynx measures 0.08 mm. in diameter. The oesophagus is long and bifurcates into two intestinal caeca just before the genital pore. The intestinal caeca run along the lateral sides but their course and extent could not be determined due to the presence of a very large number of eggs. The ventral sucker is 0.19-0.23 (0.21) mm. in diameter and muscular but shallow. It is present in the anterior one-sixth of the body. In the complete specimen seen in the ventral view, the lateral sides of the ventral sucker show two processes as in *B. stunkardi* (Pande, 1939) and *B. strigis* (Yamaguti, 1939).

The two testes are present posterior to the ventral sucker in the anterior one-fourth of the body. The anterior testis measures 0.12 (0.12) mm. in diameter and is separated from the posterior testis by a loop of the uterus with eggs. The posterior testis is 0.12-0.14 (0.13) mm. in diameter and both the testes are rounded. The cirrus pouch is present just posterior to the ventral sucker and measures 0.14-0.17 × 0.05-0.065 (0.165 × 0.057) mm. in size. The cirrus in two specimens was partly everted, measuring 0.062 × 0.05 and 0.066 × 0.052 mm. in size. It is unarmed. The genital opening is at the intestinal bifurcation of the oesophagus, median and 0.14-0.17 (0.155) mm. in front of the ventral sucker. The vesicula seminalis inside the cirrus pouch is bipartite.

where it could be observed, it measured 0.086 mm. in diameter. The vitellaria consist of a few large follicles present posterior to the ovary and separated from it by a loop of the uterus with eggs. The follicles are asymmetrical, the number and the position of the follicles on the two sides being different. The extension of the follicles is more than the distance between the ovary and the ventral sucker. The coils of the uterus could not be made out due to the presence of a very large number of golden yellow eggs but it has a descending and an ascending limb. The entire space behind the genital organs, specially posterior to the vitellaria, is completely filled up with eggs. The ascending limb passes in between the various genital organs, runs dorsal to the ventral sucker to open near the male genital pore. The eggs measure 0.04-0.046 × 0.02-0.024 (0.043 × 0.023) mm. in size.

The excretory pore is terminal and the rest of the system could not be seen due to the presence of eggs.

Brachylecithum chapmani n.sp.

Anterior end, ventral view.

- OVER -

Discussion: The present species can be distinguished from the closely related species of the genus *Brachylecithum* thus : from *B. gruis* Denton & Byrd, 1951 in having smooth and rounded testes, much smaller in size and separated from the ventral sucker by several folds of the uterus and position of vitelline follicles; from *B. moorei* Denton & Byrd, 1951 in the shape of the body, comparative size of the two suckers, shape and position of the two testes, in having the ovary larger than the testes and distribution of the vitelline follicles; from *B. rarum* Travassos, 1917 in the breadth of the body (though the length is nearly the same), absence of the tubercles from cuticle, absence of distended pouches from the ends of the caeca, position of cirrus pouch in relation to the ventral sucker and the ovary being larger than the testes; from *B. strigis* (Yamaguti, 1939) in having the two suckers of almost the same size, number and position of the vitelline follicles, in having the ovary larger than the two testes and the absence of metraterm; from *B. stunkardi* (Pande, 1939) in the ratio of the width of oral sucker to ventral sucker, position of the genital pore and cirrus pouch in relation to the ventral sucker and in having the ovary larger than the testes; from *B. tuberculatum* Denton & Byrd, 1951 in the absence of tubercles from the cuticle, position of anterior testis and cirrus pouch in relation to the ventral sucker, and the ovary being larger than the testes; and from *B. indicum* n.sp. in

The ovary is rounded or slightly oval and present just behind the posterior testis and separated from it by a loop of the uterus. The ovary measures 0.16-0.2 (0.17) mm. in long diameter. The receptaculum seminis is present just posterior to the ovary and in one specimen

the size of the body, in having the two suckers of almost the same size, shape and position of the testes, position of the cirrus pouch in relation to the ventral sucker and in having the ovary larger than the testes.

The new species is named in honour of Mr. Gordon Chapman who very kindly shot the bird for me.

Host : Red-billed Blue Magpie, *Kitta erythrorhyncha occipitalis* (Blyth, 1846) (Corvidae).

Location : Liver.

Locality : Mukteswar-Kumaun, Sitla Orchard (about 6000 ft.).

Type slide : Zoological Survey of India, Calcutta.

INDIAN J. HELMINTHOL. 14(1): 45-52

Brachylecithum chapmani Singh, 1962

(Fig. 42)

The following description is based upon four specimens recovered from the liver of one specimen of babbler collected from Khanspur (Ayyubia).

The body of the fluke is narrow, elongated, subcylindrical and fragile. The anterior end is broader than the posterior. The maximum breadth is just behind the testes. The tegument is unarmed. The oral sucker is subterminal and subspherical. The ventral sucker is subequal to the oral sucker and is situated at about one eighth of the body length from the anterior end. Acetabular auricles are present. There is no prepharynx. The pharynx is spherical and considerably smaller than the oral sucker. The oesopagus is short and divides into thin-walled caeca. The intestinal fork a little in front of the ventral sucker. The caeca almost reach the posterior end of the worm. The posterior tips of the caeca are often obliterated from the view by eggs.

The testes are immediately behind the ventral sucker and are tandem. The anterior testis lies at a distance of 0.078 mm behind the ventral sucker. The cirrus sac is small and extends posteriorly to the anterior margin of the ventral sucker. The cirrus sac encloses vesicula seminalis, ductus ejaculatorius and pars prostatica. The genital atrium is immediately postbifurcal. The ovary is larger than the testes, and is situated at a distance of 0.078 mm from the posterior border of the posterior testis. The vitellaria are in the form of 19-20 large follicles which are clumped a little behind the ovary, occupying about one eighth of the total body length. The uterus is extensive and is thrown into numerous closely packed coils which occupy almost the entire body behind the level of the vitellaria. The ascending limb of the uterus proceeds forward and opens into the common genital atrium. The egges are numerous, brown, oval, operculate and embryonated. The excretory vesicle is tubular.

42

MEASUREMENTS

(All measurements in millimetres)

Body length	4.696 – 5.151
Body breadth	0.294 – 0.313
Oral sucker	0.196 × 0.196 – 0.245
Ventral sucker	0.205 – 0.215 × 0.205 – 0.215
Pharynx	0.068 × 0.056
Ovary	0.196 – 0.196
Anterior testis	0.147 – 0.196 × 0.147 – 0.156
Posterior testis	0.166 – 0.176 × 0.147 – 0.176
Cirrus sac	1.096
Eggs	0.033 – 0.045 × 0.025 – 0.030

Host: Babbler
Location: Liver
Locality: Khanspur (Ayyubia)

DISCUSSION

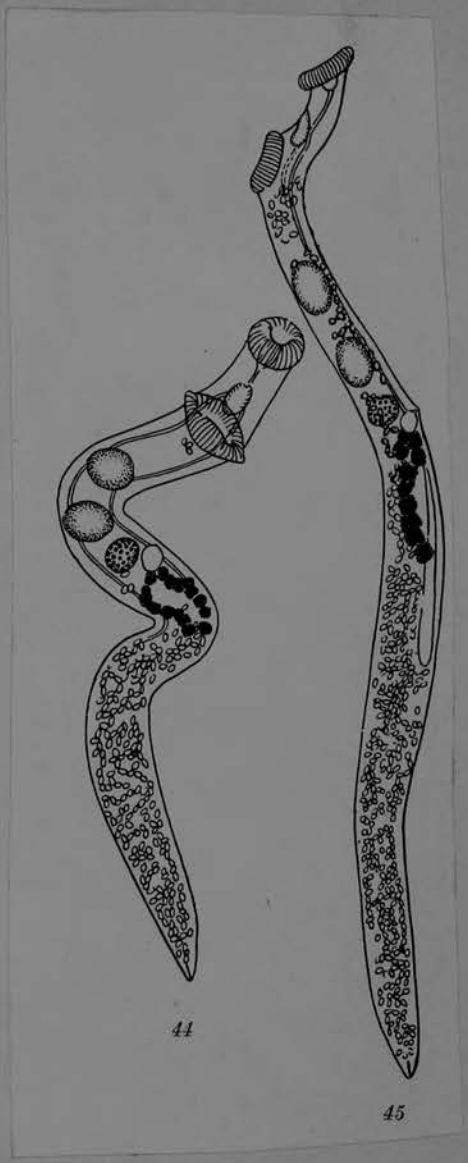
The fluke under present study resembles *Brachylecithum chapmani* Singh, 1962 in all essential features except that the present material is comparatively broader and has a relatively smaller cirrus sac. It is, therefore, identified as such. However, this species is being reported for the first time from Pakistan.

From BHUTTA AND KHAN, 1975

Brachylecithum chivosca (Pratt & Cutress,1949)

Syn.: Olssoniella chivosca Pratt & Cutress,1949

Host: Hesperiophona vespertina brooksi



44

45

Brachylecithum colorosum (Patwardhan, 1935)

Синонимы: *Lyperosomum colorosum* Patwardhan, 1935; *Lyperosomum bhattacharyai* Pande, 1939; *Lutztrema colorosum* (Patwardhan, 1935) Travassos, 1944

(Рис. 46)

Хозяева: птицы — *Temenchus pagadorum* (Gm.), *Sturnopastor contra* (L.) (= *Sturnopastor capensis*).

46

Brachylecithum coturnixi Oschmarin, 1952 [1]

(Рис. 47)

Хозяин: перепел (*Coturnix coturnix*)

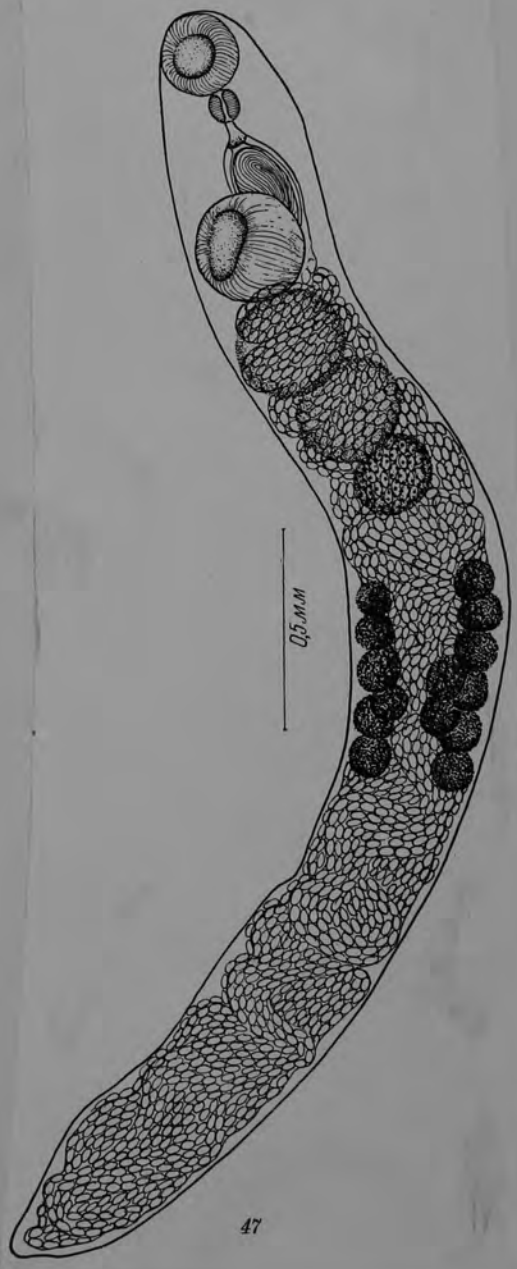
Локализация: желчные протоки печени.

Место обнаружения: СССР (Приморский край, Хорольский район).

Экстенсивность инвазии: у двух перепелов из 16 вскрытых.

Описание вида (по Ошмарину, 1952). Длина тела— 2,62 мм, ширина 0,340 мм. Ротовая присоска 0,140 × 0,120 мм в диаметре; ее полость обращена на вентральную сторону. Брюшная присоска значительно крупнее, шарообразной формы, сильно выступает над поверхностью червя. Размер брюшной присоски равен 0,28 × 0,24 мм. Фаринкс маленький, шарообразный. Семенники шарообразные, лежат непосредственно позади брюшной присоски. Диаметр семенников равен 0,130 мм. Половая бурса 0,220 мм длины; она заполнена внутренним семенным пузырьком. Круглый яичник 0,120 мм в диаметре. Крупные желточные фолликулы образуют с каждой стороны ряд из 6—8 штук. Размер яиц 0,032 × 0,023 мм.

Более крупные экземпляры достигали 3,6 × 0,360 мм. Размер ротовой присоски колебался от 0,100 до 0,195 мм в диаметре, брюшной 0,225—0,265 мм в диаметре. Семенники могут достигать 0,255 мм в диаметре, располагаются один позади другого.



47

Brachylecithum cuculi Oschmarin, 1952[1]

(Рис. 48)

Хозяин: кукушка обыкновенная (*Cuculus canorus*).

Локализация: желчные протоки печени.

Место обнаружения: СССР (Приморский край, Пожарский, Калининский и Красноармейский районы).

[1] Публикуется впервые.

Экстенсивность инвазии: у трех кукушек из девяти исследованных.

Описание вида (по Ошмарину, 1952). Цилиндрической формы трематода длиной 3,2 мм, шириной 0,360 мм; наибольшая ширина тела позади желточников, во второй половине его длины. Размер ротовой присоски 0,160 × 0,150 мм. Диаметр фаринкса приблизительно в четыре раза меньше диаметра ротовой присоски. Размер брюшной присоски 0,225 × 0,175 мм; она отстоит от ротовой на расстоянии, несколько превышающем ее диаметр. Семенники располагаются один позади другого, непосредственно позади брюшной присоски; их размеры равны 0,190 × 0,115 мм. Половая бурса 0,200 мм длины и 0,050 мм ширины; она изогнута так, что образует зигзагообразный излом. Дно бурсы почти достигает середины брюшной присоски; ее полость содержит крупный семенной пузырек.

Яичник 0,110 мм в диаметре. Желточники состоят всего из 11 очень крупных фолликулов, диаметр каждого из которых равен 0,060 мм. Петли матки заполняют пространства между половыми железами и участок тела позади них. Размер яиц 0,049 × 0,027 мм.

Вышеприведенное описание сделано на основании изучения одного из мелких экземпляров. Наиболее крупные достигают 4,9 мм длины и 0,4 мм ширины. Тело может быть одинаковой толщины на всем протяжении или даже иногда передний конец может быть шире заднего. Брюшная присоска может быть круглой или даже поперечно-овальной. Семенники могут быть поперечно-овальными и достигать 0,185 × 0,300 мм. Положение бурсы и ее строение являются у этого вида признаком постоянным. Число желточных фолликулов может достигать 14.

От других *Brachylecithum* этот вид отличается малым количеством желточных фолликулов и их весьма крупной величиной.

48

Brachylecithum dacelonis ~~n.sp.~~ ANGEL AND PEARSON, 1977

FIG. 5

Host. [1]*Dacelo novaeguineae*.

Location in host. Liver.

Locality. Bridgewater, S. Aust., July 1973.

Incidence. 1 of 9 birds from S. Aust.; none of 4 from N.S.W.; neither of 2 from Tas.

Food of host includes beetles, other insects, and spiders.

Holotype. SAM V89.

Paratypes. SAM V90, V91.

Description based on 10 balsam mounts of specimens recovered alive.

Description

Body slender, cylindrical, narrowing from ovary to posterior end. Length 2.9–3.5 mm, width or depth/length ratio 1:24–1:29 (1:26). Conical papillae (10 μm across base, 8 μm high, approximately 50 μm apart) on body surface from acetabulum to ovary, diminishing in number posteriorly. Acetabulum (176 x 152 μm) slightly larger than oral sucker (167 x 145 μm), situated approximately in anterior fifth of body, wider than long, with a blunt point on each side. Pharynx mostly wider than long, sometimes round; oesophagus bifurcating near genital pore; caeca end posterior to vitellaria, at about one quarter to one third of body length from posterior end.

Testes oval to rectangular with rounded corners, tandem, close together. Cirrus pouch arises between anterior edge and anterior third of acetabulum. Cirrus up to 80 μm long x 45 μm near base. Genital pore nearer to acetabulum than to oral sucker. Ovary round or slightly wider than long, median, close to second testis, in anterior two-fifths of body. Receptaculum seminis large, loosely coiled, about 105 x 65 μm. Vitellaria consisting of 7–11 compact follicles (up to 60 x 53 μm) on each side of body.

B. dacelonis is close to *B. parvum*, but differs primarily in width/length ratio. Both of Johnston's specimens of *B. parvum* are mounted on their sides, and the depth/length ratios (measured by us) are 1:12 and 1:20, whereas width/length ratio of 7 specimens of *B. dacelonis* is from 1:24–1:29. They are noticeably more slender worms than *B. parvum*. Corresponding with the lesser width in *B. dacelonis*, the suckers, pharynx and gonads are smaller than those of *B. parvum*.

Other species recorded from alcedine birds are: *B. halcyonis* (Yamaguti) from *Halcyon coromanda major* from Japan, *B. andamanensis* Soota, Srivastava & Ghosh (in Soota et al. 1973) from *Halcyon chloris* from the Andaman Islands, *B. palawanense* Fischthal & Kuntz from *H. chloris collaris* and *Ceyx rufidorfus rufidorfus* from the Philippines, and *B. sabahense* Fischthal & Kuntz from *H. chloris* from Sabah.

B. dacelonis differs from all of these in: narrower body (w/l ratio 1:24–1:29); (*B. halcyonis* (1:17–1:20) approaches this most nearly, the other three species are 1:10, 1:9–1:12, 1:8–1:9 respectively (our calculations)) and in size or relative dimensions of eggs (*B. dacelonis* 39 x 24 μm, *B. halcyonis* 42 x 21–22 μm, *B. andamanensis* 63–90 x 12–16 μm, *B. palawanense* 32 x 18 μm, *B. sabahense* 35 x 19 μm). It differs further: from *B. halcyonis* in its smaller size 2.9–3.5 mm (5.1–5.2 mm) and the acetabulum being further back, 1:4–1:6 body length (1:7) and from *B. sabahense* in lacking a constriction of the body at the acetabular level.

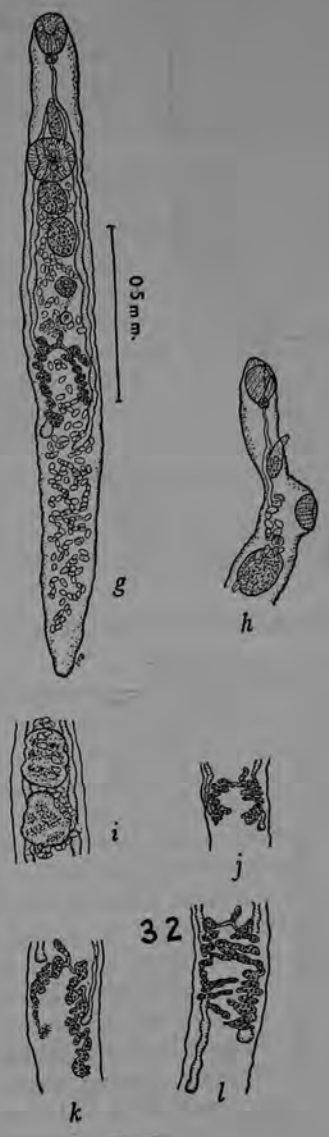
[1] Despite its specific name *D. novaeguineae* does not occur outside Australia.

FROM ANGEL AND PEARSON, 1977

BRACHYLECITHUM DELICATUM, new species Denton & Byrd, 1951

FIGURE 37, *g–l*

Diagnosis.—Body thin, semitransparent, elongated, with almost parallel sides and rounded anterior and tapering posterior ends; it measures 1.43 to 2.18 mm. long by 0.17 to 0.20 mm. wide in region between posterior testis and vitellaria. Cuticle thin, aspinose, with fine transverse ridges, and with small sensory papillae on margins of body in some specimens. Oral sucker subterminal to small liplike anterior end of body, weakly muscular, elongated oval, 0.10 to 0.13 mm. long by 0.08 to 0.10 mm. wide. Acetabulum weakly muscular, protrusible, 0.10 to 0.14 mm. in diameter, with center protruded (fig. 37, *h*), in anterior fourth of body. Ratio of width of oral sucker to acetabulum 1: 1.07 to 1.41. Prepharynx absent. Pharynx muscular, globular, 0.03 to 0.04 mm. long by 0.03 mm. wide. Esophagus very thin walled, slender, slightly wavy, bifurcating from one-half to three-fifths of distance from oral sucker to acetabulum. Ceca thin walled, of medium width, slightly wavy, with extreme terminal portions slightly dilated, terminating unevenly in zone of vitellaria or just posterior to that zone. Excretory pore terminal. Excretory vesicle thin-walled, tubular, narrow, extending anteriad to about middle of vitellaria. Genital pore median, ventral to intestinal bifurcation or slightly anterior to it. Testes round to oval, approximately equal in size, 0.08 to 0.17 mm. long by 0.07 to 0.14 mm. wide, with smooth to slightly lobed margins (fig. 37, *i*) in oldest specimen, slightly oblique in position. Anterior testis located immediately posterior to acetabulum or separated from it by a single uterine loop; posterior testis entirely behind anterior one. Vasa efferentia uniting just in front of anterior testis to form a short vas deferens. Cirrus sac elongated-pyriform, 0.09 to 0.12 mm. long by 0.03 to 0.05 mm. wide, containing convoluted seminal vesicle, ejaculatory duct and eversible cirrus, with its posterior end at or slightly below cephalic margin of acetabulum. Ovary round to oval in shape, 0.05 to 0.12 mm. in diameter, with smooth to slightly irregular margins, on midline or slightly to one or other side of body, separated from posterior testis by one loop of ascending uterus. Seminal receptacle globular, posterior to ovary, midway between ovary and vitellaria. Mehlis' gland and yolk reservoir posteromedial to seminal receptacle. Laurer's canal not observed. Vitellaria (fig. 37, *g*, *j–l*) consisting of 7 to 10 medium-sized irregular or transversely elongated follicles on each side of body. Vitelline ducts arise from anterior follicles on each side and pass mesially to join, forming yolk reservoir. Uterus convoluted, filling most of body posterior to vitellaria then passing between and ventrally to vitellaria, to either right or left of ovary, usually between ovary and posterior testis, between testes and dorsal to acetabulum to genital pore. Mature ova few in number, dark brown in color, 34μ to 40μ long by 19μ to 26μ wide.



Host.—Pipilo erythrophthalmus (Linnaeus).

Habitat.—Liver.

Locality.—NORTH CAROLINA: Highlands.

Type specimen.—U.S.N.M. Helm. Coll. No. 37119.

Remarks.—Brachylecithum delicatum is described from 12 young, although sexually mature, specimens found in association with other species of *Brachylecithum* in the liver of a red-eyed towhee, *Pipilo erythrophthalmus*, from Highlands, N. C. The species is very similar to *B. seiuricum* but differs from that in having a somewhat shorter esophagus, in having the genital pore more posterior, ventrally to the intestinal bifurcation, in the nature and arrangement of the vitellaria, and in the smaller ova. The slightly larger pharynx, somewhat longer ceca, smaller cirrus sac, and the different configuration of the uterus in *B. delicatum* are minor differences that may have specific values.

