ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 4, Issue, 06, pp.048-049, June, 2012

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

SHORT COMMUNICATION

FIRST RECORD OF THE FRESHWATER SNAIL *Bulinus beccari* (PALADILHE 1872) THE INTERMEDIATE HOST OF THE PARASITE *Schistosoma haematobium* IN HA'IL PROVINCE SAUDI ARABIA

Mohammed Zuhair Amr and Ahmed Mohajja Al-Shammari

Department of Biology, Faculty of Science, University of Ha'il, Ha'il, KSA

ARTICLE INFO

Article History:
Received 17th March, 2012
Received in revised form
25th April, 2012
Accepted 17th May, 2012
Published online 30th June, 2012

Several studies mentioned the genus *Bulinus* in Saudi Arabia and the Arabian Peninsula such as (Brown & Wright, 1980; Brown, & Gallagher, 1985; Neubert, 1998; Bin Dajem 2009). Most of these studies where in the western and the south regions of the Arabian Peninsula. The genus is medically important because several species of *Bulinus* function as intermediate hosts for the schistosomiasis blood fluke. Recently a study made by Jamjoom &, Banaja 2007 mentioned that intestinal schistosomiasis is prevalent in Ha'il, without recording any of the genus *Bulinus* in Ha'il. *Bulinus beccari* is a freshwater snail and serves as an intermediate host for *Schistosoma haematobium*, this species is distributed throughout the south-western region of the Arabian Peninsula (Brown & Wright 1980). The present study records *B. beccari* in the dams of Ha'il province for the first time, and adds additional record to the localities of *B. beccari* in Saudi Arabia.

Empty were collected from seven locations of Ha'il region from February through June 2010 (Fig. 1) and from March through June 2011 (figure 1). Locations are Wasmi Dam (27°30'33.76"N 41°34'45.29"E), Ukdah Dam (27°31'56.42"N 41°35'45.73"E), Al- Nagbeen Dam (27°37'16.59"N 41°36'49"E), Tuwarin Dam (27°34'34"N 41°26'23.73"E) Mawqaq Dam (27°16'1"N 41°13'42"E), and other two dams in the south west of Aja mountains (27°25'43.46"N 41°31'14.72"E) and (27°22'18.09"N 41°26'10.93"E). Shells were cleaned, the largest length and width of each shell was measured. Specimens were collected over two periods: from February through June 2010, and from March through June 2011. Species were identified according to Neubert (1998). Samples Photos were sent to Dr. Ekie Neubert in Germany for identification verification. The shells of *B. beccari* were collected from seven dams, most of them are dry most of the year and they are filled during winter, the shells were found on the organic soil. The shells have a height of 5-6 mm and 3-4 mm in diameter which is smaller size than *B. truncates*, the whorls are rounded and smooth (figure 2). It was recorded in southern Hejaz by Neubert(1998), and in Asser region by (Bin Dajem 2009). It is recorded for the first time in Ha'il. From the total number of the freshwater snails that were recorded 27 species, three of them were *Bulinus* species. In general the low number of freshwater species is due to the geological and climatological factors, as well as insufficient knowledge of many parts of the Arabian Peninsula in mollusks fauna (Neubert, 1998). Freshwater snails of the genus *Bulinus* act as an intermediate hosts for *Schistosoma haematobium* which is associated with urinary schistosomiasis.

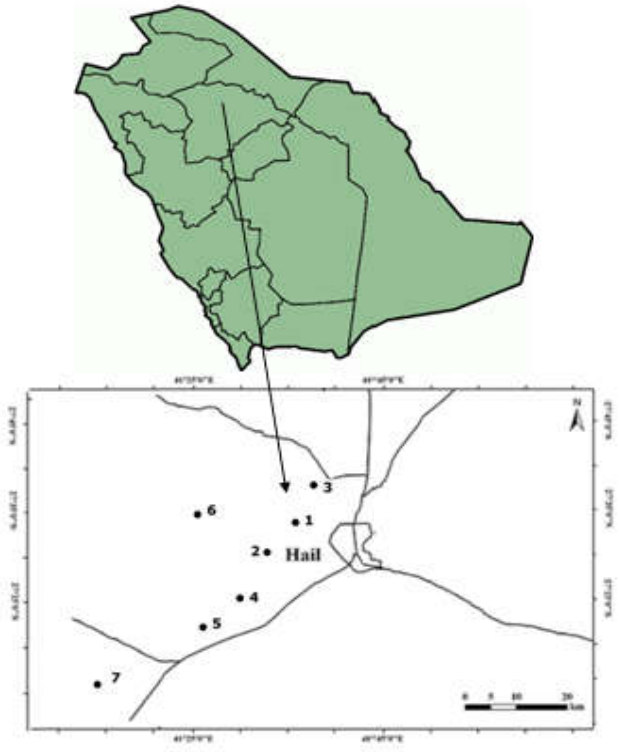

Figure 1: Distribution *Bulinus beccari* in Ha'il, 1: Ukdah Dam, 2: Wasmi Dam, 3: Al- Nagbeen Dam, 4, 5: Two dams in the south west of Aja mountains, 6: Tuwarin Dam, and 7: Mawqaq Dam.

Corresponding author: mohajja@yahoo.com

Figure 2: Lateral view of *Bulinus beccari*

The genus can be divided into four major groups of species (Brown 1994). The *B. forskalii* group contains 11 species with slender shells and usually high spires and is practically pan-African in distribution with species occurring on some of the surrounding islands and the Arabian Peninsula. The *B. africanus* group has 10 species confined to the Afrotropical region. The *B. truncatus/tropicus* complex, which contains polyploid species, is again pan-African with 14 representatives extending into the Middle East, Mediterranean islands and the Iberian Peninsula; the two species included in the *B. reticulatus* group both have restricted distributions. Within each group there are species that act as intermediate hosts for schistosomes in part or all of their geographical range.

Acknowledgment

I would like to express my thanks to Prof. Dr. Zuhair Amr and Dr. Adel Ibrahim for reviewing the article, and to my students Fahd and Hmoud for collecting specimens. Due credit is offered to Dr. Eike Neubert (Forschungsinstitut enckenberg Sektion Malakologie, Germany) for providing useful references and for species identification and verification.

REFERENCES

Bin Dajem, S.M . 2009. Freshwater snails in Asser region, Saudi Arabia with special refernce to the zoonotic trematode. *Journal of the Egyptian Society of Parasitology* 39: 555-557.

Brown, D. 1994. *Freshwater snails of Africa and their medical importance.* 608 pp. London.

Brown, D.S. & Gallagher, M.D. 1985. Freshwater snails of Oman, South eastern Arabia. *Hydrobiologia* 127: 125-149.

Brown, D.S. & Wright, C.A. 1980. Molluscs of Saudi Arabia. Freshwater molluscs. *Fauna of Saudi Arabia* 2: 341-358.

Jamjoom, M.B. & Banaja, A.A. 2007. Comparative Studies on the Susceptible and Non-Susceptible Biomphalaria alexandrina the Intermediate Snail Host of Schistosoma mansoni in Western Saudi Arabia. *World Journal of Medical Sciences*. 2(2): 108-114.

Neubert E. 1998. Annotated checklist of the terrestrial and freshwater mollusks of the Arabian Peninsula with descriptions of new species. *Fauna of Arabia* 17: 333–461.

****