



Short Communication

Ghat Municipality recorded the first record of Tadpole Shrimp (*Triopsgranarius*) in Libya

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Available online at: www.isca.in, www.isca.me

Received 25th October 2019, revised 23rd June 2020, accepted 21st July 2020

Abstract

The tadpole shrimp (*Triopsgranarius*) is largely geographically distributed throughout North Africa, Middle East and Asia. It has recently been found in Ghat Municipality of Libya after torrential floods. The collections of *Triops granaries* are the first records to be documented for Libya.

Keywords: Tadpole Shrimp, *Triopsgranarius*, Ghat Municipality, Libya.

Introduction

The Notostraca fauna (tadpole shrimp), species *Triopsgranarius* has a dispersed distribution, found in all continents (Africa, Middle East, India to East Asia (China and Japan) and others extend north¹⁻⁶ except southernmost continent (Antarctica)^{7,8}. Tadpole shrimp is called the living fossil, due to its minimal morphological changes; their morphology hasn't changed since the Triassic; 250 millions of years ago, exactly matching their ancient fossils. It is considered to be one of the oldest living species on the planet^{9,10}; fossils of this species were recorded in Triassic in Germany and Jurassic fossils from Kazakhstan and China^{11,12}. The *Triopsgranarius* inhabit drier parts of Africa especially the fresh and brackish temporary waters, in accordance with the results of different researchers^{13,14}. Our understanding and knowledge of *Triopsgranarius* ecology and their distribution is poorly known in Libya; Although it is relatively well-known and described by pioneer work of Gauthier 1928 at Maghreb: Algeria, Morocco and Tunisia^{14,29}. It is characterized by a high diversity and a pronounced degree of indigenesness. Moreover, new and cryptic species have been discovered at adjacent nations^{3,29}. However, the year 2019 Ghat municipality of Libya has reported the first record of *Triopsgranarius*.

Collection

On June 22, 2019, Twelve species were captured at Ghat Municipality, which lies some 1,300km south west of Tripoli on the Algerian border (245745468N 10104698E) altitude 667 meters. Torrential floods were estimated to be 1.70 meters by 4 meters with a maximum depth of 20cm.

Specimens were collected by personal of Rapid response team (RRT) of National Center for Diseases Control (NCDC) during

torrential floods at Ghat Municipality (Figure-1 and 2). All 12 specimens captured were preserved and was deposited in the Parasitology and Vector Borne Disease laboratory. The specimens were identified based on morphology according to various researchers^{1,11,31-32}. The species is known to disperse via floodwater³¹. It is likely brought down the Waditanazafat north south of form Algerian border during Ghattorrential floods; or it is probably that these species eggs already excited in Ghat, because the high number species that were observed in the area during the floods estimated approximately (500/m²)¹⁴. *Triopsgranarius* eggs are known to disperse via birds and wind, as well as that the species eggs are able to survive the dry desert because of their ability to enter anhydrobiosis after the water evaporates and can hatch 20 years later or more¹⁴.

Triopsgranarius is used as bio-indicators for the ecosystem health and a biological control agent for certain weeds, it is considered as a possible human ally against West Nile virus because it acts as a predator on Culicidae³²⁻³⁶.

Conclusion

Triopsgranarius was sighted at Ghat Municipality during the torrential floods; specimens were identified and recoded for the first time in country. However, Future surveys should be done in the country together information on the presents, distribution and their ecology.

Acknowledgments

The authors are thankful to all personal of Rapid response team (RRT) of National Center for Diseases Control (NCDC)/ Ministry of health Tripoli / Libya during the torrential floods, and appreciation to Ghat Municipality for their assistances and support.

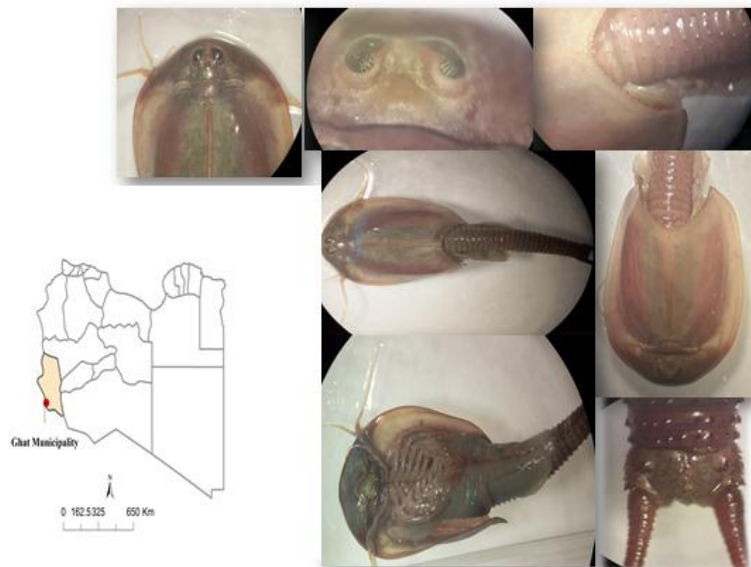


Figure-1: Specimens collected at Ghat Municipality.



Figure-2: Ghattorrential floods photographed by Emad Nujoumah.

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