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FISH COCCIDIA: AN ANNOTATED LIST OF DESCRIBED SPECIES

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Abstract. An annotated list of known species of coccidia infecting fish is presented. It includes one species of the genus *Cryptosporidium* Tyzzer, one species of the genus, *Crystallospora* Labbé, two species of the genus *Epieimeria* Dyková et Lom, 18 species of the genus *Goussia* Labbé, and 105 species of the genus *Eimeria* Schneider. Each coccidian is listed along with its synonyms, name of host, site of infection, geographic distribution, published sources of description and other information and if needed, other remarks.

In recent years, a great progress has been made in the research of coccidia, especially of those infecting economically important warm-blooded hosts. This interest is reflected in a considerable number of published monographs. Coccidian species infecting fishes (i.e., members of the class Chondrichthyes and Osteichthyes) were not paid much attention until recently (Marquardt and Khalifa 1974, Dyková and Lom 1981), although first studies on these parasites date back almost a century (*Eimeria sardinae* Thélohan, 1890). It has been only recently that some investigators have begun to realize the challenge that the study of fish coccidia represents for better understanding of life cycles, evolution of host-parasite interrelationships, phylogeny and morphology of coccidia in general (Desser 1981, Overstreet 1981). Fish coccidia may prove to be one of the limiting factors in modern fish farming, both marine and freshwater (e.g., McVicar and MacKenzie 1977, Bauer et al. 1981). Fish coccidia are an important part of the parasite fauna of free living and game fish the role of which is yet to be assessed.

Still the data on these parasites are scattered in various publications and there is no comprehensive treatment. Pellérdy's (1974) monograph on coccidia catalogues 66 named species. Since then, 61 more species have been described and the taxonomic status of many of the previously described species has been changed. Therefore there is a need of an updated, annotated list of known species which could provide students in this newly developing area with basic data on fish coccidia. An equally important aim of this paper is to stimulate interest in these intriguing organisms.

INTRODUCTORY NOTES ON THE ARRANGEMENT OF THE LIST

The list includes data on 127 named species of the genera *Cryptosporidium* Tyzzer, 1910, *Crystallospora* Labbé, 1896, *Eimeria* Schneider, 1875, *Epieimeria* Dyková et Lom, 1981 and *Goussia* Labbé, 1896, infecting Chondrichthyes and Osteichthyes. On the evidence of important morphological and life cycle characters, recognition of the previously disputed genera *Crystallospora* and *Goussia* was proposed along with the establishment of a new genus, *Epieimeria* (Dyková and Lom 1981). We do not list species given only generic but not specific assignement, since most of the findings recorded as *Eimeria* sp. lack a due morphological description and, perhaps with the exception of *Eimeria* sp. (MacKenzie, 1981) from *Micromesistius poutassou* (Riso), can hardly be identified again.

The list covers the period from 1890 to 1981. Within that period, several compilations of species of fish coccidia appeared: Labbé (1896), Stankovitch (1921), Yakimoff (1929) Levine and Becker (1933) and Pellérdy (1963 1965, 1974). Pellérdy (1974) listed 66 named species including two which he considered nomina nuda, i.e., *Eimeria scylli* and *E. wierzejskii*.

The parasite list is arranged alphabetically according to scientific names and contains all recognized synonyms that may have been used. It identifies the host species (authors of descriptions of host names are only quoted in the following host-parasite check list), site of infection within the host and geographic distribution (or locality) as far as known. If only one area of distribution is given, it is the area from which the species was originally described, if several areas are quoted, number in parenthesis referes to the published records. The entry "Record" gives other published sources of information given in numbers indicating papers in the reference list. The entry "Remarks" states, in addition to other problems, whether a Stieda body was described in the sporocysts or whether it was absent according to existing data. The absence of a Stieda body indicates there may be a bivalve sporocyst shell and it could be in fact a species of the genus *Goussia*. In some species, the presence or absence of Stieda body was neither mentioned nor illustrated and so it is not quoted in "Remarks".

The host-parasite list gives scientific names of the hosts alphabetically arranged within the orders recognized by Deckert et al. (1976), along with their respective coccidian parasites.

In the list of references, publications were assigned numbers referred to in the parasite list. Authors responsible for the records are listed in chronological order of the published records. Of the many textbooks and manuals on protozoology, parasitology and ichthyopathology we list only those which give some more original or more detailed descriptions or comments on the fish coccidia mentioned.

Necessarily, in a compilation such as this one some references will be inadvertently overlooked. We hope that the users of this list will not find these unintentional omissions to be numerous.

THE PARASITE LIST

Cryptosporidium nasoris Hoover, Hoerr, Carlton, Hinsman et Ferguson, 1981
Host: *Naso lituratus*
Location: intestine, surface of epithelial cells
Locality: unspecified; the single host specimen was purchased from a pet shop in North America
Record: 118

Crystallospora crystalloides (Thélohan, 1893) Labbé, 1899
Syn.: *Coccidium crystalloides* Thélohan, 1893, *Crystallospora thélohani* Labbé, 1896, *Eimeria crystalloides* (Thélohan, 1893) Doflein, 1909
Hosts: *Motella fusca, M. maculata, M. tricirrata*
Location: intestine, epithelium, submucosa
Locality: Atlantic and Mediterranean coasts of France
Record: 19, 37, 48, 49, 88, 107, 108

Eimeria acerinae Pellérdy et Molnár, 1971
Host: *Acerina cernua*
Location: intestine
Locality: Hungary, river Danube
Record: 88, 90
Remark: no Stieda body

Eimeria ambassi Patnaik et Acharya, 1972
Host: *Barbus ambassis*
Location: absces in „the dorsal side of the rigth shoulder", „communicating with the abdominal cavity/intestine"
Locality: India, Bhubaneswas, „Pipilli fish market"
Record: 85
Remark: a single infected specimen found. Thick-walled oocyst is ovoid, with a micropyle

Eimeria amurensis Akhmerov, 1959
Hosts: *Pseudorasbora parva* (a), *Sarcochilichthys sinensis* (a, b)
Location: liver (a); kidney (b)
Locality: USSR — Asian part
Record: 22, 88, 98
Remark: no Stieda body

Eimeria aristichthysi Lee et Chen, 1964
Hosts: *Aristichthys nobilis, Hypophthalmichthys molitrix*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria aurati Hoffman, 1965
Host: *Carassius auratus*
Location: intestine, epithelium
Locality: USA, Pennsylvania
Record: 42, 67, 88
Remark: no Stieda body

Eimeria banyulensis Lom et Dyková, 1982
Host: *Crenilabrus mediterraneus*
Location: middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 60
Remark: no Stieda body

Eimeria branchiphila Dyková, Lom et Grupcheva, 1983
Host: *Rutilus rutilus*
Location: kidney, spleen, gills
Locality: Bulgaria — Batak dam lake
Record: 28
Remark: Stieda body present

Eimeria brevoortiana Hardcastle, 1944
Host: *Brevoortia tyrannus*
Location: pyloric caeca; testes
Locality: Atlantic ocean, US coast of North Carolina
Record: 37, 39, 67, 88
Remark: Stieda body present

Eimeria carassii Yakimoff et Gousseff, 1935
Host: *Carassius carassius*
Location: intestine
Locality: USSR — European part
Record: 88, 98, 111
Remark: according to (98), this is an insufficiently described species

Eimeria carassiusaurati Romero Rodriguez, 1978
Host: *Carassius auratus*
Location: intestine
Locality: Spain, Granada
Record: 95
Remark: no Stieda body

Eimeria catalana Lom et Dyková, 1981
Host: *Crenilabrus mediterraneus*
Location: middle part of intestine
Locality: Mediterranean Sea, coast near Banyuls-sur-Mer, France
Record: 59
Remark: Stieda body present

Eimeria catostomi Molnar et Hanek, 1974
Hosts: *Catostomus commersoni, Hypenthelium nigricans*
Location: anterior part of intestine, epithelium, feces
Locality: Canada, Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria cheissini Shulman et Zaika, 1962
Hosts: *Gobio gobio, Hemiculter leucisculus, Hemibarbus labeo*
Location: peritoneum, intestine, swim bladder, gall bladder
Locality: USSR — Asian part
Record: 88, 98
Remark: no Stieda body