Brachylecithum donicum (Issaitschikoff, 1919)

Синонимы: *Lyperosomum donicum* Issaitschikoff, 1919; *Lutztrema donicum* (Issaitschikoff, 1919) Travassos, 1944

(Рис. 49)

Хозяин: городская ласточка (*Chelidon urbica*).

Локализация: желчные ходы печени.

Место обнаружения: СССР (Ростовская область).

К. И. Скрябин и Н. П. Захаров обнаружили этот вид у трех городских ласточек из общего количества 84 обследованных ими экземпляров.

Описание вида (по Исайчикову, 1919), Тело тонкое, нежное, максимальная длина достигает 4,0 мм при ширине 0,3 мм. Наиболее широкая часть тела находится в передней трети его длины, в области семенников. Ротовая присоска круглой формы; ее диаметр достигает 0,17 мм. Тело паразита сейчас же за ротовой присоской суживается, образуя как бы шейку; начиная же с брюшной присоски оно снова расширяется.

На расстоянии 0,55 мм от переднего конца тела расположен центр брюшной присоски; ее диаметр 0,185 мм. Как и ротовая присоска, она круглой формы и у некоторых экземпляров занимает собой почти всю ширину тела, достигая его боковых краев.

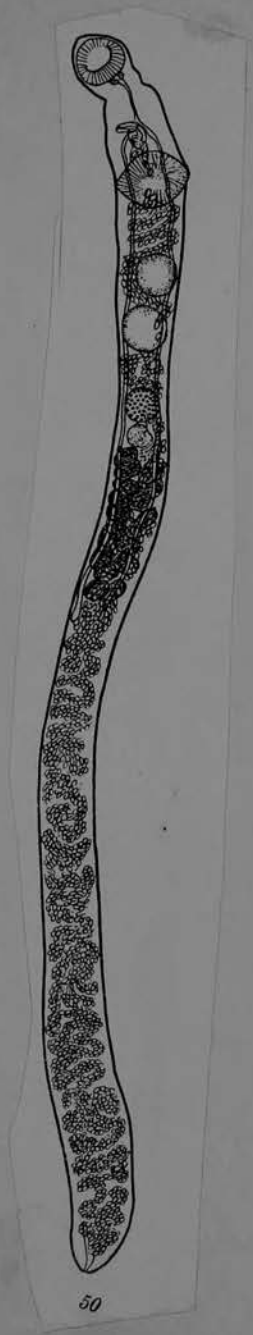
Кишечник своими слепыми концами доходит до заднего конца тела. Позади брюшной присоски располагаются удлиненно-овальной формы парные семенники; лежат они один позади другого по длинной оси тела, отделяясь друг от друга лишь узеньким извивом матки. Расстояние между передним краем переднего семенника и задним краем брюшной присоски, равное 0,09 мм, также заполнено нешироким каналом матки, доходящим

49

Brachylecithum eophonae (Yamaguti,1941)

Syn.: Lyperosomum eophonae Yamaguti,1941
Olssoniella eophonae (Yam.,1941) Trav.,1944

Host: Eophona personata personata



50

Brachylecithum eugenia Oschmarin, 1947

(Рис. 51)

Хозяин: кедровка (*Nucifraga caryocatactes* L.)

Локализация: печень.

Место обнаружения: СССР (Бурят-Монголия).

Описание вида (по Ошмарину, 1947). Тело цилиндрическое, 9 мм длины. Наибольшая ширина в области семенников — 0,346 мм, далее кзади тело постепенно слабо утончается. Кутикула гладкая. Ротовая присоска субтерминальная, 0,275 мм в диаметре. Фаринкс маленький, лежит непосредственно позади ротовой присоски, его размер 0,085 мм длины и 0,076 мм ширины. Пищевод тонкий, трубковидный, 0,240 мм длины. Развилок кишечника находится немного кзади от середины расстояния между фаринксом и передним краем брюшной присоски. Брюшная присоска крупная, ширина ее равна максимальной ширине тела или превосходит таковую. У фиксированных трематод полость присоски обычно закрыта ее передним и задним краями, поэтому, во-первых, присоска становится меньше размером в длину, чем в ширину, а во-вторых, боковые края присоски образуют своеобразные выступы. Длина брюшной присоски равна 0,275 мм, ширина, считая и боковые выступы,— 0,375 мм. Обычно между брюшной присоской и передним семенником тело утончено в виде перехвата.

Семенники этого вида характерны своей большой величиной. В месте расположения семенников тело трематоды вздуто. Ширина семенников равна 0,375 мм, максимальная длина их — 0,505 мм.

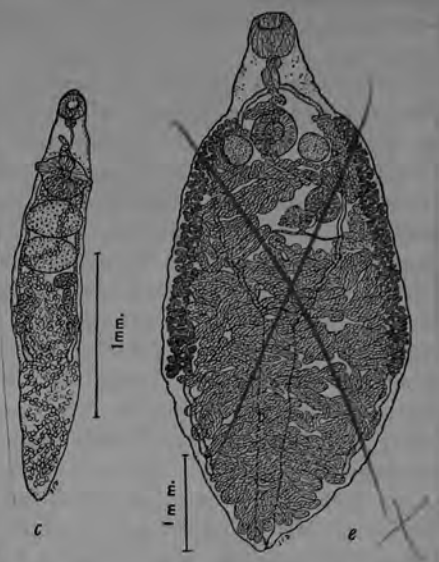
Половая бурса расположена впереди брюшной присоски, заходя дорзально за ее передний край. Длина половой бурсы равна 0,248 мм, ширина — 0,132 мм. На дне половой бурсы расположен семенной пузырек, свернутый вдвое или втрое. От семенного пузырька отходит извитой циррус. Половые отверстия расположены на уровне развилка кишечника.

Шарообразный яичник находится в непосредственной близости кзади от второго семенника, его диаметр 0,195 мм. Позади яичника лежит тельце Мелиса.

51

BRACHYLECITHUM EXOCHOCOTYLE, new species Denton & Byrd, 1951

FIGURE 38, *c*, *d*



Diagnosis.—Body elongated, slightly flattened, 1.42 to 2.50 mm. long by 0.28 to 0.59 mm. wide, widest in region of vitellaria. Cuticle aspinose, finely striated transversely, with small retractile sensory papillae on margins of anterior third of body. Oral sucker subterminal to a short liplike projection, 0.16 to 0.18 mm. long by 0.15 to 0.17 mm. wide. Acetabulum large, 0.22 to 0.28 mm. long by 0.28 to 0.35 mm. wide, with a small, flat, conical thickening on each lateral margin, located about one-sixth of body length from anterior end. Ratio of width of oral sucker to acetabulum 1:1.8 to 1:2.1. Pharynx 0.05 to 0.07 mm. long by 0.06 to 0.09 mm. wide. Esophagus narrow, slightly wavy, 0.09 to 0.13 mm. long, bifurcating about two-thirds the distance from oral sucker to acetabulum. Ceca slender, slightly sinuous, terminating a short distance posterior to vitellaria. Excretory pore terminal. Genital pore median, ventral to intestinal bifurcation. Testes conspicuously large, transversely oval, 0.14 to 0.25 mm. long by 0.22 to 0.46 mm. wide, located one immediately behind the other, with anterior one contiguous to or slightly overlapping zone of acetabulum. Cirrus sac large, oval, 0.13 to 0.19 mm. long by 0.08 to 0.13 mm. wide, containing coiled seminal vesicle and eversible cirrus, with approximately posterior half lying dorsally to anterior margin of acetabulum. Ovary oval in shape, small, 0.07 to 0.12 mm. long by 0.11 to 0.17 mm. wide, located immediately behind posterior testis, lateral in position, with outer margin pressed close against either right or left cecum. Seminal receptacle large, globular, located posteromedially to ovary. Vitellaria composed of 8 to 12 large oval follicles on each side of body, located immediately posterior to ovary. Uterus convoluted filling greater part of body posterior to ovary, then passing to either right or left of posterior testis and ovary, dorsal to anterior testis, to describe two or three lateral loops dorsal to acetabulum before ascending to genital pore. Mature ova dark brown, 46μ to 53μ long by 27μ to 32μ wide.

d

Host.—*Toxostoma rufum* (Linnaeus).

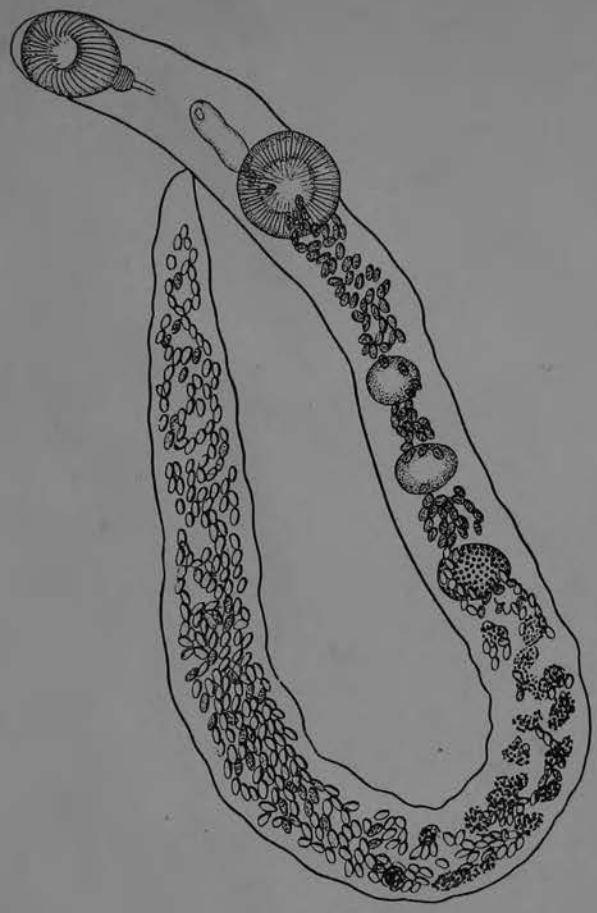
Habitat.—Liver.

Locality.—GEORGIA: Athens.

Type specimen.—U.S.N.M. Helm. Coll. No. 37122. Additional specimens, Nos. 36755 and 36756.

Remarks.—*Brachylecithum exochocotyle* is described from more than 75 specimens removed from the liver of a brown thrasher, *Toxostoma rufum*, obtained at Athens, Ga. This infection, the only one (2.44 percent) encountered in 41 brown thrashers examined from various localities, occurred as a double infection with *Lyperosomum oswaldoi*. The bird, which was found in a dying condition with its liver almost completely destroyed, was the only host examined that showed definite evidence of being harmed by its dicrocoeliid infections.

Brachylecithum exochocotyle can be separated from *B. stunkardi*, which it resembles very closely, by its shorter and wider body, its relatively smaller oral sucker, its large oval testes, its relatively smaller ovary, and especially in the difference in size and appearance of the vitelline follicles.



53

52. *Brachylecithum filiforme* (Skrjabin, 1913) (по Скрябину, 1913)

53. *Brachylecithum filiforme* (Skrjabin, 1913) *biologica* (Semenov, 1927)
(по Семенову, 1927)

Brachylecithum fringillae (Layman, 1923)

Синоним: *Lyperosomum fringillae* Layman, 1923

(Рис. 54)

Хозяин: зяблик (*Fringilla coelebs*).

Локализация: печень.

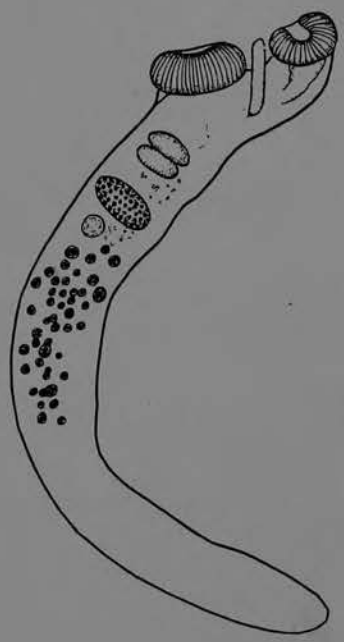
Место обнаружения: СССР (Московская область).

Описание вида (по Ляйману, 1923). Длина тела колеблется от 2,0 до 2,56 мм. Ротовая присоска 0,157—0,220 мм длины при ширине 0,171 мм. Брюшная присоска крупнее ротовой: 0,27—0,29 × 0,184 мм.

Семенники маленькие, поперечно-овальные, отодвинуты от брюшной присоски и налегают слегка друг на друга. Передний семенник 0,062×0,17—0,18 мм. Задний семенник 0,062 ×0,178 мм. Яичник несколько отодвинут от семенников, также поперечно-овальной формы, но вдвое крупнее семенников (0,112 мм длины и 0,202 мм ширины). Желточники в виде беспорядочно разбросанных фолликулов позади яичника в средней зоне тела. Половая бурса заходит своим дном дорзально от брюшной присоски.

Яйца достигают 0,019—0,024 мм длины и 0,0096 мм ширины.

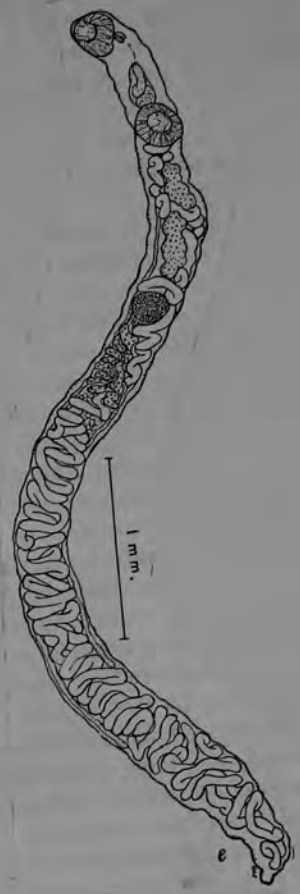
Литература: Ляйман, 1923; Travassos, 1944.



54

BRACHYLECITHUM GRUIS, new species Denton & Byrd, 1951

FIGURE 36, *e*



Diagnosis.—Body thin and semitransparent, greatly elongated, tapering gradually at posterior end, measuring approximately 5.24 mm. long by 0.26 to 0.30 mm. wide at acetabulum. Cuticle without spines or other obvious markings. Oral sucker subterminal, weakly muscular, 0.25 mm. long by 0.23 mm. wide. Acetabulum weakly muscular, approximately equal in size to oral sucker, 0.18 to 0.28 mm. in diameter, within anterior sixth of body. Pharynx globular, 0.09 mm. in diameter. Esophagus narrow, thin-walled, about twice as long as pharynx, bifurcating approximately midway between suckers. Ceca slender, slightly wavy, passing laterally to gonads to terminate about two-thirds the distance from vitellaria to posterior end of body. Excretory pore terminal. Genital pore median at intestinal bifurcation. Testes distinctly lobed, approximately equal in size, 0.26 to 0.41 mm. long by 0.14 to 0.19 mm. wide: anterior testis separated from

acetabulum by two or three lateral loops of uterus; posterior testis entirely behind anterior one. Cirrus sac elongated-oval, 0.15 to 0.27 mm. long by 0.07 to 0.11 mm. wide, containing much convoluted seminal vesicle, ejaculatory duct and eversible cirrus. Ovary oval, 0.13 to 0.24 mm. long by 0.12 to 0.23 mm. wide, slightly submedially in position. Seminal receptacle globular, dorsal to caudal margin of ovary. Vitellaria consisting of 10 to 12 large irregular follicles on each side of body, in anterior half of body, just caudal to seminal receptacle. Uterus greatly convoluted in descending and ascending, filling most of postovarial portion of body, then passing anteriorly to left of ovary and posterior testis and between testes to genital pore. Mature ova dark brown, 36μ to 42μ long by 22μ to 23μ wide.

Host.—*Grus canadensis tabida* (Peters).

Habitat.—Liver.

Locality.—TEXAS: Clodine.

Type material.—U. S. N. M. Helm. Coll. No. 36757.

Remarks.—*Brachylecithum gruis* is described from pieces of seven worms from the livers of two sandhill cranes, *Grus canadensis tabida*. These birds died of a limberneck disease occurring in wintering birds in the vicinity of Clodine, Tex., during January 1940. Only fragments of the worm were available for study, although one nearly complete worm is included in the collection.

Brachylecithum gruis has an elongated, serpentine body and suckers of approximately equal size, which, together with the elongated, distinctly lobed testes situated one entirely behind the other and a relatively large oval ovary, distinguish it from other species of the genus.

Brachylecithum halcyonis (Yamaguti, 1941)

Синонимы: *Lyperosomum halcyonis* Yamaguti, 1941; *Olssoniella halcyonis* (Yamaguti, 1941) Travassos, 1944

(Рис. 55)

Хозяин: зимородок — *Halcyon coromanda major* (Temm. et Schleg.).

Локализация: тонкие кишки.

Место обнаружения: Япония.

Описание вида (по Ямагути, 1941). Тело тонкое, цилиндрическое, 5,1—5,25 мм длины и 0,25—0,3 мм ширины. Ротовая присоска субтерминальная достигает 0,15—0,2 мм в диаметре. Диаметр фаринкса — 0,048—0,051 × 0,048—0,054 мм. Пищевод 0,12—0,14 мм длины. Кишечные стволы простираются в заднюю треть тела. Брюшная присоска

55

Brachylecithum harrisoni (Johnston, 1917)
syn. Lyperosomum harrisoni Johnston, 1917

LYPEROSOMUM HARRISONI, sp. n.

Diagnosis.—Elongate, cylindrical; suckers large, but *not so wide as the body*, oral sucker smaller than the ventral. Testes large, oval in shape; posterior larger than anterior; ovary oval. Long axis of *both testes and ovary transversely placed.* Genital pore midway between the suckers. Cirrus sac mostly in front of ventral sucker, but part dorsal to it. Coils of the uterus lying *between the testes and between the second testis and ovary.* Yolk glands of few, large follicles. Eggs 0·038 × 0·024 mm.

Host.—The boobook owl, *Ninox boobook.*

Type specimen in the Australian Museum, No. W. 440.

A small number of specimens from the boobook owl were given me by my colleague Mr. Launcelot Harrison, who obtained them from the intestine of an owl, secured at Lindfield, near Sydney. This species is similar in size to *L. parvum.* The oral sucker, 0·223 mm. in diameter, is smaller than the ventral, 0·262 mm. The testes are broader than long, and the anterior (0·33 mm. broad by 0·25 mm. long) is smaller than the posterior (0·33 mm. broad by 0·29 mm. long). The testes are separated from one another and from the ovary behind them by wide coils of uterus. The genital pore lies midway between the two suckers; most of the cirrus sac lies in front of the ventral sucker and the vesicula seminalis is coiled.

The yolk glands consist of twelve to fourteen large, oval follicles arranged in two rows in the field behind the ovary. The uterus, as usual, is very extensive, obscuring the yolk glands and occupying the whole field of the body posterior to them. The eggs which are light yellow in the proximal part, become dark brown in the distal part of the uterus. They measure 0·038 × 0·024 mm., and are very even in size.

This species is closely related to *L. parvum.* Indeed all three species, described here for the first time, are closely related to one another.

Brachylecithum hydromyos ~~n.sp.~~ ANGEL AND PEARSON, 1977

FIG. 3

Host. *Hydromys chrysogaster*.

Locality. Lily Creek, Cairns, Qld, 14.ii.1975. (Coll. *C. M. Weaver*).

Location in host. Pancreatic ducts.

Incidence. More than 35 specimens in 1 of 3 rats from Cairns. In none of 49 hosts from S. Aust., or in two from Vict.

Food of host mostly fish, molluscs, crustaceans, but insect remains found in several rats.

Holotype. SAM V82.

Paratypes. SAM V83, V84.

The worms were recovered live, in good condition, and were in two distinct sizes, apparently representing different age groups. Of the 14 larger worms, only 4 were completely intact after removal. The description is based on whole mounts of these four and of six of the smaller (though egg-bearing) worms. Measurements given (range or means) are for the four larger specimens. The width/length ratio and the position of the acetabulum in relation to length of body, were similar in both sizes

Description

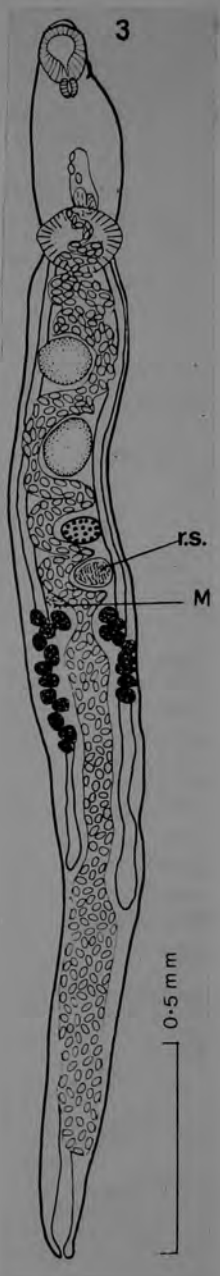
Body sub-cylindrical, with prominent preoral lobe and acetabulum. Length, 1.8–3.4 mm. Greatest width from level of first testis to ovary; width/length ratio 1:12. (Depth approximately three-fifths width) Without papillae on body surface. Acetabulum (153 x 176 μm), aproximately in first fifth of body, rounded, with very slight projections on each side, protruding from body. Ratio of width of oral sucker to width of acetabulum approximately 1.0:1.4 Oral sucker (133 x 119 μm) rounded, pharynx slightly wider than long; oesophagus short, caeca passing almost immediately to sides of body; caeca obvious, up to 58 μm wide, terminating about 900 μm from end of body.

Testes rounded, in tandem or very slightly diagonal, separated from acetabulum and from each other by uterus. Cirrus pouch begins near antero-dorsal border of acetabulum. Genital pore in region of caecal bifurcation.

Ovary transversely oval; submedian, lying in first half of body. Receptaculum seminis large, with oval or irregular outline, up to 130 x 90 μm. Vitellaria consisting of 8–12 well-defined lobes (approximately 47 x 42 μm), in a compact row on each side of body, near sides of body. Uterus confined to inter-caecal area; posterior to caeca occupying all of body.

Excretory pore terminal: excretory bladder overlaps ends of caeca.

B. hydromyos differs from *B. insulare* from *Rattus fuscipes* in its relatively broader body, oval rather than rounded ovary, smaller and rounded testes; in the first testis being further separated from the acetabulum and the two testes always separated from each other; vitellaria much more prominent, not obscured by uterus and noticeably less in extent than in *B. insulare;* and in having smaller eggs (mean, 36 x 20 μm in *B. hydromyos*, 43 x 22 μm in *B. insulare*). The food of *Hydromys chrysogaster*



- OVER -

(a water rat) and *Rattus fuscipes* is very different, and it is unlikely that *H. chrysogaster* would eat many ants.

