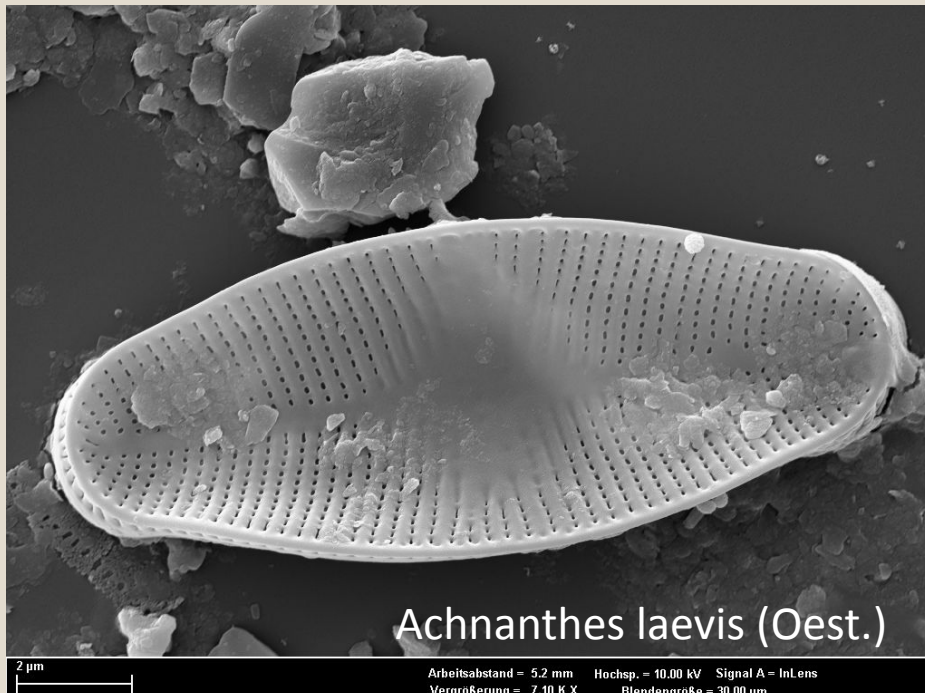


Diatom method

Pankova Daria,
SPbU, CORELIS

St. Petersburg, 2018

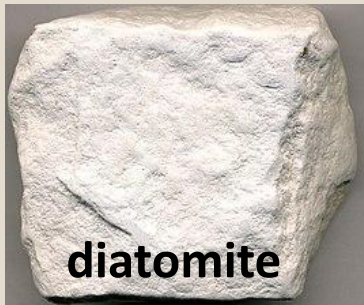
- **Diatoms** are unicellular algae with golden-brown photosynthetic pigments. Their cell wall is silicified to form a frustule, comprising two valves, one overlapping the other like the lid of a box.
- Diatoms are the dominant marine primary producers and play a particularly important role in the carbon, silica and nutrient budgets of the modern ocean.



Diatoms distribution



- Diatoms are autotrophic and form the basis of food chains in many aquatic ecosystems. Different species occupy benthic and planktonic niches in ponds, lakes, rivers, salt marshes, lagoons, seas and oceanic waters, while some thrive in the soil, in ice, or attached to trees and rocks.



diatomite



sapropel



sand



clay



peat

Reconstructable parameters

Physical factors:

- Temperature
- Luminance
- Mixing properties
- Ice cover duration

Chemical factors:

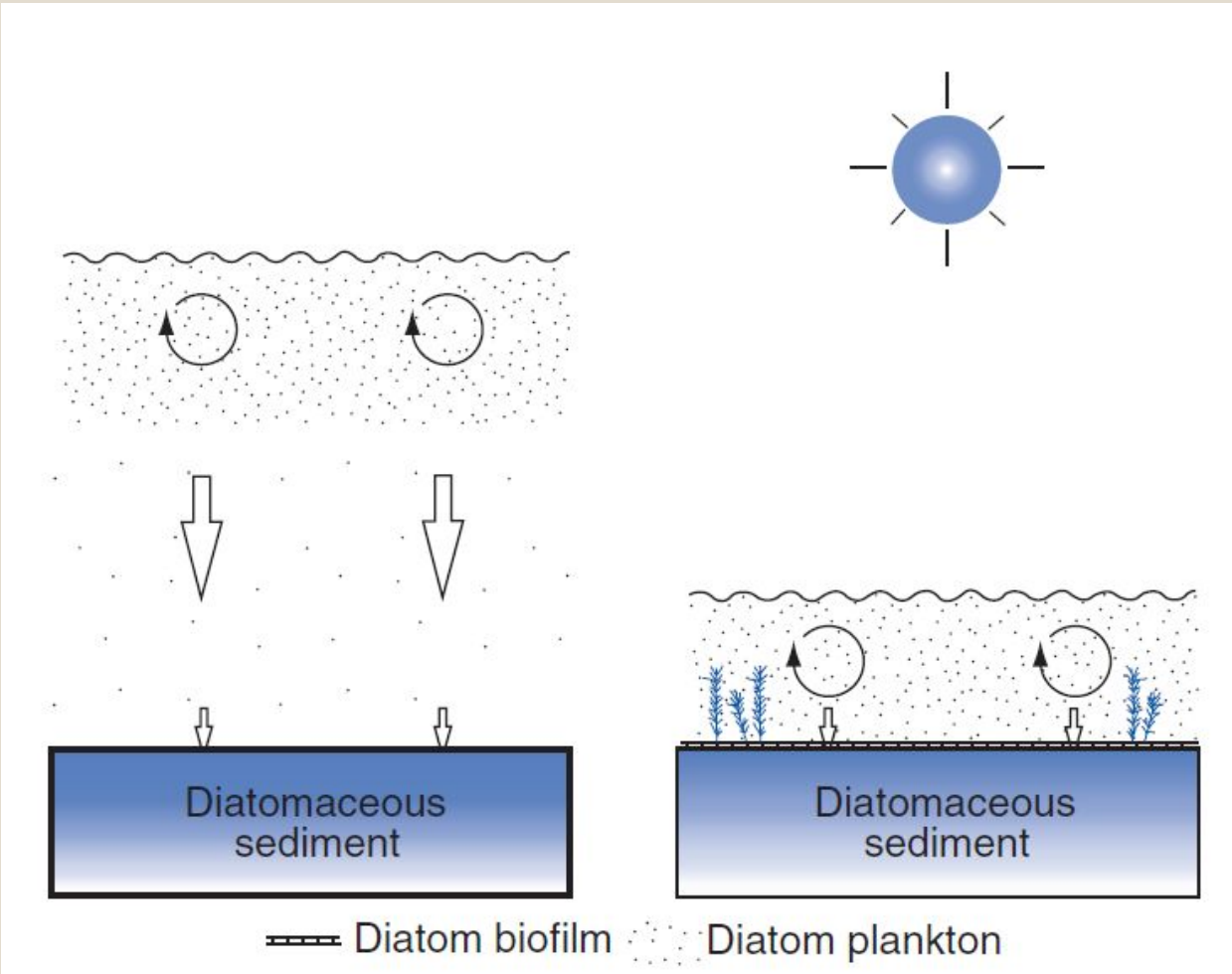
- pH
- Nutrients
- Salinity
- Organic carbon

Biological factors:

- Mutualism
- Parasitism



The formation of diatom-rich deposits



Salinity Reconstructions from Continental Lakes

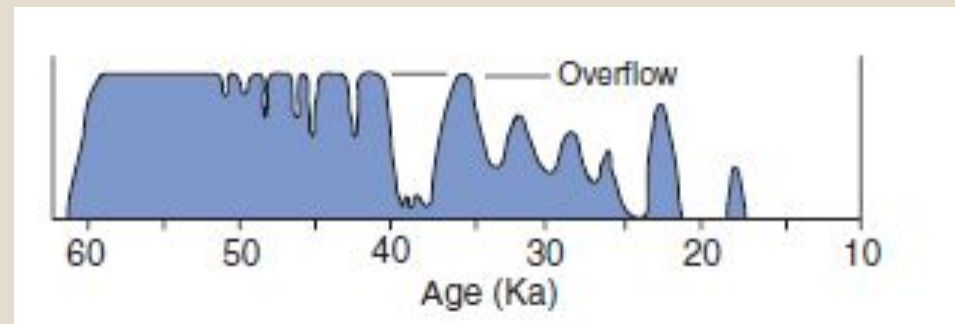
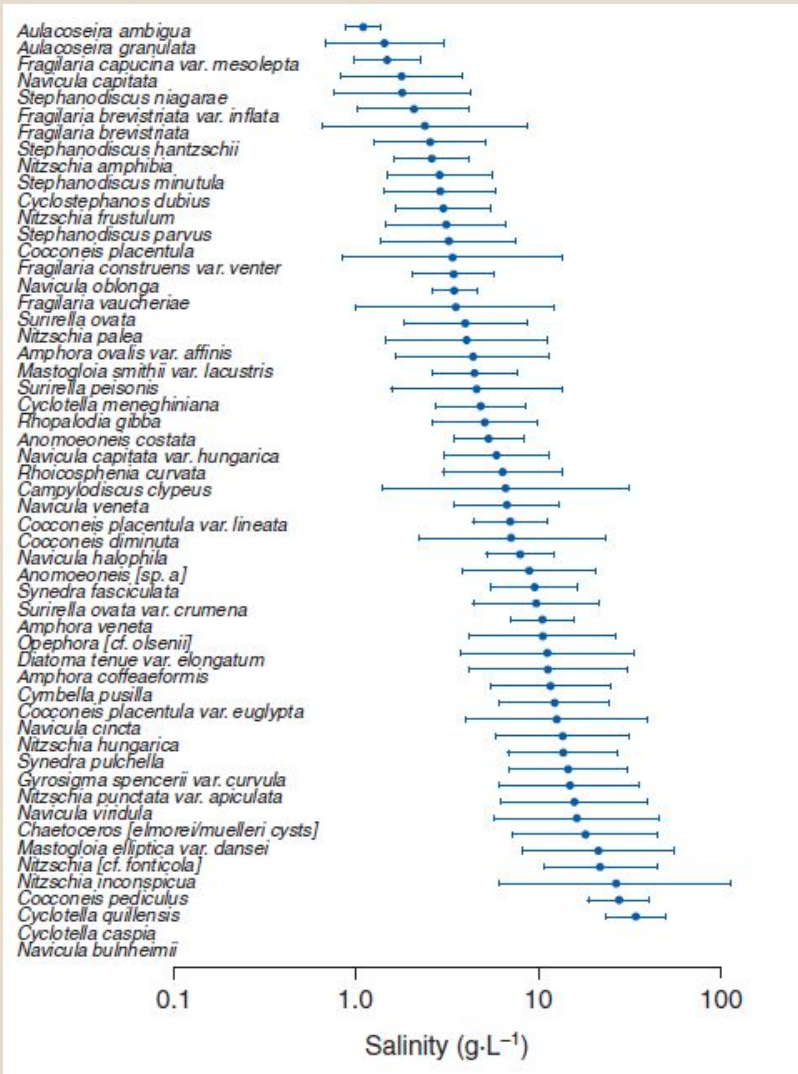


Figure: Lake-level record from the Willandra Lakes, Murray Basin, southwestern New South Wales. Modified from Bowler JM (1998) Willandra Lakes revisited: Environmental framework for human occupation.

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Thank you for your attention!

