

Monactinus simplex

(Meyen) Corda, 1839

Most likely ID: n.a.

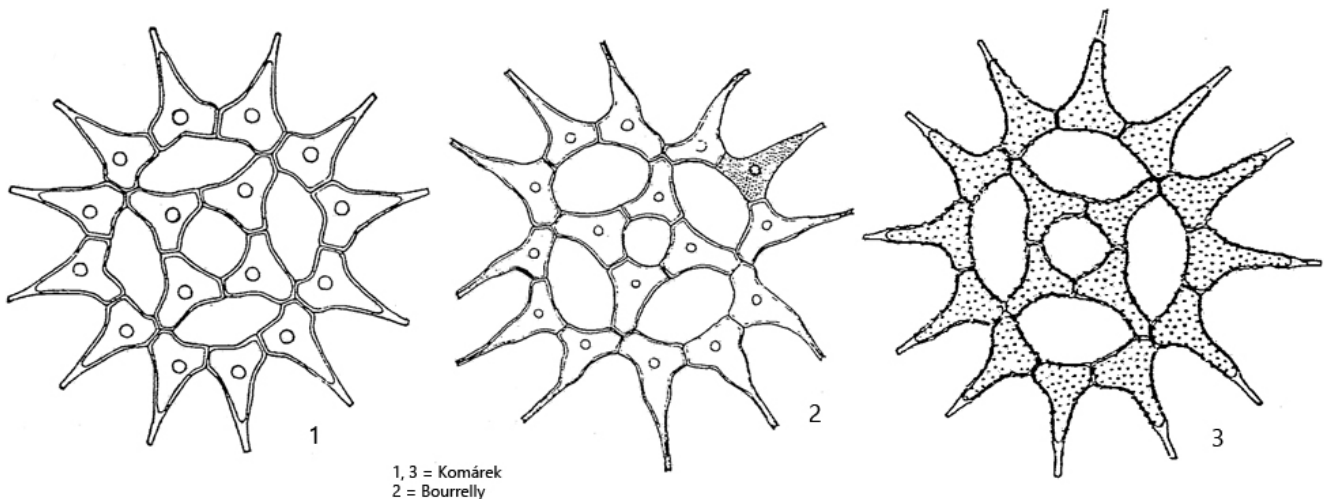
Synonym: *Pediastrum simplex*, *Micrasterias simplex*

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

Phylogenetic tree: [Monactinus simplex](#)

Diagnosis:

- coenobium star-shaped, flat and single-layered
- diameter coenobium up to 250 µm
- coenobium of 4, 8, 16, 32, 64, (128) cells
- cell wall smooth or granulated
- marginal cells with a single, gradually tapering projection
- inner cells Y-shaped with intercellular spaces, sometimes with a single central space
- marginal cells occasionally bearing tufts of mucilaginous spines
- one chloroplast, filling the cell
- single pyrenoid



I found *Monactinus simplex* in the plankton of the [pond of the waste disposal plant of Constance](#) in September 2023 in large large quantities.

The genus *Monactinus* is easily recognized because the marginal cells have only one horn-shaped process. Between the inner cells of *Monactinus simplex* large intercellular spaces are present (s. fig. 1 a). Sometimes the inner cells are lacking so that the outer cells form a ring. The cell wall of the specimens in my population was granulated but not covered with short spines as in the similar form [*Monactinus simplex* var. *echinulatum*](#).

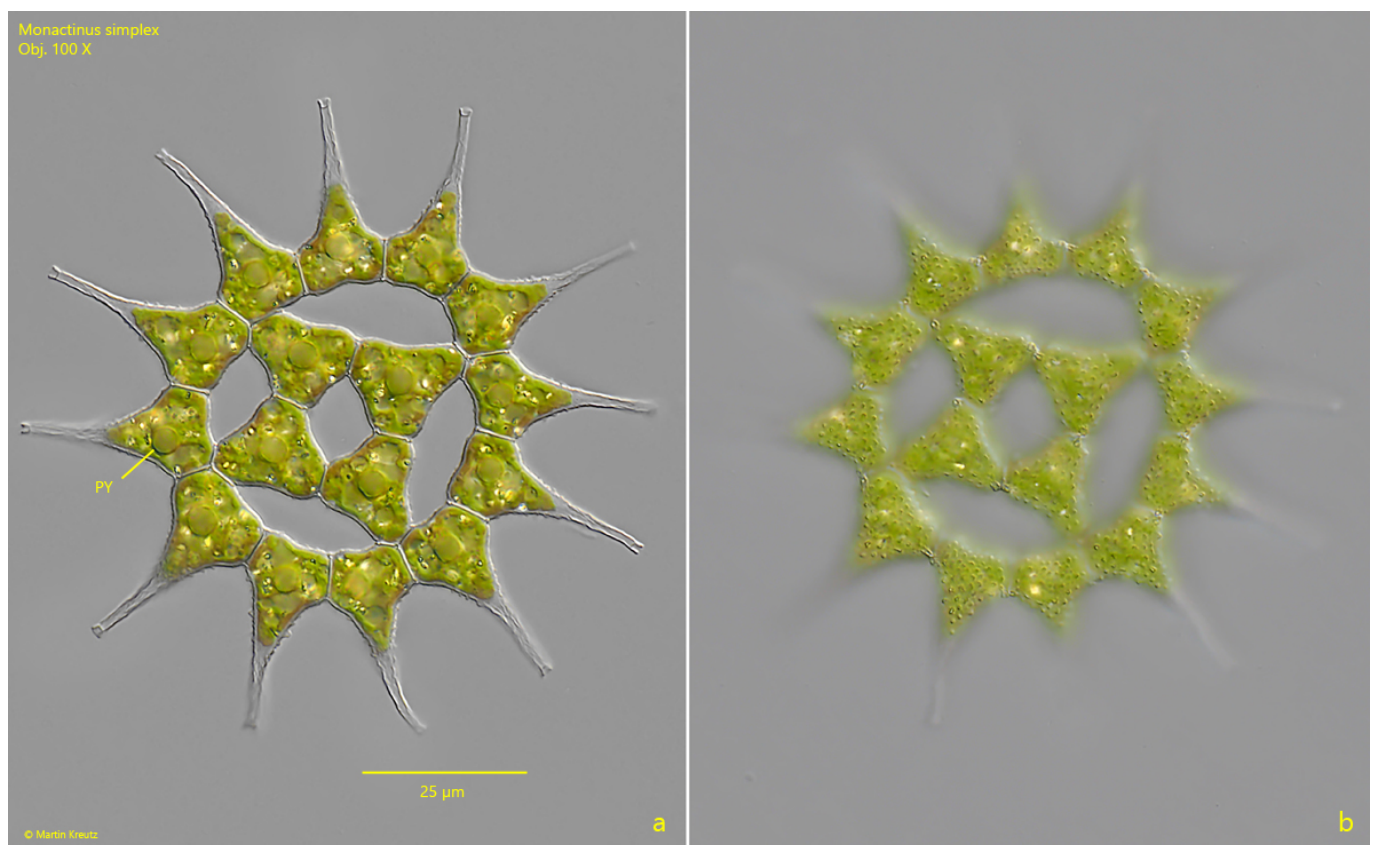


Fig. 1 a-b: *Monactinus simplex*. D = 85 µm. Two focal planes of a coenobium of 16 cells. There are intercellular spaces between the Y-shaped inner cells (a). The surface of this specimen is finely granulated (b). PY = pyrenoid. Obj. 100 X.