

***Monactinus simplex var. echinulatum***

**(Wittrock) Pérez, Maidana & Comas, 2009**

**Most likely ID:** n.a.

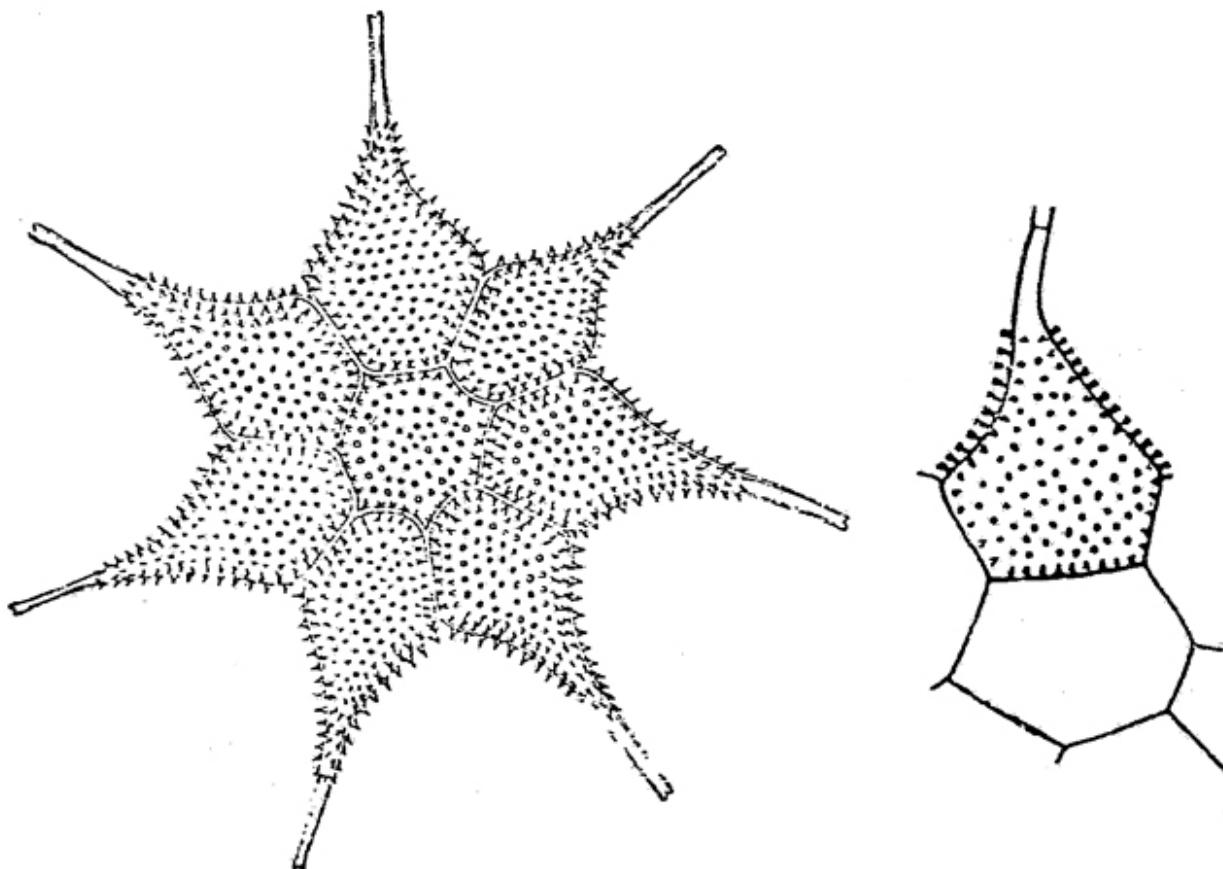
**Synonym:** *Pediastrum simplex* var. *echinulatum*, *Pediastrum sturmii* var. *echinulatum*

**Sampling location:** [Pond of the waste disposal company Constance](#)

**Phylogenetic tree:** [\*Monactinus simplex\* var. \*echinulatum\*](#)

**Diagnosis:**

- coenobium star-shaped, flat and single-layered
- diameter coenobium up to 250 µm
- coenobium of 4, 8, 16, 32, 64, (128) cells
- coenobium covered with distinct warts or short spines
- marginal cells with a single, gradually tapering projection
- inner cells polygonally shaped, concentrically arranged, sometimes with small intercellular spaces
- marginal cells occasionally bearing tufts of mucilaginous spines
- one chloroplast, filling the cell
- single pyrenoid

