

***Kariphilus muscorum***  
**(Kahl, 1931) Jankowski, 2007**

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

**Synonyms:** *Saprophilus muscorum*, *Sathrophilus muscorum*, *Zitheron muscorum*

**Sampling location:** Moss

**Phylogenetic tree:** [Kariphilus muscorum](#)

**Diagnosis:**

- body obovoid or oval
- posteriorly slightly tapered
- length about 35 µm
- oral apparatus large, in anterior half
- contractile vacuole subterminal with short emptying canal
- macronucleus globular, mid-body
- one spherical micronucleus
- sometimes extrusomes present
- one caudal cilium



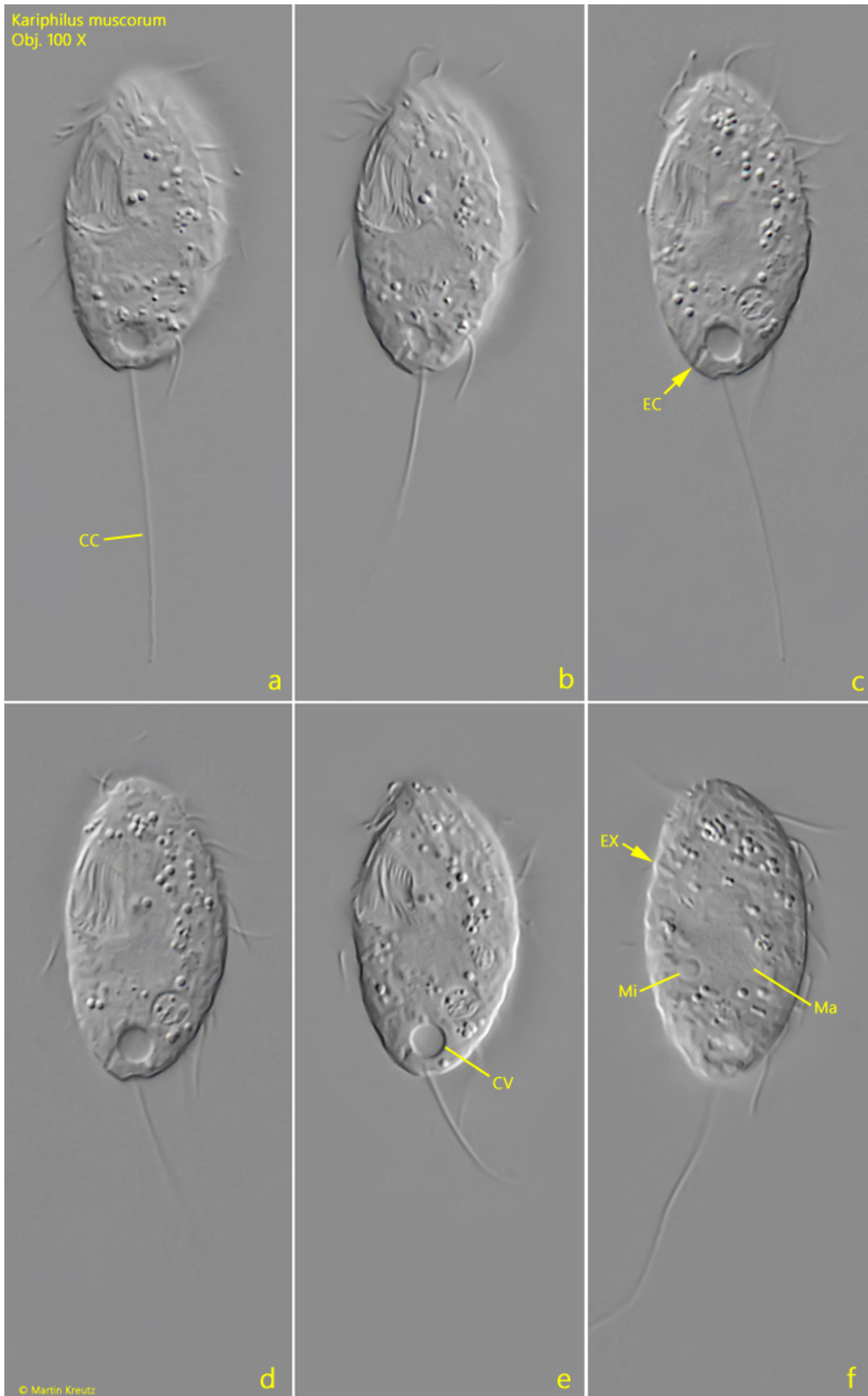
*Kariphilus muscorum*

*Kariphilus muscorum* was first described by Kahl (1931) as *Saprophilus muscorum*. Corliss (1960) transferred the species to the genus *Sathrophilus*, and Jankowski (2007) finally transferred it to the newly created genus *Kariphilus*. The only species in the genus established by Jankowski is *Kariphilus muscorum*.

I found *Kariphilus muscorum* in a moss sample in March 2021. Kahl also found the population he describes in a few lines in moss. The ciliate has a relatively large mouth opening compared to its body size, which is located in the anterior half. A membranelle of long cilia is visible inside. At 25–28  $\mu\text{m}$ , my specimens were smaller than those described by Kahl (35  $\mu\text{m}$ ).

Apart from this deviation, all other characteristics correspond to Kahl's description. Particularly striking and explicitly mentioned by Kahl is the short emptying canal of the subterminal contractile vacuole (s. fig. 1 c). In my specimens, I was able to identify isolated, rod-shaped extrusomes with a length of 1.8  $\mu\text{m}$  (s. fig. 1 f). In the cytoplasm of various specimens, I was able to identify symbiotic bacteria, but these were difficult to contrast. The margin of the ciliate appears slightly wavy due to indentations where the cilia originate.

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Obj. 100 X



**Fig. 1 a-f:** *Kariphilus muscorum*. L = 26  $\mu\text{m}$ . Different focal planes of a freely swimming specimen. Note the short emptying canal (EC) of the subterminal contractile vacuole (CV). CC = caudal cilium, EX = extrusome, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.