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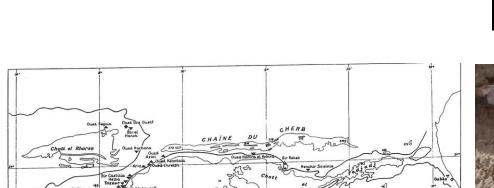
## MODERN DIATOM IN TUNISIA AS INDICATORS OF WATER CHEMISTRY AND THEIR USE FOR HYDROLOGIC AND CLIMATIC RECONSTRUCTION



## Leila Ben Khelifa

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The purpose of this work is to update taxonomic identification of Diatom from Tunisia described in Ben Khelifa, L., 1989, for a better understanding of quaternary diatom occurrence and its implication. In particular, have quaternary Cerastoderma lens a marine or a continental origine?



I. Quaternary Sites location:



II. Modern Sites location with in particular, photos of the diverses biotopes in Wadi El Akarit











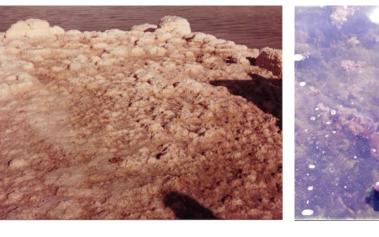
Les **Chotts** *Cerastoderma* lens



Akarit Cerastoderma lens

**Hydrothermal sources** 

**Metasaline biotopes** 

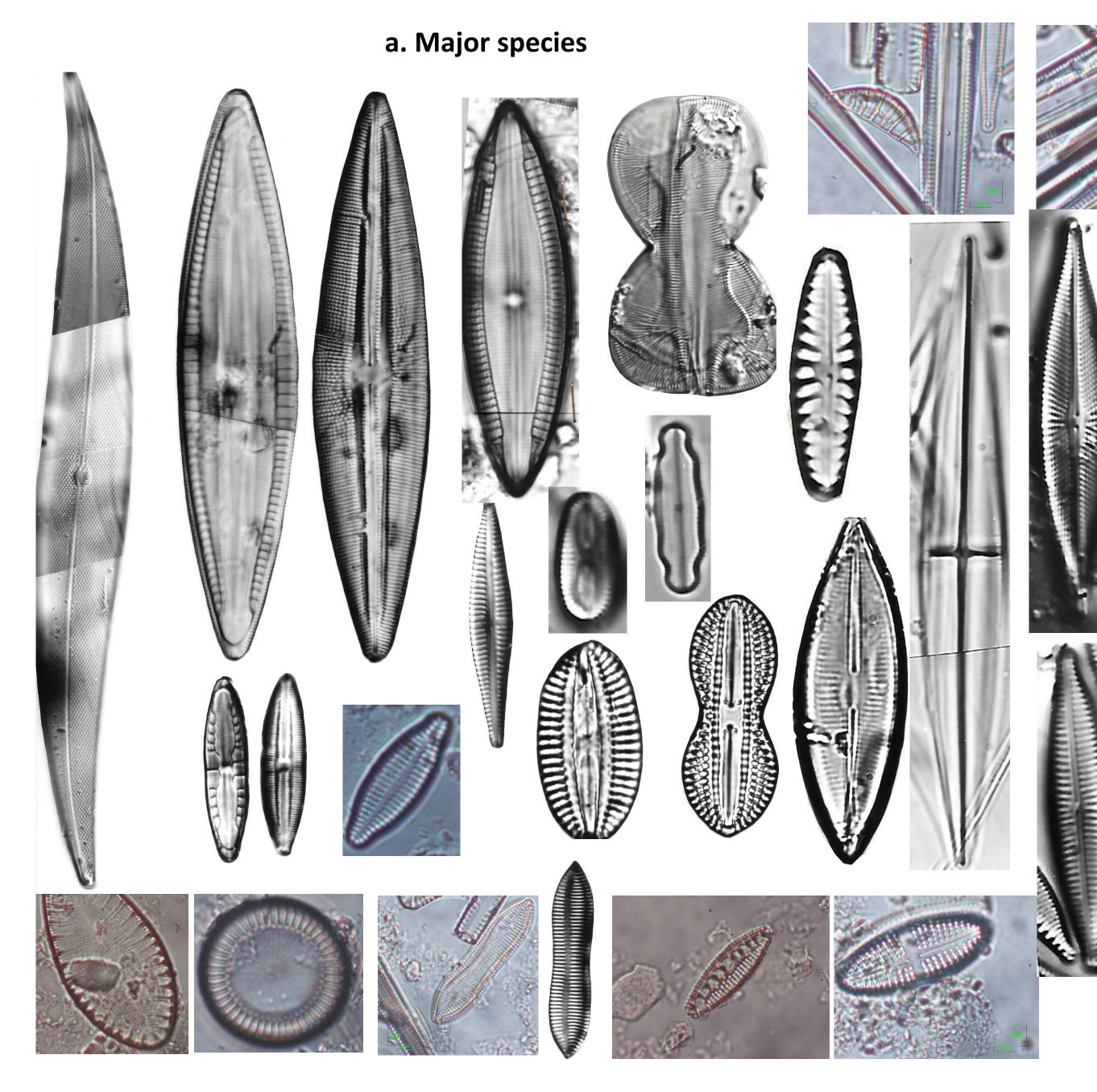




Modern sites location

II. Diatom assemblages, stenotypic species, autoecological results and paleoecological interpretations