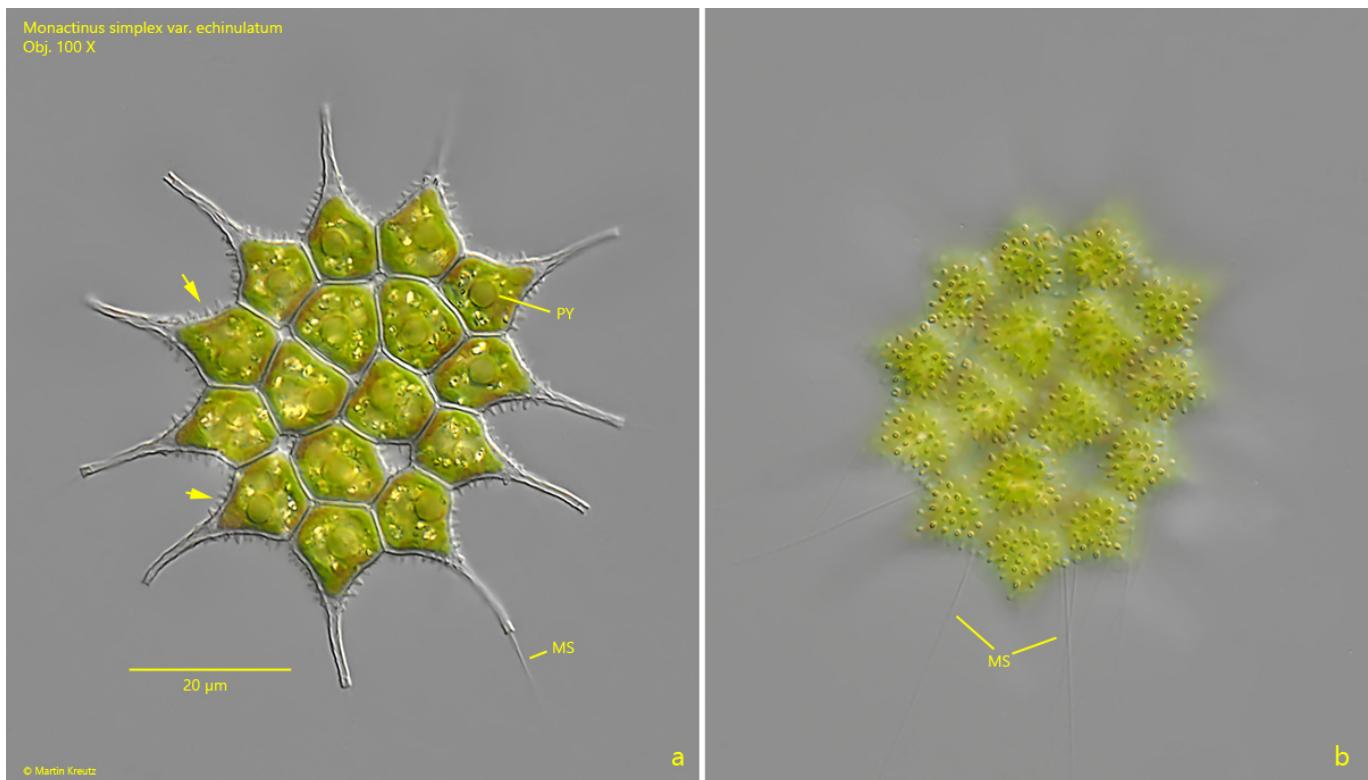


after Hortobágyi

### Monactinus simplex var. echinulatum

*Monactinus simplex var. echinulatum* is described as not very common (Komárek & Fott, 1983). However, in the [pond of the waste disposal plant of Constance](#) I found this form in large quantities in the plankton in September 2023.

The genus *Monactinus* is easily recognized because the marginal cells have only one horn-shaped process. In the form *Monactinus simplex var. echinulatum*, the gaps between the inner cells are either absent or very small. As a distinctive characteristic, the cell walls of the coenobia are covered with distinct warts or short spines. In my population these were short spines of 0.7 – 1.2 µm length (s. fig. 1 a-b).



**Fig. 1 a-b:** *Monactinus simplex* var. *echinulatum*. D = 65  $\mu$ m. Two focal planes of a coenobium of 16 cells. The coenobium is covered with distinct, short spines (arrows) with a length of 0.7 – 1.2  $\mu$ m. Note the delicate mucilaginous spines (MS) arising from the marginal cells. PY = pyrenoid. Obj. 100 X.