Eimeria cheni Shulman et Zaika, 1962
Syn.: *E. intestinalis* Chen, 1956 (= nomen preoccupatum)
Hosts: *Mylopharyngodon piceus, Hypophthalmichthys molitrix, Aristichthys nobilis*
Location: anterior part of intestine
Locality: USSR (98), China (8), Hungary (70)
Record: 4, 8, 70, 79, 80, 81, 88, 98
Remark: no Stieda body

Eimeria citriformis Dogiel, 1948
Host: *Tilesina gibbosa*
Location: pyloric caeca
Locality: Sea of Japan, Peter the Great Bay
Record: 21, 88, 98
Remark: Stieda body present

Eimeria clini Fantham, 1932
Host: *Clinus superciliosus*
Location: intestine, epithelium
Locality: South Africa
Record: 30, 88

Eimeria cobitis Stankovitch, 1923
Host: *Cobitis taenia*
Location: liver
Locality: Yugoslavia, Serbian stretch of the river Danube
Record: 88, 98, 104
Remark: no Stieda body

Eimeria cotti Gauthier, 1921
Syn.: *Eimeria votti* Gauthier, 1921, lapsus
Host: *Cottus gobio*
Location: caecal opening, epithelium
Locality: France
Record: 36, 88, 98, 103
Remark: Stieda body present

Eimeria culteri Lee et Chen, 1964
Host: *Culter erythropterus*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria cylindrospora Stankovitch, 1921
Host: *Alburnus alburnus*
Location: intestine, epithelium
Locality: France, Savoie (102); Hungary (76)
Record: 76, 88, 98, 102, 103
Remark: no Stieda body

Eimeria cyprinorum Stankovitch, 1921
Syn.: *Goussia carpelli* pro parte
Hosts: *Abramis brama, Barbus barbus, Phoxinus phoxinus, Rutilus rutilus, Scardinius erythrophthalmus*
Location: intestine, epithelium
Locality: France, Eastern and Central (102); Hungary (76)

Record: 76, 88, 102, 103
Remark: no Stieda body

Eimeria dingleyi Davies, 1978
Host: *Blennius pholis*
Location: intestine, epithelium
Locality: Atlantic Ocean, Saint George Channel, Welsh coast
Record: 13
Remark: no Stieda body

Eimeria dogieli (Dogiel, 1948) Pellérdy, 1963
Syn.: *E. sphaerica* Dogiel, 1948 non *E. spherica* (Schneider, 1887) Levine et Becker, 1933
Host: *Opisthocentrus ocellatus*
Location: kidney
Locality: Sea of Japan, Peter the Great Bay, Putyatin Island
Record: 21, 86, 88, 98
Remark: no Stieda body

Eimeria duszynskii Conder, Oberndorfer et Heckmann, 1980
Host: *Cottus bairdi*
Location: intestine, epithelium
Locality: USA — Utah, Provo river
Record: 12
Remark: no Stieda body

Eimeria esoci Shulman et Zaika, 1962
Host: *Esox lucius*
Location: intestine, urinary bladder wall
Locality: USSR — Asian part
Record: 88, 98
Remark: Stieda body present

Eimeria etheostomae Molnar et Hanek, 1974
Hosts: *Etheostoma exile, E. nigrum*
Location: anterior part of intestine, epithelium
Locality: Canada — Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria etrumei Dogiel, 1940
Host: *Etrumeus micropus*
Location: testes (supposedly)
Locality: Sea of Japan, Peter the Great Bay
Record: 20, 21, 88, 98
Remark: Pellérdy (88) gives a wrong date of description (1948)

Eimeria evaginata Dogiel, 1948
Hosts: *Sebastodes taczanowskii, Myoxocephalus stelleri*
Location: pyloric caeca
Locality: Sea of Japan, Peter the Great Bay
Record: 21, 88, 98

Eimeria fernandoae Molnar et Hanek, 1974
Hosts: *Catostomus commersoni, Hypentelium nigricans*
Location: anterior part of intestine, epithelium
Locality: Canada — Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria freemani Molnar et Fernando, 1974
Host: *Notropis cornutus*
Location: kidney
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria funduli Duszynski, Solangi et Overstreet, 1979
Hosts: *Fundulus grandis, F. similis*
Location: liver
Locality: USA, estuaries of Mississippi, Alabama and Virginia
Record: 26, 33, 100, 117, 121
Remark: Stieda body present. According to (100), this species requires a second host, the shrimp *Palaemonetes pugio*

Eimeria gasterostei (Thélohan, 1890) Doflein, 1909
Syn.: *Coccidium gasterostei* Thélohan, 1890
Host: *Gasterosteus aculeatus*
Location: liver
Locality: France
Record: 19, 57, 63, 88, 98, 103, 105
Remark: no Stieda body

Eimeria gigantea (Labbé, 1896) Reichenow, 1921
Syn.: *Pfeifferia* sp. Labbé, 1894, *Pfeifferia gigantea* Labbé, 1896, *Coccidium giganteum* Labbé, 1896, *Pfeifferella gigantea* (Labbé, 1896) Labbé, 1899
Host: *Lamna cornubica*
Location: spiral valve
Locality: France
Record: 49, 50, 88, 94

Eimeria glenorensis Molnar et Fernando, 1974
Host: *Morone americana*
Location: intestine, epithelium; feces
Locality: Canada — Ontario
Record: 63, 74

Eimeria glossogobii Mukherjee et Haldar, 1980
Host: *Glossogobius giuris*
Location: intestine
Locality: India, West Benghal, Kalyani
Record: 78
Remark: Stieda body present

Eimeria gobii Fantham, 1932
Host: *Gobius nudiceps*
Location: intestine, epithelium
Locality: South Africa
Record: 30, 88

Eimeria haichengensis Chen, 1962
Host: *Cyprinus carpio*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria haneki Molnar et Fernando, 1974
Host: *Culaea inconstans*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria harpodoni Setna et Bana, 1935
Eimeria sp. Setna, 1933

Host: *Harpodon nehereus*
Location: intestine
Locality: Indian Ocean at Bombay
Record: 88, 97
Remark: Stieda body present

Eimeria hemiculterii Chen et Hsieh, 1964
Host: *Hemiculter leucisculus*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria hexagona Lom et Dyková, 1981
Host: *Onos tricirratus*
Location: pyloric caeca, middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 59
Remark: Stieda body present

Eimeria hoffmani Molnar et Hanek, 1974
Host: *Umbra limi*
Location: anterior part of intestine, epithelium
Locality: Canada — Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria hupehensis Chen et Hsieh, 1964
Host: *Carassius aratus*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria hybognathi Molnar et Fernando, 1974
Host: *Hybognathus hankinsoni*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria hypophthalmichthys Akhmerov, 1959
Host: *Hypophthalmichthys molitrix*
Location: kidney
Locality: USSR — Asian part
Record: 22, 88, 98
Remark: no Stieda body

Eimeria ictaluri Molnar et Fernando, 1974
Host: *Ictalurus nebulosus*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria insignis Lom et Dyková, 1982
Host: *Scorpaena notata*
Location: pyloric caeca
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 60
Remark: no Stieda body

Eimeria iroquoina Molnar et Fernando, 1974
Hosts: *Notropis cornutus, Nocomis biguttatus, Notropis heterolepis, N. rubellus, Pimephales notatus, Rhinichthys atratulus, Semotilus atromaculatus*
Locality: Canada — Ontario
Record: 63, 74, 120, 119
Remark: *Pimephales promelas* was susceptible to experimental infection (84). No Stieda body

Eimeria ivanae Lom et Dyková, 1981
Host: *Serranus cabrilla*
Location: pyloric caeca
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 59
Remark: Stieda body present

Eimeria kassai Molnar, 1978
Host: *Umbra krameri*
Location: intestine, epithelium
Locality: Hungary — Kiskunság National Park
Record: 72
Remark: no Stieda body

Eimeria kwangtungensis Chen, 1960
Hosts: *Channa argus, C. maculata*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria lairdi Lom et Dyková, 1981
Host: *Myocephalus scorpius*
Location: pyloric caeca
Locality: Grand Banks off the coast of Newfoundland
Record: 59
Remark: Stieda body present

Eimeria laureleus Molnar et Fernando, 1974
Host: *Perca flavescens*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria leucisci Shulman et Zaika, 1964
Hosts: *Leuciscus leuciscus baicalensis, Abramis brama, Alburnus alburnus, Blicca bjoerkna, Rutilus rutilus, Scardinius erythrophthalmus*
Location: kidney tubules, gall bladder
Locality: Hungary (76), Lake Baikal (99)
Record: 76, 88, 99
Remark: no Stieda body