B. hydromyos resembles *B. aetechini* in width/length ratio and in position of acetabulum, but differs from it in overall size, 1.8–3.4 mm (4.6–6.0 mm) and egg size, 36 x 20 μm (47 x 32 μm). *B. hydromyos* has a similar width/length ratio to *B. rodentini*, but is smaller, 1.8–3.4 mm (5.0–6.5 mm), and differs from the latter: in the more backward position of its acetabulum; in the testes being separated from the acetabulum and from each other (in *B. rodentini* the testes are almost contiguous and the anterior one underlies the posterior border of the acetabulum); the vitelline follicles are more, 8–12 (6–8), and the vitellaria and ovary are further back in the body. *B. hydromyos* resembles *B. taiwanense* in width/length ratio and position of acetabulum, but is apparently smaller, 1.8–3.4 mm for 10 specimens (3.6 for 1 specimen), its suckers are relatively smaller and the testes are separated from the acetabulum (but contiguous with it in *B. taiwanense*).

BRACHYLECITHUM INDICUM ~~n. sp.~~ K. S. SINGH, 1962

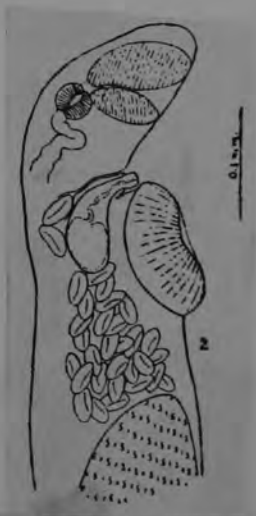
The body is much elongated and measures 1.344-2.537 (2.075) mm. in length and 0.11-0.168 (0.137) mm. in maximum breadth which is in the testicular region. The body is thin and translucent and the spines are absent. Both the ends are rounded.

The oral sucker is subterminal, well developed and rounded to oval in shape. It measures 0.086-0.114 × 0.066-0.086 (0.097 × 0.077) mm. The mouth opening is subterminal, ventral and directed anteriorly. The pharynx is rounded, muscular and small, measuring 0.03-0.032 (0.031) mm. in diameter. The oesophagus is comparatively short and divides into two intestinal caeca which run as simple tubes laterally. The ending of the caeca, which definitely extend beyond the vitellaria, could not be determined with certainty due to the presence of a large number of eggs, but the posterior 1/20th part of the body which is free from eggs does not show the caeca. In one specimen, no eggs were present posterior to the vitellaria and in this specimen, the caeca end just posterior to the vitellaria about one-third the distance between the end of the vitellaria and the posterior end. The ventral sucker is present near the end of the anterior-fourth of the body and is much better developed than the oral sucker and measures 0.09-0.15 (0.123) mm. in diameter. Only in one specimen the oral sucker was as big as the ventral sucker but never bigger.

The two testes are present one behind the other and a little posterior to the ventral sucker. They are usually elongated in shape but in others they are oval and only in one specimen they were rounded. The anterior testis measures 0.09-0.24 × 0.09-0.122 (0.153 × 0.1) mm. and the posterior one 0.09-0.27 × 0.09-0.136 (0.168 × 0.104) mm. The two testes are separated just by a loop of the uterus with eggs. The two vasa efferentia join anterior to the anterior testis to form the vas deferens which runs forward to enter the pear-shaped cirrus pouch present partly overlapping the ventral sucker. The cirrus pouch contains a well developed vesicula seminalis. In a few specimens, the cirrus was everted, measuring 0.046 × 0.02 and 0.04 × 0.015 mm. in two specimens, while in five others it was not fully everted. In one specimen a small number of small papillae were present on the cirrus. The male genital pore is present just posterior to the intestinal bifurcation, 0.15-0.24 (0.18) mm. from the anterior end. The cirrus pouch measures 0.08-0.13 × 0.026-0.05 (0.092 × 0.034) mm.

The ovary is present at about the middle of the body, posterior to both the testes. It is rounded to oval in shape, usually oval and measures 0.086-0.12 (0.102) mm. along its long diameter. The small receptaculum seminis, 0.034-0.038 (0.035) mm. in diameter, is present on the dorsal and posterior border of the ovary. The vitellaria consist of a number of small follicles, wedged close together, and usually present on the right side asymmetrically but in two specimens they were present symmetrically. The vitellaria extend for a short distance only, never more than twice the diameter of the ovary. The uterus consists of ascending and descending limbs, forming a number of loops specially posterior to the vitellaria. The female genital pore is present just anterior to the male genital pore. There are numerous comparatively large eggs, brown in colour, measuring 0.03-0.034 × 0.012-0.016 (0.031 × 0.014) mm in size.

Entire specimen, ventral view.



2. Anterior end, lateral view.

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The excretory bladder can be seen for a short distance only but presumably it is Y-shaped with a long stem. The excretory pore is terminal.

Discussion : There are about fifty species of the genus *Brachylecithum* Strom, 1940 described from the various parts of the world but apparently only one species, *B. stunkardi* (Pande, 1939) has been described from India. Pande (1939) described the parasite as *Lyperosomum stunkardi* from the Black-throated Jay, *Garrulus lanceolatus*. Travassos (1944) while revising the family Dicrocoeliidae, created the genus *Olssoniella* (now regarded as a synonym of *Brachylecithum*, in part) and transferred Pande's species to this genus. Denton & Byrd (1951) redescribed this species from *Cyanocitta cristata* from the U.S.A. and transferred it to the genus *Brachylecithum*, a position which has been accepted by Yamaguti (1958).

The present form can be differentiated from the closely related species thus : from *B. delicatum* Denton & Byrd, 1951 in the size of the body, in having the ventral sucker broader than the body, position of the genital pore in relation to the ventral sucker, distribution of the vitelline follicles and the position of the anterior testis with reference to the ventral sucker; from *B. exochocotyle* Denton & Byrd, 1951 in the relative size of the two suckers, shape and the position of the two testes, size of ovary compared to the two testes and distribution of the vitelline follicles; and from *B. stunkardi* (Pande, 1939) in the size of the body, size of the two suckers, position and shape of ventral sucker and size of cirrus pouch.

Host : Himalayan Whistling Thrush, *Myiophoneus caeruleus temminckii* Vigors, 1832 (Turdidae).

Location : Liver.

Locality : Mukteswar-Kumaun, U.P. (Ht. 7500 ft.).

Type specimen : Zoological Survey of India, Calcutta.

In February 1960, two Himalayan Whistling Thrush, *Myiophoneus caeruleus temminckii* Vigors, 1832 were examined and a number of delicate and small trematodes were recovered from the liver of one host. The parasites were fixed while alive in alcoholic Bouin's fluid without any pressure, and finally stained with acetic alum carmine and mounted in balsam.

Six complete and several incomplete specimens were studied and measured and the measurements in parentheses refer to average of all the specimens examined.

Since the parasites were fixed while alive and without any pressure, in several specimens the body length and breadth varies to a certain extent and the internal organs assumed different shape and size, and also somewhat changed their relative position.

INDIAN J. HELMINTHOLOGY 14(1): 45-52

Brachylecithum insulare ~~n.sp.~~ ANGEL AND PEARSON, 1977

FIGS 1–2

Hosts. Rattus fuscipes (type host), *Amphibolurus fionni*.

Location in host. Gall bladder and bile ducts.

Locality. Pearson Island, S. Aust.

Incidence. 1 of 4 rats (January 1969), 2 of 9 rats (February 1973); many trematodes in each infected rat. 2 of 11 lizards (January 1969).

Holotype. SAM V76.

Paratypes. SAM V77, V78, V79.

Other slides deposited. SAM V80, V81.

Pearson Island is remote and only occasionally visited by biologists. Some trematodes, fixed in the field by a colleague in 1969, were recorded as "elongate dicrocoeliids" from *Rattus fuscipes* and *Amphibolurus fionni* by Mawson (1971).

The following description is based on sections of 4 worms (1969, 1973) and on 9 whole specimens from *Rattus fuscipes* (collected in February, 1973 and frozen before dissection). The trematodes (including the holotype and paratypes) were stained in Ehrlich's haematoxylin and examined in cedarwood oil, and later made into permanent mounts. The measurements of these did not differ significantly from the measurements made in cedarwood oil.

Description

Body long, narrow, approximately cylindrical; mostly uniform throughout length, but occasionally wider; rounded anteriorly, slightly tapered posteriorly. Length, 2.8–3.6 mm; width or depth/length ratio 1:17–1:21 (1:19).

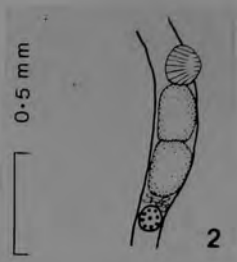
(23 balsam mounts of trematodes fixed in the field in 1969 (on slides without pressure) measured 2.0–4.8 mm (2.92); the greatest width (0.36 mm) was in a specimen 2.24 mm long).

No papillae on body surface.

Acetabulum (198 x 208 μm) situated approximately in first fifth of body, larger than oral sucker (141 x 129 μm), wider than body. Ratio of width of oral sucker to width of acetabulum 1:1.5.

Pharynx almost spherical. Oesophagus and alimentary caeca poorly stained, indistinct. Oesophagus 45–110 μm long. Caeca 2, up to 26 μm wide, close to each other dorsal to acetabulum, then diverging laterally; terminating past the ovary, probably near posterior vitellaria.

Testes large, tandem, contiguous or nearly so; anterior testis close to or overlapping posterior border of acetabulum; shape often almost rectangular with rounded corners; posterior testis sometimes much elongated. Cirrus pouch arises dorsal to, and close to anterior border of, acetabulum; encloses coiled seminal vesicle. Pars prostatica absent. Cirrus muscular, about 24 μm wide, with rounded end, often protruding from genital pore, which lies medially, nearer to acetabulum than to pharynx.



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Ovary rounded, entire. Receptaculum seminis large, longitudinally oval, close to posterior border of ovary. Laurer's canal not seen. Vitellaria forming approximately eight irregular lobes on both sides of body; limited to area posterior to ovary, extending to distance of 0.88–1.45 mm from end of body.

Uterus occupying all of body posterior to ovary, then passing anteriorly and dorsally, with a few coils between ovary and second testis, sometimes between testes and between first testis and acetabulum; opening at genital pore with male duct. Eggs numerous; brown; oval, often flattened along one side.

Excretory pore apparently terminal, with two wide arms extending well up length of body.

The specimens from *Amphibolurus fionni* differ from those from *Rattus fuscipes* in the relatively greater thickness and shorter length. The width/length ratio of 9 specimens from *R. fuscipes* averaged 1:19 and of 9 from *A. fionni* 1:13. However, a tenth from *A. fionni* measured 3.6 mm by .136 μm deep (1:26) i.e. almost as long as, and narrower than the longest of the 9 from *R. fuscipes*. The relationships and measurements of the organs do not appear to differ significantly. (Although the testes are in general smaller in specimens from *A. fionni* this is not regarded a significant character). Nearly all the specimens from *A. fionni* are lateral mounts, and the acetabulum could not be compared easily with that from the specimens from *R. fuscipes;* but in two spirit specimens from *A. fionni* the acetabulum was wider than the body, measuring 187 x 197 μm in the first, and 134 x 150 μm in the second. Twenty eggs from specimens from each of the two hosts averaged the same width (22 μm) but were 46 μm long in the specimens from *A. fionni* and 43 μm in those from *R. fuscipes*. Although it is possible (because of the differing width/length ratios) that the trematodes from the two hosts belong to distinct species, we assign the form from *A. fionni* to *Brachylecithum insulare*. The hosts live in close proximity on a small island. The snail host for the trematodes is not known, but it seems certain that ants act as second intermediate host for those from *A. fionni*. Smyth (1971) stated that *A. fionni* appeared to feed exclusively on small ants (*Iridomyrmex*). Although we have no information on the feeding habits of *R. fuscipes*, Smyth (pers. comm.) stated that ants are so numerous on Pearson Island he considered it impossible for any animal on the island to avoid ingesting them.

B. insulare is closely related to S. J. Johnston's three Australian species; the only features by which *B. insulare* can be distinguished are the size of the eggs (slightly longer and relatively narrower in *B. insulare*) and the absence of papillae on surface of body in *B. insulare*.

It is possible that life-history studies may be necessary to determine the relationship of these species. Two complete life-histories have been described—that of *B. americanum* Denton, which uses chrysomelid beetles as second intermediate hosts (Denton 1945), and that of *B. mosquense* (Skrjabin & Isaichikov), which uses ants (*Camponotus herculeanus*) (Carney 1967). Gabrion & Ormières (1973) reported metacercariae of *Brachylecithum* sp. in *Phalangium opilio* in France, but it seems unlikely that arachnids are involved in the life cycles of the four species here.

Of the bird hosts of *Brachylecithum parvum*, *B. megastomum* and *B. harrisoni*, *Strepera versicolor* is the only one known to eat ants, though it also includes beetles in its diet. *Sterna bergii* might be expected to feed exclusively on fish, but dissection records show that "beetle grubs" have been found in the stomach. *Ninox novaeseelandiae* eats beetles as well as other insects, spiders, etc., and could possibly ingest night-working ants (e.g. "meat ants" on carrion). We suggest that *B. megastomum* and *B. harrisoni* may use beetle larvae as second intermediate hosts, while *B. insulare* almost certainly uses ants. *B. parvum* could use either

Brachylecithum has not previously been recorded from reptiles; only three species have been described from mammals, *B. aetechini* Dollfus from *Erinaceus algirus* from Morocco, *B. rodentini* Agapova, from *Clethrionomys rufocanus* from Kazakhstan and *B. taiwanense* Fischthal & Kuntz from *Hipposideros armiger terasensis* from Taiwan. A fourth, unnamed species was reported from *Blarina brevicauda* from N. Carolina by Miller, Price & Wilson (1974). *B. insulare* from *Rattus fuscipes* differs from *B. aetechini* in: smaller size (length, 2.0–4.8 mm in *B. insulare*, 4.6–6.0 mm in *B. aetechini*); ovary separated from second testis, while in *B. aetechini* the ovary is in contact, or almost, with this organ; testes in tandem, while in *B. aetechini* they are slightly diagonal; and in the egg length/breadth ratio, approximately 2:1 in *B. insulare*, 3:2 in *B. aetechini*.

B. insulare differs from *B. rodentini* (Agapova's paper not seen: data in Skrjabin (1970)) in its smaller size (length 2.0–4.8 mm in *B. insulare*, 5.0–6.5 mm in *B. rodentini*). It probably differs in width/length ratio, which was not given for *B. rodentini* but, from the measurements, appears to be from 1:10–1:12, and in *B. insulare* from *Rattus fuscipes* is 1:17–1:21. The acetabulum of *B. rodentini* is further forward; from the measurements, it lies in the anterior eighth to the anterior eleventh of the body, while in *B. insulare* it is in the anterior fifth. The vitelline fields are relatively smaller in *B. rodentini* and one side is said to be at a higher level than the other. Finally, the eggs are shorter in *B. rodentini* (36 x 23 μm), than in *B. insulare* (43 x 22 μm from *Rattus fuscipes*).

B. insulare differs from *B. taiwanense* (described from a single specimen) in: body shape (slightly tapered posteriorly in former, with rounded end in latter); width/length ratio, (1:19 in *B. insulare*, 1:13 in *B. taiwanense*); both suckers larger and oral sucker relatively smaller than acetabulum in *B. insulare* (oral sucker/acetabulum length ratio 1:1.4 in *B. insulare*, 1:1.14 in *B. taiwanense*, width ratio 1:1.6 in *B. insulare*, 1:1.45 in *B. taiwanense*); ovary shape, rounded in *B. insulare*, much wider than long in *B. taiwanense;* and in its larger eggs (43 μm x 22 μm in *B. insulare*, 35 μm x 19 μm in *B. taiwanense*.

B. insulare is the only trematode found in *R. fuscipes* and *A. fionni* from Pearson Island. The only other trematode found in a lizard from the island was *Paradistomum crucifer* (Nicoll), from the gall bladder of *Phyllodactylus marmoratus* (Mawson 1971). *B. insulare* was not found in other lizards examined, i.e. 6 *P. marmoratus* Gray, 5 *Lerista tetradactyla* (Lucas & Frost), 2 *Hemiergis peronii* (Fitzinger) and 1 *Morethia obscura* Storr (Mawson 1971).

FROM ANGEL AND PEARSON, 1977

Brachylecithum kakea (Bhalerao, 1926)

Синонимы: *Lyperosomum kakea* Bhalerao, 1926; *Lutztrema kakea* (Bhalerao, 1926) Travassos, 1941

(Рис. 56)

Хозяин: ворона (*Corvus insolens*).

Локализация: желчные ходы печени.

Место обнаружения: Азия (Индо-Китай).

Описание вида (по Балерао, 1926). Тело вытянутое, суживающееся к обоим концам. Длина тела 3,36 мм, максимальная ширина на уровне брюшной присоски 0,33 мм. Тело покрыто тонкой кутикулой, лишенной какой-либо орнаментации. Вентральная присоска 0,13 мм длины и 0,15 мм ширины. Префаринкс отсутствует. Фаринкс круглый, 0,6 мм в диаметре. Сравнительно длинный пищевод разветвляется на две простые кишечные ветви, идущие по боковым полям тела к заднему его концу. Круглая брюшная присоска расположена на расстоянии $^1/_5$ от переднего конца тела; ширина ее 0,2 мм. Отношение размера ротовой присоски к брюшной как 2 : 3.

Семенники лежат медианно, один позади другого, на некотором расстоянии от брюшной присоски. Ось их направлена косо по отношению к длине тела. Размер семенников: 0,15—0,18 мм длины и 0,12—0,125 мм ширины. Грушевидная половая бурса лежит медианно, приблизительно на 0,28 мм кпереди от брюшной присоски. Половое отверстие расположено на некотором расстоянии позади фаринкса. Семенной пузырек извитой. Простатическая часть и циррус маленькие. Яичник овальный, лежит позади семенников по медианной линии, достигает 0,165 мм длины и 0,12 мм ширины. Его длинная ось располагается поперечно к длине тела. Непосредственно позади яичника лежит маленький круглый семяприемник. Лауреров канал имеется. Тельце Мелиса лежит медианно позади яичника.

Петли матки заполняют всю заднюю часть тела позади яичника. Кпереди их петли направляются зигзагообразно между яичником и задним семенником и между передним семенником и брюшной присоской. Петли эти проходят кпереди с дорзальной стороны брюшной присоски. Желточники маленькие и состоят из небольшого числа фолликулов, простирающихся на короткое расстояние 0,33—0,43 мм кзади от яичника. Два коротких желточных протока видны позади тельца Мелиса и соединяются по медианной линии. Яйца овальные, 0,028—0,03 мм длины × 0,016—0,018 мм ширины.

Литература: Bhalerao, 1926; Travassos, 1941; Travassos, 1944, стр. 193.

56

Brachylecithum kirghisensis Evranova, 1952 [1]

Синоним: *Brachylecithum* sp. Strom, 1940

(Рис. 57)

Хозяин: выорок (*Montifringilla alpicola prosvirowi* Zar.)

Локализация: желчные ходы печени.

Место обнаружения: СССР (Киргизия).

[1] Публикуется впервые.

формы, достигает 0,20 мм длины и 0,14 мм ширины. Брюшная присоска, имеющая 0,20 мм в диаметре, лежит недалеко от ротовой присоски, на расстоянии 0,65 мм от переднего конца тела. Фаринкс 0,045—0,068 мм. Пищевод 0,09 мм длины.

Семенники расположены позади брюшной присоски. Расстояние между брюшной присоской и передним семенником 0,171 мм. Передний семенник достигает 0,148 мм длины и 0,16 мм ширины; задний — 0,16 мм длины и 0,19 мм ширины. Расстояние между семенниками 0,057 мм. Половая бурса 0,171 мм длины и 0,068 мм ширины. Половая бурса располагается своим дном дорзально от брюшной присоски. Поперечно-овальный яичник лежит позади семенника на расстоянии 0,057 мм и достигает 0,129 мм длины и 0,171 мм ширины. Желточники состоят из крупных фолликулов и начинаются позади яичника. Общее протяжение желточников 0,57 мм. Матка начинается позади брюшной присоски и заполняет собой все свободное пространство в задней половине тела.

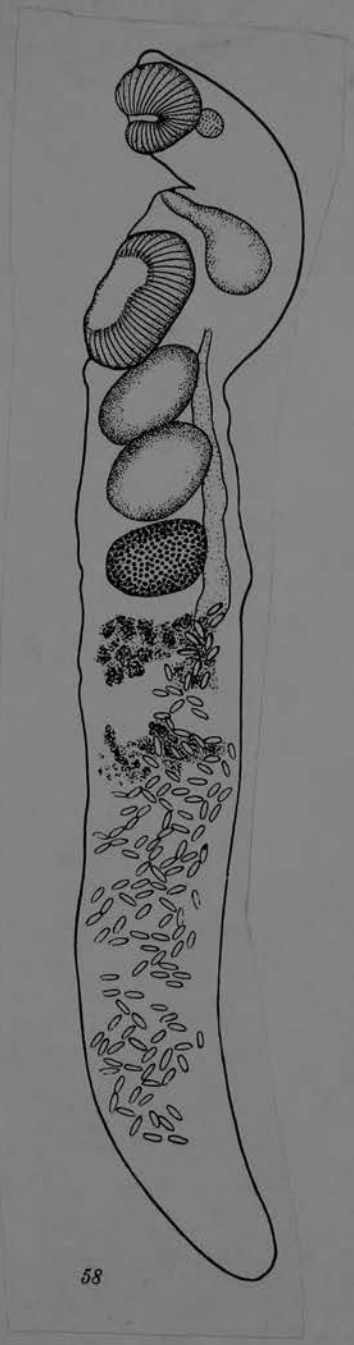
Яйца 0,040—0,043 мм длины и 0,021—0,026 мм ширины.

Литература: Семенов, 1927; Travassos, 1944.

Brachylec ithum laniicola (Layman,1926)

Syn: Lyperosomum lanicola
Olssoniella laniicola (Layman,1926) Travassos,1944

Host: Enneoctonus collurio; Upupa epops



Brachylecithum latius ~~n.sp.~~ ANGEL AND PEARSON, 1977

FIG. 11

Type host. *Cracticus torquatus*.

Location in host. Gall bladder.

Locality. Cowell, S. Aust., 27.v.1965.

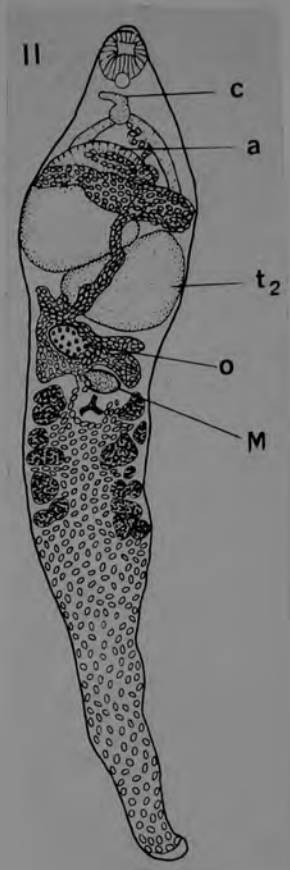
Incidence. 1 of 5 birds from S. Aust.

Food of host includes beetles, ants and other insects.

Holotype. SAM V102

Paratypes SAM V103, V104, V105.

