

## ***Holophrya saginata* Penard, 1922**

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

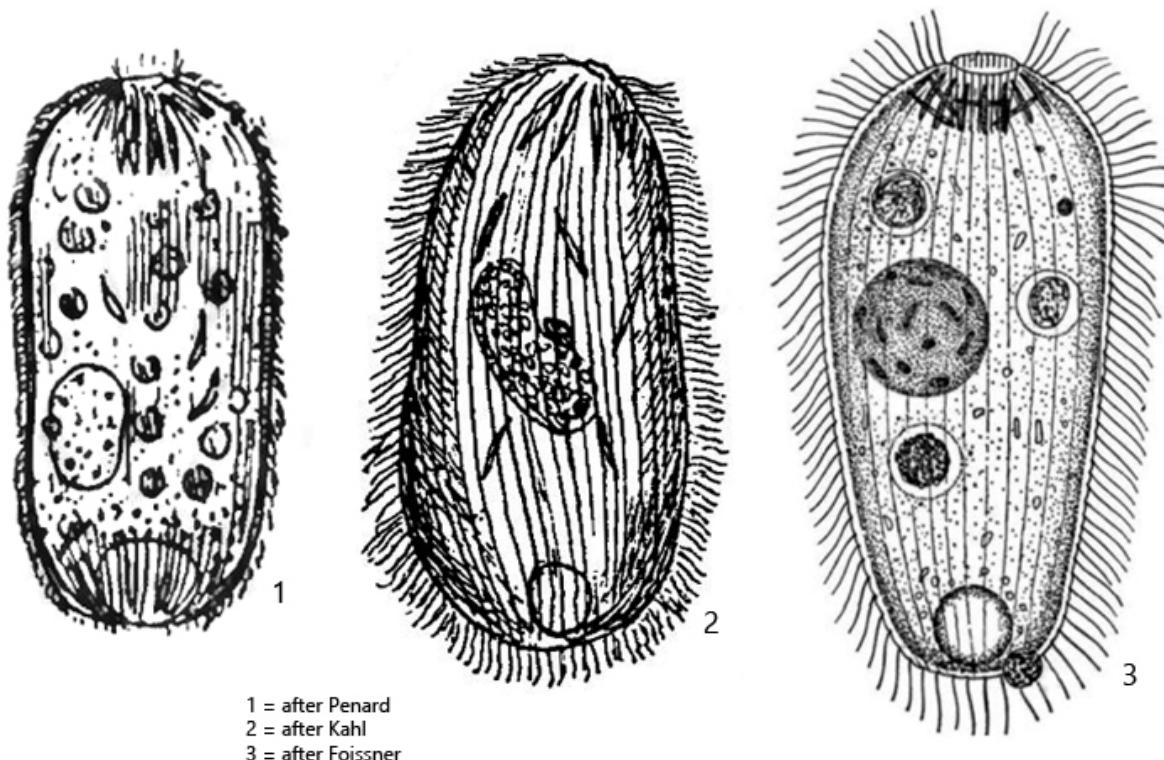
**Synonym:** n.a.

**Sampling location:** [Ulmisried, Simmelried](#)

**Phylogenetic tree:** [\*Holophrya saginata\*](#)

**Diagnosis:**

- body oval or ovoid, shape variable
- body cross section almost circular
- length 70–130 µm
- mouth opening apical
- pharyngeal basket lined with thin, rod-shaped extrusomes
- pharyngeal basket surrounded by large, comma- or spindle shaped extrusomes
- pellicle coarse
- macronucleus spherical or oval with one adjacent micronucleus
- contractile vacuole terminal



1 = after Penard  
 2 = after Kahl  
 3 = after Foissner

### *Holophrya saginata*

So far I have found only two specimens of *Holophrya saginata*. The first specimen in August 2007 in the [Simmelried](#) and the second specimen in September 2023 in the [Ulmisried](#). The rare finds are probably due to the fact that *Holophrya saginata* is actually known as a moss form.

*Holophrya saginata* can be easily identified by the very large extrusomes surrounding the apical pharyngeal basket. The tapered tip of these extrusomes always points anteriorly. In some cases, these large, comma- and spindle-shaped extrusomes are also found scattered throughout the cytoplasm. These large extrusomes were 15–17 µm long in my specimens (s. figs. 3 a and 4). The pharynx is lined with a second variety of extrusomes, which are thin and rod-shaped (s. figs. 2 a-b and 3 a). According to my measurements this type of extrusomes is 9–10 µm long (s. fig. 3 a).

