

Marine fungi from littoral sea sediments at Bab El – Bahar fishing port along the west coast of Libya.

Al-Masri. T .A

Department of biology. Faculty of Education. University of Tripoli. Tripoli/ Libya.

Tahermasri9030@gmail.com

Abstract:

The present study reports on Marine fungi species from west coast of Libya. Organisms were isolated from littoral sea sediments from Bab- El -Bahar fishing port location along west coast of Libya. Collected samples were examined under light microscope and standard identification keys were used. Of the samples examined (11) genera and species have been identified . The identified organisms belong to the Classes Ascomycetes (3 species) and Hyphomycetes (8 species) . The Ascomycetes *Haloguignardia sp.* Is the first record of the species from Libya.

Keywords : Marine fungi, sea sediments, Ascomycetes, Hyphomycetes.

Introduction:

sea sediments sources are commonly streams , sea cliff erosion , onshore migration of sand banks and materials of biological origin such as shells , fragments and skeletons of small Marine organisms. Algae remains were also registered.(Shyer. H and Paul, D 1994).

Materials and Methods:

1 - Collection of sea sediments :-

Sediments were sampled from May to July 2022 from Bab -El- Bahar fishing port along the west coast location. Organisms were isolated from littoral sea sediments of Libya .The samples were collected by dipping screw cap glass tubes at (50 cm - 1 M. deep) below the sea water surface , tubes were opened and capped while submerged to prevent contamination with air borne spores.

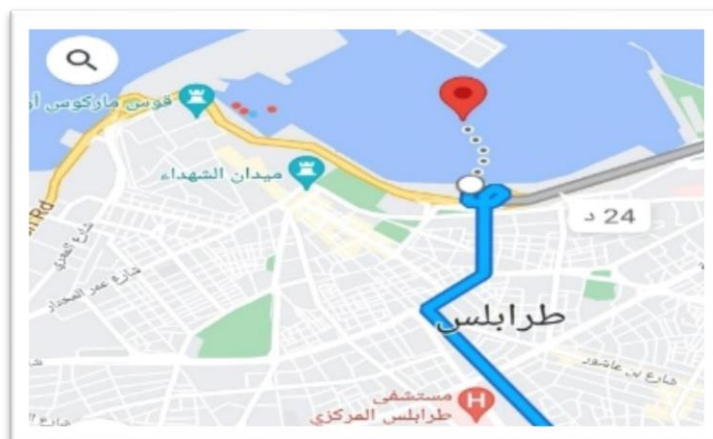


Fig1: Bab -El- Bahar fishing port

2- Isolation and identification of fungi isolated from sea sediment sambals :-

The collected samples underwent manual agitation for 10 minutes, a process which was performed in order to loosen any microorganism which had adhere to grains of sediments, then the suspended sediment allowed to settle for 5-10 minutes, until noticeable layer of sediment formed on bottom of the tubes. The sea water was slowly poured leaving only sediments and a small amount of residual sea water .The sediment samples were examined immediately or incubated for weeks. as some fungi may exist in the form of mycelium which has not yet fruiting. The isolated fungi genera and species were identified with help of available fungi identification keys in literature. More complete definition of Marine fungi are found in A.R.Cavaliere 1977. and Kohelmyer and Kohelmyer, 1991. For Terrestrial fungi in survival in Marine environments , Barnett ,1960 and Booth 1986 references were used.

Results:

Table 1 . Genera and species of fungi isolated from littoral sea sediments along the west coast of Libya.

Ascomycetes
1- <i>Ceriosporpsis halima</i>
2- <i>Corollospora maritema</i>
3- <i>Haloguingnardia sp . Fig1</i>
Hyphomyctes

- 1- *Alternaria sp*
- 2- *Aspergillus sp*
- 3- *Cirrenallia macrocephala*
- 4- *Cladosporium sp*
- 5- *Fusarium sp*
- 6- *Penicillium sp*
- 7- *Phoma sp*
- 8- *Trichoderma sp*

In this study eleven fungal taxa were identified. The identified taxa belong to two Classes, Ascomycetes (3 taxa) and Hyphomycetes (8 taxa) . Among the Ascomycetes detected in this work. *Haloguignardia sp* (Fig 1) is the first record of this species from Libya.