Other hosts. *Corvus coronoides*: liver; Port Augusta, S. Aust., 20.ix.1965. 1 of 4 birds from S. Aust. *Food* includes beetles and other insects. *Slide deposited* SAM V106. *Gymnorhina hypoleuca*: gall bladder; Adelaide suburb, S. Aust., 15.ii.1974. 1 of 68 birds from S. Aust., none of 16 from A.C.T. or 1 from N.T. *Slide deposited* SAM V107. *Food* of *G. hypoleuca* includes beetles, ants, other insects and spiders.



Description based on balsam mounts of 7 worms in quite good condition. Those from *Corvus coronoides* and *Gymnorhina hypoleuca* are also in good condition, but in the whole mounts the eggs are mostly filled with air, and are black.

Description

Body (3.5–6.5 x 0.54–1.26 mm) lanceolate, widest anteriorly, at level of first or second testis. No spines or papillae present on surface of body.

Acetabulum (447 x 588 μm) larger than oral sucker (259 x 259 μm), weakly muscular, wider than long, situated close to anterior end of body. Oral sucker rounded, well-developed. Pharynx rounded; oesophagus short, caeca two (only visible to level of mid-acetabulum).

Testes large, contiguous; roughly triangular, rectangular or oval; tandem to diagonal; anterior testis underlying posterior half of acetabulum. Cirrus pouch overlaps anterior part of acetabulum; cirrus 260 μm long, regular in width, 33 μm. Genital pore at caecal bifurcation, slightly nearer to acetabulum than to oral sucker.

Ovary oval with long axis across width of worm; generally contiguous with second testis, to right or left of body. Mehlis' gland posterior and oblique, to ovary. Receptaculum seminis not obvious. Vitellaria of quite large follicles, limited in extent, reaching anteriorly near level of ovary. Uterus very extensive, generally obscuring most of acetabulum and sometimes of vitellaria. Eggs approximately 47 x 31 μm.

The specimens from *Corvus coronoides* show some differences from those from the type host, probably attributable to immaturity. Thus, the uterus is less extensive, and does not so completely (if at all) obscure the acetabulum; the testes are in general smaller, do not underlie the acetabulum; and are always at least slightly diagonal. The acetabulum is further forward in worms from *Cracticus torquatus* than in those from *Corvus coronoides*, but the bodies of some of the worms are slightly contracted anteriorly. We consider that to use this character would involve comparing worms obtained alive and fixed under the same conditions. The acetabulum appears relatively greater in width in worms from the type host, but in the smallest (in which it is not obscured by eggs) it is 365 x 412 μm, conforming to the more nearly round shape in worms from *C. coronoides*. (In worms from *C. coronoides* the acetabulum comes to a blunt point on each side: a character obscured by eggs in worms from the type host. The size of the oral sucker may distinguish worms from the two hosts; but although the mean size of the organ in worms from *Cracticus torquatus* is 259 x 259 μm, in the largest worm from this host the oral sucker is 365 x 376 μm, in comparison with the largest, 388 x 353 μm, from *Corvus coronoides*. The eggs in worms from *Cracticus torquatus* are relatively wider than in those from *Corvus coronoides* and *Gymnorhina hypoleuca*, but this character is not sufficient to place the worms in separate species.

-OVER-

We have placed the species in *Brachylecithum* because it resembles this genus more than other related genera as defined by Yagamuti (1971). Although it resembles *Brachydistomum* in shape and some other respects, it is distinguished by the weakly developed acetabulum ("very prominent" in *Brachydistomum*).

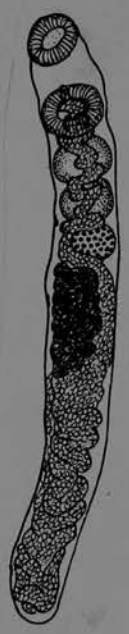
Brachylecithum latius differs from congeners described here (including the unnamed species from the intestine of *Gymnorhina hypoleuca*) in body shape and width/length ratio (never more than 1:8.3 in *B. latius;* never less than 1:11 in the other species).

Of all described species of *Brachylecithum* (we have not seen the description of *B. riparia* Erkulov), *B. latius* most closely resembles *B. attenuatum parinum* Oshmarin from *Parus palustris*, Maritime Province, U.S.S.R. in shape and general appearance. However, it is larger (2.8 x 0.4 mm) and the eggs are smaller (reaching 58 x 29 μm in *B. attenuatum parinum*).

Brachylecithum laymani (Travassos,1944)

Syn.: Lyperosomum transversogenitalis donicum Layman,1926
Olssoniella laymani Travassos,1944

Host: Cotyle reparia (:: Riparia riparia)



59

Brachylecithum lobatum (Railliet, 1900)

Синонимы: *Lyperosomum lobatum* Railliet, 1900; *Olssoniella lobata* (Railliet, 1900) Travassos, 1944

(Рис. 60)

Хозяева: перепелятник (*Accipiter nisus*), сорока (*Pica pica*), галка (*Monedula turrium*).

Локализация: печень.

Места обнаружения: Франция, Австрия, СССР (Московская область).

Описание вида (по Брауну, 1902). Тело достигает 7,0—8,0 мм длины при ширине 0,2 мм. Субтерминальная ротовая присоска достигает 0,156 мм в диаметре. Брюшная присоска — 0,135 мм длины и 0,156 мм ширины. Длина фаринкса 0,007 мм. Овальные семенники, 0,24 мм длины, располагаются один позади другого, причем их отделяет лишь одна петля матки; передний семенник отстоит от брюшной присоски на расстоянии, равном его длине. Круглый яичник 0,1 мм в диаметре, отделен от заднего семенника только одной петлей матки. Расстояние от заднего края яичника до переднего края тела составляет около 2,0 мм. Вся остальная часть тела густо заполнена петлями матки, в результате чего не удается выявить топографию желточных фолликулов, и только у единичных экземпляров удалось установить отдельные ряды фолликулов, длина которых достигает 0,7 мм.

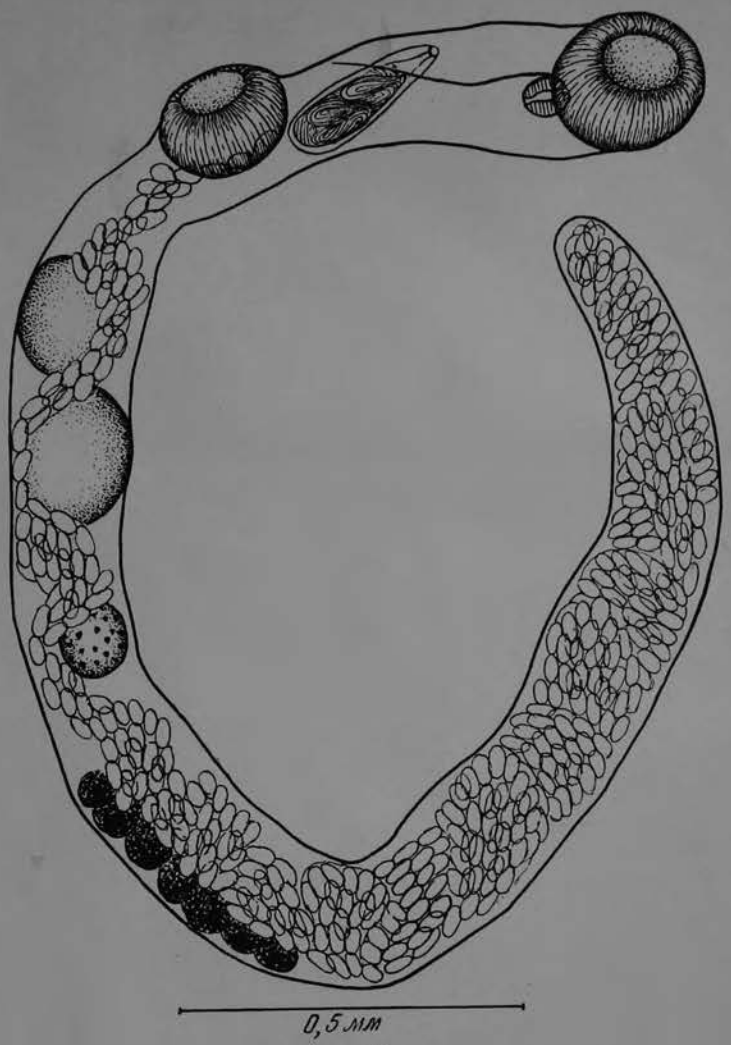
Темнокоричневые яйца с толстой оболочкой достигают 0,041—0,045 мм длины и 0,0228—0,0273 мм ширины.

Литература: Railliet, 1900, стр. 239; Braun, 1902, стр. 110—111; Travassos, 1944, стр. 209.

60

61

60. *Brachylecithum lobatum* (Railliet, 1900) (по Брауну, 1902)
61. *Brachylecithum lobatum* (Railliet, 1900) *glandarii* (Semenov, 1927) (по Семенову, 1927)



62

62. *Brachylecithum lobatum* (Railliet, 1900) *strixi* Oschmarin, 1952 (по Ошмарину, 1952)

2. *Brachylecithum lobatum* (RAILLIET 1900)

Wirt/Herkunft. *Corvus corone cornix* L., Nebelkrähe (Passeriformes, Corvidae)/ geschossen im Tierpark am 28. 2. 1963 (1 ♀).

Lokalisation. Gallengänge.

Präparat-Nr. kT 15/3—4 (etwa 30 Exemplare).

Beschreibung (vgl. Abb. 2 und Tabelle 1).

Cuticula teils mit vereinzelten Papillen, teils glatt; Körper langgestreckt, ganz hinten konisch, vorn vom Bauchsaugnapf an verschmälert, 4,3—8 mm lang, maximale Breite 0,45—0,8 mm; Pharynx klein; Oesophagus ziemlich lang; Darmgabelung unmittelbar vor dem Bauchsaugnapf; Darmschenkel enden bereits ein Stück höchstens von der Länge des Dotterstockbereichs hinter den Dotterstöcken; Bauchsaugnapf größer als Mundsaugnapf; Bauchsaugnapf bisweilen jederseits mit einem „Zipfel"; Genitalporus unmittelbar vor der Darmgabelung oder ventral von dieser; Testes meist nur durch eine Uterusschlinge vom Bauchsaugnapf, voneinander und vom Ovarium getrennt, hintereinander gelegen, größer als das Ovarium und oft auch etwas größer als der Bauchsaugnapf, fast die gesamte Körperbreite ausfüllend, rundlich bis fast quadratisch oder längs- bzw. queroval bis fast rechteckig; Ovarium queroval bis querelliptisch oder tropfenförmig, selten rundlich, glattrandig; Dotterstöcke hinter dem Ovarium beginnend und einen Bereich etwa von der Länge der Gonadenregion einnehmend, aus zwei Reihen oder einem kompakten Bereich von insgesamt 10 bis 20 großen rundlichen Dotterfollikeln bestehend; Eigröße 0,046—0,051 × 0,028—0,032 mm.

Bemerkungen.

Die Synonymiefrage *lobatum* — *alfortense* kann anhand des vorliegenden Materials nicht entschieden werden. Mit *B. alfortense* RAILLIET in DOLLFUS, 1954 ist identisch *Lyperosomum* sp. BRAUN, 1902 (Fig. 66) — *Brachylecithum* sp. (BRAUN, 1902) SKRJABIN et EVRANOVA, 1952 aus *Corvus corone*, Mitteleuropa (s. DOLLFUS 1954,1957) sowie *B. lobatum* bei TIMON-DAVID 1953 (s. TIMON-DAVID 1957). DOLLFUS (1954) wies auf die Möglichkeit einer Synonymie beider Arten hin. *B. alfortense* hat kleinere Körper- und Organmaße und etwas kleinere Eier als *B. lobatum*. Das Originalbild der Art *B. lobatum* ergibt sich aus der Summe der Beschreibungen bei RAILLIET (1900) und DOLLFUS (1957). Die Charakteristik von SKRJABIN et EVRANOVA (1952) stützt sich hingegen auf die Beschreibung von BRAUN (1902), die gar nicht so recht mit dem Originalbild von *B. lobatum* übereinstimmt (Saugnäpfe gleich groß, Abstand zwischen vorderem Testis und Bauchsaugnapf größer, Eier kleiner). Auch scheinen die von sowjetischen Autoren begründeten Unterarten von *B. lobatum* auf Grund der BRAUNschen Beschreibung entstanden zu sein: *B. lobatum glandarii* (SEMENOV, 1927) und *B. lobatum strixi* OŠMARIN in SKRJABIN, 1952. Da die Unterschiede dieser beiden Unterarten von „*lobatum*" und des BRAUNschen „*lobatum*" gegenüber dem echten *lobatum* von RAILLIET größer sind als diejenigen zwischen *lobatum* und *alfortense*, betrachtete ich beide als valide Arten *B. glandarii* (SEMENOV) und *B. strixi* OŠMARIN, wobei „*Lyperosomum lobatum*" bei BRAUN (1902) in Synonymie zu *B. glandarii* fällt. Eine neuere Beschreibung von *B. glandarii* gab MACKO (1957). *B. lobatum* wurde neuerdings gemeldet von DELIĆ et RUKAVINA (1955), RYŠAVÝ (1960) und DUBININA et KULAKOVA (1961). Vgl. auch BYCHOVSKAJA-PAVLOVSKAJA (1962). HÖRNING (1961) beschrieb *B. alfortense* aus *Corvus corone cornix* und *Pica pica*, Berlin; die angegebenen Maße für den Bauchsaugnapf sind kleiner (0,22—0,27 × 0,27 bis 0,33 mm) als bei dem mir vorliegenden Material, auch sind die Eier schlanker (Breite 0,023—0,027 mm).

Abb. 2. *Brachylecithum lobatum* aus *Corvus corone cornix* (Orig. ZIEGER).

FROM ODENING, 1964

—OVE

Tabelle 1. Brachylecithum lobatum, Maße von 10 Exemplaren in mm

Körperlänge	6,2	6,5	5,5	8	6,5	4,5	4,5	6,2	6,5	4,3
Maximale Körperbreite	0,7	0,6	0,6	0,5	0,6	0,6	0,6	0,8	0,5	0,45
Mundsaugnapf										
Länge	0,301	0,301	0,323	0,323	0,316	0,272	0,294	0,308	0,323	0,301
Breite	0,308	0,294	0,323	0,286	0,316	0,250	0,279	0,316	0,316	0,294
Bauchsaugnapf										
Länge	0,477	0,426	0,477	0,440	0,462	0,382	0,367	0,411	0,367	0,352
Breite	0,477	0,440	0,330	0,418	0,440	0,272	0,514	0,462	0,411	0,418
Pharynx										
Länge	0,088	0,088	0,103	0,103	0,081	0,088	0,103	0,103	0,081	0,110
Breite	0,095	0,081	0,088	0,095	0,088	0,081	0,073	0,103	0,081	0,095
Oesophaguslänge	0,235	0,191	0,213	0,220	0,235	0,095	0,184	0,161	0,176	0,161
Testes										
Länge	0,462 bis 0,565	0,426 bis 0,551	0,330 bis 0,492	0,382 bis 0,404	0,404 bis 0,528	0,294 bis 0,308	0,330 bis 0,404	0,404 bis 0,440	0,367 bis 0,404	0,308 bis 0,375
Breite	0,514 bis 0,573	0,440 bis 0,455	0,411 bis 0,514	0,499	0,536 bis 0,573	0,455 bis 0,528	0,551 bis 0,587	0,624 bis 0,639	0,440 bis 0,455	0,440
Ovarium										
Länge	0,191	0,198	0,191	0,161	0,147	0,161	0,161	0,198	0,184	0,206
Breite	0,257	0,272	0,242	0,338	0,330	0,294	0,301	0,367	0,294	0,323
Dotterstöcke, Länge	0,661 bis 0,969	0,807 bis 0,991	0,492 bis 0,587	0,661 bis 0,844	0,734 bis 0,903	0,587 bis 0,807	0,661 bis 0,683	0,514 bis 0,918	0,697 bis 0,969	0,624 bis 0,918
Cirrusbeutel, Länge	0,279	0,198	0,286	0,198	0,206	0,220	0,235	0,257	0,220	0,228

FROM ODENING, 1964

Brachylecithum loossi (Layman, 1926)

Синонимы: *Lyperosomum loossi* Layman, 1926; *Olssoniella* (?) *loossi* (Layman, 1926) Travassos, 1944

(Рис. 63)

Хозяин: береговая ласточка (*Cotyle riparia* = *Riparia riparia*).

Локализация: желчные ходы печени.

Место обнаружения: СССР (Ростовская область).

Описание вида (по Ляйману, 1926). Тело достигает 2,56 мм длины при ширине 0,17 мм. Ротовая присоска почти круглая, 0,136 мм длины и 0,114 мм ширины. Брюшная присоска, отстоящая от ротовой на расстоянии 0,228 мм, имеет поперечно-овальную форму и достигает 0,20 мм длины, при ширине 0,10 мм. Передний семенник отстоит от брюшной присоски на расстоянии 0,285 мм. Семенники продольно-овальные. Расстояние между семенниками достигает 0,057 мм. Передний семенник 0,16 мм длины и 0,114 мм ширины, задний семенник 0,10 мм длины и 0,08 мм ширины. Яичник располагается на расстоянии 0,068 мм от заднего семенника, имеет почти круглую форму и достигает 0,102 × 0,114 мм. Желточники лежат позади яичника, образуя компактную массу длиною 0,285 мм. От заднего конца тела задний край желточников отстоит на 1,026 мм. Яйца 0,034—0,039 мм длины и 0,014—0,019 мм ширины.

Литература: Ляйман, 1926, стр. 63; Travassos, 1944, стр. 220.

63

Brachylecithum magnitestium (Layman, 1922)

Синонимы: *Lyperosomum magnitestium* Layman, 1922; *Lutztrema magnitestium* (Layman, 1922) Travassos, 1944

(Рис. 64)

Хозяин: золотистая щурка (*Merops apiaster*).

Локализация: желчные протоки печени.

Место обнаружения: СССР (Ростовская область).

Описание вида (по Ляйману, 1922). Тело тонкое, удлиненное, достигающее 4,5 мм длины при максимальной ширине 0,41 мм на уровне семенников. Ротовая присоска относительно круглая, 0,162 × ×0,157 мм в диаметре. Брюшная присоска крупнее ротовой, достигает 0,234 × 0,247 мм в диаметре и отстоит на расстоянии 0,30—0,43 мм от головного конца. Семенники очень крупные, продольно-овальные, занимают всю ширину тела, причем края последнего на месте локализации семенников имеют соответственные вздутия. Длина семенников 0,432 мм. Лежат семенники один позади другого и занимают вторую четверть длины тела. Передний семенник располагается на расстоянии 0,585 мм позади брюшной присоски. Яичник поперечно-овальный, достигает 0,09—0,126 × ×0,171—0,225 мм. Желточники состоят из небольшого числа крупных

64

Brachylecithum marinholutzi (Travassos,1941)

Syn: Lutzitrema marinholutzi Trav.,1941

Host: Progne chalybea domestica.

Сем. DICROCOELIIDAE

65

65. *Brachylecithum marinholutzi* (Travassos, 1941) (по Травассосу, 1941)

Brachylecithum megastomum (Johnston, 1917)
syn. Lyperosomum megastomum Johnston, 1917

LYPEROSOMUM MEGASTOMUM, sp. n. (Fig. 15).

Diagnosis.—Form elongated, cylindrical. Suckers very large, *wider than the body*, oral smaller than the ventral. Testes large, approximately equal, close together, a short distance behind the ventral sucker. Genital pore in front of intestinal fork; cirrus sac lying mainly *anterior to the ventral sucker*, ovary oval, half as large as testes, long axis transversely placed. Yolk glands consisting of few, large follicles, occupying a short field behind ovary; uterus very extensive, filling up posterior two-thirds of body. Eggs large, 0·038 × 0·023 mm.

Host.—Crested tern, *Sterna bergii* in the intestine. Locality: Tuggerah, N.S.W.

Type specimen in the Australian Museum, Sydney, No. W. 439.

The most striking character of this species is the size of the suckers which considerably exceed the narrow cylindrical body. The worms are about the same length as *L. parvum* (3·68 mm. on the average) but are much more slender, being only 0·194 mm., in breadth at the level of the testes, and 0·145 mm., in the region of the uterus. Both the suckers exceed this breadth in their diameter and so project beyond the lateral edges of the body. The oral sucker 0·203 mm. in diameter, is rather smaller than the ventral (0·239 mm.). The œsophagus is short (0·144 mm.) and the intestinal limbs very narrow. The genital pore lies nearer the anterior end than usual in other species, being nearer the oral than the ventral sucker. The cirrus sac, with the contained vesicula seminalis, lies mainly anterior to the ventral sucker, but with its base projecting backwards for a short distance behind the anterior edge of it. The testes are large and oval with the long axis longitudinal, while the oval ovary has its long axis transversely placed. The three gonads are placed close together in a line, one behind the other, without any loops of the uterus separating them. The posterior testis is always slightly smaller than the anterior, the measurements being 0·214 × 0·161 mm., and 0·239 × 0·171 mm., respectively. The ovary is considerably smaller, 0·107 × 0·161 mm. The receptaculum seminis and gland of Mehlis lie just posterior to the ovary.

The yolk glands, as in *L. parvum*, are few and large, occupying a short field in the body immediately behind the ovary. They are arranged in an irregular double row and are greatly obscured from view by the uterus filled with eggs. The whole of the posterior part of the body is taken up by the folds of the uterus.

The eggs are large, the largest measured being 0·041 × 0·024 mm., the smallest 0·037 × 0·021 mm., while the average of a large number measured was 0·038 × 0·023 mm.

Brachylecithum megastomum (Johnston, 1916)

Синонимы: *Lyperosomum megastomum* Johnston, 1916; *Olssoniella* (?) *megastoma* (Johnston, 1916) Travassos, 1944

(Рис. 66)

Хозяин: крачка (*Sterna bergii*).

Локализация: кишечник.

Место обнаружения: Австралия.

Описание вида (по Джонстону, 1916). Тело паразита удлиненное, цилиндрическое, достигает 3,68 мм длины при максимальной ширине 0,194 мм. Ротовая присоска 0,203 мм в диаметре. Брюшная присоска превышает ширину тела; ее диаметр 0,239 мм. Пищевод короткий, 0,144 мм длины. Кишечные стволы очень узкие. Половое отверстие перед бифуркацией кишечника, располагается ближе к ротовой, чем к брюшной, присоске. Половая бурса, содержащая семенной пузырек, лежит впереди от брюшной присоски, причем ее дно слегка заходит за передний край брюшной присоски.

Семенники крупные, продольно-овальной формы, в то время как яичник имеет слегка поперечно-овальное очертание. Все три половых железы лежат на медианной линии, причем в промежуток между ними не заходит ни единая петля матки. Передний семенник достигает 0,239 × 0,171 мм, задний — немного меньше переднего — 0,214 × 0,161 мм. Яичник меньшего размера, чем семенники, достигает 0,107 мм длины и 0,161 мм ширины. Позади яичника находятся семяприемник и тельце Мелиса.

Желточники располагаются в два не вполне правильных ряда и состоят из небольшого числа крупных фолликулов, занимающих небольшую зону позади яичника. Матка очень мощно развита, заполняет собой в задней части тела пространство, соответствующее двум третям общей длины паразита.

Яйца в среднем достигают 0,038 мм длины и 0,023 мм ширины, однако встречаются и более крупные яйца, доходящие до 0,041 × 0,024 мм.

