

SCHISTOSOME DERMATITIS FROM *POMACEA PALUDOSA*  
(SAY) (PROSOBRANCHIA: PILIDAE)<sup>1</sup>

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ABSTRACT

*A dermatitis-producing cercaria is reported from Pomacea paludosa from Lake Okeechobee, Florida. Dermatitis was contracted from March-August and caused maculopapular eruptions of the skin which were accompanied by intense itching. This is the first report of schistosomes from Pomacea within the United States.*

Schistosome dermatitis occurs when man becomes the accidental host to cercariae of "nonhuman" schistosome trematodes. The cercariae penetrate the skin where they soon die, causing a hypersensitive reaction of the skin (Hoeffler, 1974). Such dermatitis is globally distributed and is widespread in the United States (Jarcho and Van Burkalow, 1952). In Florida, dermatitis has been reported from marine localities (Penner, 1953; Short and Holliman, 1961), and from an unspecified river near Tampa (Cort, 1936).

The adult trematodes live in the mesenteric veins of waterfowl, marshbirds, and small mammals (Cort, 1950). Eggs pass in the host's feces and hatch, in water, into miracidia which infect snails, their intermediate hosts. In the United States, schistosome cercariae have been reported from species of freshwater pulmonates (*Lymnaea*, *Physa*, *Planorbis* [i.e. *Helisoma*], *Stagnicola*, *Gyraulus*, *Hydrobia*) (Farley, 1971; Scott and Burt, 1976), marine prosobranchs (*Littorina*, *Batillaria*, *Nassarius* [i.e. *Ilyanassa*], *Cerithidea*), and the marine opisthobranch, *Haminoea* (Farley, 1971).

While doing field research in Moonshine Bay, Lake Okeechobee, Glades County, Florida (26° 54' N, 81° 02' W), the senior author contracted dermatitis. The infection resulted from wading in the shallow, vegetation-choked airboat trails that cross the bay. The dermatitis, present from

March—August, was most prevalent in June and July, as evidenced by a greater number of cercarial lesions.

The dermatologic response was similar to that described by Hoeffler (1974). Initial cercarial contact caused burning and itching for several hours. After a subsequent quiescent period of eight hours, maculopapular eruptions appeared, accompanied by intense itching that lasted for several days. Vesicles formed after two days and lasted for two weeks.

Adult apple snails, *Pomacea paludosa* (Say) (Prosobranchia: Pilidae) were isolated in glass jars and, after several hours of darkness, were subjected to direct incandescent light. The snails shed furcocercous, apharyngeate, brevifurcate, distome cercariae (Schistosomatidae: *Cercaria* sp.). These cercariae elicited a dermatologic response when placed on the authors' arms. A sample of three hundred and twenty-six snails, collected July 11, 1976 from Moonshine Bay, were isolated and found to have a three percent infection of schistosomes.

To our knowledge, this is the first record of a dermatitis-producing schistosome from *Pomacea* within the United States. The only previous record of a larval schistosome from *Pomacea* is *Cercaria heteroglandula* from *Pomacea glauca* in Venezuela (Nasir and Diaz, 1968).

Cort (1950) reported dermatitis-producing cercariae to be associated with shallow, warm, quiet waters that are thick with vegetation and have large snail and waterfowl populations. Moonshine

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Bay provides a similar habitat. It is a backwater bay consisting of a wet prairie of almost pure stands of spikerush, *Eleocharis cellulosa*. The air-boat trails contain large quantities of bladderwort, *Utricularia* sp., and white waterlily, *Nymphaea odorata*. During the summer, the water is warm ( $X = 26^{\circ} \text{C}$ ) and shallow ( $<0.5 \text{ m}$ ), and has a silt bottom which is overlaid with flocculants. *Pomacea* is abundant in the area, where it forms an important food source for the limpkin (*Aramus guarauna pictus*), the boat-tailed grackle (*Cassidix mexicanus*), and the endangered Everglade kite (*Rostrhamus sociabilis plumbeus*) (Synder and Snyder, 1969).

In the freshwater lakes of Michigan and Wisconsin migratory waterfowl were found to be the predominant definitive hosts of the adult schistosomes (Cort, 1950). It is likely that the primary host in Moonshine Bay will be one of the many species of local and migratory waterfowl that makes extensive use of the area.

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## THREE INTRODUCED GASTROPODS IN IOWA

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#### ABSTRACT

*Three introduced gastropods are reported from Iowa for the first time: Arion fasciatus in Story and Allamakee Counties, Lehmannia valentiana from greenhouses in Ames, Story County, and Viviparus malleatus in Polk County, Iowa.*

The continuing expansion of the ranges of introduced gastropods in North America is an interesting but poorly documented phenomenon (Chichester and Getz, 1968). Recent collecting in

central and northeast Iowa has revealed the following introduced species:

*Arion fasciatus* (Nilsson, 1822). This is the most widely distributed of three closely related