

My testate of the Month:

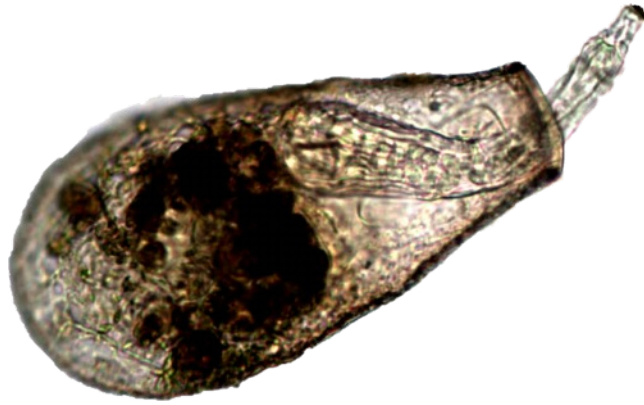
Pontigulasia

(latin: throat bridge)



Pontigulasia are a genus of rather unimpressive Diffugia-like amoebae, roughly between 90 and 150 μm high, which have developed a remarkable strategy against a common enemy of thecamoebae: Some bdelloid Rotifer-species.

Some bdelloid-species inhabit shells, either self secreted, or stolen amoeba tests. If not empty they kill the owner.



a rotifer inhabiting a Longinebela-shell

As a protection, the Pontigulasia species restrict the entrance to their shells by means of a diaphragm or internal bridge between the neck and the main body.

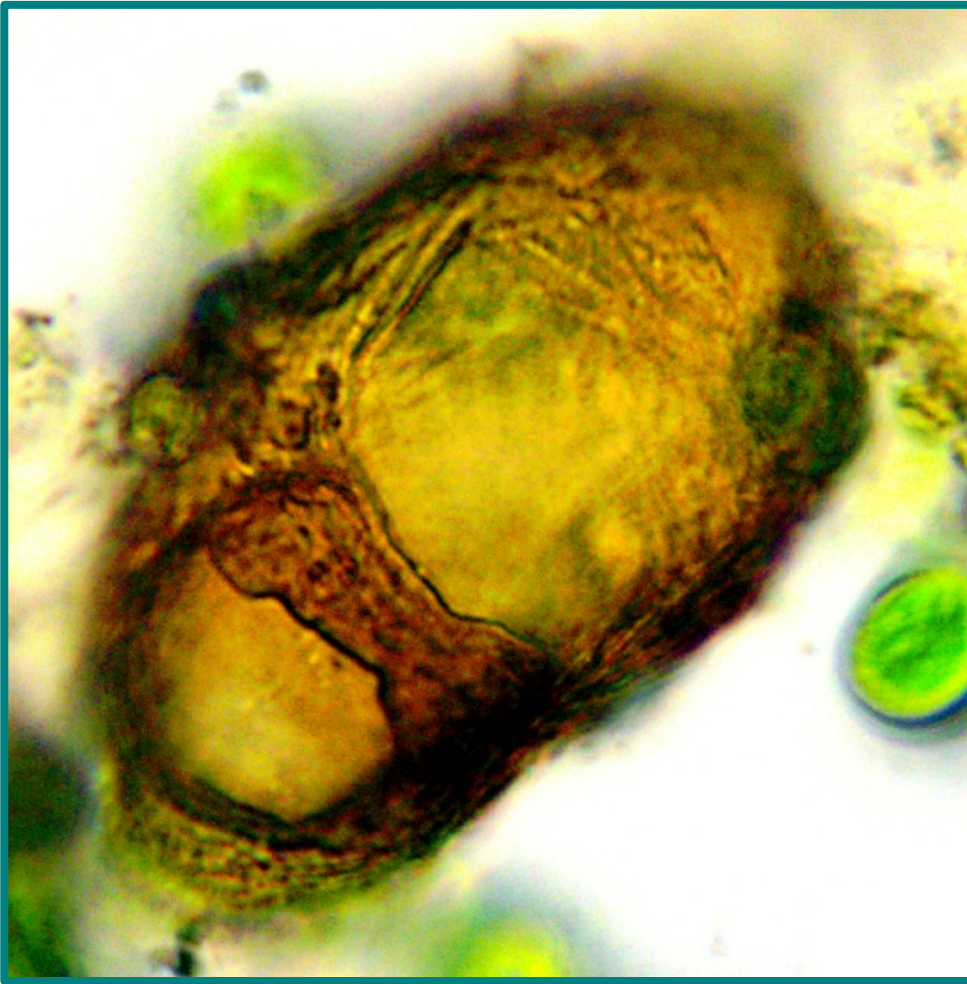
Colin G. Ogden mentioned 1987 : " ... the difficulty of trying to see inside the shell either en face or laterally due mainly to the opacity of the mineral particles of which it is constructed."

I did it!



Pontigulasia rhumbleri as seen from aside through the shell (left), and into the mouth (below).





And the smaller *Pontiguasia elisa*
into the mouth (top) ...

... and through the shell (right).

