

*Eimeria acerinae* sp. n. in the Ruff (*Acerina cernua*)

Dr. László PELLÉRDY — Dr. Kálmán MOLNÁR

Veterinary Research Institute of the Hungarian Academy of Sciences,  
Budapest

On dissection of 20 specimens of the ruff (*Acerina cernua*) caught in the Hungarian reach of the Danube in 1969 and 1970, we have regularly found large numbers of sporulated - and only exceptionally unsporulated - *Eimeria* oocysts in intestinal scrapings. As we do not know of the occurrence of any coccidia in the ruff, we consider the parasites found to be the representative of a new species, and describe it as follows.

*Eimeria acerinae* sp.n.

Oocysts round, 10-12  $\mu$  in diameter, cyst wall smooth, thin, single-layered, usually resting on the sporocysts, but sometimes rupturing, in which case the sporocysts occur free, lying loosely next to one another. Oocysts with an intact wall have no oocyst residuum (Fig. 1).

In some cases the oocysts occur free in the intestinal lumen, at other times in smaller groups conglomerated in the remnants of the yellow body. Unsporulated oocysts are still attached to of the destroyed host cell, whose flattened nucleus may occasionally be observed.

The sporocysts are more or less coffee-bean-shaped. From certain angles they appear oval, laterally, however, one side is convex in outline, the other nearly flat. Sporocysts dimensions: 8-8.5 x 5-5.5  $\mu$  (Fig. 2).

The four sporocysts are usually arranged with three in one plane and the fourth lying on them, or so that two pairs of parallel sporocysts cross each other.

The rough granules of the sporocysts residuum are dispersed in the several sporocysts, at other times condensed centrally.

The sporozoites are banana-shaped, with measurements  $8.5 \times 2-2.5 \mu$ , their more tapered extremity sometimes slightly recurved. They arrange head-to-tail along the more convex side of the sporocyst, the remaining space being filled by sporocysts residuum. At extremity of sporozoites with a smaller and nearer to the wider end with a larger paranuclear body.

No coccidium has hitherto been described from the ruff. The coccidia described from the closely related fresh-water Perciformes differ decidedly in their morphology from the new species. The oocysts of Eimeria cotti and E. piraudi (host: *Cottus gobio*), of approximately similar dimensions, differ in that the sporocysts of the former species possess a neck-like cerviform extension, whereas the oocyst wall of E. piraudi is not thin but thick, and one end of the sporocysts is moderately tapered. The oocysts of E. percae, which parasitizes *Perca fluviatilis*, have a micropyle and there is a corresponding thickening of the cyst wall. Among the coccidia of phylogenetically more distant fish species it is the oocysts of E. cyprinorum, parasitizing species of the order Cypriniformes, which most nearly resemble those of the new species, but then only to a certain extent, as they too differ in that the sporozoites recurve hookwise uncinately within the sporocysts.

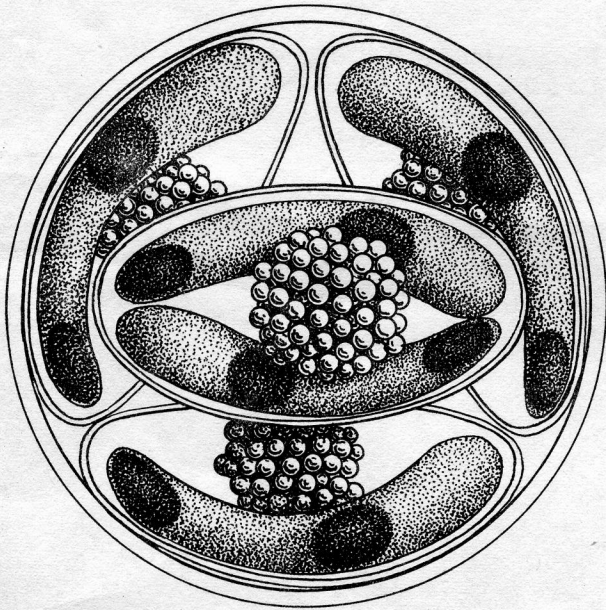


Fig. 1: Eimeria acerinae sp.n., oocyst.  
1. ábra: Eimeria acerinae sp.n., oocysta

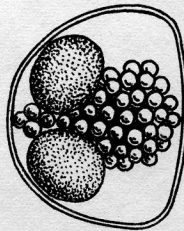


Fig. 2: Cross-section of a sporocyst.  
2. ábra: Sporocystájának keresztmetszete

PELLÉRDY, L. — MOLNÁR, K.: Új coccidium-faj (*Eimeria acerinae* sp.n.)  
a vágó durbincsban (*Acerina cernua*)

A szerzők a Dunából származó 20 vágó durbincs boncolása során a bélkaparékban *Eimeria*-oocystákat találtak. Minthogy e halfajban coccidiumok előfordulásáról nincs tudomásuk, a talált élősködőket új fajnak tekintik. Közlik az oocysta részletes leírását, valamint azokat az elkülönítő bélyegeket, amelyek a vágó durbincshoz rendszertanilag közel álló halak coccidiumaira jellemzők.

References

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Dr. L. PELLÉRDY - Dr. K. MOLNÁR  
Veterinary Research Institute  
of the Hungarian Academy of  
Sciences,  
Budapest XIV., Hungária krt 21.