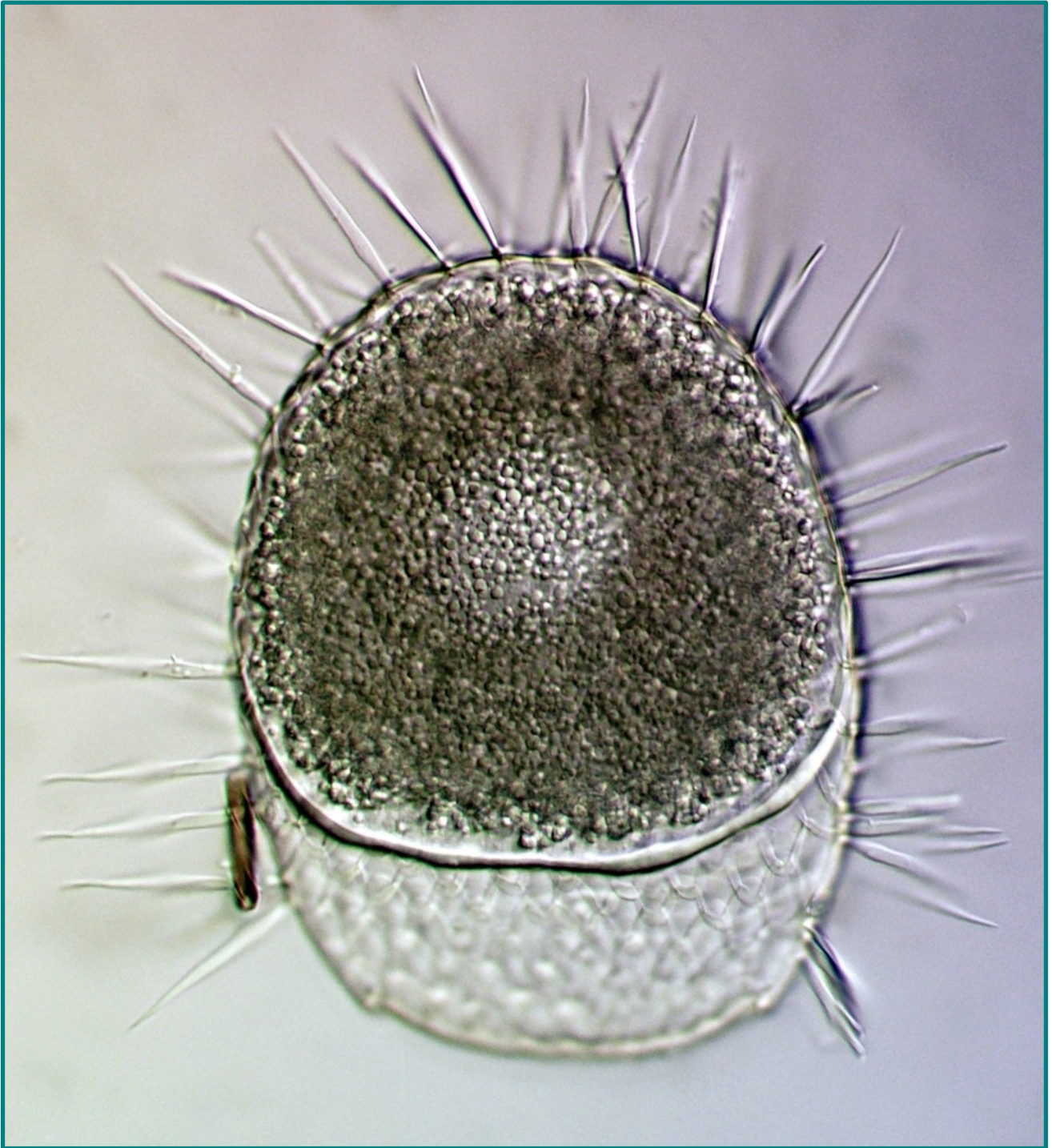


This month I'll talk about
Placocista spinosa

Greek: plax - plate; kiste - box



Placocista spinosa is a filose amoeba, order Euglyphida, family Assulinidae. Filose amoebae have filiform pseudopodia, while the lobose amoebae of the (not closely related) order Arcellinida have broader lobose pseudopods.

With a size of up to 145 μm it is the the largest of the Euglyphida. It is tyrphobiont, i. e. limited to wet acid [$\text{pH} < 4.5$] sphagnum bogs. Even there it is rare. Appears worldwide in all climates.



aboral view



empty shell, oblique light

Animal with a compressed oval, hyaline, colorless shell, with acute border and terminal elliptical mouth; the border of the latter entire. Shell composed of longitudinal rows of alternating oval or roundish plates overlapping at their contiguous borders, so as to produce hexahedral areas limited by zones of minute ellipses.