*Holophrya saginata*  
Obj. 100 X



a

b



c

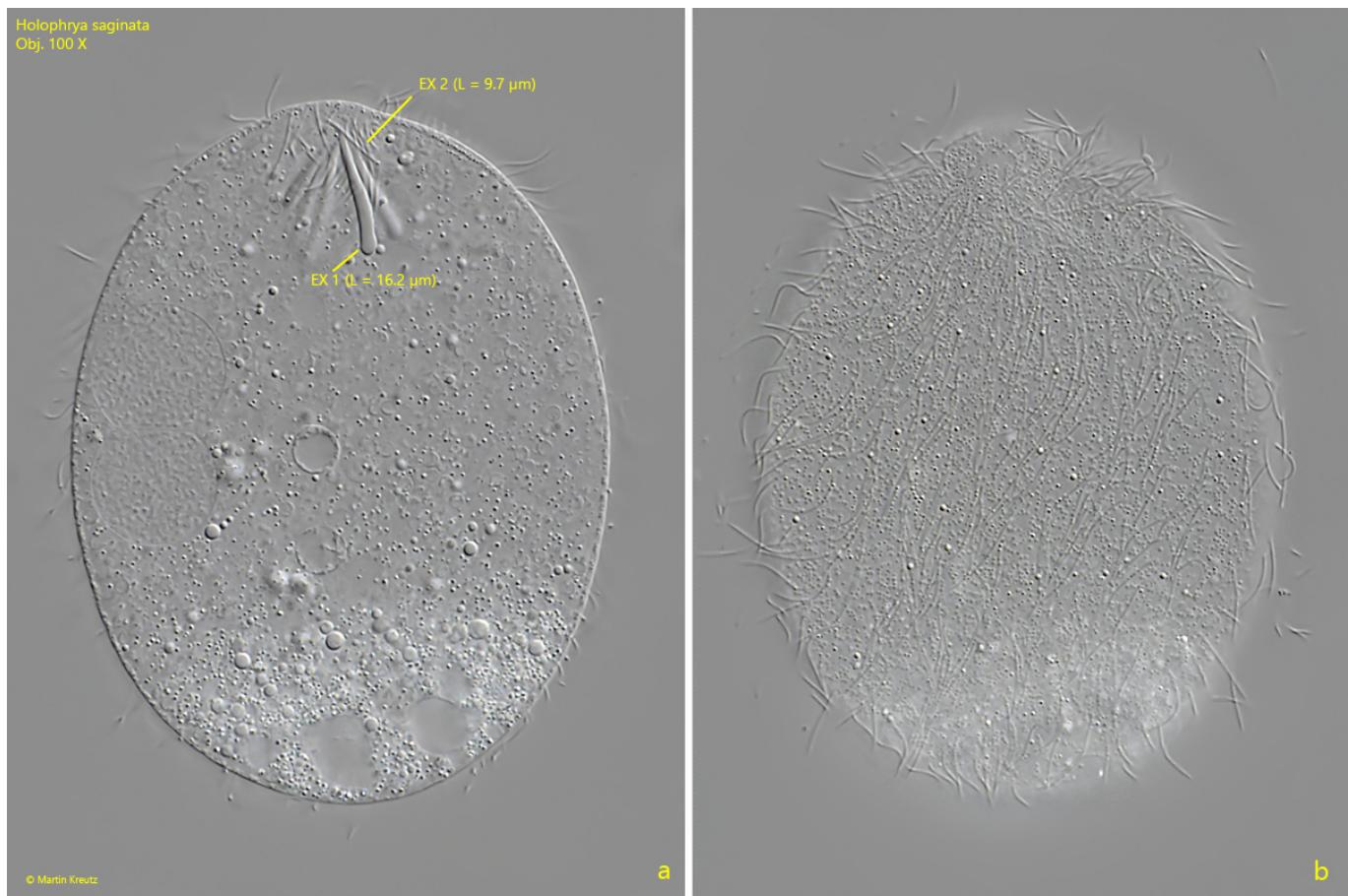
d

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**Fig. 1 a-d:** *Holophrya saginata*. L = 86  $\mu$ m. A freely swimming specimen. Note the large extrusomes (EX 1) surrounding the pharyngeal basket. CV = contractile vacuole, Ma = macronucleus. Obj. 100 X.



**Fig. 2 a-b:** *Holophrya saginata*. L = 74  $\mu$ m. A slightly squashed second specimen. The pharyngeal basket is lined with thin rod-shaped extrusomes (EX 2) and surrounded by large, comma- and spindle shaped extrusomes (EX 1). This specimen has two macronuclei (Ma 1, Ma 2), probably due to a conjugation before. Obj. 100 X.



**Fig. 3 a-b:** *Holophrya saginata*. L = 74  $\mu$ m. The squashed specimen as shown in fig. 2 a-b. The thin, rod-shaped extrusomes (EX 2) are 9-10  $\mu$ m long and the comma-shaped extrusomes (EX 1) are 15-17  $\mu$ m long. Obj. 100 X.

Holophrya saginata  
Obj. 100 X

10  $\mu$ m

EX1

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**Fig. 4:** *Holophrya saginata*. The comma-shaped extrusomes (EX 1) in detail. In this specimen these extrusomes are 15.8-16.3  $\mu$ m long. Obj. 100 X.