Eimeria macroresidualis Shulman et Zaika, 1962
Host: *Gobio albipinatus tenuicorpus*
Location: spleen
Locality: USSR — Asian part
Record: 88, 89, 98
Remark: According to (89), *E. macroresidualis* is morphologically difficult to distinguish from *Goussia metchnikovi*. No Stieda body

Emeria maggieae Lom et Dyková, 1981
Host: *Pagellus erythrinus*
Location: middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 59

Remark: Stieda body present

Eimeria matskasii Molnár, 1978
Host: *Umbra krameri*
Location: intestine, epithelium
Locality: Hungary — Kiskunság National Park
Record: 72
Remark: Stieda body present

Eimeria merlangi Zaika, 1966
Host: *Odontogadus merlangus euxinus*
Location: intestine, gall bladder
Locality: Black Sea, USSR — coast of Sevastopol
Record: 113
Remark: Stieda body present

Eimeria meszarosi Molnar, 1978
Host: *Umbra krameri*
Location: intestine, epithelium
Locality: Hungary — Kiskunság National Park
Record: 72
Remark: no Stieda body

Eimeria micropteri Molnar et Hanek, 1974
Hosts: *Micropterus dolomieui, M. salmoides*
Location: anterior part of intestine
Locality: Canada — Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria misgurni Stankovitch, 1924
Hosts: *Cobitis taenia, Misgurnus fossilis*
Location: intestine
Locality: Yugoslavia, Serbian stretch of the river Danube
Record: 88, 98, 104
Remark: no Stieda body

Eimeria moronei Molnar et Fernando, 1974
Host: *Morone americana*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: Stieda body present

Eimeria muraiae Molnar, 1978
Host: *Misgurnus fossilis*
Location: kidney, tubules
Locality: Hungary — Kiskunság National Park
Record: 72
Remark: no Stieda body

Eimeria mylopharyngodoni Chen, 1956
Host: *Mylopharyngodon piceus*
Location: anterior part of intestine, liver, kidney
Locality: China
Record: 8, 88, 98
Remark: no Stieda body

Eimeria myoxocephali Fitzgerald, 1975
Host: *Myoxocephalus polyacanthocephalus*
Location: anterior part of intestine
Locality: Pacific ocean, US Coast of Washington
Record: 32

Eimeria nemethi Molnar, 1978
Host: *Alburnus alburnus*
Location: spleen, liver, kidney
Locality: Hungary — Lake Velencei
Record: 72
Remark: Stieda body present

Eimeria nicollei Yakimoff et Gousseff, 1935
Host: *Carassius carassius*
Location: intestine
Locality: USSR — European part
Record: 88, 98, 111
Remark: According to (98), this is an insufficiently described species

Eimeria nishin Fujita, 1934
Hosts: *Clupea harengus harengus, C. harengus pallasi*
Location: testes
Locality: Japanese coast of the Pacific ocean (3), Soviet Far East coast (20), North American Pacific coast (34)
Record: 3, 20, 34, 88
Remark: no Stieda body

Eimeria notopteri Chakravarty et Kar, 1944
Host: *Notopterus notopterus*
Location: intestine
Locality: Indian ocean, India, at Calcatta
Record: 7, 88
Remark: no Stieda body

Eimeria nucleocola Lom et Dyková, 1981
Host: *Myoxocephalus scorpius*
Location: pyloric caeca
Locality: Grand Banks off the coast of Newfoundland
Record: 59
Remark: Stieda body present

Eimeria ochetobiusi Lee et Chen, 1964
Host: *Ochetobius elongatus*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria ojibwana Molnar et Fernando, 1974
Host: *Cottus bairdi*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: no Stieda body

Eimeria ophiocephalae Chen et Hsieh, 1960
Hosts: *Ophiocephalus argus, O. maculatus*
Location: intestine, pyloric caeca
Locality: China — Kwantung and Hubei provinces
Record: 11

Eimeria osmeri Molnar et Fernando, 1974
Host: *Osmerus mordax*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74

Eimeria ottojiroveci nom. nov.
Syn.: *E. jiroveci* Lom et Dyková, 1981 (= nomen preoccupatum)

Host: *Raja clavata*
Location: intestine, epithelium, spiral valve, epithelium
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 59
Remark: Stieda body present

Eimeria parasiluri Lee et Chen, 1964
Host: *Parasilurus asotus*
Location: gall bladder
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria percae (Dujarric de la Rivière, 1914) Reichenow, 1921
Syn.: *Coccidium percae* Dujarric de la Rivière, 1941, *Eimeria rivieri* Yakimoff, 1929
Host: *Perca fluviatilis*
Location: intestine, epithelium
Locality: France (25), USSR — Baikal and Ladoga lakes (99)
Record: 25, 88, 94, 98, 99, 103, 110
Remark: no Stieda body

Eimeria pigra Léger et Bory, 1932
Host: *Scardinius erythrophthalmus*
Location: intestine, epithelium
Locality: France — Lyon
Record: 52, 53, 88, 98
Remark: no Stieda body

Eimeria piraudi Gauthier, 1921
Host: *Cottus gobio*
Location: intestine
Locality: France — Dauphiné
Record: 36, 88, 98, 103
Remark: no Stieda body

Eimeria pneumatophori Dogiel, 1948
Host: *Pneumatophorus japonicus*
Location: liver
Locality: Sea of Japan, Peter the Great Bay
Record: 21, 88, 98
Remark: no Stieda body

Eimeria pungitii Molnar et Hanek, 1974
Host: *Pungitius pungitius*
Location: anterior part of intestine, epithelium
Locality: Canada — Ontario
Record: 63, 75
Remark: no Stieda body

Eimeria quentini Boulard, 1977
Host: *Aetobatus narinari*
Location: peritoneal cells
Locality: Indian ocean, Malacca straits at Kuala Lumpur
Record: 6
Remark: Stieda body present

Eimeria raiarum van den Berghe, 1937
Host: *Raja batis*
Location: posterior part of intestine, epithelium
Locality: English Channel, French coast
Record: 5, 88

Eimeria rhodei Kandilov, 1975
Host: *Rhodeus sericeus*
Location: intestine
Locality: USSR — Azerbaidzhan, Kura river basin
Record: 44, 69
Remark: Mentioned without description in (44); first valid description in (69)

Eimeria roussillona Lom et Dyková, 1981
Host: *Labrus turdus*
Location: middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 59
Remark: Stieda body present

Eimeria rouxi (Elmassian, 1909) Reichenow, 1921
Syn.: *Coccidium rouxi* Elmassian, 1909, *E. rouxi* (Elmassian, 1909) Stankovitch, 1921
Host: *Tinca tinca*
Location: intestine
Locality: France
Record: 29, 88, 94, 103
Remark: no Stieda body

Eimeria rutili Dogiel et Bychovsky, 1938
Host: *Rutilus rutilus caspius*
Location: kidney
Locality: USSR — Asian part
Record: 23, 88, 98
Remark: Stieda body present

Eimeria salvelini Molnar et Hanek, 1974
Host: *Salvelinus fontinalis*
Location: anterior part of intestine, epithelium
Locality: Canada — Ontario
Record: 63, 75
Remark: Stieda body present

Eimeria sardinae (Thélohan, 1890) Reichenow, 1921
Syn.: *Coccidium sardinae* Thélohan, 1890, *Eimeria oxyphila* Dobell, 1919, lapsus, *E. oxyspora* Dobell, 1919, *E. snijdersi* Dobell, 1920
Hosts: *Clupea harengus harengus, C. pilchardus, Engraulis encrasicholus, Sprattus sprattus*
Location: testes, seminiferous tubules
Locality: Mediterranean Sea (105), Atlantic Ocean (63), North Sea (43), Baltic, Barents, Black, White and Japan Seas (98)
Record: 17, 18, 20, 37, 43, 63, 88, 92, 94, 98 105, 109
Remark: no Stieda body

