

## ***Willea rectangularis***

**(Braun) John, Wynne & Tsarenko, 2014**

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

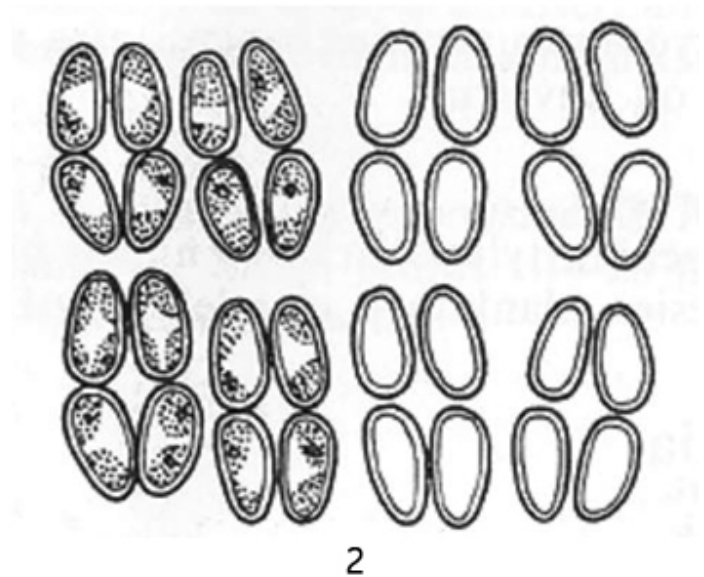
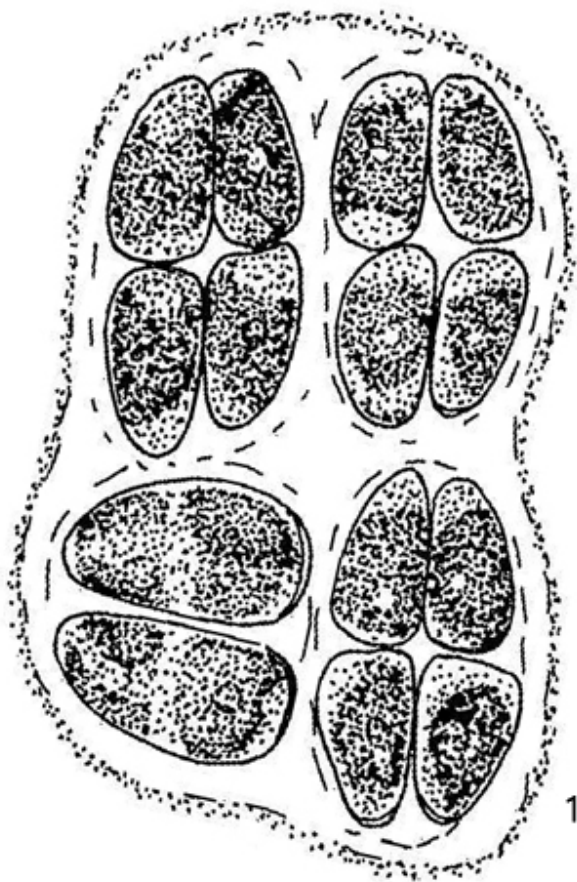
**Synonym:** *Staurogenia rectangularis*, *Crucigenia rectangularis*, *Crucigeniella rectangularis*

**Sampling location:** Pond behind parking space St. Ulrich (Austria)

**Phylogenetic tree:** [Willea rectangularis](#)

### **Diagnosis:**

- rectangular coenobia of 4–32 cells, flattened, in mucilaginous envelope
- cells arranged in quadrate plates
- between each 4 quadrate plates a rhombic gap
- cells ovoid or almost cylindrical with rounded apices
- length 8–12  $\mu\text{m}$ , width 3–5  $\mu\text{m}$
- one parietal chloroplast with each one pyrenoid



