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Short communication

Planorbella duryi (WETHERBY, 1879) (GASTROPODA: *Planorbidae*) FIRST RECORD TO JUTIAPA, GUATEMALA

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ABSTRACT

The presence of the freshwater mollusk *Planorbella duryi* (Wetherby, 1879) (Gastropoda: *Planorbidae*) (=Helisoma duryi Wetherby, 1879) in Jutiapa Department (Guatemala) is reported for the first time. The seven specimens with different stages of growth were captured in the Güija Lagoon belonging to the "El Güayabo" Village, Asunción Mita municipality.

Keywords: Freshwater mollusk, Jutiapa, *Planorbella duryi*, Specimens.

INTRODUCTION

Several species of freshwater molluscs intervene in the biocycle of parasitizes that cause human diseases, such as fasciolosis, angiostrongilosis, paragonomosis and schistosomiasis (Iannacone et al., 2013; Fimia et al., 2014 [1,2],Vázquez & Cobián, 2014), without forgetting the importance that they have from the veterinary point of view when serving as intermediate hosts of diseases that cause affectations to cattle and sheep, such as the cases of fasciolosis and paramphistomosis (Vázquez & Sánchez, et al., 2015) [3].

The freshwater malacofauna of Guatemala has received very little attention, starting these studies intensively from 2017 in the Department of Jutiapa, as there is a great lack of knowledge of the biological impact that species cause in natural nursery (Diéguez et al.,2019) [4]. Therefore, as a result of the malacological surveys carried out in 2019, this first report of the species is made for the department and the country.

METHODS & RESULTS

A small population of *Planorbella duryi* (Wetherby, et al., 1879) (Gastropoda: *Planorbidae elioa duryi* Wetherby, 1879) consisting of seven specimens with different growth stages, was discovered on November 11, 2019 in a freshwater reservoir known as Laguna Güija from the "El Güayabo" village, Asunción Mita municipality, Department of Jutiapa (Reg.=No.52-2019-Jut).

This lagoon is used for public baths and commercial fishing. In the collection of the samples, a bronze strainer (15 cm diameter with 1 mm mesh pitch) was used to remove the different substrates and once sieved; the entire content was poured into a white plastic tray on which the specimens were separated with the help of a soft copper clamp. The method consisted of capture per unit of effort for 30 min without replacement. A total of 25 bodies of natural fresh water, of the lentic and lotic type, shallow with and without aquatic vegetation, floating and adjacent, were surveyed. As a result, a body of water resulted in the presence of the species (4.00%).

The *P. duryi* mollusk is characterized by presenting two different shapes in the shell (discoid and scalar), as well as a straight spiral apex and a mantle with a thick renal crest (Vázquez & Sánchez, et al., 2015).

DISCUSSION AND CONCLUSION

As a result of the studies carried out in Jutiapa, eight genera and ten species had been registered; some of great medical and veterinary relevance with Drepanotrema being the most abundant group (Diéguez et al., 2019). Shells of Biomphalaria helophila had been collected from the genus Biomphalaria (Diéguez et al., 2020) to which *P. duryi* belongs, which are being studied through their internal anatomy.

Another important data was the finding of invasive species that have a marked relevance as bioregulators of other mollusk species, such as the cases of *Tarebia granifera* (Lamarck, et al., 1816) and Melanoides tuberculata (Müller, et al., 1774) (Diéguez et al., 2019).

From this new report, it is recommended to deepen ecological studies on the relationships of this species with

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those already reported, as well as its influence on population dynamics and probable departmental distribution patterns, in order to have evidence that allows us to design and implement surveillance strategies and control of molluscs of sanitary relevance more successful in this Central American country.

ETHIC ASPECTS

This investigation was subject to ethical norms that facilitated to reduce to the minimum the damage possible to the gathered specimens, to the breeding places, as well as to the technical personnel involved in the identification of the gathered samples, for this way, to be able to generate new knowledge without violating the established ethical principles for these cases. All the authors involved in the investigation, publication and diffusion of the results, we are responsible for the dependability and accuracy of the show results (DHAMM, 2013)[5.

COMPETING INTERESTS

The authors declare that there is no conflict of interests regarding the publication of this paper.

REFERENCES

1. Iannacone, J., La Torre, M.I., Alvario, L., Cepeda, C., IAyala, H., Argota, G. (2013).Toxicity of biopesticides Agave americana, Furcraea andina (Asparagaceae) and Sapindus saponaria (Sapindaceae) on invader snail Melanoides tuberculata (Thiaridae). Neotropical Helminthology., 7: 231-241.
2. Vázquez, A.A., Cobián, R.D. (2014). Illustrated guide to the fluvial mollusks of the Guanahacabibes Peninsula Biosphere Reserve, Pinar del Río, Cuba. Cuba Zoo., 25: 11-15.
3. Vázquez, A.A., Sánchez J. (2015). Illustrated and annotated key for the identification of fluvial gastropod mollusks of Cuba. Cuban Journal of Tropical Medicine., 67: 231-243.
4. Diéguez, L., Monzón, M.V., Rodríguez, J., Juárez, J.A., Iannacone, J, Fimia, R. (2019). Distribution and preferential hábitats of sweetacuicolas mollusks from Jutiapa, Guatemala. Biotempo (Lima)., 16(1):11-21.
5. DHAMM. (2013). Ethical Principles for Medical Research Involving Human Subjects. 64th General Assembly, Fortaleza, Brazil, October. 64ª General Assembly, Fortaleza, Brazil, October. World Medical Association, Inc. – All Rights reserved. 9pp.