Eimeria saroetobramae Allamuratov et Iskov, 1970
Syn.: *E. capoetobramae* Allamuratov, 1966, nomen nudum
Host: *Capoetobrama kuschakewitschi*
Location: kidney
Locality: USSR — Azerbaidzhan, Uzbekistan Surkhandari river basin
Record: 2
Remark: *E. capoetobramae* mentioned in (1) without any description. The new spelling "*saroetobramae*" arose probably through

wrong transliteration of the host's generic name (Capoeto can be read "Saroeto" by a Russian)

Eimeria saurogobii Chen, 1964
Host: *Ctenopharyngodon idella*
Location: intestine
Locality: China — Hubei province
Record: 10
Remark: no Stieda body

Eimeria scardinii Pellérdy et Molnar, 1968
Host: *Scardinius erythrophthalmus*, most probably also *Blicca bjoerkna*, *Chondrostoma nasus* and *Rutilus rutilus*
Location: kidney
Locality: Hungary — Lake Velencei
Record: 88, 89
Remark: no Stieda body

Eimeria schulmani Kulemina, 1969
Host: *Leuciscus idus*
Location: intestine
Locality: USSR — European part, Seliger Lake
Record: 47, 88
Remark: no Stieda body

Eimeria scorpaenae Zaika, 1966
Host: *Scorpaena porcus*
Location: intestine
Locality: Black Sea — USSR, coast at Sevastopol
Record: 113
Remark: Stieda body present

Eimeria scyllii (Drago, 1902) Levine et Becker, 1933
Syn.: *Coccidium scyllii* Drago, 1902
Remark: nomen nudum (24, 88)

Eimeria sinensis Chen, 1956
Hosts: *Aristichthys nobilis*, *Hypophthalmichthys molitrix*
Location: intestine
Locality: China (9), USSR (4), Hungary (70)
Record: 4, 9, 70, 71, 79, 80, 88, 98
Remark: no Stieda body. According to (9), there is a micropyle in the oocyst wall

Eimeria soufiae Stankovitch, 1921
Syn.: *Eimeria sontlae* Stankovitch, 1921, lapsus, *E. souflae* Stankovitch, 1921, lapsus in Becker, 1956
Host: *Leuciscus soufia agassizi*
Location: middle part of intestine
Locality: France — Dauphiné
Record: 88, 102, 103
Remark: no Stieda body

Eimeria southwelli Halawani, 1930
Host: *Aetobatus narinari*
Location: liver, intestine; embryos
Locality: Indian Ocean, Ceylon Pearl Banks
Record: 38, 88

Eimeria squali Fitzgerald, 1975
Host: *Squalus acanthias*
Location: spiral valve
Locality: Pacific Ocean, US coast of Washington
Record: 32

Eimeria strelkovi Shulman et Zaika, 1962
Host: *Pseudorasbora parva*
Location: kidney
Locality: USSR — Asian part
Record: 88, 98
Remark: no Stieda body

Eimeria syngnathi Yakimoff et Gousseff, 1936
Host: *Syngnathus nigrolineatus*
Location: intestine, mucosa
Locality: USSR — European part
Record: 88, 98, 112
Remark: no Stieda body

Eimeria tedlai Molnar et Fernando, 1974
Host: *Perca flavescens*
Location: intestine, epithelium
Locality: Canada — Ontario
Record: 63, 74
Remark: Stieda body present

Eimeria truttae (Léger et Hesse, 1919) Stankovitch, 1924
Syn.: *Goussia truttae* Léger et Hesse, 1919
Hosts: *Salmo fario*, *Salvelinus fontinalis*
Location: pyloric caeca, epithelium, intestine, epithelium
Locality: France (54), Canada — Ontario (75)
Record: 54, 63, 75, 88, 98, 103
Remark: Stieda body present

Eimeria variabilis (Thélohan, 1893) Reichenow, 1921
Syn.: *Coccidium variabile* Thélohan, 1893, *Goussia variabilis* (Thélohan, 1893) Labbé, 1896
Hosts: *Cottus bubalis*, *Crenilabrus melops*, *Gobius bicolor*, *G. paganellus*, *Myoxocephalus bubalis*, most probably also *Anguilla anguilla* and *Lepadogaster gouanii*
Location: pyloric caeca, rectum
Locality: French coast at Roscoff (107), Atlantic Ocean, Saint George channel, Welsh coast (13)
Record: 13, 49, 88, 94, 107, 108
Remark: according to (13), Stieda body present

Eimeria wierzejskii (Hofer, 1904) Stankovitch, 1921
Syn.: *Coccidium wierzejskii* Hofer, 1904
Remark: nomen nudum (88)

Eimeria zygaenae Mandal et Chakravarty, 1965
Host: *Sphyrna blochii*
Location: found only oocysts in feces
Locality: Indian Ocean
Record: 62, 88

Epieimeria anguillae (Léger et Hollande, 1922) n. comb.
Syn.: *Eimeria anguillae* Léger et Hollande, 1922
Hosts: *Anguilla anguilla*, *A. dieffenbachi*, *A. rostrata*, *A. australis*
Location: intestine
Locality: Mediterranean Sea, coast of Corsica (55), New Zealand (40)
Record: 27, 40, 55, 63, 88, 98

Epieimeria isabellae Lom et Dyková, 1982
Host: *Conger vulgaris*
Location: middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 60

Goussia alburni Stankovitch, 1920
Syn.: *Eimeria alburni* (Stankovitch, 1920) Yakimoff, 1929
Hosts: *Gobio gobio*, *Rutilus rutilus*, *Scardinius erythrophthalmus*
Location: peri-intestinal adipose tissue
Locality: France (101), Czechoslovakia (Dyková et Lom, unpublished)
Record: 27, 88, 101, 103

Goussia auxidis (Dogiel, 1948) comb. n.
Syn.: *Eimeria auxidis* Dogiel, 1948
Hosts: *Cololabis saira*, *Auxis maru*
Location: kidney
Locality: Sea of Japan — Peter the Great Bay
Record: 21, 27, 88

Goussia bigemina Labbé, 1896
Syn.: *Eimeria bigemina* (Labbé, 1896) Yakimoff, 1929
Host: *Ammodytes tobianus*
Location: middle part of intestine
Locality: French (Atlantic?) coast
Record: 49, 88
Remark: a quite deficient description

Goussia carpelli (Léger et Stankovitch, 1921) comb. n.
Syn.: *Eimeria carpelli* Léger et Stankovitch, 1921; *Eimeria cyprini* Plehn, 1924
Hosts: *Cyprinus carpio*, *Carassius carassius*, *Hypophthalmichthys molitrix*, *Phoxinus phoxinus*, *Paracottus kessleri*, *Asprocottus megalops*, *Batrachocottus baicalensis*
Location: intestine, epithelium
Locality: Europe (many authors), Baikal and Amur river systems (98)
Record: 4, 27, 45, 46, 56, 64, 88, 93, 96, 98, 103, 114, 115

Goussia caseosa Lom et Dyková, 1982
Host: *Macrourus berglax*
Location: swim bladder, gas gland, gall bladder, intestine, blood vessels of mesentery
Locality: Grand Banks off the coast of Newfoundland
Record: 60

Goussia clupearum (Thélohan, 1894) Labbé, 1896
Syn.: *Coccidium* sp. Thélohan, 1892; *Coccidium clupearum* Thélohan, 1894; *Eimeria clupearum* (Thélohan, 1894) Doflein, 1909, *Eimeria wenyoni* Dobell, 1919
Hosts: *Alosa kessleri pontica*, *Clupea harengus harengus*, *C. harengus pallasi*, *C. pilchardus*, *Engraulis encrasicholus*, *Etrumeus micropus*, *Scomber scombrus*, *Sprattus sprattus*
Location: liver
Locality: Mediterranean Sea (43), Atlantic Ocean (108), North Sea (43), Sea of Japan (21)
Record: 3, 17, 19, 21, 27, 35, 43, 49, 63, 88, 98, 108

Goussia cruciata (Thélohan, 1892) Labbé, 1896
Syn.: *Eimeria cruciata* (Thélohan, 1892) Yakimoff, 1929, *Coccidium cruciatum* Thélohan, 1892
Host: *Caranx trachurus*
Location: liver
Locality: Atlantic Ocean, French coast of Concarneau
Record: 27, 49, 88, 106

Goussia degiustii (Molnar et Fernando, 1974) comb. n.
Syn.: *Eimeria degiustii* Molnar et Fernando, 1974, *Eimeria spleni* DeGiusti et Hnath, 1968 (nomen nudum)
Host: *Notropis cornutus*
Location: spleen
Locality: Canada — Ontario
Record: 15, 27, 63, 74, 120

