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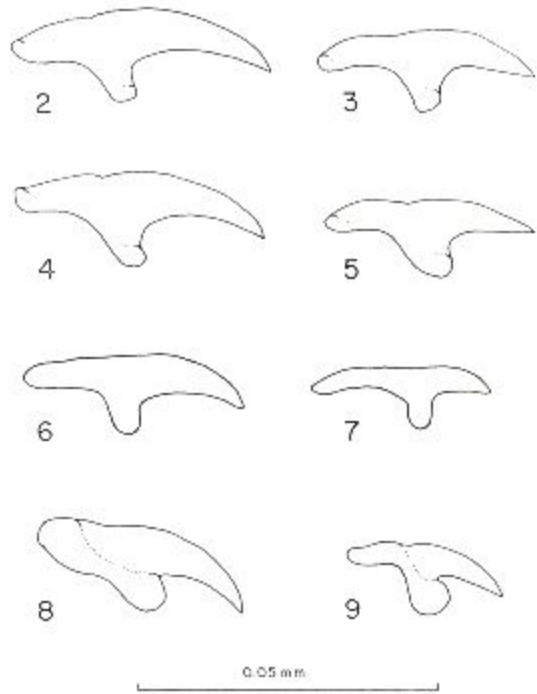
Echinococcus oligarthrus (Diesing, 1863) Developing in a United States Zoo

Cross and Thomas (1966, J. Parasit. **52:** 1215–1216) reported hydatid disease in nutria, *Myocastor coypus* (Molina), born in a U. S. zoo. They believed that the cysts probably represented *Echinococcus granulosus* (Batsch, 1786). The findings of Thatcher and Sousa (1966, Ann. Trop. Med. Parasit. **60:** 405–416) concerning *E. oligarthrus* (Diesing, 1863) in Panamá made it desirable to re-examine the nutria specimens. Consequently, microscopic slides and fixed material from the nutria cysts were compared with Panamanian specimens of *E. oligarthrus*, and the results are reported herein.

The cysts are of a septate, or multilocular nature (Fig. 1) with an undulating, irregular laminated layer. The hooks are large (41 to 43 μ) and closely comparable to those from a Panamanian human hydatid that was considered to be *E. oligarthrus* by Thatcher and Sousa (loc. cit.) (Figs. 2–5). The hooks are slightly larger than those from the agouti reported as *E. cruzi* by Brumpt and Joyeaux (1924, Ann. Parasit. **2:** 226–231), but they have a similar shape (Figs. 4–7). Cameron (1926, J. Helm. **4:** 13–22) believed *E. cruzi* to be a synonym of *E. oligarthrus* as did also Pinto de Almeida (1937, O Campo. **550:** 41–48). Sousa and Thatcher (to be published elsewhere) found natural hydatids in Panamanian agoutis, and they induced experimental hydatids of *E. oligarthrus* in agoutis and other rodents. Cysts from these sources also showed similar hook morphology. The cystic hooks from the nutria are larger and of a different shape than the hooks of adult *E. granulosus* (Figs. 2, 3; 8, 9).

Since the nutria hydatids were multilocular, with a thin laminated layer, and had hooks of larger size and different contour than those

FIGURE 1. Photograph of one-half of a hydatid cyst from the nutria, stained and cleared to show internal septa and compartments. Cyst length 12 mm.



FIGURES 2–7. *Echinococcus* hooks from hydatid cysts, all drawn to same scale. **2, 3.** Large and small hooks from hepatic cyst in nutria from a U. S. zoo. **4, 5.** Large and small hooks from human hepatic cyst from Panama. **6, 7.** Large and small hooks from splenic cyst in agouti from Brazil. (Redrawn from Pinto and Lins de Almeida, 1937.) **8, 9.** Large and small hooks from *E. granulosus* adult (original).

known for *E. granulosus*, it is necessary to conclude that the infections in the nutria did not represent that species. The hooks from the nutria cysts are also larger and morphologically different from those reported for *E. multilocularis* Leuckart, 1863. In view of the close similarity between material from the nutria and known or suspected *E. oligarthrus* specimens, infections in the nutria probably represented the latter species. Since the nutria is a native South American rodent, it could be a natural host of *E. oligarthrus*. The nutria probably acquired the infection in a U. S. zoo by proximity to South American wild felids.

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