Литература: Johnston, 1916, стр. 225, 249 и 252; Travassos, 1944, стр. 215.

Brachylecithum microtesticulatum Timon-David, 1955

Brachylecithum microtesticulatum

This species was found only in *Larus fuscus* *LF*. Twenty-six individuals were found in a single bird, two in the gall bladder, the remainder in the first fifth of the intestine. The gall bladder additionally contained three specimens of the trematode ***Gymnophallus deliciosus***. There are no previous British records of ***B. microtesticulatum***.

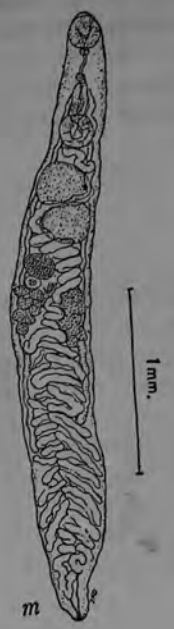
B. microtesticulatum was described from *LA* of southern France by Timon-David (1955), who recovered three individuals from the proximal intestine of a single bird. This location was regarded as unusual since the various species of this genus are normally parasites of the bile ducts and gall bladder. No differences were observed between specimens from the intestine and gall bladder in the present investigation.

Description (Fig. 3, Ventral view): Body elongate, tapering slightly towards extremities. Length 4·93 mm., width 0·43 mm. Suckers sub-equal, oral 0·23 mm. in diameter, ventral 0·28 mm. in diameter. Pharynx and oesophagus small, 0·10 mm. and 0·13 mm. in length, respectively. Pharynx partly incorporated in base of oral sucker. Distal ends of caeca obscured by eggs. Testes rounded, obliquely in tandem, diameters: anterior 0·18 mm., posterior 0·19 mm. Cirrus pouch prominent, 0·37 mm. in length, immediately in front of ventral sucker. Ovary rounded, diameter 0·19 mm., posterior to testes. Mehlis' gland, diameter 0·14 mm., situated immediately behind ovary. Vitellaria eight or nine large follicles on each side extending 1·25 mm. behind ovary. Follicles 0·10–0·18 mm. in diameter. Convolutions of uterus occupy remainder of posterior region. Eggs 0·038 × 0·024 mm.

From PEMBERTON, 1963

BRACHYLECITHUM MOOREI, new species Denton & Byrd, 1951

FIGURE 37, *m*



Diagnosis.—Body elongated, dorsoventrally flattened, 3.38 to 4.31 mm. long by 0.27 to 0.52 mm. wide in region of vitellaria, with weakly developed musculature, almost parallel sides which taper slightly toward both extremities. Cuticle thin, without spines or other obvious markings. Oral sucker weakly muscular, elongated-oval, 0.18 to 0.26 mm. long by 0.17 to 0.23 mm. wide, subterminal to a short liplike projection. Acetabulum 0.17 to 0.28 mm. in diameter, weakly muscular, somewhat protrusible, with center protruded far enough to obliterate lumen, in anterior fourth of body. Ratio of width of oral sucker to acetabulum 1:1.12 to 1.21. Pharynx globular, muscular, 0.05 to 0.07 mm. in diameter. Esophagus narrow, very thin-walled, straight to slightly wavy, 0.14 to 0.23 mm. long, bifurcating midway between suckers. Ceca narrow, slightly undulating, passing laterally to genital organs and dorsally to vitellaria, terminating from one-third to one-half of distance from vitellaria to posterior end of body. Excretory pore terminal. Genital pore median, ventral to intestinal bifurcation. Testes large, oval, approximately equal in size, 0.20 to 0.35 mm. in diameter, tandem in position, with zones contiguous but not overlapping in relaxed specimens. Zone of anterior testis separated from zone of acetabulum by one to three loops of uterus. Cir-

rus sac elongated-oval, 0.20 to 0.31 mm. long by 0.09 to 0.14 mm. wide, containing convoluted seminal vesicle, ejaculatory duct and eversible cirrus. Cirrus sac situated so that caudal extremity reaches to or slightly beyond anterior margin of acetabulum. Ovary round to transversely oval in shape, smaller than testes, 0.13 to 0.19 mm. in transverse diameter, on either right or left side of body, separated from posterior testis by one to three loops of uterus. Seminal receptacle small, globular, contiguous to caudal margin of ovary. Mehlis' gland diffuse, medially to seminal receptacle. Laurer's canal not observed. Vitellaria consisting of 6 to 14 large follicles on each side of body, with more follicles on side of body opposite ovary, located just posterior to seminal receptacle. Uterus greatly convoluted, filling most of body posterior to ovary, ascending to genital pore by one of three courses: (1) Passing to either right or left of ovary, between ovary and posterior testis, between testes, then anteriorly by a wavy course; (2) passing to either right or left of both ovary and posterior testis, between testes, then anteriorly by wavy course; or (3) passing to either right or left of all three gonads, then anteriorly by wavy course. Mature ova dark brown, 36μ to 44μ long by 23μ to 29μ wide.

Host.—*Bubo virginianus* (Gmelin).

Habitat.—Liver.

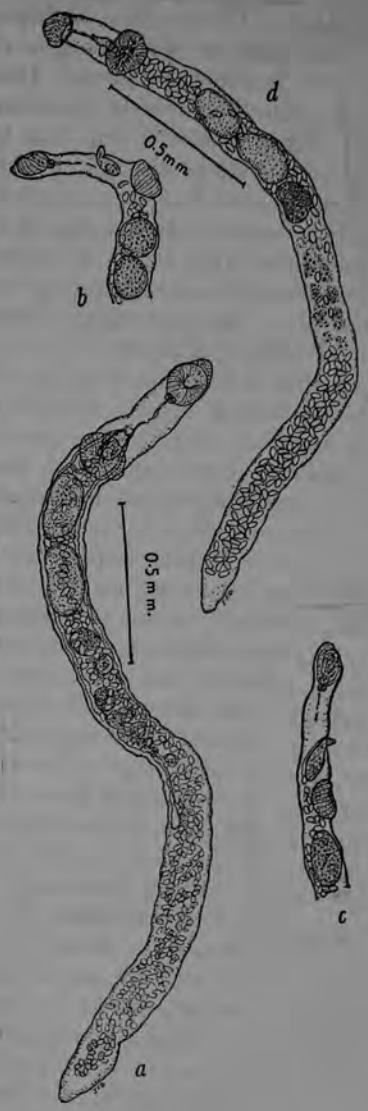
Locality.—United States (probably Texas).

Type specimen.—U.S.N.M. Helm. Coll. No. 37120. Additional specimen No. 37121.

Remarks.—*Brachylecithum moorei* is described from about 50 specimens taken from the liver of a great horned owl, *Bubo virginianus*. The host died while in the Zoological Gardens, Houston, Tex. Although the bird probably came from the vicinity of Houston, the exact locality from which it was taken could not be determined. It appears to be more closely related to *B. americanum* Denton, 1945, than to the other members of the genus. From this species it is distinguished by the longer ceca, oval instead of lobed testes, and a larger cirrus sac.

BRACHYLECITHUM NANUM, new species Denton & Byrd, 1951

FIGURE 36, *a–d*



Diagnosis.—Body much elongated-cylindrical, with weakly developed musculature and showing a tendency to be serpentine; it measures 1.85 to 3.39 mm. long by 0.10 to 0.26 mm. wide, widest in

region between acetabulum and vitellaria. Cuticle thin, aspinose, smooth except for small, conical, sensory papillae along margins of suckers and on lateral margins of body in some specimens. Oral sucker subterminal to a small liplike projection, weakly muscular, usually elongate oval in shape, measuring 0.07 to 0.16 mm. long by 0.08 to 0.15 mm. wide. Acetabulum somewhat protrusible, weakly muscular, slightly lemon shaped in frontal view but without prominent auricular appendages, with shallow, saucerlike lumen (fig. 36, *c*) in some specimens or with center protruded (fig. 36, *b*) in others, obliterating lumen; located in anterior body fifth and measuring 0.10 to 0.18 mm. long by 0.11 to 0.20 mm. wide. Ratio of width of oral sucker to acetabulum 1:1.0 to 1:1.4. Prepharynx absent. Pharynx muscular, globular, longer than wide, 0.03 to 0.05 mm. long by 0.03 to 0.04 mm. wide. Esophagus very thin-walled, slender, straight to slightly wavy, relatively long, bifurcating from one-half to two-thirds of distance from oral sucker to acetabulum. Ceca thin-walled, slender, straight to slightly wavy, passing dorsally to acetabulum, dorsally to lateral margins of gonads, dorsally to vitellaria, terminating unevenly as slightly distended tubes from a short distance posterior to vitellaria to midway between vitellaria and posterior end of body. Excretory pore terminal. Genital pore median, ventral to intestinal bifurcation. Testes elongated-oval to kidney-shaped, approximately equal in size, 0.09 to 0.27 mm. long by 0.07 to 0.19 mm. wide, situated one directly behind other and occupying almost entire width of body at their levels; depending on state of constriction of body, anterior testis separated from acetabulum by one to four loops of uterus; posterior testis contiguous to anterior testis or separated from it by a single uterine loop. Cirrus sac elongated-pyriform, 0.12 to 0.16 mm. long by 0.04 to 0.06 mm. wide, containing coiled seminal vesicle, ejaculatory duct, and eversible cirrus, extending posteriorly far enough for one-third to one-half its length to lie dorsally to acetabulum. Ovary oval, 0.05 to 0.12 mm. long by 0.06 to 0.16 mm. wide, situated near middle of body and separated from posterior testis by one to three uterine loops. Seminal receptacle small, globular, situated entirely posterior to ovary, near either margin of body. Mehlis' gland diffuse, located posteromedial to seminal receptacle. Laurer's canal opening on middorsal surface at caudal level of seminal receptacle. Vitellaria consisting of 6 to 10 large oval to irregular follicles on each side of body (sometimes fusing together to form large irregular masses of yolk cells), occupying zone immediately posterior to Mehlis' gland. Uterus greatly convoluted with loops rather indistinct, filling body posterior to vitellaria, then passing anteriorly between and ventrally to vitellaria, ventrally to one margin of ovary, to dorsal side between ovary and posterior testis, dorsally to both testes and acetabulum to

genital pore. Mature ova dark brown, 38μ to 48μ long by 21μ to 28μ wide, fully embryonated when oviposited.

Hosts.—Pipilo erythrophthalmus (Linnaeus) (type) and *Zonotrichia albicollis* (Gmelin).

Habitat.—Liver.

Localities.—North Carolina: Highlands (type); Virginia: Mountain Lake; Georgia: Athens and Augusta; Texas: Houston.

Type specimen: U.S.N.M. Helm. Coll. No. 37116. Additional specimen, No. 36758, from the white-throated sparrow.

Remarks.—Brachylecithum nanum is described from specimens from the livers of 9 (27.3 percent) of 33 red-eyed towhees, *Pipilo erythrophthalmus*, collected at Highlands, N. C., and Mountain Lake, Va., and from 4 (12.9 percent) of 31 white-throated sparrows, *Zonotrichia albicollis*, collected in Georgia and Texas. Because of their delicate structure and the difficulty with which they are extracted, many specimens were broken during removal. Other specimens, because of a tendency to rotate a part of the body, are poor for detailed study. The species shows a close relationship to no less than five of the already described forms: *B. filliforme* (Skrjabin, 1913), *B. megastoma* (Johnston, 1917), *B. vanellicolae* (Layman, 1922), *B. loossi* (Layman, 1926), and *B. asovi* (Layman, 1926). Of these only *B. filliforme* is described and figured in sufficient details to permit comparison with *B. nanum*. From it *B. nanum* differs in being smaller and in having relatively larger suckers, relatively larger testes, and a much smaller cirrus sac. The type material of *B. filliforme* came from the gall bladder of a hawk, *Circus cyaneus*.

A dicrocoeliid trematode has been commonly found in the biliary ducts of ruffed grouse examined over the past several years from Ontario. The same parasite has been taken in Michigan from this host by Cowan and Spaulding (12), who have kindly let us examine their specimens. As the specimens from Ontario and Michigan differ from other species of dicrocoeliids, we have assigned them to a new species in the genus *Brachylecithum* here described as *Brachylecithum orfi* sp. nov.

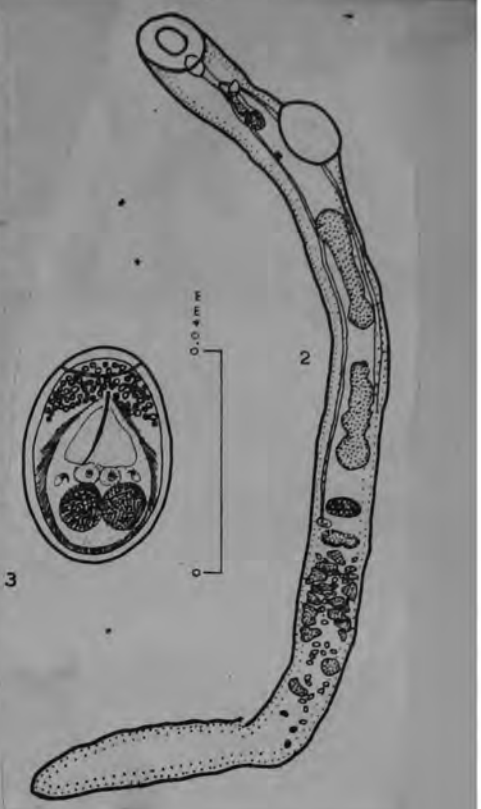
A species of the genus *Tanaisia* Skrjabin, 1924, as emended by Byrd and Denton (2), also has been found in the ruffed grouse in the urinary tubules.

Description

Genus: Brachylecithum Shtrom, 1940, as emended by Skrjabin and Evranova (10).

Brachylecithum orfi sp. nov.[4] Kingston & Freeman, 1959

Body of mature specimen elongate-cylindrical with nearly parallel sides, tapering gradually in posttesticular region; body length 9.9 (4.4–11.2), body width 0.33 (0.21–0.43) in region of anterior testis. Ratio of body width to body length 1:30 (1:16–38). Cuticle aspinose, without tuberculations. Oral sucker elongate-oval 0.29 in length by 0.24 in width (0.25–0.43 by 0.23–0.40), subterminal, with a dorsal, overhanging lip (seen best in sectioned material), mouth opening ventrally. Acetabulum without auricles, transversely oval 0.29 in length by 0.32 in width (0.26–0.49 by 0.31–0.43), anterior margin 0.73 from anterior end of worm (0.45–1.13), cavity (usually) not obliterated by protruding center. Ratio of oral sucker to acetabulum 1:1 (1:0.92–1.27). Prepharynx absent. Pharynx pyriform, wider than long (generally), 0.070 in length by 0.086 in width (0.057–0.095 by 0.067–0.112).



Oesophagus narrow, thin-walled, slightly undulating, 0.14 in length by 0.025 in width (0.14–0.21 by 0.025–0.047), bifurcating immediately anterior to female genital pore. Caeca paired, narrow, thin-walled, difficult to follow posterior to testes, extent not determined. Male genital pore median, opening between oral sucker and acetabulum 0.51 from anterior end of worm (0.36 in contracted specimen to 0.73 in large extended specimen). Cirrus sac 0.30 in length by 0.11 in width (0.25–0.41 by 0.08–0.12), containing an unarmed, eversible cirrus and a coiled seminal vesicle; bulbous portion of cirrus sac posterior and dorsal to anterior margin of acetabulum. Testes elongate-cylindrical, tandem, almost filling body width, with smooth margins (or only slightly indented; in some specimens, presumed young, testes may (Fig. 2) be lobate), anterior testis (generally) shorter in length than posterior testis: anterior testis 0.96 in length by 0.25 in width (0.30–1.23 by 0.11–0.35), posterior testis 1.29 in length by 0.26 in width (0.45–1.63 by 0.10–0.30); anterior testis begins 1.13 from anterior end of worm (0.80–1.60), posterior testis begins 2.23 from anterior end of worm (1.20–2.80). Space between testes 0.13 (0.00–0.15) occupied (or not) by loop(s) of uterus. Ratio of length of testes field[5] to body length 1:4.3 (1:3.33–5.23). Ovary dorsal, behind posterior margin of posterior testis, (round to) oval, 0.28 in length by 0.19 in width (0.10–0.35 by 0.08–0.25), located 3.81 from anterior end of worm (1.96–4.50). Seminal receptacle globular, 0.12 in length by 0.11 in width (0.11–0.12 by 0.07–0.11), anterior margin 0.05 (0.01–0.05) behind and dorsal to the posterior border of ovary. Mehlis' gland posterior to seminal receptacle. Laurer's canal not seen. Vitellaria (Figs. 1 and 2) entirely posterior to ovary, and seminal receptacle consisting of 10 (6–12) large irregular follicles on each side (fields frequently joined anteriorly; number of follicles on one side may vary from number on other), occupying a total field of 1.50 in length (0.60–1.50) beginning 4.36 from anterior end of worm (2.48–5.05). Descending limb of uterus, on dorsal side of body, containing developing eggs, leaves the ovary, passes in coils between vitellaria to within 0.05 (0.070) of posterior end of body where it turns and ascends, on ventral side of body, in wide loops to the region of the vitellaria. Posterior to the vitellaria, approximately 6.60 from the anterior end of the body, the ascending uterus contains dark, fully embryonated eggs; it continues in coils ventral to vitelline follicles, passes with compressed loop(s) (one to six) between vitellaria and ovary,

proceeds ventral (or lateral) to ovary, with four loops (two to four) between anterior margin of ovary and posterior margin of posterior testis, (generally) runs ventral to posterior testis, with one loop (none to two) between posterior testis and anterior testis, then in slight sinuosities ventrolateral to anterior testis (sometimes ventral or dorsal) to region behind acetabulum where it passes in several coils (three to seven) to female genital pore located median and immediately anterior to male genital pore. Excretory pore posterior, terminal. Fully developed ova dark brown, thick-shelled, operculate (in

[illegible] of the anterior testis to the posterior margin

[illegible] genital, oval vesicles can be seen; these ova range in size from 0.037–0.047 by 0.025–0.032) (Fig. 3).

Host: *Bonasa umbellus* L.

Habitat: Biliary ducts.

Locality: Ontario—Algonquin Park (holotype) and Big Island, Lake of the Woods; Michigan—Ottawa National Forest.

Molluscan hosts: *Zonitoides arboreus, Zoniloides nitidus, Deroceras reticulatum, Deroceras laeve, Cionella lubrica.*[5]

Type specimen: Holotype and nine paratypes in U.S.N.M. Helminthological Collection, Nos. 38391 and 38392 respectively.

Twenty-six unfixed worms from three ruffed grouse from Algonquin Park measured 6.9–15.0 mm in length. Width measurements of worms which were 9.4–13.0 mm in length ranged from 0.44–0.55 mm. The range of the ratios of the body widths to the body lengths, 1:20–23.

Some features of these worms were more apparent in unfixed specimens than in fixed material: namely, the subterminal position of the oral sucker; the nature and extent of the vitelline follicles; the occluded cavity of the acetabulum in some specimens; and the gravid condition of the uterus. The identity of *Brachylecithum orfi* can be confirmed in unfixed material by noting that the testes field to body length ratio lies in the range of 1:3–5.

Discussion

Brachylecithum orfi sp. nov. differs from the other species now contained in the genus in the following characters: (1) by its greater length, (2) by its larger ratio of body width to body length, (3) by its longer testes, (4) by its smaller ratio of testes field to body length, and (5) by the extent and position of the vitelline field, which lies in whole, or in large part, in the posterior half of the body.

Brachylecithum orfi while resembling *Brachylecithum eugenia* Oschmarin, 1947 (in Skrjabin and Evranova (10)) differs from it as follows: (1) The testes of *B. orfi* are nearly twice the length of those in the latter species; some specimens of *B. orfi* and *B. eugenia* have testes of comparable length, but the body lengths for such specimens of *B. orfi* are much shorter than is the body length of *B. eugenia*, and the ratio of the testes field to body length remains near 1:4 for *B. orfi* while this ratio is 1:9 for *B. eugenia*. (2) Further, *B. orfi* lacks auricles on the acetabulum which *B. eugenia* possesses. (3) Finally, the length of the vitelline field of *B. orfi* is greater than that of *B. eugenia*.

Brachylecithum orfi although similar to *Brachylecithum papabejani* (Skrjabin and Udinzew, 1930) Shtrom, 1940 differs from it as follows: (1) *B. orfi* is narrower thus possessing a greater ratio of body width to body length than does *B. papabejani* (1:10.8–11.2). (2) The eggs of *B. orfi* are larger than those of *B. papabejani*.[7]

Brachylecithum orfi somewhat resembles *Brachylecithum gruis* Denton and Byrd, 1951. It differs from *B. gruis* in that while both species have elongate testes, in only one short paratype specimen of *B. orfi* are the lengths of the testes comparable to those of *B. gruis;* further, the margins of the testes are smooth in mature specimens of *B. orfi* while they are lobate in *B. gruis*. The size of the oral and ventral suckers is greater in *B. orfi* than that given for *B. gruis*. The vitelline field in *B. orfi* is up to four times longer than in *B. gruis*. The vitelline field of *B. gruis* apparently lies wholly in the anterior half of the body whereas in specimens of *B. orfi* the vitelline field always extends into, or lies wholly within, the posterior half of the body.

Ishii (6) and Erickson *et al.* (4) reported finding a dicrocoeliid identified as *Lutztrema* (= *Lyperosomum*) *monenteron* (Price & McIntosh, 1935) Travassos, 1941 in ruffed grouse in Minnesota. Erickson *et al.* gave no description, and Ishii's description is inadequate for generic or species identification. Denton and Byrd (3) examined Ishii's slides and concluded that these specimens must remain as *species inquirenda* pending study of more favorable material.

Through the kindness of Drs. A. B. Erickson, Minnesota Department of Conservation, and E. F. Cook, University of Minnesota, we examined the material recovered by Dr. Erickson from a ruffed grouse. From the condition of the specimen we cannot state with exactness what species this is, but the oral and ventral suckers are approximately equal in size, which character more nearly approaches that in *Brachylecithum* than *Lutztrema*. The intestinal caeca bifurcate at the level of the genital pore, which character removes it from the genus *Lutztrema* sensu Travassos (13). Only a few large follicles remain of the vitellaria situated across the breadth of the body, a character common to *Brachylecithum* (9, 10) and *Lutztrema* (3, 10, 13) and in contrast to the finer follicles arranged along the lateral margins of the body of *Lyperosomum* (3, 10, 14).

It appears most probable, therefore, that Erickson's specimen belongs in the genus *Brachylecithum* rather than in the genus to which he assigned it.

Time and Incidence of Infection

A total of 87 ruffed grouse, of which 44 harbored *B. orfi*, were examined from Algonquin Park and Big Island, Lake of the Woods, Ontario, between 1952 and 1958 (Table I). Twenty-two of these were young birds, examined

Brachylecithum palawanense ~~sp. n.~~ Fischthal and Kuntz, 1973
(Figs. 5, 6)

HOSTS: Type, *Halcyon chloris collaris* (Scopoli), white-collared kingfisher; *Ceyx rufidorsus rufidorsus* Strickland, red-backed kingfisher (Coraciiformes: Alcedinidae).