Goussia gadi Fiebiger, 1913
Syn.: *Eimeria (Goussia) gadi* Fiebiger, 1913, *Eimeria* (*Goussia*) *gadi* (Fiebiger, 1913) Grassé, 1953
Hosts: *Enchelyopus cimbrius*, *Gadus aeglefinus*, *G. morrhua*, *G. virens*, *Melanogrammus aeglefinus*
Location: swin bladder
Locality: North Sea
Record: 27, 31, 37, 63, 82, 88, 94, 98

Goussia legeri Stankovitch, 1920
Syn.: *Eimeria légeri* (Stankovitch, 1920) Pinto, 1928, *Eimeria stankovitchi* (Stankovitch, 1920) Pinto, 1928, non *Eimeria légeri* (Simond, 1901)
Hosts: *Alburnus alburnus*, *Abramis brama*, *Scardinius erythrophthalmus*, *Aspius aspius*, *Leuciscus brandti*
Location: intestine
Locality: France — Savoie
Record: 27, 88, 91, 98, 101, 103

Goussia luciae Lom et Dyková, 1982
Host: *Mullus barbatus*
Location: middle part of intestine
Locality: Mediterranean Sea coast near Banyuls-sur-Mer, France
Record: 60

Goussia lucida (Labbé, 1893) Labbé, 1896
Syn.: *Coccidium lucidum* Labbé, 1893, *Eimeria lucida* (Labbé, 1893) Reichenow, 1921
Hosts: *Acanthias vulgaris*, *Mustelus canis*, *M. vulgaris*, *Scyliorhinus caniculus*, *S. stellaris*
Location: posterior part of intestine
Locality: Atlantic Ocean and Mediterranean Sea, French coast

Record: 37, 48, 49, 88, 94

Goussia metchnikovi (Laveran, 1897) comb. n.
Syn.: *Coccidium metchnikovi* Laveran, 1897, *Eimeria metchnikovi* (Laveran, 1897) Reichenow, 1921
Hosts: *Gobio albipinnatus, G. albipinnatus tenuicorpus, G. gobio*
Location: spleen, liver, kidney, intestine
Locality: France (51), Hungary (89), USSR (93), Czechoslovakia (Lom and Dyková, unpublished)
Record: 27, 51, 88, 89, 94, 98, 103

Goussia minuta (Thélohan, 1892) Labbé, 1896
Syn.: *Coccidium minutum* Thélohan, 1892, *Eimeria minuta* (Thélohan, 1892) Doflein, 1909
Host: *Tinca tinca*
Location: spleen, liver, kidney
Locality: France
Record: 19, 27, 48, 49, 88, 98, 103, 106

Goussia motellae (Labbé, 1893) Labbé, 1896
Syn.: *Coccidium motellae* Labbé, 1893, *Eimeria motellae* (Labbé, 1893) Yakimoff, 1929
Host: *Motella tricirrata*
Location: pyloric caeca
Locality: Atlantic Ocean, French coast
Record: 27, 49, 88

Goussia siliculiformis (Shulman et Zaika, 1962) comb. n.
Syn.: *Eimeria siliculiformis* Shulman et Zaika, 1962
Hosts: *Gobio albipinnatus tenuicorpus, Scardinius erythrophthalmus, Alburnus alburnus,* most probably also *Abramis brama* and *Rutilus rutilus*
Location: swim bladder, intestine, kidney, testes
Locality: USSR — Amur river basin (98), Hungary (76)
Record: 27, 76, 88, 98

Goussia subepithelialis (Moroff et Fiebiger, 1905) comb. n.
Syn.: *Eimeria subepithelialis* Moroff et Fiebiger, 1905
Hosts: *Cyprinus carpio,* most probably also *Tinca tinca*
Location: intestine
Locality: Europe (many authors)
Record: 4, 27, 46, 65, 66, 73, 77, 88, 89, 93, 96, 98, 103, 116

Goussia thelohani Labbé, 1896
Syn.: *Coccidium* sp. Thélohan, 1894, *Eimeria thélohani* (Labbé, 1896) Yakimoff, 1929
Host: *Labrus* sp.
Location: liver
Locality: Atlantic Ocean, French coast
Record: 27, 49, 88

CHONDRICHTHYES

Acanthias vulgaris Risso
see *Squallus acanthias* Linnaeus
Aetobatus narinari (Euphrasen)
Eimeria quentini
Eimeria southwelli
Lamna cornubica Fleming
see *Lamna nasus* (Bonnaterre)
Lamna nasus (Bonnaterre)
Eimeria gigantea
Mustelus canis (Mitchill)
Goussia lucida
Mustelus vulgaris Risso
Goussia lucida
Raja batis Linnaeus
Eimeria raiarum
Raja clavata Linnaeus
Eimeria jiroveci
Scyliorhinus caniculus (Linnaeus)
Goussia lucida
Scyliorhinus stellaris Linnaeus
Goussia lucida
Sphyrna blochii Cuvier
Eimeria zygenae
Squallus acanthias Linnaeus
Eimeria squalli
Goussia lucida
Zygaena blochii
see *Sphyrna blochii* Cuvier

OSTEICHTHYES

CLUPEIFORMES

Alosa kessleri pontica (Antipa)
Goussia clupearum
Brevoortia tyrannus Latrobe
Eimeria brevoortiana
Clupea harengus harengus Linnaeus
Eimeria nishin
Eimeria sardinae
Goussia clupearum
Clupea harengus pallasi Valenciennes
Eimeria nishin
Goussia clupearum
Clupea pilchardus Walbaum
Eimeria sardinae
Goussia clupearum
Engraulis encrasicholus (Linnaeus)
Goussia clupearum
Eimeria sardinae
Etrumeus micropus (Temminck et Schlegel)
Goussia clupearum
Eimeria etrumei
Harpodon nehereus (Russell)
Eimeria harpodoni
Notopterus notopterus (Pallas)
Eimeria notopteri
Osmerus mordax (Mitchill)
Eimeria osmeri
Salmo fario Linnaeus
see *Salmo trutta* Linnaeus

Salmo trutta Linnaeus
Eimeria truttae
Salvelinus fontinalis (Mitchill)
Eimeria salvelini
Eimeria truttae
Sprattus sprattus phalericus (Risso)
Eimeria sardinae
Goussia clupearum

ESOCIFORMES

Esox lucius Linnaeus
Eimeria esoci
Umbra krameri Walbaum
Eimeria kassai
Eimeria matskasii
Eimeria meszarosi
Umbra limi (Kirtland)
Eimeria hoffmani

