Diversify of higher filamentous Marine fungi from different regions of the west and east coasts of Libya

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Abstract:

This review article aimed to summarize the latest publications findings on obligate Marine fungi from east and west coasts of Libya. The fungi recorded have been found in nearly every marine habitats examined ,Sand buried wood, Seagrasses *Posidonia oceanica* and *Cymodocya nodosaa* ,Driftwood ,Brown Algae *Cystoseira compressa*, and recently the Sparids *Diplodus sargus* (Linnceus)1958.

Key words: Marine fungi, Driftwood, Brown Algae, Seagrasses, seasediments and Sand barried wood.

Introduction:

The Libyan Fungi are presently represented by (702) fungal taxa, species and varieties by (EL Buni A.M. and Ratan S.S. 1981) .In comparing the fungal diversity in Libya with other Countries , it is important to mention that some Ecological groups of fungi such as Marine fungi are complity ignored and never featured in research topics until now. The following (8) published studies document[1 2 3 4 5 6 7 8 9 10] the information on Libyan Marine fungi, their habitats and their locations of isolation along the west and east coasts of Libya. However these data have not gathered together so as to comment on the diversify of Marine fungi in Libya. The subsequent list listing the higher obligate Marine fungi collected up to dat and their types of substrates. The Hyphomycetes, *Alternaria, Aspergillus, Cladpsorium, Fusarium, Penicillum, Stachybotrys* and *Trichderma* species are terrestrial fungi in survival in Marine environments , usually refered to as Facultative Marine fungi are excluded. The fungal names have been listed alphabetically.

The more recent fungal names and synonyms have been listed.

Ascomycetes:

1- Arenaroiomyces majusculus, Kohlm

2 - *Corollospora gracili* , Nakr

3 - *Corollospora maritima* ,werd

Syn.*Peritrichospora integra* ,Lind

4- *Ceriospopsis circumvestita* Kohlm

5- *Ceriospopsis halima*, Linder.

Syn .*Ceriospopsis Barbata*, H ohnk

6-*Halosphaeria maritima* , Linder

7-*Halosphaeria mediosetagera* Cribbs. and Cribb

Syn. *Halosphaeriopsis mediosetagera* John

8- *Halòsphaeria* sp

9-*Halserphia fibrosa* ,kohl

10-*Halottia Posidonia* , Dur et Mont

11- *Haloguignardia* sp

12- *Leptosphaeria oreamaris* , Linder

Syn. *Pheosphaeria oreamaris* (Shaerer)Linder

13- *Leptosphaeria albopunctata* (West) kohl

14- *Leptosphaeria* sp

15- *Lignicola laevis* , Hohnk

16-*Lindra hawaiinnsis* ,Kohl

17-*Lulworthia opaca* ,(Linder) Cribb and Cribb

Syn. Lulworthia salina .Meyers

18-*Pleospora pelagicum*

19- *Pontoporia biturbinata* (Dur′et Mont .) Kohlm

20-*Torpidospora radita*, Kohl

21-*Verruculina enalia* , Kohlm

.Syn. *Didymosphaeria enalia*, Kohlm

Hyphomycetes

1- *Cirrenalia macrocephala* .Meyers and Moore

2- *Dendryphieala arenria* Nicot.

3-*Dictyosporium pelagicum* ,Linder.

4- *Humicola alopallonella* , Meyers et Moore.

Syn. *Trichocladium alopallonellum* , Meyers and Moore.

5- *Humicola*. *-Piriccauda pelagicum* T.W.johnson.

Syn .Monodictys pelagic, G .Jones.

6- *Zalerion maritima*, Linde.

7 - *Zalerion varium,* Anstasiou.

Coeleomycetes

1- *Camarspoium* roumeguere

2- *Phoma* sp .Saccardo.

Results and Discussion:

Thirty taxa of obligate Marine fungi occurring on various substrates including Driftwood [1, 5] . Brown Algae [6] . Seagrasses [1, 3,4] Sea sediments [7] and sand barried wood [2] .from east and west coasts of Libya were listed.

These fungal taxa (21) of them belong to the Classes Ascmycetes. (7) Hyphomycetes and only two species are known as Coelomycetes.

Some species were identified from one type of substrata , Driftwood as with *Lignicola leovis* , *Halospheria mediosetagera* and *Verruculina enalia.*

On other hand some of the identified species were reported from more than one type of substrata as with *Corollospor maritima* (Ascmycetes) and *Cirrenalia macrocephala*, *Dendryphieala arenarea* (Hyphomycetes).

Of the identified organisms, wood inhabiting fungi (LIGNICOLOUS) and sand barried wood (‹ARENICOLOUS) ,have been the mostreported group of Marine fungi. while the lowest was recorded from the sea fish Diplodus sargus. The most species isolated from the brown Algae *Cystoseira compressa* are ,Facultative Marine fungi and just 4 species are known as obligate Marine ones , *Corollospora maritima* (Ascmycetes) and *Cirrenalia macrocephala*, *Dendriphaella arenarea* and *Humicola alopallonela* (Hyphomycetes).

The wide variability of fungal assemblage associated with the two Seagrasses , *Posidonia oceanica* and *Cymodocya nodosaa* should be noted and only mitotic fungal species were identified from the seagrass *Cymodocya nodosa*.

The data documented allow to suppose that substrata types is a factor which may influence fungal diversity or composition . More studies are needed in the future to address a complete lisl of fungal taxa from previously mentioned substrates in Marine habitats in Libya.

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