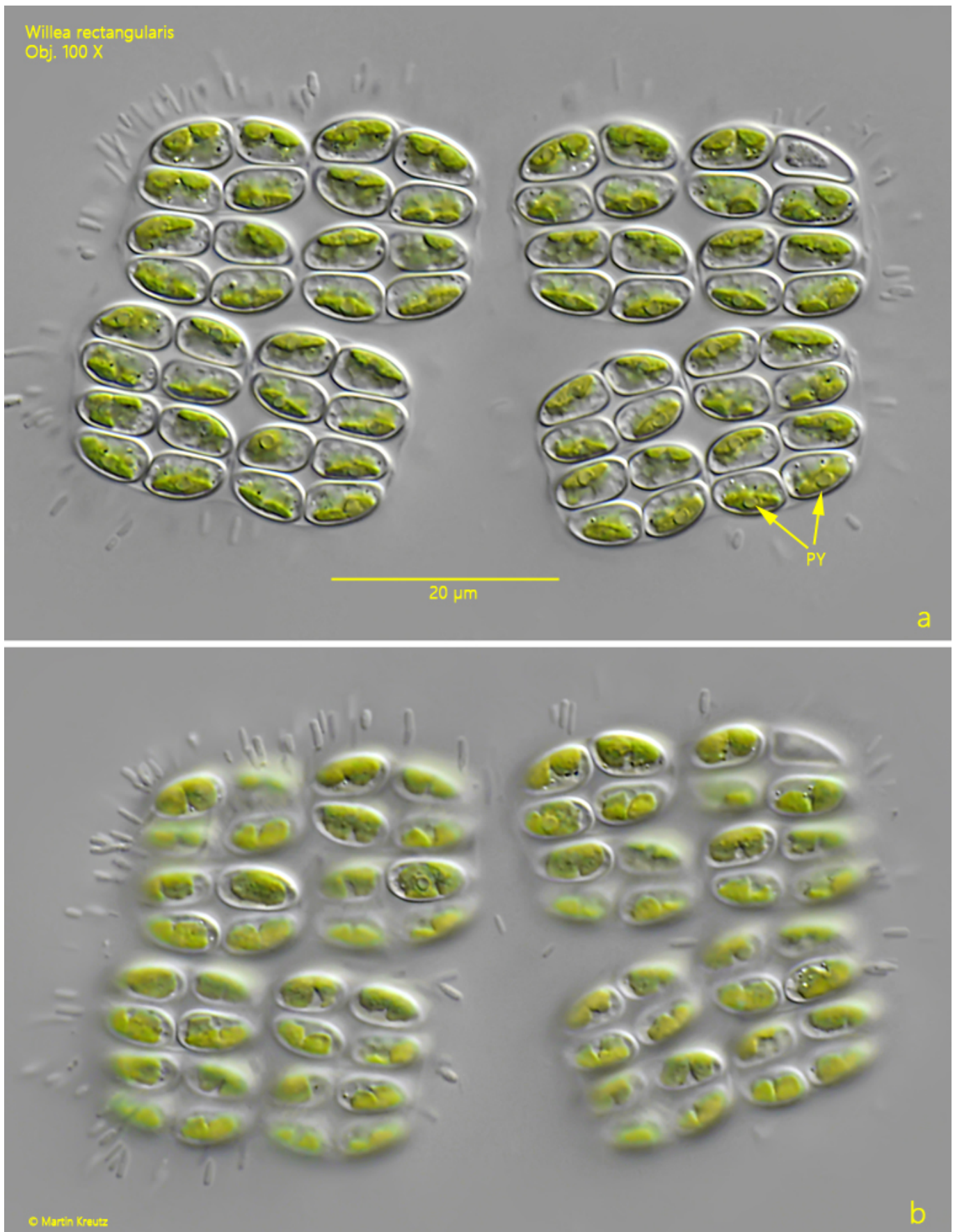
1 = after Kümmerlin & Bürgi  
2 = after Lähde

