Research Journal of Marine Sciences ISSN 2321-1296
Vol. **13(2),** 1-2, December **(2025)** *Res. J. Marine Sci.*

Short Communication

New records of two fungal species (Asteromyces cruciantus, Moreau and Moreau) and Paecilomyces sp. associated with the carapace of dead Loggerhead (C.caretta) washed along Farwa Island beaches, west Tripoli-Libya

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Available online at: www.isca.in, www.isca.me
Received 3rd March 2025, revised 18th June 2025, accepted 13th October 2025

Abstract

The eventually that the sea Turtles (C .caretta) reported is influenced by multiple environments factors mainly related to human activities and climatic change, this present work attempt to investigate the specific impact of the Mycobiota found on the carapace of the dead Loggerhead sea Turtles washed up along Faŕwa island beaches, as contributing factor to such reported phenomen.

Keywords: Sea Turtles, Fungi, Libya.

Introduction

Sea Turtles are considered severely endangered species that are threaned to many factors mainly related to human activities and climatic change. Recntly emerging fungal infectious diseases are one of main threats to sea Turtles, (Frank H.Gleason, 2020)[1], Fungal infections may contribute to reducing number of sea Turtles,(Sarmiento Ramines et al. 2017a)[2] (Reynolds et al. 2017)[3] and (Walla et al. 2010)[4]. All the previous mentioned studies have been made to study the Fungal community associated with sea Turtles egg shells and nest sand (Taher Al Masri et.al. 2024)[5]. (Guo et al.2022)[6], Provided the initial insight into the fungal communities found on the carapace of healthy and ulcerated green Turtle.

The published data based on culture dependent and cultural independent methods, did not provide anylist of fungal taxa found on carapace of stranded or dead Loggerhead sea Turtles Based on microscopic morphological discription, (two) fungal species found on carapace, (Asteromyces cruciantus) and (Paecilomyces sp.) of dead washed up along Farwa Island beaches Loggerhead sea Turtle were identified and brief description of the tow species was made.

(Guo et al .2022)[6], as previously mentioned above, provided the initial insight into the fungal communities found on carapace (healthy and ulcerated) green Turtles. However surface Mycobiota in Loggerhead sea Turtles in Mediterranean basin ecosystem have not yet been conducted. The aim of this work was to investigate the mycobiota associated with the Carapace of dead Loggerhead sea Turtles.

More studies are needed in the future particularly when new substrata are investigated. (e.g. Carapace of stranded or dead Loggerhead sea Turtles). Here reported tow anamorphic taxa as new records for Libya. *Asteromyces cruciantus* and *Paecilomyces* sp.

Materials and Methods

Sampling site and isolation: The samples were collected from the carapace of dead Loggerhead sea Turtles washed up along Farwa Island beaches about 200 km west Tripoli- Libya in the area of Zuara.

In the present work samples were collected from carapace, bysterileswabs, For the washed up dead sea Turtles (*C .caretta*), the shell (carapace) was initially washed. Under running tape water and 3 times with sterile water. A flame sterilized spatula was used to scrape the surface of the carapace to allow swabbing. Swabsthen were smeared onto glass slides, stained with Lactophrys cotton Bleu and examined under light microscope using 40× and 100ximmersion objectives.

Results and discussion

A total of (2) fungal taxa identified from Carapace of dead Loggerhead sea Turtles *(Caretta caretta*) washed along Farwa Island beaches, were identified.

Taxonomy: i. A*steromyces cruciantus*. (R. Moreau and M. Moreau ex Hennebert, 1962)[7]. Asexual Marine fungus, is among the Marine fungal species that have been not yet sequenced (Jones EBG et al., 2015)[8] The genus Asteromyces

comprises only one valid species A. cruciantus. The species was introduced by Moreau and Moreau (1962) from sand dunes of the Atlantic coast of France. Obligate Marine filamentous fungus (Kohlm. 1991)[9] is widespread, reported from wide range of substrata. The organism wasreported in marsh Ecosystem on plant host, Spartina spp, (Kohelmyer j.and Kohelmyer E 1979)[10]. Conidia ovoid or pyriform, thin walled one celled. dispersed in nature as aggregates of up to 13 cells. (Kohlm and Kohlm. 1991)[9] Figure-1

Paecilomyces sp .:Phylum (Division). Ascomycota
Class: Eurtiomycètes. The genus *Paecilomyces* was first described in (1907 by Brinier)[11] as a genus closely related to *Penicillium*, was characterized by verticillate conidiophores with divergent whorls of phialides which have a cylindrical or inflated base tapering to a long and distinct neck. The organism is frequently found in soils. Some species of the genus have been Identified from the sea Turtles species, *C .caretta*, Chelonia mydas, Leatherback and Eretmochelys (Frank H Gleason et al. 2020)[1]. She'll mycosis due to *Paecilomyces lilacinus* was previously observed in Carettochelyidsinculpate (Luangsa - ard et al) in (Simona Nardoni and Francesca Mancianti, 2023)[12].

Acknowledgement

Many thanks to Dr . Hamza,A. for his assistance in the samples collection process and to Dr. Ghenghish M.S for her assistance to confirmation of fungi Taxonomy.

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