HABITAT: Small intestine (?).

LOCALITY: Tarabanan Concepción.

DATES: 12, 14 May 1962.

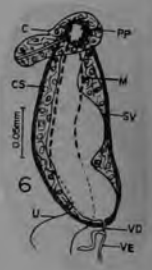
SPECIMENS DEPOSITED: No. 72169 (holotype, from *Halcyon*); No. 72170 (paratypes, *Halcyon*); No. 72171 (paratypes, *Ceyx*).

DIAGNOSIS (based on seven adult worms in dorsal or ventral view from *Halcyon*, measurements of six given below; and five adults in lateral view from *Ceyx*, measurements not included below): Body elongate, narrow, extremities rounded, 3,305–4,535 long by 270–485 wide at testicular level. Forebody 535–695 long; hindbody 2,535–3,365 long; forebody–hindbody length ratio 1:4.3–6.2. Oral sucker subterminal ventral, longitudinally elongate, somewhat inverted pear-shaped, truncate or nearly so posteriorly, in ventral or dorsal view with compact layer of muscles just within posterior and posterolateral margins, in lateral view muscle layer posterior, posterodorsal and posteroventral, 148–177 by 114–153; preoral lip prominent, 31–61 long; acetabulum usually somewhat transversely elongate but occasionally round, 173–235 by 186–252; sucker length ratio 1:1.05–1.33, width ratio 1:1.47–2.41. Prepharynx absent; pharynx round or nearly so, sometimes with nipplelike projection at anterior end, 51–61 by 47–58; esophagus 121–230 long; cecal bifurcation 130–180 preacetabular; ceca extending short distance into posterior third of body.

Gonads smooth, transversely oval, separated from one another by uterine coils. Anterior testis slightly sinistral in four worms and slightly dextral in two, 90–270 by 120–285, lying 170–315 postacetabular in worms from *Halcyon*, lying closer to acetabulum in worms form *Ceyx*; posterior testis slightly dextral in four worms but slightly sinistral in two when anterior testis dextral, 110–242 by 118–310, lying 22–110 posterior to anterior testis. Cirrus sac elongate oval, straight, thick-walled, muscular, commencing dorsal to anteriormost part of acetabulum or entirely preacetabular, 157–196 by 65–78. Seminal vesicle winding, somewhat coiled, filling most of cirrus sac when cirrus protruded, 125–180 by 40–70. Pars prostatica roundish, small, surrounded by few prostate cells. Cirrus large, muscular, usually protruded, opening into posterior part of genital atrium. Genital pore median, at cecal bifurcation.

Ovary in tandem with posterior testis, slightly dextral in four worms but slightly sinistral in two when posterior testis sinistral, 97–120 by 127–170, lying 35–143 posterior to posterior testis. Seminal receptacle very large, 97–148 by 116–155, lying postovarian and slightly more lateral than latter. Mehlis' gland well developed, lying posteromedian to seminal receptacle at or near anterior limits of vitellaria. Latter follicular, in two short, subequal, lateral fields; field on ovarian side 335–430 long, with eight follicles in one worm, nine in five; opposite field 350–605 long, with 10 follicles in one worm, 12 in five; anteriormost follicle lying 93–190 postovarian; postvitellarian space 1,130–2,015 long. Uterus filling most of hindbody, extending to near posterior extremity, ascending median to ovary and posterior testis with single loop between them, crossing (with several loops) between testes to median side of anterior testis. Metraterm thick-walled, muscular, shorter than and lying dorsal to cirrus sac, opening into shallow genital atrium anterior to male opening. Eggs numerous, operculate, 25 measuring 29–37 (32.3) by 15–19 (17.9).

Excretory bladder tubular, sometimes dilated, where visible posteriorly; narrowing to short duct before opening through terminal pore.



DISCUSSION: This form keyed to the genus *Brachylecithum* Strom, 1940, in the key given by Odening (1964). While some of the five specimens from *Ceyx* were smaller than those from the other host, the morphology, measurements, and ratios of all were basically similar. It differs from all others in the genus in the shape of the oral sucker. It is closest to *B. halcyonis* (Yamaguti, 1941) Skrjabin and Evranova, 1953, *B. tetraogalli* Gvozdev, 1953, *B. bubo* Chibichenko, 1959, and *B. indicum* Singh, 1962. The latter species differs further in the shape of the gonads, the testes being tandem, very close to each other, and separated by only a single uterine coil, and the extent of the vitellaria never being more than twice the length of the ovary rather than three to four times its length. *B. halcyonis* differs further in the shape of the gonads, and in having tandem testes and larger eggs (42 by 21–22). *B. bubo* differs further in having tandem testes, an S-shaped cirrus sac, and somewhat larger eggs (36–40 by 18–20). *B. tetraogalli* differs further in having a postbifurcal genital pore and larger eggs (47 by 26–30).

Brachylecithum parvum (Johnston, 1917)
syn. Lyperosomum parvum Johnston, 1917

LYPEROSOMUM PARVUM, sp. n. (Fig. 14.)

Diagnosis.—Elongated, cylindrical; suckers large, oral rather smaller than the ventral, œsophagus short; intestinal limbs reaching posterior end. Testes *placed close together* and *just behind* the ventral sucker. Genital opening in front of, but *close to* the ventral sucker; cirrus sac lying mainly *dorsal to the ventral sucker*; vesicula seminalis *much coiled*. Ovary behind and close to the posterior sucker. Yolk glands consisting of a *few large follicles* in two rows behind the ovary. Uterus very extensive. Eggs thick shelled, 0·039 × 0·023 mm.

Host.—*Strepera versicolor*, in the intestine.

Type specimen in the Australian Museum, No. W. 438.

This species is represented by a number of small trematodes collected at Rydal, New South Wales, by my friend Dr. S. J. H. Moreau, from the intestine of the grey crow-shrike, *Strepera versicolor*.

This species is much smaller than any *Lyperosomum* hitherto described, having a length of 3·6 mm., and breadth of 0·37 mm. The body is almost cylindrical, but only slightly flattened towards the posterior end. The suckers are rather longer than broad, the oral (0·213 × 0·194 mm.) being smaller than the ventral (0·252 × 0·233 mm.). The pharynx, broader than long (0·054 × 0·08 mm.), is very much smaller than the suckers. There is a short œsophagus, ending a little in front of the ventral sucker, and the two intestinal limbs, which are narrow and unbranched, run back to the posterior end of the body. The genital opening is situated in the middle line in front of, and close to the

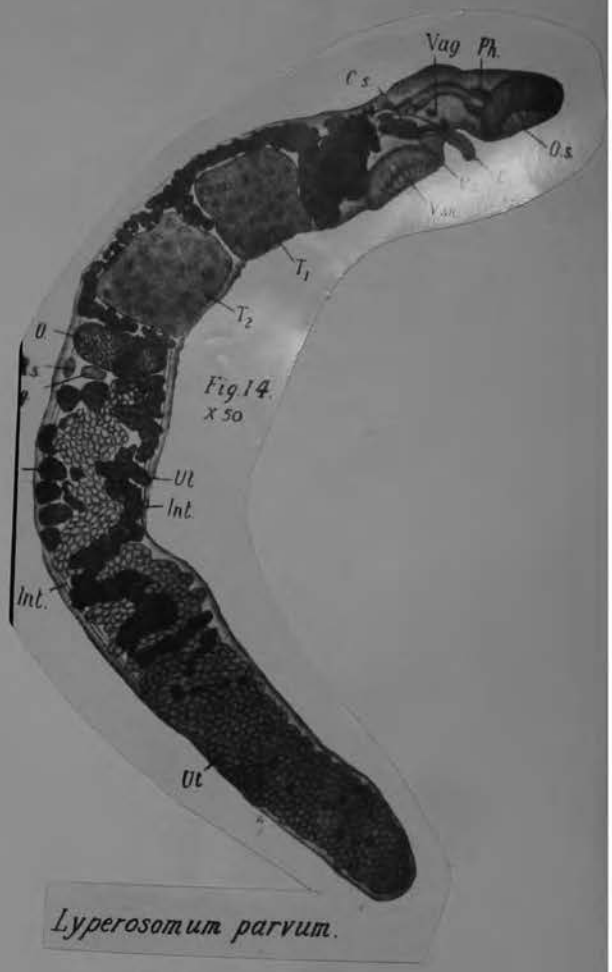


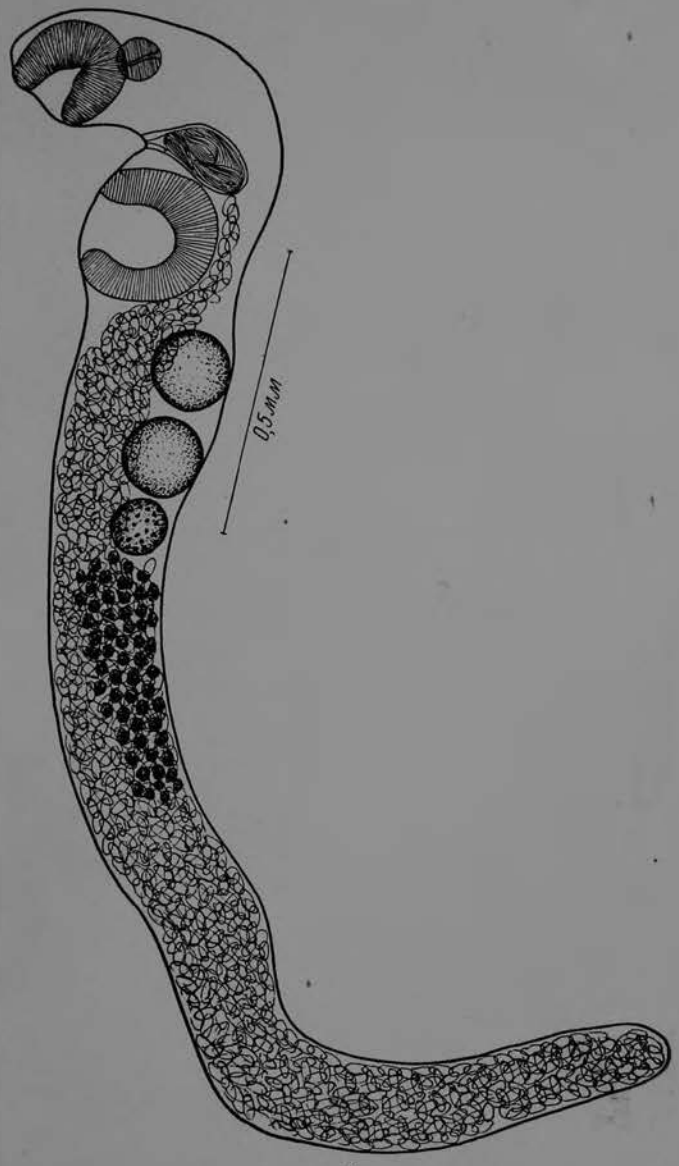
Fig. 14. x 50

Lyperosomum parvum.

Brachylecithum pici Oschmarin,1952

Host: Picus canus

Сем. DICROCOELIIDAE



68

68. *Brachylecithum pici* Oschmarin, 1952 (по Ошмарину, 1952)

Brachylecithum praetenuis Oschmarin, 1952[1]

(Рис. 69)

Хозяин: стриж восточноазиатский (*Apus pacificus*).

Локализация: печень.

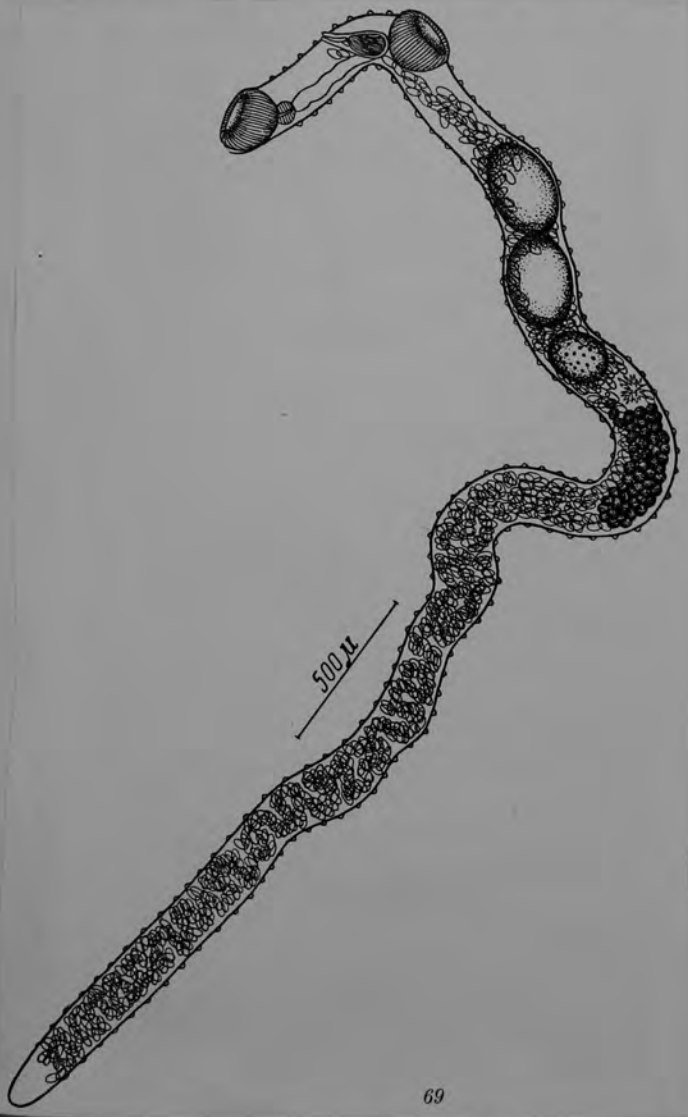
Место обнаружения: СССР (Приморский край — Ольгинский район).

Экстенсивность и интенсивность инвазии: у одного стрижа из четырех вскрытых, в количестве 16 экземпляров.

Описание вида (по Ошмарину, 1952). Длинные и очень тонкие трематоды, поверхность которых покрыта мельчайшими бородавковидными образованиями. Длина тела 5 мм, максимальная толщина 0,205 мм. Ротовая присоска 0,205 мм длины и 0,155 мм ширины. Чашевидная брюшная присоска 0,205 мм в диаметре.

Расстояние между присосками равно удвоенному диаметру брюшной присоски. Фаринкс 0,050 мм в диаметре. Семенники относительно крупные, продольно-овальные. Длина семенников 0,275 мм, ширина — 0,185 мм. Маленькая половая бурса почти достигает своим дном середины дорзальной поверхности брюшной присоски. Длина бурсы 0,178 мм, ширина — 0,075 мм. Яичник лежит непосредственно позади второго семенника; его размер 0,155 × 0,127 мм. Желточники состоят из большого числа мелких фолликулов, распространяющихся на очень небольшом протяжении тела трематоды. Размер яиц 0,044 × 0,021 мм.

По своему строению этот вид наиболее близок *Brachylecithum rarum* (Travassos, 1917), который также имеет сильно вытянутое тело, покрытое бородавковидными образованиями, и некоторые другие сходные признаки. Отличия *B. praetenuis* от *Br. rarum* заключаются в строении желточников, которые у *Br. rarum* состоят из небольшого числа крупных фолликулов, в форме и размерах семенников и яичника. Наконец, хозяевами *Br. rarum* являются бразильские птицы, относящиеся к другому отряду.



Brachylecithum papabejani (Skrjabin et Udinzev, 1930)

Синоним: *Lyperosomum papabejani* Skrjabin et Udinzev, 1930; *Orthorchis papabejani* (Skrj. et Udinzev, 1930) Travassos, 1944

(Рис. 70)

Хозяин: каменная куропатка (*Alectoris graeca* = *Caccabis chukar*).

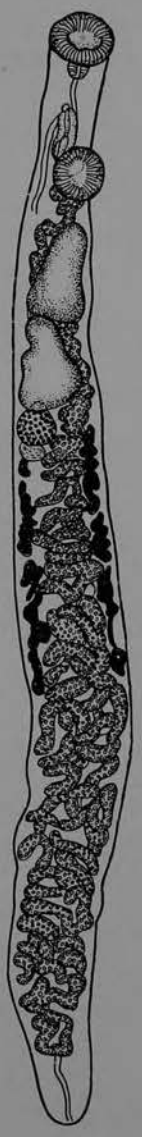
Локализация: желчный пузырь и желчные протоки печени.

Место обнаружения: СССР (Армения).

Описание вида (по Скрябину и Удинцеву, 1930). Паразит имеет вытянутое тело, длиною 6,561 мм при максимальной ширине 0,585—0,612 мм. Ротовая присоска лежит субтерминально; ее диаметр 0,364×0,346 мм. Фаринкс 0,099 мм длины и 0,090 мм ширины. От него начинается довольно длинный пищевод (0,192 мм). Несколько впереди от бифуркации кишечника находится половое отверстие. Брюшная присоска достигает в диаметре 0,273 × 0,291 мм.

[1] Публикуется впервые.

Сем. DICROCOELIIDAE



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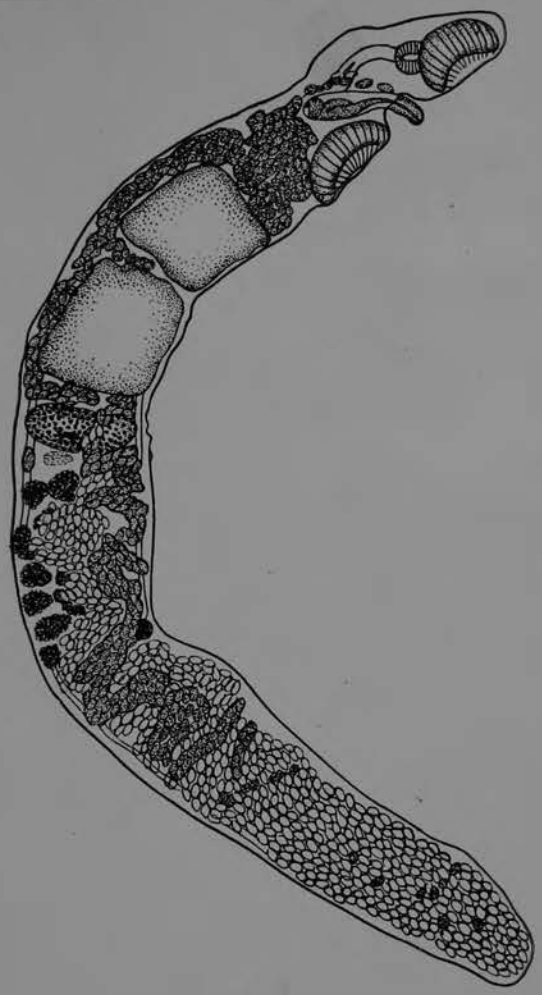
70. *Brachylecithum papabejani* (Skrjabin et Udinzev, 1930) (по Скрябину и Удинцеву, 1930)

Brachylecithum parvum (Johnston, 1916)

Синонимы: *Lyperosomum parvum* Johnston, 1916; *Olssoniella* (?) *parva* (Johnston, 1916) Travassos, 1944

(Рис. 67)

Хозяин: птица (*Strepera versicolor* = *Strepera cuneicaudata*).
Локализация: кишечник.
Место обнаружения: Австралия.



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67. *Brachylecithum parvum* (Johnston, 1916) (по Джонстону, 1916)

-OVER-

Brachylecithum parvum (Johnston)

FIG. 4

Lyperosomum parvum Johnston, 1917, from *Strepera versicolor*, N.S.W.

Brachylecithum parvum: Skrjabin & Evranova, 1953.

Host. *Petrochelidon nigricans*.

Location in host. Liver and gall bladder.

Locality. Mannum, S. Aust., February 1972.

Incidence. 1 of 2 birds from same locality at same time.

Food of host includes insects.

Slides deposited. SAM V85, V86. Identification based on seven balsam mounts. Other specimens too twisted or broken to be of any use.

Host. *Corvus mellori*.

Location in host. Bile duct and/or gall bladder.

Locality. Tas., September 1969.

Incidence. 29 specimens, in one of 48 birds from Tas. (24 in July 1967, 24 in September 1969). In none of 9 *Corvus mellori* from S. Aust., 1966–1970.

Food of host includes insects.

Slides deposited. SAM V87, V88. Identification based on 10 balsam mounts.

Since *B. parvum* has priority in Johnston's (1917) paper, we have named the present species, *B. parvum*.

At first examination it appears that acetabulum shape might distinguish specimens from *Petrochelidon* and *Corvus*. Johnston described the suckers of *B. parvum* as "rather longer than broad". In a slide in T. H. Johnston's collection labelled *"Lyperosomum ?parvum, Strepera versicolor"*, thought to be one of S. J. Johnston's preparations, the acetabulum measures 200 μm x 282 μm and shows, on one side, a lateral projection which is a feature in some of the species described here.

In each of four specimens from *Petrochelidon* in which both dimensions can be measured, the acetabulum is distinctly wider than long, and comes to a point on each side (Fig. 4). In 6 of 7 specimens from *Corvus mellori* the acetabulum is longer than broad; in the seventh, length and breadth are equal; in an eighth, mounted partly laterally, there are indications of the lateral projections. We conclude that acetabular shape is variable, depending perhaps on the muscular contraction of the organ, and also on the mounting of the specimen.

The type of *B. parvum* shows papillae on the surface of the body, which were not mentioned by Johnston. They are pointed or (mostly) rounded; about 13 μm across the base and 8 μm above the surface of the body. They may be present in the acetabular region, but occur only very occasionally anterior to it. Posterior to the acetabulum they are about 25 μm apart, in the vitelline region about 53 μm apart, diminishing to the posterior end.

Papillae similar in size and shape, and also limited to the acetabular and post-acetabular region, are present on the types of *B. megastomum* and *B. harrisoni*. They are present in some specimens from *Petrochelidon nigricans*, but not in the specimens from *Corvus mellori*, which are not so well preserved.

Petrochelidon nigricans, although migratory, breeds in Australia and is found in winter only in New Guinea and the southwest Pacific, from which areas *Brachylecithum* spp. have not been recorded. *Corvus mellori* is restricted to Australia.

FROM ANGEL AND PEARSON, 1977

Brachylecithum philippinense ~~sp. n.~~ Frechthal and Kuntz, 1978
(Figs. 7, 8)

HOST: *Tersiphone cyanescens* (Sharpe), blue paradise flycatcher (Passeriformes: Muscicapidae).

HABITAT: Small intestine (?).

LOCALITY: Tarabanan Concepción.

DATE: 14 May 1962.

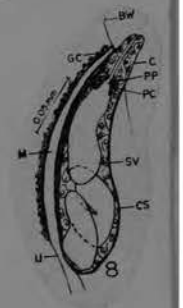
SPECIMEN DEPOSITED: No. 72172 (holotype).

DIAGNOSIS (based on one worm in dextrolateral view; measurements are length by depth): Body elongate, narrow, extremities rounded, 2,563 by 143 at vitellarian level. Forebody 420 long; hindbody 2,005 long; forebody–hindbody length ratio 1:4.8. Oral sucker subterminal ventral, 141 by 100, with compact muscle layer inside posterior, posterodorsal, and posteroventral margins; preoral space 8 long; acetabulum 138 by 95; sucker length ratio 1:0.98, depth ratio 1:0.95. Prepharynx absent; pharynx very small, 29 by 32; esophagus 115 long; cecal bifurcation 120 preacetabular.