CYPRINIFORMES

Abramis brama (Linnaeus)
Eimeria cyprinorum
Eimeria leucisci
Goussia legeri
Goussia siliculiformis
Alburnus alburnus Linnaeus
Eimeria cylindrospora
Eimeria leucisci
Eimeria nemethi
Goussia legeri
Goussia siliculiformis
Aristichthys nobilis Valenciennes
Goussia carpelli
Eimeria sinensis
Eimeria aristichthysi
Aspius aspius (Linnaeus)
Goussia legeri
Barbus ambassis
Eimeria ambassi
Barbus barbus (Linnaeus)
Eimeria cyprinorum
Blicca bjoerkna Linnaeus
Eimeria leucisci
Eimeria scardinii
Capoetobrama kuschakewitschi (Kessler)
Eimeria saroetobramae
Carassius auratus (Linnaeus)
Eimeria aurati
Eimeria carassiusaurati
Carassius carassius (Linnaeus)
Eimeria carassii
Eimeria nicolei
Goussia carpelli
Catostomus commersoni (Lacépède)
Eimeria catostomi
Eimeria fernandoae
Chondrostoma nasus (Linnaeus)
Eimeria scardinii
Cobitis taenia Linnaeus
Eimeria cobitis
Eimeria misgurni
Ctenopharyngodon idella Valenciennes
Eimeria saurogobii
Culter erythropterus Basilewsky
see *Erythroculter erythropterus* (Basilewsky)
Cyprinus carpio Linnaeus
Eimeria wierzejskii
Goussia carpelli
Goussia subepithelialis
Erythroculter erythropterus (Basilewsky)
Eimeria culteri
Etheostoma exile (Girard)
Eimeria etheostomae
Etheostoma nigrum Rafinesque
Eimeria etheostomae
Gobio albipinnatus Lukasch
Goussia metchnikovi
Gobio albipinnatus tenuicorpus Mori
Eimeria macroresidualis
Goussia metchnikovi
Goussia siliculiformis
Gobio gobio Linnaeus
Goussia alburni
Eimeria cheissini
Goussia metchnikovi
Hemibarbus labeo (Pallas)
Eimeria cheissini
Hemiculter leucisculus (Basilewsky)
Eimeria cheissini
Eimeria hemiculterii
Hybognatus hankinsoni Hubbs
Eimeria hybognathi
Hypenthelium nigricans (LeSueur)
Eimeria catostomi
Hypophthalmichthys molitrix Valenciennes
Eimeria aristichthysi
Eimeria cheni
Eimeria hypophthalmichthys
Eimeria sinensis
Goussia carpelli
Ictalurus nebulosus (LeSueur)
Eimeria ictaluri
Leuciscus brandti (Dybowski)
Goussia legeri
Leuciscus idus (Linnaeus)
Eimeria schulmani
Leuciscus leuciscus baicalensis (Dybowski)
Eimeria leucisci
Leuciscus soufia agassizi Cuvier et Valenciennes
Eimeria soufiae
Misgurnus fossilis (Linnaeus)
Eimeria misgurni
Eimeria muraiae
Mylopharyngodon piceus (Richardson)
Eimeria cheni
Eimeria mylopharyngodoni
Nocomis biguttatus (Kirtland)
Eimeria iroquoina
Notropis cornutus (Mitchill)
Eimeria freemani
Goussia degiustii
Eimeria iroquoina
Notropis heterolepis (Eigenmann et Eigenmann)

Eimeria iroquoina
Notropis rubellus (Agassiz)
Eimeria iroquoina
Parasilurus asotus (Linnaeus)
Eimeria parasiluri
Phoxinus phoxinus (Linnaeus)
Eimeria cyprinorum
Goussia carpelli
Pimephales notatus (Rafinesque)
Eimeria iroquoina
Pimephales promelas Rafinesque
Eimeria iroquoina
Goussia degiustii
Pseudorasbora parva (Schlegel)
Eimeria strelkovi
Eimeria amurensis
Rhinichthys atratulus (Hermann)
Eimeria iroquoina
Rhodeus sericeus (Pallas)
Eimeria rhodei
Rutilus rutilus (Linnaeus)
Eimeria branchiphila
Eimeria cyprinorum
Eimeria leucisci
Eimeria scardinii
Goussia alburni
Goussia siliculiformis
Rutilus rutilus caspius (Jakowlew)
Eimeria rutili
Sarcochilichthys sinensis (Dybowski)
Eimeria amurensis
Scardinius erythrophthalmus (Linnaeus)
Eimeria cyprinorum
Eimeria leucisci
Eimeria scardinii
Eimeria pigra
Goussia alburni
Goussia legeri
Goussia siliculiformis
Semotilus atromaculatus (Mitchill)
Eimeria iroquoina
Tinca tinca (Linnaeus)
Eimeria rouxi
Goussia minuta
Goussia subepithelialis

ANGUILLIFORMES

Anguilla anguilla (Linnaeus)
Epieimeria anguillae
Eimeria variabilis
Anguilla australis Richardson
Epieimeria anguillae
Anguilla dieffenbachi Gray
Epieimeria anguillae
Anguilla rostrata (LeSueur)
Epieimeria anguillae
Conger vulgaris Linnaeus
Epieimeria isabellae

BELONIFORMES

Cololabis saira (Brevoort)
Goussia auxidis

CYPRINODONTIFORMES

Fundulus grandis Baird et Girard
Eimeria funduli
Fundulus similis Baird et Girard
Eimeria funduli

PERCIFORMES

Acerina cernua (Linnaeus)
see *Gymnocephalus cernua* (Linnaeus)
Ammodytes americanus De Kay
Goussia bigemina
Ammodytes tobianus Linnaeus
see *Ammodytes americanus* De Kay
Asprocottus megalops Gratzianov
see *Limnocottus megalops* (Gratzianov)
Auxis maru Kishinouye
Goussia auxidis
Batrachocottus baicalensis (Dybowski)
Goussia carpelli
Blenius pholis Linnaeus
Eimeria dingleyi
Caranx trachurus Eichwald
see *Trachurus mediterraneus* Steindachner
Chana argus (Cantor)
Eimeria kwangtungensis
Eimeria ophiocephalae
Chana maculata (Lecépède)
Eimeria kwangtungensis
Eimeria ophiocephalae
Clinus superciliosus (Linnaeus)
Eimeria clini
Cottus bairdi Girard
Eimeria ojibwana
Eimeria duszynskii
Cottus bubalis Euphrasen
Eimeria variabilis
Cottus gobio Linnaeus
Eimeria cotti
Eimeria piraudi
Crenilabrus mediterraneus Linnaeus
Eimeria catalana
Eimeria banyulensis
Crenilabrus melops (Linnaeus)
Eimeria variabilis
Glossogobius giuris (Hamilton—Buchanan)
Eimeria glossogobii
„Gobius bicolor“
Eimeria variabilis
Gobius nudiceps Cuvier
Eimeria gobii
Gobius paganellus Linnaeus
Eimeria variabilis
Gymnocephalus cernua (Linnaeus)
Eimeria acerinae
Labrus sp.
Goussia thelohani
Labrus turdus Linnaeus
Eimeria roussillona
Limnocottus megalops (Gratzianov)
Goussia carpelli
Micropterus dolomieui Lacépède
Eimeria micropteri

Micropterus salmoides (Lacépède)
Eimeria micropteri
Morone americana (Gmelin)
Eimeria glenorensis
Eimeria moronei
Mullus barbatus Linnaeus
Goussia luciae
Myoxocephalus bubalis (Euphrasen)
Eimeria variabilis
Myoxocephalus polyacanthocephalus (Pallas)
Eimeria myoxocephali
Myoxocephalus scorpius (Linnaeus)
Eimeria lairdi
Eimeria nucleocola
Myoxocephalus stelleri Tilesius
Eimeria evaginata
Naso lituratus Bloch et Schneider
Cryptosporidium nasoris
Ophiocephalus argus
see *Channa argus* (Cantor)
Ophiocephalus maculatus
see *Channa maculata* (Lacépède)
Opisthocentrus ocellatus (Tilesius)
Eimeria dogieli
Pagellus erythrinus Linnaeus
Eimeria maggieae
Paracottus kessleri (Dybowski)
Goussia carpelli
Perca flavescens (Mitchill)
Eimeria laureleus
Eimeria tedlai
Perca fluviatilis Linnaeus
Eimeria percae
Pneumatophorus japonicus (Houttuyn)
see *Scomber japonicus* (Houttuyn)
Scomber japonicus Houttuyn
Eimeria pneumatophori
Scomber scombrus Linnaeus
Goussia clupearum
Scorpaena notata Rafinesque
Eimeria insignis
Scorpaena porcus Linnaeus
Eimeria scorpaenae
Sebastodes taczanowskii (Steindachner)
Eimeria evaginata
Serranus cabrilla Linnaeus
Eimeria ivanae
Tilesina gibbosa Schmidt
Eimeria citriformis
Trachurus mediterraneus Steindachner
Goussia cruciata

SYNGNATHIFORMES

Syngnathus nigrolineatus Eichwald
Eimeria syngnathi

GASTEROSTEIFORMES

Culaea inconstans (Kirtland)
Eimeria haneki
Gasterosteus aculeatus Linnaeus
Eimeria gasterostei
Pungitius pungitius (Linnaeus)
Eimeria pungitii

GADIFORMES

Enchelyopus cimbrius (Linnaeus)
Goussia gadi
Gadus aeglefinus Linnaeus
Goussia gadi
Gadus morhua Linnaeus
Goussia gadi
Gadus virens Linnaeus
Goussia gadi
Gaidropsarus mediterraneus Linnaeus
Crystallospora crystalloides
Eimeria hexagona
Goussia motellae
Gaidropsarus sp.
Crystallospora crystalloides
Macrourus berglax Lacépède
Goussia caseosa
Melanogrammus aeglefinus Linnaeus
Goussia gadi
Motella fusca
see *Gaidropsarus* sp.
Motella maculata
see *Gaidropsarus* sp.
Motella tricirrata Bloch
see *Gaidropsarus mediterraneus* (Linnaeus)
Odontogadus merlangus euxinus Nordmann
Eimeria merlangi
Onos tricirratus (Brünnich)
see *Gaidropsarus mediterraneus* (Linnaeus)

GOBIESOCIFORMES

Lepadogaster gouanii Risso
see *Lepadogaster lepadogaster* (Bonnaterre)
Lepadogaster lepadogaster (Bonnaterre)
Eimeria variabilis

КОКЦИДИИ ПАРАЗИТИРУЮЩИЕ У РЫБ: СПИСОК ОПИСАННЫХ ВИДОВ С АННОТАЦИЯМИ

И. Дыкова и Й. Лом

Резюме. Список всех видов кокцидий паразитирующих у рыб (Chondrichthyes, Osteichthyes) содержит один вид рода *Cryptosporidium* Tyzzer, один вид рода *Crystallospora* Labbé, два вида рода *Epieimeria* Dyková et Lom, 18 видов рода *Goussia* Labbé и 105 видов рода *Eimeria* Schneider. У каждого вида даются сведения о синонимике, хозяевах, локализации, географическом распространении или местонахождении, список аннотаций и другие необходимые данные.

