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Entitled

INVESTIGATING THE PRESENCE OF CLADOCERA SPECIES WITHIN THE WETLANDS OF UAE

by

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<https://eu.bbcollab.com/guest/b9b813e6487e47dcabd69dc535fa482d>

Abstract

The wetlands ecosystems found in the Arabian Peninsula have poorly investigated. Moreover, the available information about the presence of freshwater communities have been rarely documented. Although there are scattered records about the presence of freshwater Cladocera organisms within the Arabian Gulf countries; few of them have received proper taxonomic identification. Cladocera populations in freshwater bodies are always characterizing its water quality and other living invertebrates' community. United Arab Emirates wetlands are among the ecosystems belonging to Ramsar convention for its conservation. The presence of both temporary and permanent freshwater area has been developed after the great interest to collect and use the rainwater across the country for replenishment of underground water that has been used for long time in many purposes. The aim of the study is to investigate the presence of *Cladocera* species within the wetlands of UAE. The study also aimed to find information about the dams in UAE and their locations at the different emirates. In this study, ten (10) locations from different Emirates were chosen based on their accessibility. Samples were collected from both existing water and sediments of the selected locations. Hatching technique of the collected resting eggs followed the methodology described by Hamza et al., 2018 that resulted in the identification of different species. Three types of microscopes (Stereo, compound, and SEM) were used in this study to identify the species, that is in addition to their Molecular identification. From the ten selected locations, five species were identified; Two of them are new record for the UAE territory (*Moina Micrura*, *Ceriodaphnia cornuta*), two species of previous record in UAE by Van Damme & Dumont (2008) *Coronatella anemae*, Van Damme et al., 2011 *Anthalona mediterranea* and the fifth species (*Daphnia Similoides*) was mentioned by Hamza et al., 2018. However, this species is still not confirmed, since its molecular identification does not match with its DNA sequence found at the Gene data bank. The present study may be the beginning of new collaborations between the Arabian Peninsula countries in recording and investigating the presence of *Cladocera*.

Keywords: *Cladocera*, UAE wetlands, *Moina Micrura*, *Ceriodaphnia cornuta*, *Coronatella anemae*, *Anthalona mediterranea*, Taxonomic details.