Testes two, smooth, round, tandem, 36 apart, both 75 in diameter, anterior testis lying 95 postacetabular. Cirrus sac thick-walled, muscular, somewhat oval with narrower part anteriorly, 172 by 52. Seminal vesicle filling most of cirrus sac, sinuous. Pars prostatica small, surrounded by few prostate cells. Cirrus large, protruded. Genital atrium shallow. Genital pore median, at cecal bifurcation.

Ovary smooth, in tandem with testes, 77 by 90, lying 97 posterior to posterior testis. Vitellaria follicular, in two short lateral fields 350 long, anteriormost limit at posterior margin of ovary. Uterus filling most of hindbody, with several loops between ovary and posterior testis and one loop between testes. Metraterm thick-walled, muscular, slightly shorter than cirrus sac, opening into genital atrium just anterior to male opening. Eggs numerous, operculate, 10 measuring 40–46 (43.1) by 20–26 (23.2).

DISCUSSION: This form appears closest to *B. baskokowi* (Ivanitsky, 1927) Strom, 1940, *B. filum* (Dujardin, 1845) Strom and Sondak, 1935, and *B. vanellicola* (Layman, 1922) Strom, 1940. *B. baskokowi* differs in having a larger sucker length ratio (1:1.43), and much larger pharynx (74 in diameter) and gonads even though the adult worm is smaller (2,059 long). *B. filum* differs in its much greater size (7 mm long) with all structures correspondingly much larger, and in having larger eggs (49–58 by 26–37). *B. vanellicola* differs in having longitudinally elongate testes, the ovary smaller than the testes, and eggs significantly smaller (22–31 by 18).



Brachylecithum podargi ~~n.sp.~~ ANGEL AND PEARSON, 1977

FIG. 6

Host. *Podargus strigoides*.

Location in host. Bile ducts.

Locality. Moggill, Qld, 26.v.1970. Brisbane, Qld, 6.xi.1962.

Incidence. 2 birds from Qld. None of 11 birds from S. Aust. and N.T.

Food of host includes beetles, other insects, and spiders.

Holotype. SAM V92.

Paratypes. SAM V93, V94, V95.

Description based on 10 balsam mounts of mature specimens from Moggill. Immature specimens from Brisbane were also examined.

Description

Body elongate, 4.3–5.8 mm; forebody slightly narrower than hindbody; hindbody fairly uniform in width to behind vitellaria, then narrowing gradually. Width or depth/length ratio 1:24–1:30 (1:28). Without papillae on body surface. Acetabulum (199 x 154 μm), approximately in anterior eighth of body, larger than oral sucker (172 x 155 μm), slightly wider than body, wider than long, sometimes coming to blunt point on each side. Pharynx almost spherical; oesophagus bifurcating about midway between suckers; caeca dorsal, ending near posterior border of vitellaria (In 5.0 mm specimen caeca ending 2.4 mm and 2.6 mm from hind end of body).

Testes rounded, contiguous or not, slightly larger than ovary; anterior testis somewhat posterior to acetabulum. Cirrus pouch arises dorsal to anterior quarter of acetabulum; seminal vesicle coiled; genital pore midway between oral sucker and acetabulum, or slightly nearer to latter.

Ovary, close to or separated from posterior testis, situated in anterior two sevenths to one fifth of body. Receptaculum seminis large, post-ovarian. Vitellaria consisting of 7–13 follicles (up to 82 x 82 μm and 94 x 59 μm) on each side of body, post-ovarian. Uterus and male duct opening side by side at genital pore. Mean egg size 47 x 24 μm.

B podargi differs from *B. dacelonis* in its greater size, the more anterior position of its acetabulum, and in the longer eggs. It differs from *B. harrisoni* (from *Ninox novaeseelandiae*, another night-flying bird, which may eat the same foods as *Podargus strigoides*) in the larger eggs, and the absence of papillae from the body surface.

The only *Brachylecithum* sp. previously recorded from the Caprimulgiformes is *Brachylecithum transversogenitalis sylvestris* Semenov from *Caprimulgus europaeus*. From the measurements and figure given by Skrjabin & Evranova (1953), this species differs from *B podargi* in its shorter, much wider body (width/length ratio 1:8) and smaller eggs (26–33 x 16 μm).

Brachylecithum rarum (Travassos,1917)

Syn.: Lypersomum rarum Trav.,1917
Olssoniella rara (Trav.,1917) Trav.,1944

Hosts: Celeus flavescens flavescens
Daenis cayana cayana
Calospiza cyanocephala cyanocephala
(Calopoza festiva)

Genus BRACHYLECITHUM Strom, 1940

BRACHYLECITHUM RARUM (Travassos, 1917)

FIGURE 35, *d*, *e*

Lyperosomum rarum TRAVASSOS, First Conf. Soc. Sud. Amer. Hig., pp. 738, 741–742, fig. 4 (1916), 1917.

Brachylecithum rarum STROM, Parasitol, Sborn. Zool. Inst. Akad. Nauk U.S.S.R., vol. 8, p. 183, 1940.

Olssoniella rara TRAVASSOS, Monogr. Inst. Oswaldo Cruz, No. 2, pp. 217–218, est. 84, figs. 1–3; est. 85, figs. 1–2, 1944.

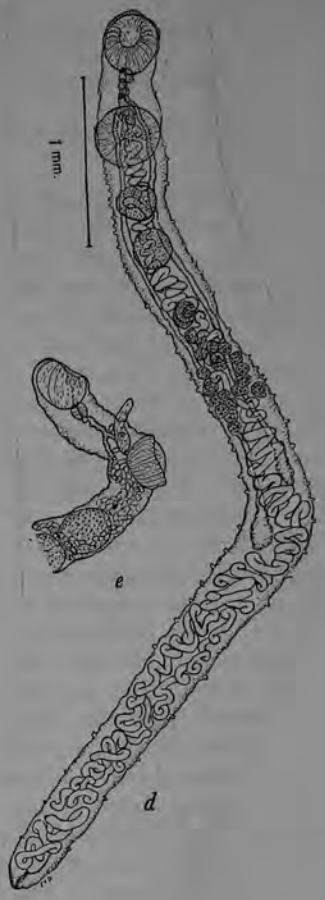
Description.—Body of mature specimens large and robust, 4.50 to 6.90 mm. long by 0.30 to 0.49 mm. wide between acetabulum and vitellaria, slightly flattened dorsoventrally, with almost parallel sides and rounded ends. Cuticle aspinose, but with prominent fingerlike tuberculations irregularly distributed over body except for region anterior to genital pore. Oral sucker subterminal in position, large and muscular, 0.28 to 0.38 mm. long by 0.28 to 0.31 mm. wide. Acetabulum weakly muscular, 0.29 to 0.35 mm. long by 0.29 to 0.41 mm. wide, with shallow, saucerlike lumen in living or relaxed specimens, or with center protruded (fig. 35, *e*) so as to eliminate lumen in most fixed specimens, located in anterior sixth of body. Ratio of width of oral sucker to acetabulum 1:1.05 to 1:1.34. Prepharynx absent. Pharynx muscular, globular, longer than wide, 0.09 to 0.11 mm. long by 0.08 to 0.10 mm. wide. Esophagus slender, straight to slightly wavy, bifurcating from one-half to three-fourths of distance from oral sucker to acetabulum. Ceca of medium width, fairly thick-walled, straight to slightly wavy, passing dorsal to acetabulum, dorsal to lateral margins of gonads and dorsal to vitellaria, terminating unevenly near body middle, with ends forming distended pouches. Excretory pore terminal. Excretory vesicle thin-walled, tubular, extending anteriad to near anterior limits of vitellaria. Genital pore medium, ventral to intestinal bifurcation. Testes round to oval, equal in size, 0.17 to 0.32 mm. in diameter, situated in body midline, with one directly behind the other. Anterior testis separated from acetabulum by three to six transverse loops of uterus; posterior testis usually separated from anterior one by a single dorsoventral loop of uterus. Vasa efferentia arising from dorsomedial surfaces of testes and uniting just posterior to caudal margin of acetabulum to form an almost straight vas deferens. Cirrus sac elongated-pyriform, 0.18 to 0.25 mm. long by 0.07 to 0.10 mm. wide, containing a coiled seminal vesicle, ejaculatory duct surrounded by prostatic gland cells and eversible cirrus. One-third to one-half of cirrus sac lies dorsally to acetabulum. Ovary transversely oval in shape, 0.11 to 0.18 mm. long by 0.14 to 0.21 mm. wide, situated in middle of body and separated from posterior testis by one to

four transverse loops of uterus. Seminal receptacle small, globular, situated entirely posterior to ovary. Mehlis' gland diffuse, located posteromedial to seminal receptacle. Laurer's canal not observed. Vitellaria consisting of 7 to 14 large oval to rounded, discrete follicles on each side of body, tending to meet ventrally at anterior limits and occupying zone immediately posterior to Mehlis' gland. Uterus much convoluted, filling most of body posterior to vitellaria, then passing forward ventrally to vitellaria and ovary (in two specimens the uterus passes dorsally to the ovary) by undulating course, dorsally between ovary and posterior testis, dorsally to both testes and acetabulum to genital pore. Mature ova dark brown, fully embryonated when oviposited, 44μ to 57μ long by 23μ to 33μ wide.

Additional host.—*Pipilo erythrophthalmus* (Linnaeus).

Habitat.—Liver and bile ducts.

Localities.—VIRGINIA: Mountain Lake; NORTH CAROLINA: Highlands.



Material.—Two specimens have been deposited in the helminthological collection of the U. S. National Museum, No. 37115.

Remarks.—*Brachylecithum rarum* is described here from 25 mature specimens from the liver of the red-eyed towhee, *Pipilo erythrophthalmus*, from Mountain Lake, Va., and Highlands, N. C. The material in the present collection agrees very closely with that described by Travassos (1917, 1944) except for the size of the pharynx, which is slightly larger in our material.

From Denton & Byrd 1951

BRACHYLECITHUM SEIURICUM, new species Denton & Byrd, 1951

FIGURE 37, *a–f*

Diagnosis.—Body flattened dorsoventrally, elongated, 1.79 to 2.37 mm. long by 0.18 to 0.29 mm. wide in region between anterior testis and vitellaria, with almost parallel sides and rounded or slightly tapering extremities. Musculature of body weakly developed. Cuticle thin, aspinose, with fine transverse ridges. Small sensory papillae on margins of body in some specimens. Oral sucker subterminal to inconspicuous liplike protuberance, weakly muscular, 0.11 to 0.14 mm. in diameter. Acetabulum weakly muscular, protrusible, 0.14 to 0.19 mm. in diameter, with shallow saucerlike lumen or with center protruded far enough to obliterate lumen (fig. 37, *b*) in anterior fourth of body. Ratio of diameter of oral sucker to acetabulum 1 : 1.2 to 1.5. Prepharynx absent. Pharynx muscular, globular, relatively small, approximately 0.03 mm. in diameter. Esophagus very thin-walled, slender, approximately 0.19 to 0.20 mm. long, bifurcating just in front of or dorsal to cephalic margin of acetabulum. Ceca thin-walled, difficult to visualize in fixed specimens, of medium width, straight to slightly wavy, terminating unevenly just in front of vitellaria or somewhere within vitelline zone. Excretory pore terminal. Genital pore median, anterior to bifurcation of intestine, from one-half to three-fourths the distance from oral sucker to acetabulum. Testes approximately equal in size, 0.06 to 0.18 mm. long by 0.07 to 0.15 mm. wide, round to oval, with smooth to slightly lobed margins, slightly oblique in position. Anterior testis immediately posterior to acetabulum or depending on state of contraction of body, may be separated from that organ by one to three uterine loops. Posterior testis entirely behind zone of anterior testis. Cirrus sac elongated-pyriform, 0.13 to 0.15 mm. long by 0.04 to 0.05 mm. wide, containing convoluted seminal vesicle, ejaculatory duct, and eversible cirrus, extending posteriorly far enough for one-third to two-thirds of its length to lie dorsally to acetabulum. Ovary entire, round to transversely oval, 0.04 to 0.08 mm. long by 0.08 to 0.11 mm. wide, on midline or slightly to one or other side of that line, separated from posterior testis by one or two loops of uterus. Seminal receptacle globular, entirely posterior to ovary, against dorsal body wall. Mehlis' gland and yolk reservoir median to seminal receptacle. Laurer's canal not observed. Vitellaria (fig. 37, *c–f*) consisting of 6 to 14 large irregular masses of yolk cells, individual masses joined together by distinct ducts and glands usually joined across body at their anterior limits to form a wide connecting bridge just beneath dorsal body wall. Uterus greatly convoluted, with rather indistinct loops, filling most of body posterior to vitellaria, passing anteriorly between and ventrally to vitellaria, ventrally to middle or either margin of ovary, to dorsal side of body between posterior testis and ovary, either right or left side of posterior testis between testes, dorsally to acetabulum where it forms several loops before reaching genital pore. Mature ova few in number, dark brown in color, 39μ to 44μ long by 22μ to 28μ wide.

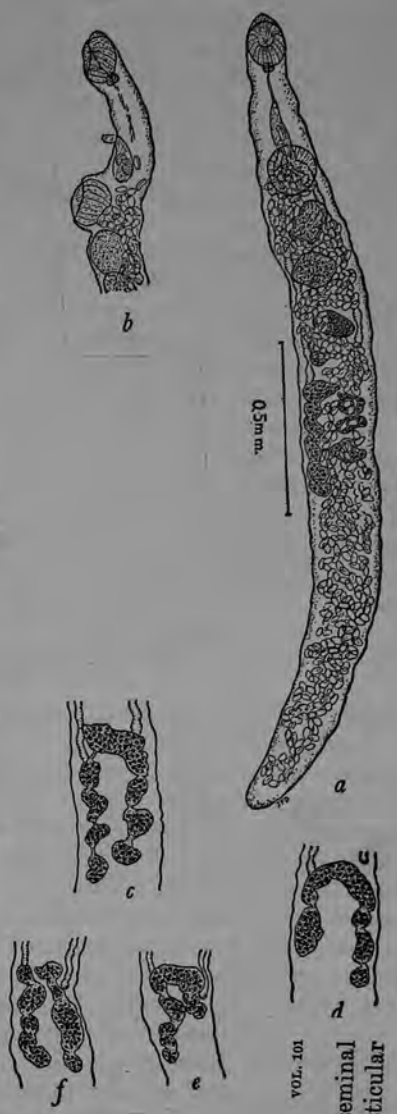
Host.—*Seiurus aurocapillus* (Linnaeus).

Habitat.—Liver.

Locality.—VIRGINIA: Mountain Lake.

Type specimen.—U.S.N.M. Helm. Coll. No. 37118.

Remarks.—*Brachylecithum seiuricum* is described from 18 specimens from the liver of one of 14 ovenbirds, *Seiurus aurocapillus*. In its combination of characters of having a slender body with suckers approximately equal in size, testes not exceeding acetabulum in size, ovary slightly smaller than testes, ceca not extending posterior to vitellaria, genital pore anterior to intestinal bifurcation and the fused vitellaria, *B. seiuricum* is unique among the already described species of the genus. From *B. americanum* and *B. moorei*, which it superficially resembles, *B. seiuricum* is readily distinguished by its more



anterior genital pore, shorter ceca, its more posteriorly located seminal receptacle, its fused vitellaria, and its completely separated testicular zones.

Brachylecithum strigosum (Looss, 1899)

Синонимы: *Dicrocoelium strigosum* Looss, 1899; *Olssoniella strigosa* (Looss, 1899) Travassos, 1944

(Рис. 72)

Хозяин: золотистая щурка (*Merops apiaster*).

Локализация: желчные ходы печени.

Место обнаружения: Африка (Египет).

Описание вида (по Лооссу, 1899). Тело чрезвычайно нежное и тонкое, нитевидное, 3,5 мм длины и почти на всем протяжении равномерной ширины (0,5 мм). Задний конец несколько сужен. Кутикула гладкая. Ротовая присоска занимает всю ширину переднего конца и наклонена к брюшной стороне. Брюшная присоска несколько крупнее и лежит у конца первой четверти общей длины тела. Имеется маленький фаринкс (около 0,04 мм), который переходит в короткий пищевод. Кишечные ветви, повидимому, не совсем доходят до заднего конца тела. Половое отверстие лежит медианно позади развилка кишечника. Оба маленьких поперечно-овальных семенника лежат недалеко друг от друга, тотчас позади брюшной присоски. Перед брюшной присоской лежит веретеновидная половая бурса, внутри которой помещается извитой семенной пузырек. Большой яйцевидный яичник лежит позади семенников; позади яичника расположено тельце Мелиса. От оотипа матка идет многочисленными извивами сперва назад до заднего конца тела, затем поворачивает таким же образом обратно кпереди. Обыкновенно вся задняя половина тела густо наполнена яйцами. Кзади от яичника матка еще заполняет пространство между ним, семенниками и брюшной присоской, а затем направляется к половому отверстию. Желточники лежат позади яичника, по сторонам тела. Их фолликулы довольно крупные и немногочисленные, так что у свежих экземпляров их можно только с трудом распознать между многочисленными яйцами.

Яйца имеют темнокоричневую окраску; их размер 0,042 мм длины и 0,025 мм ширины.

Литература: Looss, 1899, стр. 727; Travassos, 1944, стр. 208.

72

BRACHYLECITHUM STUNKARDI (Pande, 1939), new combination

FIGURE 38, *b*

Lyperosomum stunkardi PANDE, Proc. Nat. Acad. Sci. India, vol. 9, pp. 16–19, figs. 1–2, 1939.

Olssoniella stunkardi TRAVASSOS, Monogr. Inst. Oswaldo Cruz, No. 2, p. 221, est. 83, fig. 4; est. 85, fig. 3, 1944.

b

Description—Body muscular, cylindrical to slightly flattened, with rounded anterior and tapering posterior ends, measuring 2.82 to 3.98 mm. long by 0.22 to 0.30 mm. wide in region of vitellaria. Cuticle thick, aspinose, finely wrinkled transversely. Oral sucker 0.16 to 0.23 mm. in diameter, muscular, subterminal to a short lip-like projection. Acetabulum 0.19 to 0.28 mm. long by 0.22 to 0.35 mm. wide, located one-sixth to one-seventh of body length from anterior end; fairly muscular, somewhat protrusible, with center often protruded so as to obliterate its lumen; with a small, flat appendage on each lateral margin. Ratio of width of oral sucker to acetabulum 1 : 1.35 to 1 : 1.75. Pharynx muscular, 0.05 to 0.07 mm. in diameter. Esophagus in relaxed specimens narrow, 0.20 to 0.32 mm. long, straight to slightly wavy, bifurcating dorsal to cephalic margin of acetabulum. Ceca slender, becoming bulbous toward posterior ends in some specimens, slightly sinuous, terminating at different levels, from one-fourth to one-half the distance from vitellaria to posterior end of body. Excretory pore terminal. Excretory vesicle tubular, voluminous, and somewhat sinuous, extending anteriorly to level of posterior vitelline follicles. Genital pore median, about two-thirds of distance from oral sucker to acetabulum, and well in front of intestinal bifurcation. Testes large, 0.10 to 0.36 mm. in greatest diameter, round to oval, the long axis varying with state of contraction, located one directly behind the other and occupying almost entire width of body. Anterior testis separated from acetabulum by 6 to 9 loops of uterus in relaxed specimens; posterior testis separated from anterior testis by a single uterine loop. Cirrus sac large, bulb-shaped, 0.14 to 0.19 mm. long by 0.07 to 0.09 mm. wide, containing a convoluted seminal vesicle, ejaculatory duct and muscular eversible cirrus, situated so that the posterior one-half to three-fourths of its length lies dorsally to acetabulum. Ovary transversely oval, 0.07 to 0.19 mm. long by 0.15 to 0.25 mm. wide, situated immediately behind posterior testis and separated from it by a single uterine loop. Seminal receptacle globular, 0.05 to 0.08 mm. in diameter, immediately posterior to ovary. Mehlis' gland large, situated posterolaterally to seminal receptacle. Laurer's canal not observed. Each vitellaria composed of 8 to 12 large ovoid follicles, located immediately posterior to Mehlis' gland and beginning at about equator of body. Uterus convoluted, filling greater part of body posterior to vitellaria, then passing ventral or to either side of ovary, dorsal or to either side of posterior testis, between testes or dorsal to anterior testis, to form 6 to 9 lateral loops before passing to genital pore. Mature ova light to dark brown, 30μ to 41μ long by 21μ to 27μ wide (38μ to 45μ by 28μ to 33μ before preservation).

Host.—Cyanocitta cristata (Linnaeus).

Habitat.—Liver.

Localities.—TEXAS: Houston; VIRGINIA: Mountain Lake.

Material.—A specimen has been deposited in United State National Museum, Helm. Coll. No. 36795.

From: Denton & Byrd, 1951

Remarks.—Brachylecithum stunkardi is described here from 16 young specimens obtained from the liver of a blue jay, *Cyanocitta cristata*, collected at Houston, Tex., and 9 specimens just reaching sexual maturity from the same host obtained at Mountain Lake, Va. Since this trematode was found in only two (7.7 percent) of 26 blue jays examined from various localities, it apparently is not very common in this host.

The material in the present collection, although slightly smaller and possibly younger, agrees very closely with that described by Pande (1939) in (1) shape of the body; (2) size, shape, and relative position of the suckers; (3) size, shape, and relative position of genital organs; (4) position of the genital pore; (5) position and shape of vitellaria; (6) course of the uterus; and (7) size of ova. Our material differs from Pande's in having the intestinal bifurcation more posterior in position; it lies dorsal to the cephalic portion of the acetabulum, with the result that the genital pore is anterior to the intestinal bifurcation in our specimens, while it is posterior to the bifurcation in the material described by Pande.

Brachylecithum eophonae described by Yamaguti (1941) from a finch, *Eophona personata*, seems to differ from *B. stunkardi* only in having slightly larger ova. We consider the two forms to be synonymous. Furthermore, we are of the opinion that the material from *Corvus corone* described briefly and figured by Braun (1902, plate 6, figure 66) as *Lyperosomum* sp. is unquestionably a representative of *B. stunkardi*.

Brachylecithum stunkardi is closely related to *B. lobatum* (Railliet, 1900) and may possibly be a synonym of it. As pointed out by Travassos (1944, pp. 210–212) considerable confusion concerning the characteristics of *B. lobatum* exists, resulting from authors' confusing it with *L. longicauda* (Rudolphi, 1809), and possibly with other similar forms that occur in the same host group. Until adequate descriptions of *B. lobatum* and *L. longicauda* are available for comparison and the confusion concerning these forms is cleared up, we feel justified in retaining *B. stunkardi* as a separate species.