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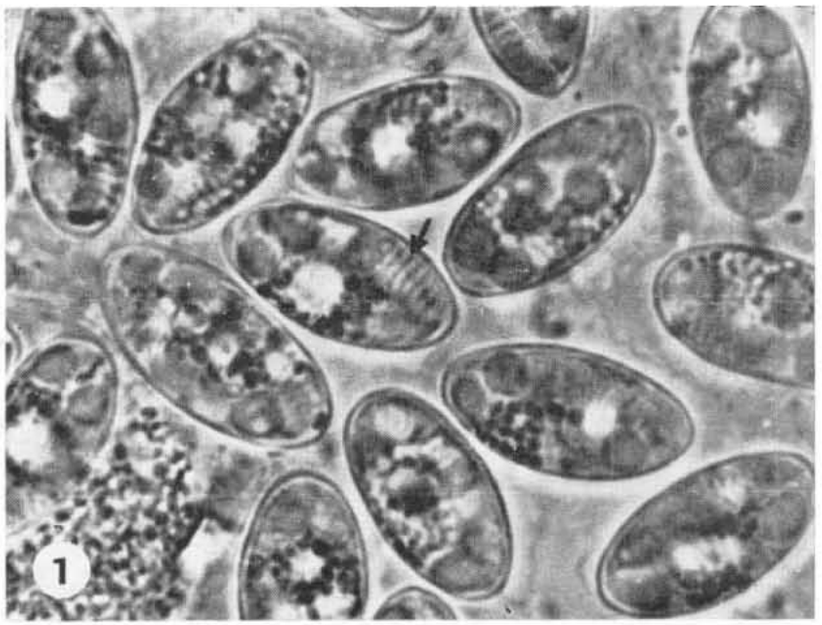


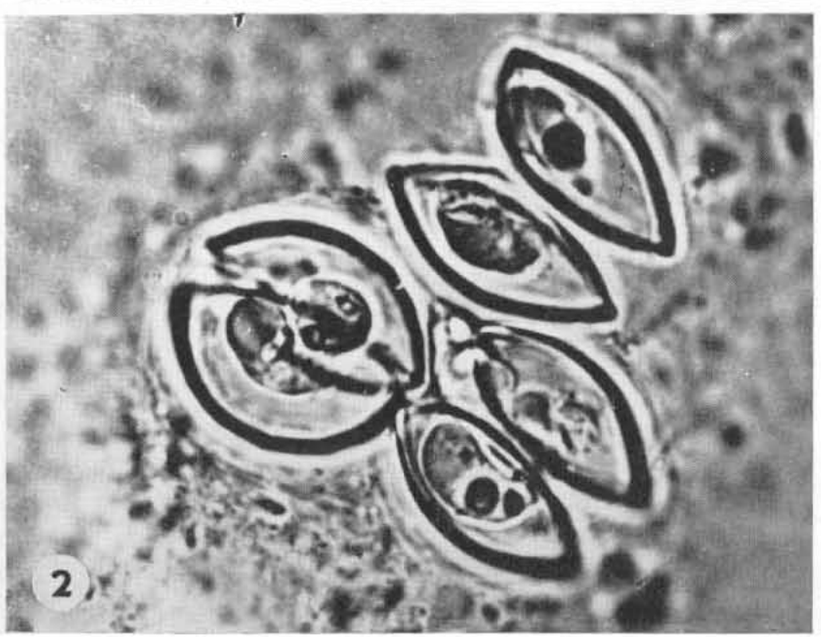


Fig. 1. *Goussia subepithelialis* (Moroff et Fiebiger, 1905): Sporulated sporocysts released from oocysts. Arrow points at the striation of the anterior end of the sporozoite. Fresh mount (×2 600). **Fig. 2.** *Goussia caseosa* Lom et Dyková, 1982: sporocyst walls opened along the meridional suture line. Fresh mount (×1 630)

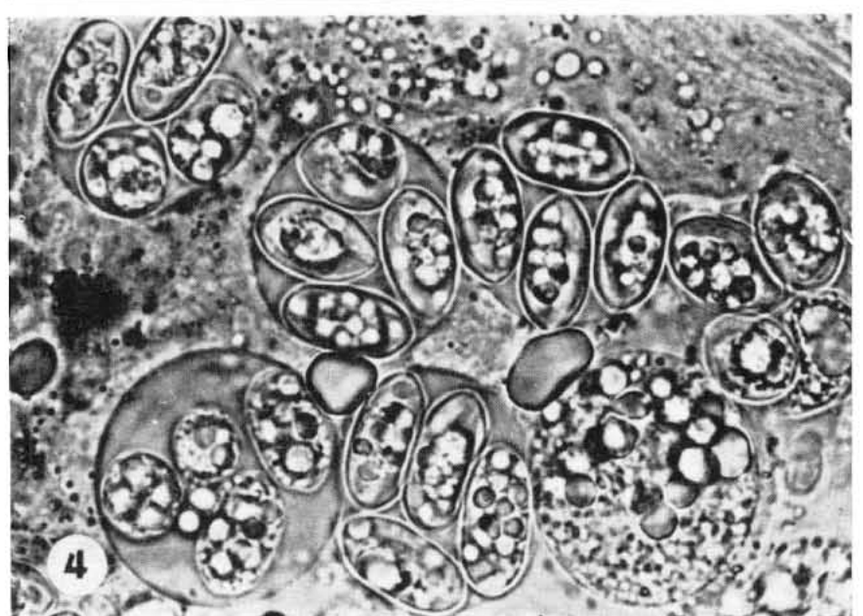


Fig. 3. *Goussia degiustii* (Molnár et Fernando, 1974): Four sporocysts held together within the thin oocyst wall (arrow) next to one free sporocyst. Fresh mount (×2 700). **Fig. 4.** *Goussia metchnikovi* (Laveran, 1897) in a fresh mount of gudgeon spleen (×1 150).

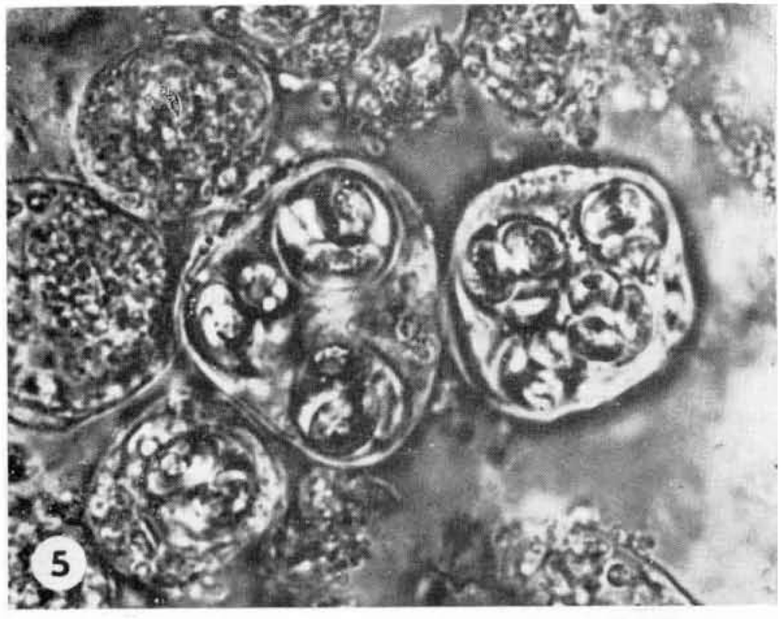


Fig. 5. "Yellow bodies", clumps of dystrophically changed host cells enclosing several oocysts of *Goussia carpelli* (Léger et Stankovitch, 1921) and found in the intestinal lumen of carp fingerlings. Fresh mount (× 1 420). **Fig. 6.** Electron micrograph of the sporocyst wall of *G. carpelli* showing its thickened rims along the suture line of the two valves (arrow). S — sporozoite, C — cell débris adhering to the sporocyst wall (× 12 280).