Modern Akarit biotopes



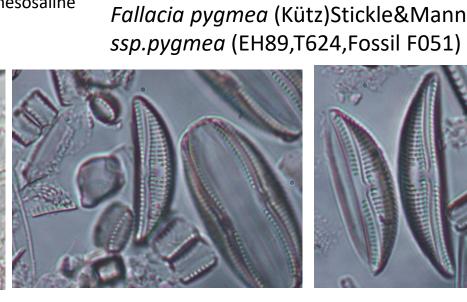
b. Major Diatom Assemblages in Modern samples of TUNISIA





epipelic sample(ST1)

Mastogloia dominant in a mesosaline

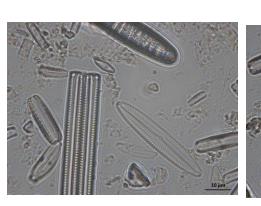


and Navicymbula pusilla Typical holocene

Chott area

Cyclotella meneghiniana

assemblage in the

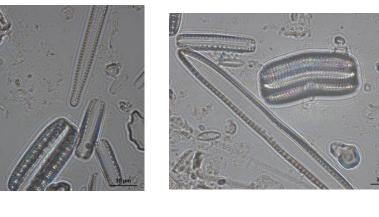


In the matrix, Surirella striatula



Several modern hydrothermal samples from the chott area with only two or three species dominant

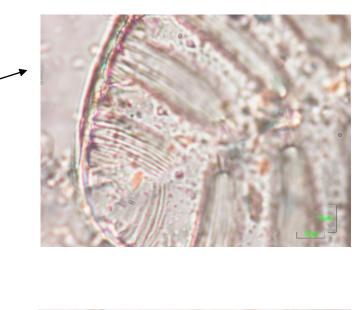




III. When Diatom allow a detailed paleorecontruction: in Akarit Cerastoderma lens, we can note an evolution from a lagunar environment

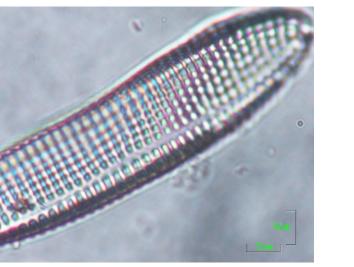
to a marine one, in Villafranchien time





Mastogloia cf aquilegiae with Achnanthes cf. arenaria are frequent inside the Cerastoderma shell

The most frequent specie in holocene sediment Denticula elegans var. africana Hustedt is abondant in modern sample EH90