Dissection :

In the present investigation (11) fungal genera and species were identified. Filamentous fungi similar to those found in terrestrial habitats as with , *Alternaria sp*, *Aspergillus sp*, *Cladpsorium sp* *Fusarium sp* , *Penicillum sp*, *Phoma sp* and *Tricoderma sp*, were isolated . Similar findings reveal the isolation of hundreds of fungal isolates that mostly resemble those isolated from terrestrial habitats , from sea sediments (Sparrow, 1937) (Damare , 2006) . A characteristic Marine fungal population was given by Kohelmyer and Kohelmyer, 1979 and 1991, of these fungi *Ceiosporopsis halima* , *Corollospora maritima* , and *Haloguignardia sps* (Ascomycetes) and *Cirrenalia macrocephala* (Hyphomycetes).were also found in the present study. Among the Ascomycetes detected in this work *Haloguignardia sp*. Is the first record of this species from Libya . Previous studies reported the isolation of *Haloguignardia sp*. from SE Sicilian coast, Italy on the brown Algae *Cystoseira . elegance* . G .Alongi at al. 1999.

Haloguignardia sp . Fig1. Ascospores single - celled (non septate) Amersoprae , 20 - 30 μ \times 14 μ . hyaline, ends more or less rounded provided at each end with a small gelatinous yellow deciduous cap shaped appendage

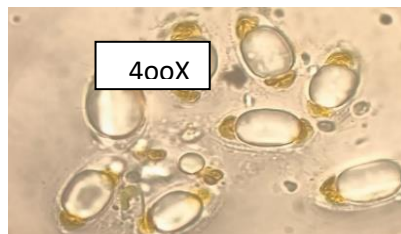


Fig. 2- 3 Haloguignardia sp

Conclusion :

In conclusion , eleven Marine fungal species have been identified from littoral sea sediments along the west coast of Libya. Of the identified organisms the Ascomycetes *Haloguignardia sp.* Was not reported previously from Libya. More studies are needed in the future to address a check list of fungal taxa from littoral and deep sea sediments .from different locations along the west and east coasts of Libya.

Acknowledgement :

. Thanks a lot for D . Ghengish Masuda Sifaw for here support and encouragement

References :

- 1- Shyer. H.Shin, Paul. D. Komar. 1994. Sediments beach morphology and sea cliff erosion within an Oregon coastel littoral cell. Journal of coastal research, 144-157.
- 2- A .R . Cavaliere , 1977 . Marine Flora and Fauna of the Northeastern United states. NOAA Technichal NMFS Circular , 398.
- 2- Kohelmyer and Kohelmyer , 1979 .Marine Mycology . Academic press New York, pp . 690.
- 3- Kohelmyer and Kohelmyer, 1991. Illustrated key to the filamentous higher Marine fungi. Botanica marina vol. 34 , 1 - 61.
- 4- Barnet and Hunter , 1972. Illustrated genera of imperfect fungi , fourth edition. Academia education .

5- Booth C. 1960 , Studies in mycology. Pap . 95 : 1 - 16.

6- Sparrow, 1937 .The occurrence of saprophytes fungi in marine muds.
Biological. Bull. Vol. 73 : 242 - 248.

7- Damar et al . 2006 . Fungi in deep-- sea sediments of the central Indian
Basin. Deep - sea Res .I vol. 53 : 14 - 27.

8- G . Alongi et al . 1999 . First record of *Haloguignardia Cystoseira*
(Ascomycetes) on *Cystoseira elegance* (Fucophyceae) from Mediterranean
sea. Botanica marina, vol .42 , 33 – 35.