

PARAGONIMUS IN SOME WILD AND DOMESTIC ANIMALS OF PANAMA

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Paragonimus rudis (Diesing, 1850) (= *P. kellicotti* Ward, 1908) is known from several Latin American countries. The species has been reported in the common opossum, *Didelphis marsupialis* L., and the skunk, *Mephitis macroura* Lichtenstein, from Guatemala (Caballero, 1946). Infections have also been reported in the fox, *Urocyon cinereoargenteus costaricensis* Goodwin, and in the four-eyed opossum, *Philander opossum* L., from Costa Rica (Caballero, 1956; Caballero & Montero, 1961). Metacercariae of *Paragonimus* in the freshwater crab, *Pseudothelphusa tristani* Rathbun, 1896, have also been reported from Costa Rica (Sogandares-Bernal & Smalley, 1965). Yokogawa et al. (1960) reviewed reports of *Paragonimus* from several South American countries, including Venezuela, but this parasite apparently has not been reported previously from the Republic of Panama.

Paragonimus rudis infections have been turning up at this laboratory in Panamanian mammals since early in 1964. Fifteen infected mammals have been seen and more than 50 adult trematodes were recovered. Additionally, three metacercariae of *Paragonimus* were found in the gills of a freshwater crab identified as *Pseudothelphusa richmondi* Rathbun, 1893, which is the species listed by Boone (1929) from nearby Panamanian streams. All 50 of the animals examined were from the town of Achiote, Colon Province, Panama, along the Arriero river. The Arriero is one tributary of a stream that flows north to the Caribbean coast.

TABLE 1
Some hosts of *Paragonimus rudis* in Panamá

Host Species	Number Examined	Number Positive	Number of Worms
<i>Didelphis marsupialis</i> L. (common opossum)	17	2	2-7
<i>Philander opossum</i> L. (four-eyed opossum)	15	8	1-6
<i>Procyon cancrivorus</i> Cuvier (crab-eating raccoon)	3	0	0
<i>Nasua narica</i> L. (coati)	1	1	3
<i>Galictis allamandi</i> Bell (grison)	1	0	0
<i>Tayra barbara</i> Goldman (tayra)	1	0	0
<i>Felis onca</i> L. (jaguar)	2	2	1-13
<i>Felis yagouaroundi</i> Geoffroy (jaguarundi)	1	0	0
<i>Felis concolor</i> L. (puma)	1	0	0
<i>Felis catus</i> L. (house cat)	1	1	3
<i>Canis familiaris</i> L. (domestic dog)	3	1	eggs in feces
<i>Pseudothelphusa richmondi</i> Rathbun (freshwater crab)	4	1	3
Totals =	50	16	50+

RESULTS

Table I lists the animals examined and the results obtained. The coati apparently represents a new host record for the lung fluke. The *Philander opossum*, however, is believed to be the most important definitive host in the area since some 53% (8 of 15) were infected. The four-eyed opossum is more common in the endemic region than the coati, and is only slightly less abundant than *Didelphis marsupialis*. Surprisingly, an adult female and two young of the crab-eating racoon were all negative for *Paragonimus*.

The findings indicate a high level of endemicity for *P. rudis* in a coastal stream of Panama. Although no human case of paragonimiasis has yet been found in this country, a potential for human infection seemingly exists. Fresh-water crabs and crayfish occur in Panamanian streams, and both are regularly consumed by native residents. Lung fluke infections do occur in domestic animals in Panama as shown by an infection in a house cat which had been owned and cared for by a resident of Achioté. Fecal flotations from a domestic hunting dog from the same area also revealed *Paragonimus* eggs on several occasions.

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