Brachylecithum stunkardi (Pande, 1939)

Синонимы: *Lyperosomum stunkardi* Pande, 1939; *Olssoniella stunkardi* (Pande, 1939) Travassos, 1944

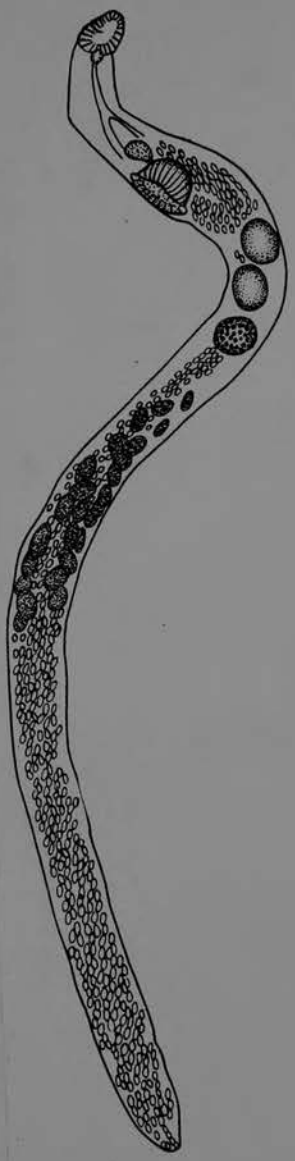
(Рис. 73)

Хозяин: сойка (*Garrullus lanceolatus*).

Локализация: желчные протоки.

Место обнаружения: Индия.

Описание вида (по Панде, 1939). Длина тела 5,8—6,6 мм при максимальной ширине 0,21—0,27 мм. Тело удлиненное, нитевидное,



73

Brachylecithum transversogenitalis (Layman, 1922) *sylvestris* (Semenov, 1927)

Синоним: *Lyperosomum transversogenitalis* (Layman, 1922) *sylvestris* Semenov, 1927

(Рис. 75)

Хозяин: обыкновенный козодой (*Caprimulgus europaeus*).

Локализация: желчные ходы.

Место обнаружения: СССР (Смоленская область).

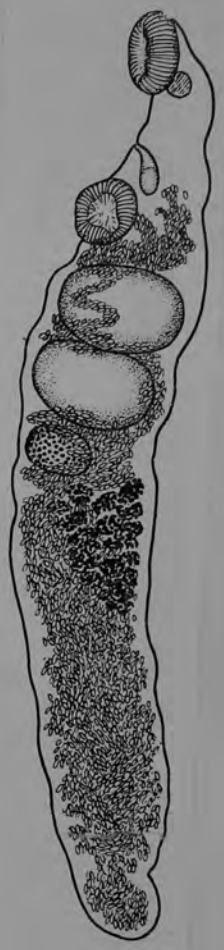
Описание вида (по Семенову, 1927). Тело 2,7—2,8 мм длины, при максимальной ширине 0,34 мм. Передний конец очень узкий, постепенно расширяется в области брюшной присоски, достигая максимальной ширины на уровне семенников, затем по направлению к заднему концу несколько суживается. Ротовая присоска 0,22 мм длины и 0,17 мм ширины; брюшная присоска — 0,17 × 0,22 мм. Фаринкс небольшой. Семенники поперечно-овальной формы, достигают 0,25 мм длины и 0,4 мм ширины, лежат позади брюшной присоски, соприкасаясь друг с другом. Они отделены от брюшной присоски петлями матки. Половая бурса грушевидная. Половое отверстие лежит на середине между двумя присосками.

Яичник поперечно-овальной формы, находится позади заднего семенника, отделяясь от него петлями матки. Длина яичника 0,14 мм при ширине 0,19 мм.

Желточники состоят из крупных фолликулов; они расположены позади яичника в виде треугольника, основание которого обращено в сторону яичника, занимая пространство от 0,16 до 0,28 мм. Извилистые петли матки лежат впереди переднего семенника; затем они проходят вентрально от переднего семенника, огибают с левой стороны задний семенник, яичник и заполняют все свободное пространство в задней части тела.

Яйца 0,026—0,033 мм длины и 0,016—0,0165 мм ширины.

Литература: Ляйман, 1922; Семенов, 1927.



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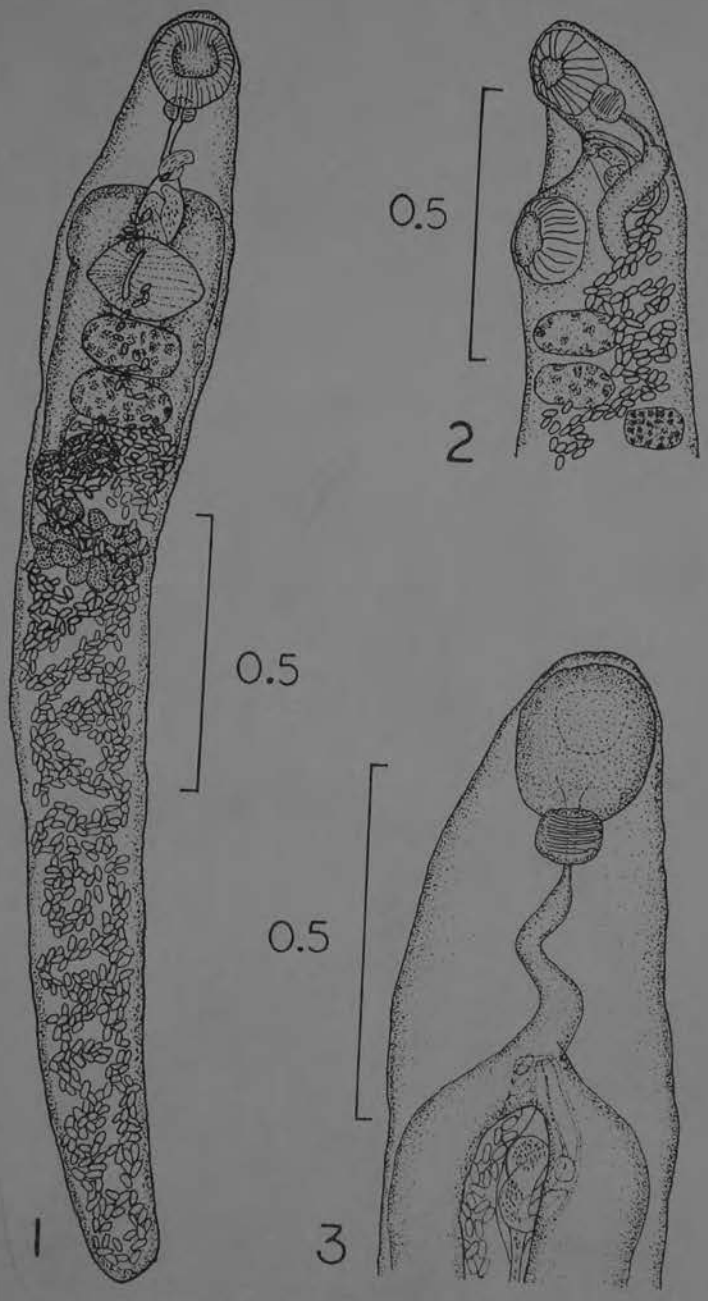
74



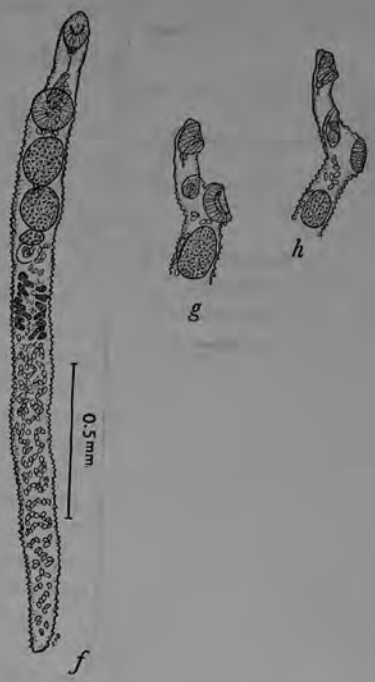
FROM: Denton and Krissinger, 1974

SEE REPRINT

Brachylecithum transversum

BRACHYLECITHUM TUBERCULATUM, new species Denton & Byrd, 1951

FIGURE 35, *f-h*



Diagnosis.—Body of mature specimen elongated-cylindrical, with rounded anterior and tapering posterior ends, 1.93 to 3.43 mm. long by 0.17 to 0.20 mm. wide in region of testes. Cuticle aspinose, with numerous close-set conical tuberculations irregularly distributed over body except in region of oral sucker Oral sucker subterminal, weakly muscular, elongated-oval in shape, 0.11 to 0.18 mm. long by 0.10 to 0.13 mm. wide, with oral opening directed ventrally. Acetabulum weakly muscular, 012 to 0.15 mm. in diameter, with shallow saucerlike lumen (fig. 35, *g*) in living and contracted specimens, or with center protruded (fig. 35, *h*), obliterating lumen in most fixed specimens, located in anterior fifth of body. Ratio of width of oral sucker to acetabulum 1:1.18 to 1:1.37. Prepharynx absent. Pharynx muscular, longer than wide, 0.03 to 0.05 mm. long by 0.03 to 0.04 mm. wide. Esophagus very thin-walled, slender, straight to slightly wavy, bifurcating from one-half to two-thirds distance from oral sucker to acetabulum. Ceca narrow, very thin-walled (visible only in sectioned specimens), slightly undulating, passing dorsally to acetabulum, dorsally to margins of testes and dorsally to vitellaria, terminating unevenly just posterior to

last follicles of vitellaria. Excretory pore terminal. Genital pore median, one-half to two-thirds distance from oral sucker to acetabulum, ventral to or slightly anterior to intestinal bifurcation. Testes round to elongated-oval, equal in size, measuring 0.12 to 0.28 mm. long by 0.08 to 0.16 mm. wide, situated one directly behind other, occupying most of width of body. Anterior testis touching acetabulum or separated from it by one or two loops of uterus; posterior testis contiguous with anterior testis. Cirrus sac elongated-pyriform, 0.13 to 0.15 mm. long by 0.05 to 0.06 mm. wide, containing coiled seminal vesicle, ejaculatory duct surrounded by prostatic gland cells and eversible cirrus, from one-third to one-half its length lying dorsally to acetabulum. Ovary round to oval in shape, smaller than testes, 0.05 to 0.10 mm. long by 0.07 to 0.10 mm. wide, located on midline immediately behind posterior testis or separated from that organ by one to three loops of uterus. Seminal receptacle larger than ovary, immediately posterior to ovary. Vitellaria consisting of 8 to 10 medium-sized, ovoid follicles on each side of body, occupying zone posterior to seminal receptacle. Uterus much convoluted, filling body posterior to vitellaria, passing anteriorly between and ventrally to vitellaria, ventrally to middle or to one or other margin of ovary, dorsally between ovary and posterior testis, dorsally to both testes and acetabulum, then following straight or slightly undulating course to genital pore. Metraterm weakly muscular, equal in length to cirrus sac. Mature ova very dark brown, embryonated when oviposited, 36μ to 40μ long by 21μ to 27μ wide.

Host.—*Wilsonia canadensis* (Linnaeus).

Habitat.—Liver.

Locality.—VIRGINIA: Mountain Lake.

Type specimen.—U.S.N.M. Helm. Coll. No. 37117.

Remarks.—*Brachylecithum tuberculatum* is described from eight specimens obtained from the liver of two of six Canada warblers, *Wilsonia canadensis*, from Mountain Lake, Va. The species shows a closer affinity to *B. rarum* (Travassos, 1917) than to the other members of the genus in that its body is covered with tuberculations. As compared with this large robust species, *B. tuberculatum* is a small delicate form that possesses differently shaped and more numerous tuberculations, inconspicuous ceca, proportionately larger testes, a different type of vitellaria and a uterus which follows a different course in ascending to the genital pore.

Brachylecithum uigurica Evranova, 1952[1]

Синоним: *Brachylecithum* sp. Strom, 1940

(Рис. 76)

Хозяин: рогатый жаворонок (*Eremophila penicillata albigua*).

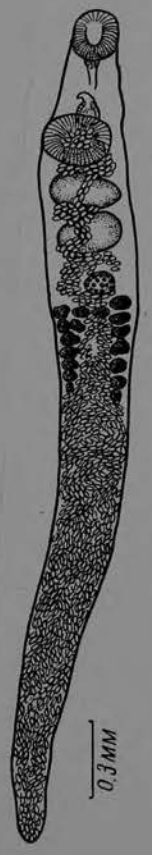
Локализация: желчные протоки печени.

Место обнаружения: СССР (Киргизия).

Описание вида (по Штрому, 1940). Небольшая трематода, 3,3 мм длины и 0,3 мм ширины на уровне яичника. Кутикула без шипов. Диаметр субтерминальной ротовой присоски 0,20 × 0,18 мм. Размер брюшной присоски 0,22 × 0,26 мм. Расстояние между присоской и передним концом тела 0,4 мм. Фаринкс маленький, круглый, 0,065 мм в диаметре. Пищевод можно проследить до переднего конца половой бурсы, где от него, повидимому, отходят два кишечных ствола, плохо видные на препарате.

Два поперечно-овальных семенника лежат один за другим непосредственно позади брюшной присоски, соприкасаясь друг с другом; их размер 0,16 × 0,28 и 0,16 × 0,25 мм. Небольшая половая бурса (0,10 × 0,09 мм) находится впереди брюшной присоски и своим дном заходит за ее передний край. Половое отверстие открывается у развилка кишечника.

Маленький овальной формы яичник находится на небольшом расстоянии позади заднего семенника, отделен от последнего петлями матки. Его размеры 0,09 × 0,19 мм. Желточники состоят из немногочисленных круп-



Brachylecithum vanellicola (Layman, 1922)

Host:

77

Brachylecithum sp.

Host. *Gymnorhina hypoleuca*.

Location in host. Intestine.

Locality. Encounter Bay, S. Aust. January, 1966.

Incidence. 1 of 68 *Gymnorhina* spp. from S. Aust.; none of 16 from A.C.T. or 1 from N.T.

Food of host includes beetles, ants, other insects, and spiders. Two slides (one of a single specimen in four pieces, a second with two whole worms and the anterior half of a third), University of Adelaide Helminthological Collection.

Two complete worms, one broken worm and the anterior half of a fourth were found. Although in poor condition, they were stained and mounted. Although the caeca are not visible the worms are referred to *Brachylecithum*.

Description

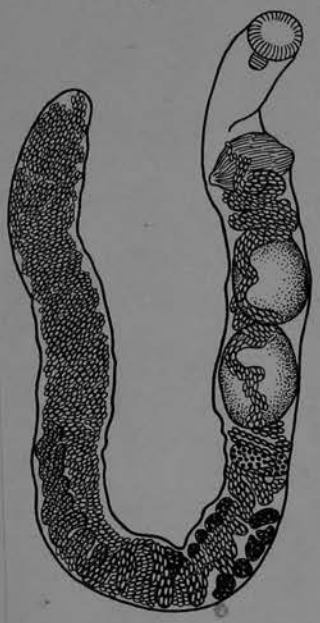
Long, narrow, cylindrical or sub-cylindrical worms (2.9–4.2 mm) Width/length ratio 1:21. No papillae seen on body surface. Not possible to measure testes and ovary but gonads apparently in tandem, situated quite close to acetabulum. Anterior margin of vitellaria 442 μm from acetabulum in each of 3 specimens. Vitellaria, about seven, generally compact, follicles (about 66 x 37 μm in size) on each side of body.

The condition of these worms does not allow a proper comparison with other species. It is probably close to *B. parvum*, the type host of which belongs to the same family as *Gymnorhina*, although it appears likely that the width/length ratio is less than in *B. parvum*. In a broken specimen the ratio of depth behind the acetabulum to the sum of the lengths of the four pieces was 1:35.

FROM ANGEL AND PEARSON, 1977

Brachylecithum sp. M. Braun, 1902

Host:: Corvus corone



78

***Brachylecithum* ~~spp.~~ Fischthal and Kuntz, 1973**

HOSTS: *Streptopelia chinensis tigrina* (Temminck), spotted neck dove (Columbiformes: Columbidae); *Pitta erythrogaster thompsoni* Ripley and Rabor, red-breasted pitta (Passeriformes: Pittidae); *Pitta s. sordida*; *Pycnonotus plumosus cinereifrons* (Tweeddale), large olive bulbul (Passeriformes: Pycnonotidae).

HABITAT: Small intestine (?).

LOCALITY: Tarabanan Concepción.

DATES: 12, 14, 15 May 1962.

DISCUSSION: Two incomplete worms were recovered from one *P. sordida* and one incomplete worm from each of the other host species. More than one species of trematode appear to be present, but allocations are not possible.

BRACHYLECITHUM

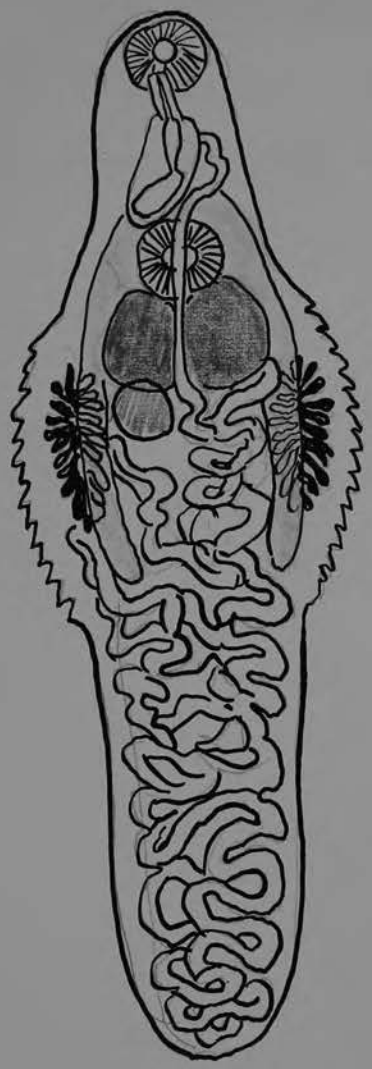
Brodeniini ~~n. trib.~~ YAMAGUTI, 1958

Tribe diagnosis. — Dicrocoeliidae, Dicrocoeliinae: Body elongate, enlarged laterally and serrate marginally at level of ovary and vitellaria. Oral sucker and acetabulum comparatively small, esophagus short, ceca half-long. Testes side by side, contiguous, posterodorsal to acetabulum. Cirrus pouch comparatively large, preacetabular. Genital pore postpharyngeal. Ovary submedian, immediately posttesticular. Vitellaria clustered in posttesticular lateral fields. Uterus occupying most of hindbody.

Dicrocoeliidae

Brodenia Gedoelst, 1913

Dicrocoeliidae of lanceolate shape, presenting in the anterior middle part of the body a notable enlargement limited latterally by a serrated tooth-like edge; testicles symmetrical and contiguous; loops of the intestine terminate a great distance at the posterior extremity of the body. Parasites of the pancreas of primates.



Type species: B. serrata Gedoelst
from: Cercocebus sp.
Belgian Congo.
Pancreas.

Other species: B. laciniata (De Blainville) Gedoelst
(syn: Fasciola laciniata deBlain. 1820
Dist. laciniatum Dies. 1860
from: Mandrill - Papio maimon - Guinea

-over-

Brodenia serrata Gedoelst, 1913

(Рис. 79)

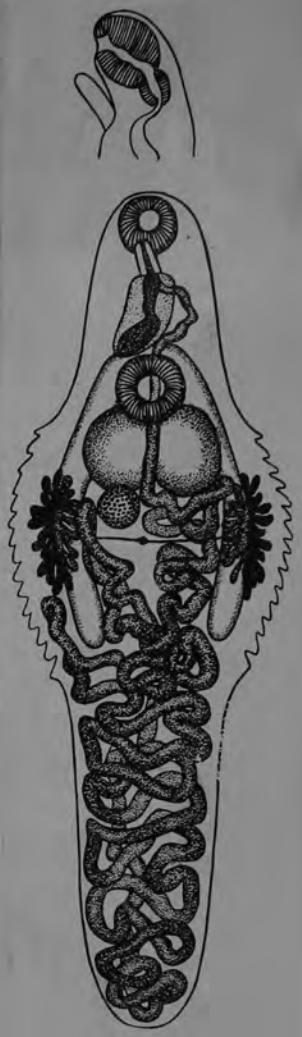
Хозяин: обезьяна (*Cercocebus* sp.)

Локализация: поджелудочная железа.

Место обнаружения: Африка (Бельгийское Конго).

Описание вида (по Травассосу, 1944). Тело достигает 4—5 мм длины, при максимальной ширине 1,4 мм в средней своей части. Тело копьевидное, состоит из трех частей: 1) конической, спереди закругленной передней части длиною 1,3 мм и шириною 0,85 мм), 2) средней веретеновидной части, края которой несут около 15 зубчиков, достигающей в длину 1,6 мм при ширине 1,4 мм и, наконец, 3) задней части с тупым терминальным кончиком, длиною 2,1 мм, при ширине 0,83 мм. В профиль тело образует угол, вершина которого занята брюшной присоской. Кутикула гладкая, невооруженная. Брюшная присоска лежит на границе передней и средней частей тела и достигает 0,41—0,52 мм в ширину и 0,38—0,46 мм в длину. Ротовая присоска шаровидная, субтерминальная, с отверстием, направленным косо вперед; диаметр ее равен 0,30—0,32 мм. Соотношение между присосками 1 : 1,42. За ротовой присоской следует круглый фаринкс диаметром 0,14 мм. Пищевод достигает в длину около 0,4 мм. Кишечные стволы простые, широкие, оканчиваются в средней части тела. Половое отверстие находится на медианной линии, кпереди от бифуркации кишечника, на расстоянии около 0,27 мм от ротовой присоски. Половая бурса крупная, грушевидной формы, лежит наискось, достигает 0,67 × 0,24 мм. Она содержит циррус, который в выпяченном состоянии достигает 0,27 мм длины и 0,11 мм ширины, простатическую часть длиною 0,28 мм и семенной пузырек длиною 0,30—0,32 мм при ширине 0,12 мм. Семенники эллипсовидные, лежат на одном горизонтальном уровне, частично налегая на брюшную присоску. Они частично заходят в область кишечных стволов и достигают 0,67—0,083 × 0,43—0,45 мм. Яичник круглый, 0,20—0,23 мм в диаметре, прилегает к заднему краю правого семенника. Желточники состоят из двух веретеновидных групп, с глубокими латеро-вентральными лопастями. Желточные протоки соединяются на медианной линии, образуя маленький резервуар. Лауреров канал не был обнаружен. Петли матки занимают всю заднюю часть тела; в переднюю часть тела проникает лишь прямой медианный ствол матки, образующий извилины лишь впереди брюшной присоски. Яйца с толстой оболочкой желтовато-коричневого цвета и мало заметными крышечками; их размер 0,042—0,045 × 0,024 мм.

Литература: Gedoelst, 1913, стр. 258; Travassos, 1944, стр. 229—230.



79

Brodenia laciniata (Blainville, 1820) Gedoelst, 1913

Синонимы: *Fasciola laciniata* Blainville, 1820; *Distoma laciniatum* (Blainville, 1820) Dujardin, 1845; *Brodeniamaimonis* Nicoll, 1927

Хозяин: мандрил (*Papio sphinx, Papio maimon*).

Локализация: поджелудочная железа.

Место обнаружения: Гвинея.

Описание вида (из Травассоса, 1944). Тело достигает, по Дюжардену, 20 мм длины, а по Гедельсту — 13,5 мм.

Средняя часть тела расширена и снабжена по краям 7—8 зубчиками.

BRODENIA