The four images of the bridges on
pages 2 and 3 are stacks of few se-
lected focal planes.



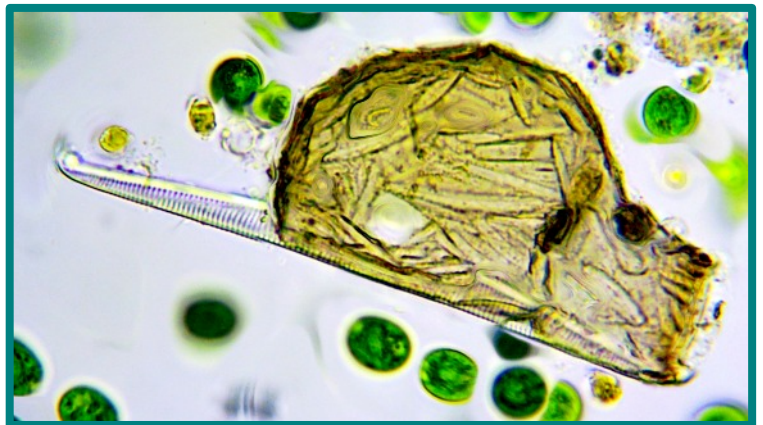
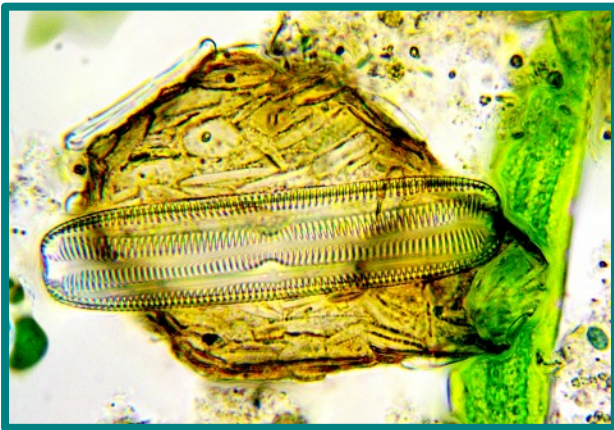
Also interesting



Their
pseudopodia

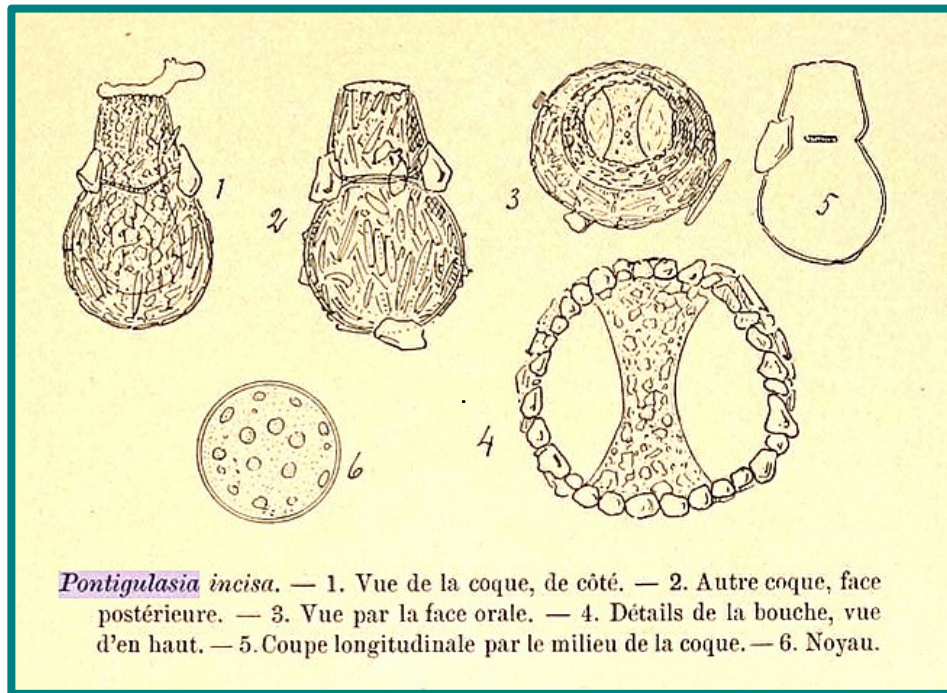


Some decorate their shell with large diatoms.



This is noteworthy because these oversize building components have not, as common, been stored by the mother cell before the division, but that the daughter cell has caught the large diatom from the environment during the hardening of the shell.

The top right example shows that the shell has been deformed and flattened by the foreign object before hardening.



Above: Drawing by Eugène Penard, from Faune rhizopodique du Bassin du Léman, 1902,



... and one of the original slides of around 1900 by Penard .

(Wikimedia commons)

Further Reading:

- Ferry Siemensma on the diaphragma,
- Ogden 1987 (Bull. Br. Mus. nat. Hist. (Zool.) 52(1): 13-17,
- My page.

All comments to the author Hans Rothauscher are welcomed.