Lateral borders and fundus furnished with acuminate spines articulated with the shell.

Sarcode and pseudopods as in Euglypha.

(Joseph Leidy, 1879)

Some papers mention symbiotic algae. Please see [HERE](#).

My specimen had no chlorella inside.



oblique light

Most of my shells were either empty or in the encysted condition as the one on the front page. Rarely I found specimen in a more active condition like the one above. Leidy: "the mass of sarcode undergoes contraction from the sides of the shell, but appears to retain a close connection with the fundus."

The large bright area near the fundus is the nucleus with a central nucleolus.

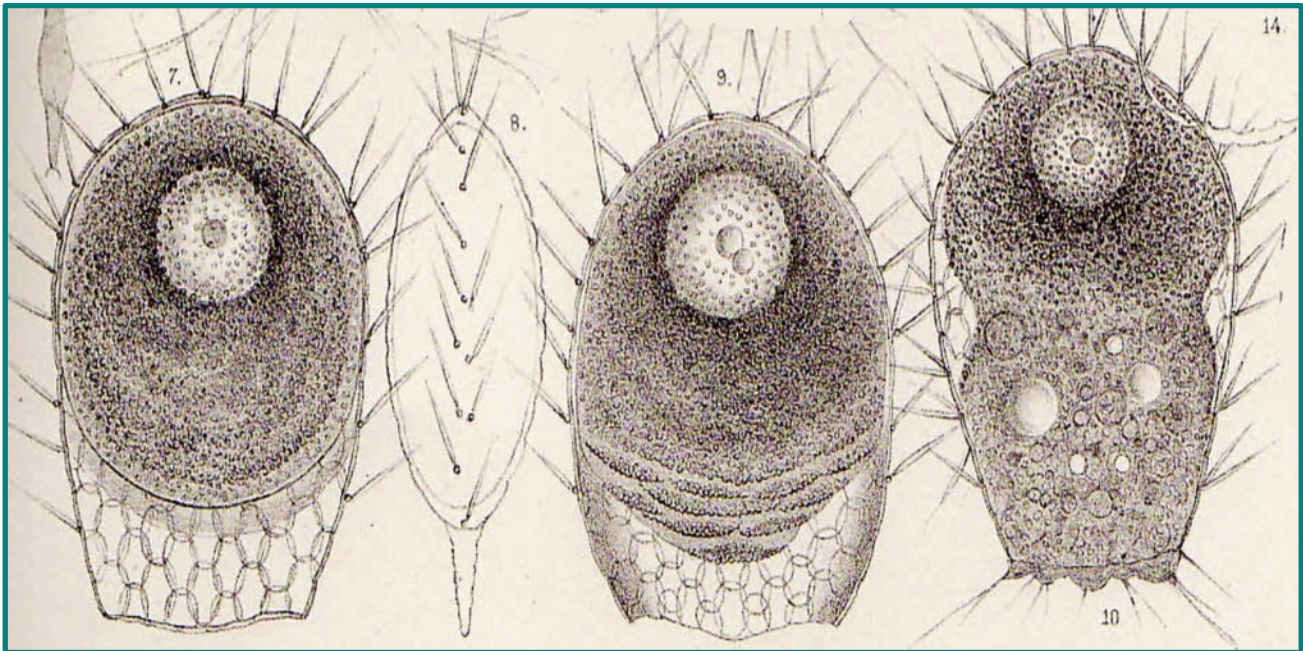
The blob to the right is a contractile vacuole. Like in many single celled fresh water organisms this organelle serves as a protective mechanism that prevents the cell from absorbing too much water due to osmosis - kind of kidney.

I have never observed emitted pseudopods.



Euglyphids produce the plates and needles for the next generation within their Golgi-apparatus and store them inside until ready for the next cell division. The bottom part of the specimen on the left is packed with this reserve building material.

Then, in an awesome process, they meticulously distribute the scales and needles over the surface of the new test.



some of Leidy's beautiful illustrations

Lookalike



Euglypha strigosa is almost as large as *Placocista spinosa* and at first glance very similar.

However, it has needles all over the shell, not only along the lateral borders, and about 10 large dents around its pseudostoma.

Hans Rothauscher, July 2019

Further reading:

- The Leidy Portal.
- Ferry Siemensma.
- My Page.

All comments to the author Hans Rothauscher are welcomed.

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