

## The Occurrence of *Unionicola* sp. in a Viviparid Snail, *Mekongia sphaericula* (Deshayes, 1876) in Thailand

WACHIRA SRIKOOM AND SOMSAK PANHA \*

*Mollusc Research Unit, Department of Biology, Faculty of Science, Chulalongkorn University,  
Phyathai Road, Bangkok 10330, THAILAND*

The five genera of the water mites family Unionicolidae are parasitic in molluscs or sponges (Mitchell, 1957). *Polyatacides* and *Atacella* occur in South America, *Vietsatax* in Japan, *Najadicola* occurs in North America as *N. ingens* and *Unionicola* is a widespread cosmopolitan genus (Gordon *et al.*, 1979). The genus *Unionicola* (Halderman, 1842) in freshwater mussels has been known for two century. Later there are additional reports on parasitic associations with many kinds of

animals such as unionid bivalves, snails and freshwater sponges (Mitchell, 1957; Davids, 1973; Jones, 1978). The parasitic association follows an evolutionary sequence from species that use the host only as a site for the egg or transformation stages to species that parasitic in the host as the nymph and adult (Paterson and Macleod, 1979). During the survey of freshwater snails in northeast Thailand in March 2004, forty five individuals (29 males and 16 females) of an edible viviparid snail,

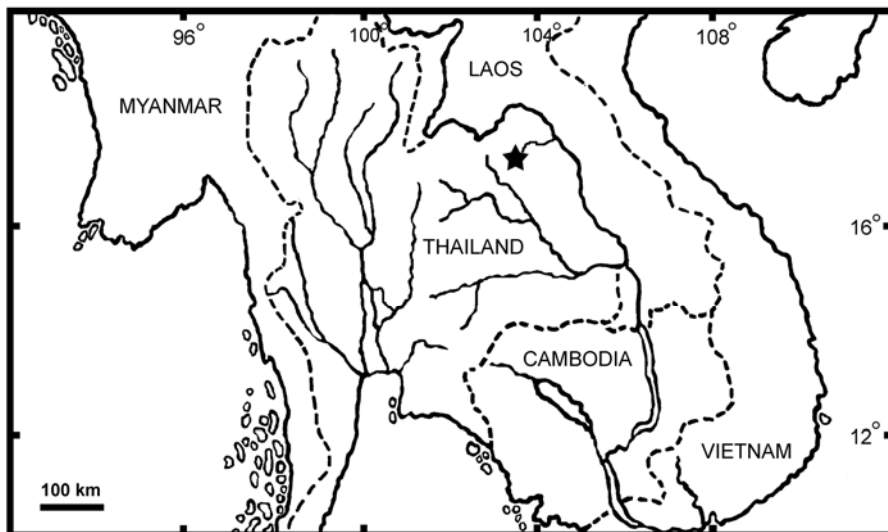


FIGURE 1. Map showing the collecting site of *Mekongia sphaericula* at Mae Hee Canal, Seka District, Nongkai Province, Thailand (star).

\* Corresponding author.

Tel: (662) 218-5273

Fax: (662) 218-5273

E-mail: somsak\_panha@yahoo.com

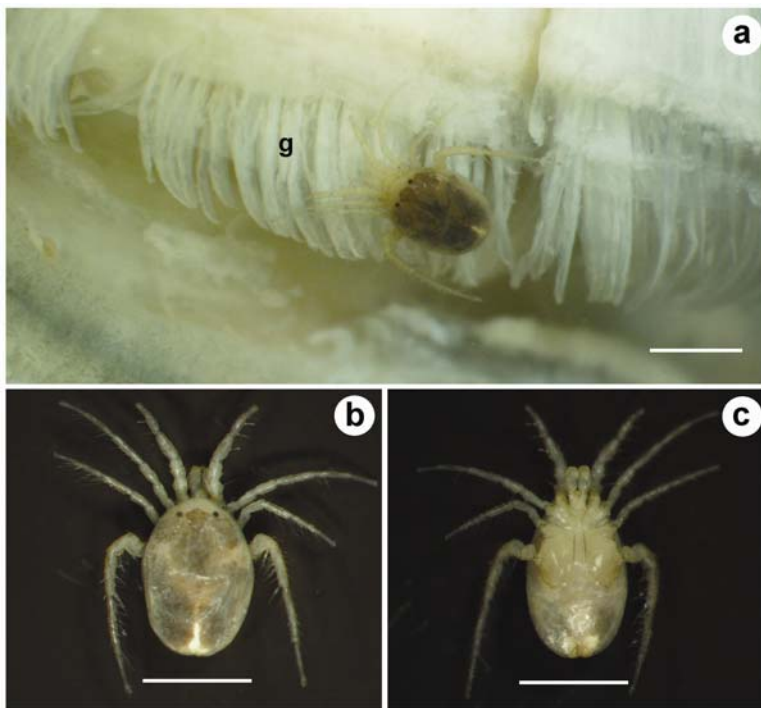


FIGURE 2. *Unionicola* sp. female found in *Mekongia sphaericula* (Deshayes, 1876); a, on gill surfaces (g); b, dorsal view; c, ventral view. Scale bars = 1 mm.

*Mekongia sphaericula* (Deshayes, 1876) were collected from Mae Hee Canal, Seka District, Nongkai Province (Fig. 1) with five species of unionid mussels. On dissecting snails for anatomical study, we discovered the water mites, *Unionicola* sp. on gill surfaces (Fig. 2). This is the first record on the parasitism of *Unionicola* on viviparid snails in Thailand. One to two individuals of mite were found on the gills of snails. There were 14 snails (4 males and 10 females) infected by the mites.

#### ACKNOWLEDGEMENT

This research was supported by a grant from Biodiversity Research and Training Program (BRT 147002).

#### LITERATURE CITED

- Davids, C. 1973. The relations between mites of the genus *Unionicola* and the mussels *Anodonta* and *Unio*. *Hydrobiologia*, 41: 37-44.
- Gordon, M. J., Swan, B. K. and Paterson, C. G. 1979. The biology of *Unionicola formosa* (Dana and Whelpley): a water mite parasitic in the unionid bivalve, *Anodonta cataraacta* (Say), in a New Brunswick lake. *Canadian Journal of Zoology*, 57: 1748-1756.
- Jones, R. K. H. 1978. Parasitism by *Unionicola* spp. Larvae on chironomids. *Hydrobiologia* 60: 81-87.
- Mitchell, R. D. 1957. On the mites parasitizing *Anodonta* (Unionidae: Mollusca). *Journal of Parasitology*, 43: 101-104.
- Paterson, C. G. and MacLeod, R. K. 1979. Observations on the life history of the water mite, *Unionicola formosa* (Acari: Hydrachnellae). *Canadian Journal of Zoology*, 57: 2047-2049.

Received: 11 November 2004

Accepted: 7 December 2004