## Willea rectangularis

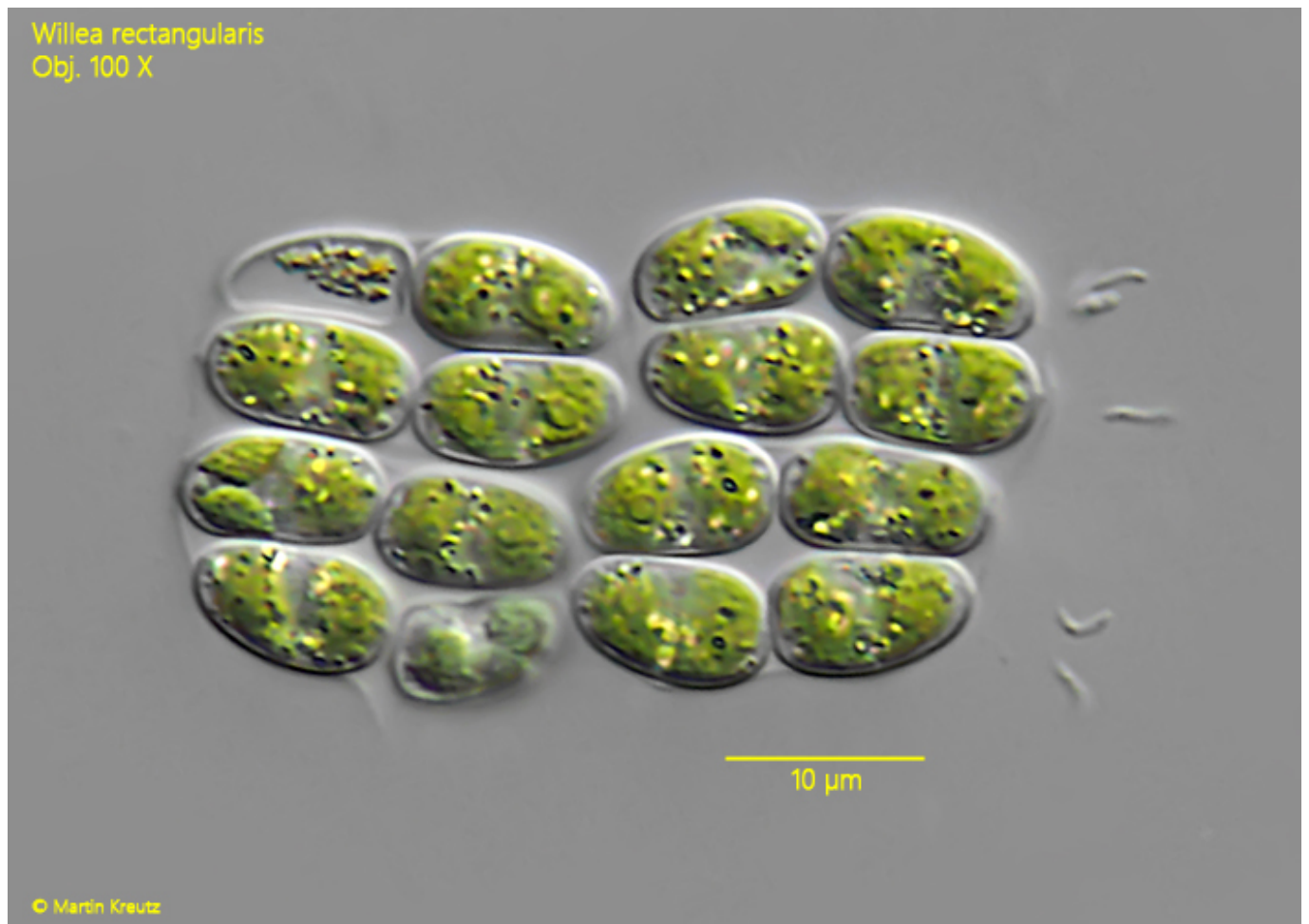
*Willea rectangularis* was found in a heavily eutrophic pond in St. Ulrich am Pillersee (Austria), which is located behind a parking space at the northern end of the village. I found a large population in the samples.

*Willea rectangularis* can be easily recognized by the regular arrangement of the cells in the coenobia and that the coenobia do not contain more than 32 cells. In the similar species *Willea irregularis* the cells are often mutually displaced. In addition, the coenobia of *Willea irregularis* can contain up to several hundred cells.

In my population, the chloroplast in the cells of *Willea rectangularis* contained a distinct pyrenoid (s fig. 1 a). However, this can also be small and inconspicuous. In some cells two chloroplasts appear to be present, but this is caused by the preparation for cell division.



**Fig. 1 a-b:** *Willea rectangularis*. L = 32  $\mu\text{m}$  (of 16-celled coenobia). Two focal planes of four coenobia of each 16 cells. PY = pyrenoids. Obj. 100 X.



**Fig. 2 a:** *Willea rectangularis*. L = 42 µm (of coenobium). A second coenobium of 16 cells. Obj. 100 X.





**Fig. 3:** *Willea reactangularis*. Three 8-celled coenobia in brightfield illumination (a) and DIC (b). Obj. 100 X.