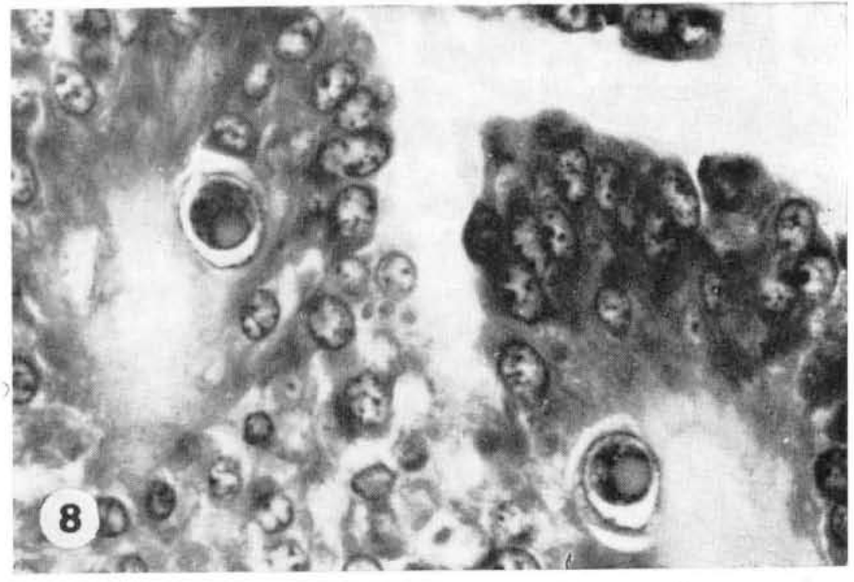


Fig. 7. Yellow body produced by *G. carpelli* infection within the epithelial layer of the carp intestine. H & E (× 830). **Fig. 8.** *Eimeria nucleocola* Lom et Dyková, 1981: macrogametes with a single large inclusion; they develop within enlarged host cell nuclei. H & E (× 1 250).

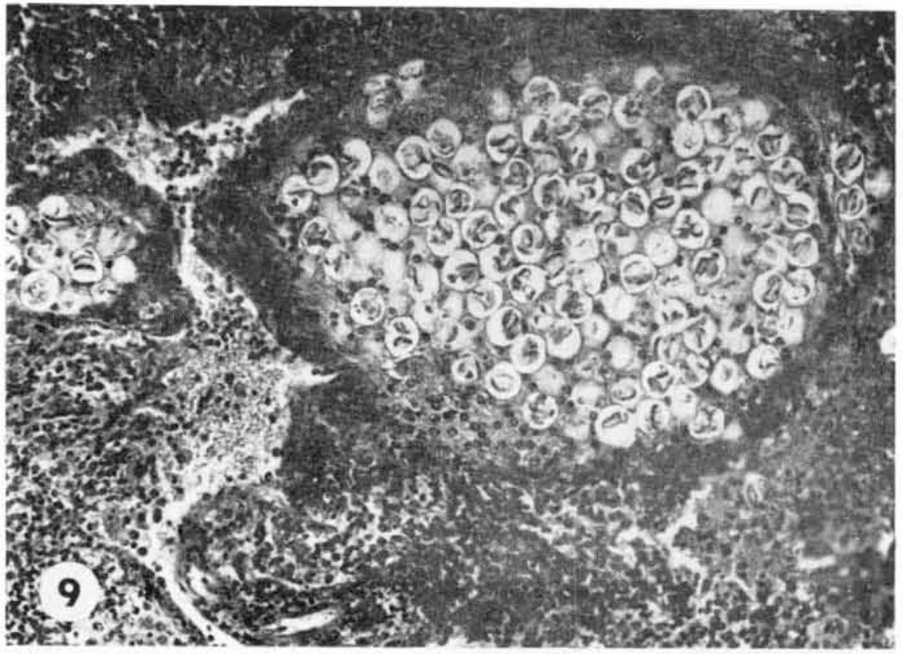
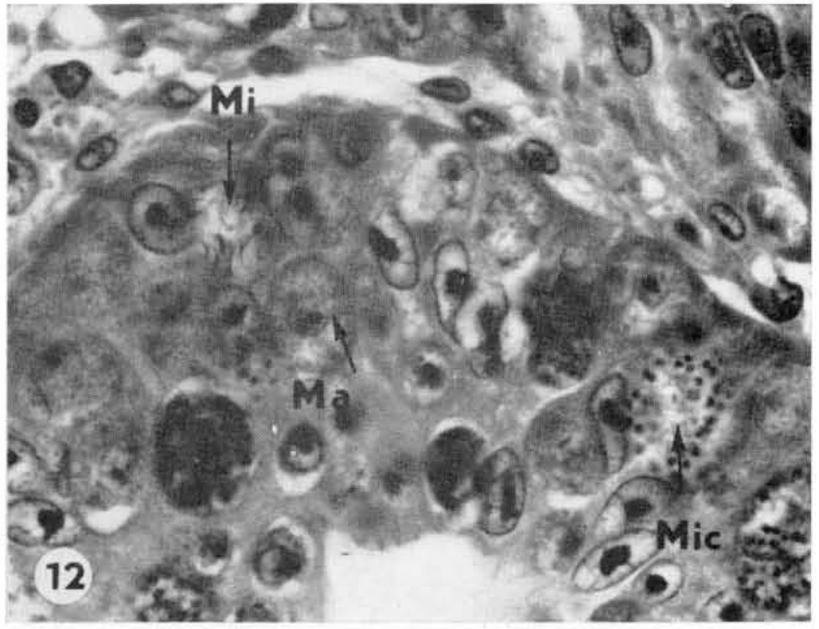
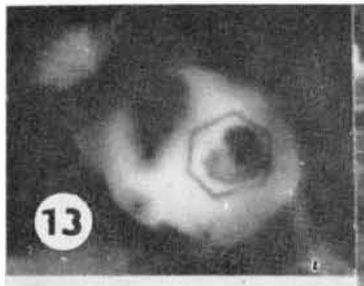


Fig. 9. Sporulated oocysts of *G. metchnikovi* (Laveran, 1897) agglomerated into a compact mass in the liver of a gudgeon. H & E (×250). **Fig. 10** and **11.** *Eimeria branchiphila* Dyková, Lom et Grupcheva, 1983 in blood spaces of the secondary gill lamellae of its host, *Rutilus rutilus*. H & E (×1 360).





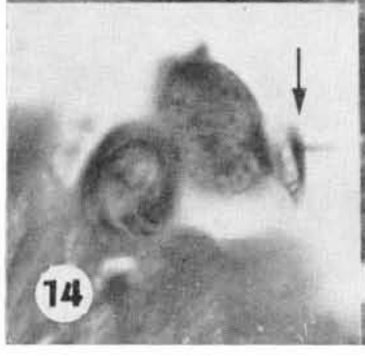


Fig. 12. *Goussia subepithelialis:* gametogony stages in the intestinal epithelium: Mi — microgametes, Ma — macrogametes, Mic — microgametocyte. H & E (×1 080). **Fig. 13.** *Eimeria hexagona* Lom et Dyková, 1981: sectioned oocyst with a hexagonal tranverse section of a sporocyst wall. H & E (×1 860). **Fig. 14.** *Epicimeria isabellae* Lom et Dyková, 1982: microgametocyte with mature microgametes and a macrogamete, both adhering to the surface of intestinal epithelium; arrow points at a released microgamete. H & E (×1 860). **Fig. 15.** *E. isabellae:* macrogamete developing on the surface of intestinal epithelium. H & E (×1 860).