

Misidentification of *Urocystis* species on *Ceratocephala falcata* (Ranunculaceae) from Northern Iran

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Roumi and Sharzei (2017) recently reported the occurrence of *Urocystis eranthidis* (Pass.) Ainsw & Sampson in Iran based on the study of an infected specimen of *Ceratocephala falcata* (L.) Cramer (*Ranunculus falcatus* L.) collected from Maragheh, North West of Iran. Re-examination of the specimen (IRAN 16881F) revealed a misidentification of the smut species. The specimen showed following morphological features: Sori on the basal part of stem forming fusiform swellings, initially grayish-silver color and covered by the epidermis which ruptures longitudinally revealing the black, granular-dusty mass of spore balls. Spore balls sub-globose, elongated or rounded irregular, 17.5–47.5 × 14–34 μm (measured in Lactic acid in glycerol), dark brown, composed of 1–7 spores surrounded by an incomplete layer or only a few sterile cells. Spores sub-globose to ellipsoidal, often flattened on contact sides, 13.5–20 × 10–15 μm, dark reddish-brown, smooth. Sterile cells sub-globose, elongate to pyriform and irregularly flattened, 6–12.5 μm long, 3.5–6 μm wide, light yellowish-brown, smooth (Fig. 1). These morphological features fit the description of *Urocystis ceratocephali* Zambett. ex Vánky (Vánky & Abbasi 2013) and differ from the morphological characteristics of *U. eranthidis* (Pass.) Ainsw and Sampson mentioned by Vánky (2012). Comparison with an authentic specimen of *U. eranthidis* (HUV296) collected from Germany, confirmed differences between IRAN 16881F and *U. eranthidis*.

Urocystis ceratocephali differs from *U. eranthidis* in having a different host, spore balls composed of up to 7 spores, producing sori only on stem and granular dusty mass of spores (Table 1). There is only one previous record of *U. ceratocephali* from Iran on *Ceratocephala falcata*, collected from Esfahan Prov., on the way between Shahreza and Semirom cities (Vánky & Abbasi 2013).



Fig. 1. a. Spore balls of *Urocystis ceratocephali*, IRAN 16881F; b. Spore balls of *U. eranthidis*, HUV296. — Scale bars = 10 μm.

Table 1. Comparison of *Urocystis ceratocephali* and *U. eranthidis* for host range and morphological features.

Species	Host	Infection pattern	Mass of spores	Spore balls
<i>U. ceratocephali</i> IRAN 16881F	<i>Ceratocephala falcata</i>	Sori on stem	Granular dusty	17.5–47.5 × 14–34 μm, composed of 1–7 spores
<i>U. eranthidis</i> HUV296	<i>Eranthis</i> spp.	Sori on stem, leaves, and petioles	Powdery	16–32(–40) μm, composed of 1–2(3) spores

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This smut is newly reported here from Maragheh, North West of Iran. Moreover, the report of Roumi and Sharzei (2017) about the occurrence of *U. eranthis* is considered as a misidentification and should be ignored.

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