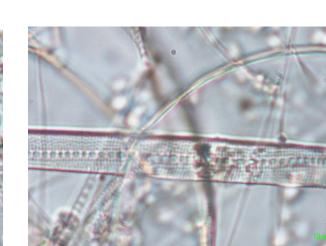


Achnanthes brevipes? is very big in

for a definitive response.

fossil sediment



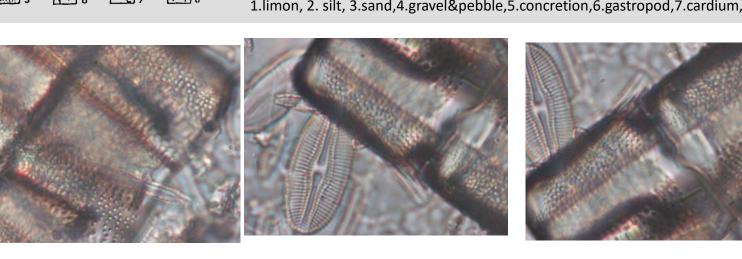




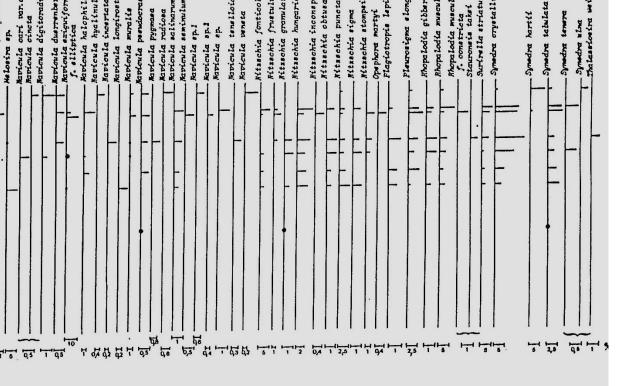


Metasaline Assemblage from modern (TN62:  $C=-(65600\mu/cm, pH=9)$ ) and fossil samples of the Chott region. Rhopalodia musculus occur in very big size and the two Nitzschia do not correspond exactly to Nitzschia graciloides Hust. And (kütz.)Smith thus more taxonomic work is needed to make sure wether these species are euryhalobous or stenotypic metasaline.

Diatom distribution in *Cerastoderma* lens of Wadi El Akarit CUC 7 1.limon, 2. silt, 3.sand, 4.gravel & pebble, 5.concretion, 6.gastropod, 7.cardium, 8.peat



**Conclusions** 



In Cerastoderma lens, no thalassic species are observed in the

species suggest a tidal influence. However, more Cerastoderma

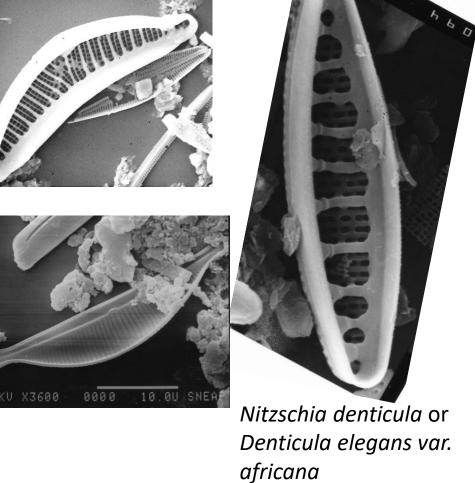
lens' samples from the chott regions need to be studied and dated

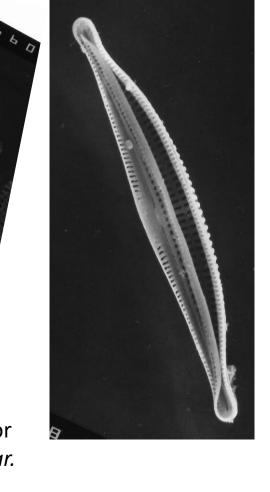
chott area whereas in Akarit, the occurrence of few marine



crystallina? origin?; in Akarit Cerastoderma lens

Eusaline Synedra MEB photo for major species occuring in both fossil and modern biotopes





Thanks to





