Epigloea (Epigloeaceae) new to North America

William R. Buck and Richard C. Harris

Epigloea Zukal is a genus of algal parasites, usually included in lichen lists. It typically grows on Coccomyxa-type algae, infecting them through formation of haustoria. The genus has been monographed (Débbeler, 1984), with 7 of the 10 recognized species described at that time. The genus is only reported from Europe and subantarctic Marion Island. It is characterized by perithecia embedded in the alga, unitunicate, 8- or polysporous asci, and colorless 2- or 4(–6)-celled ascospores, with or without terminal apiculi. The alga often, but not always, grows over mosses.

To date, two species of Epigloea have been collected in the United States. More might be expected once collectors become aware of the genus. In the field, Epigloea is difficult to find if the algal substrate is dry. However, if seen while the alga is moist, the perithecia appear as embedded darkish dots. The two species known so far can be separated by the following key:

1. Asci 32-spored; ascospores 6.5–9 × 2–3 μm ............................. E. pleiospora
1. Asci 8-spored; ascospores 9.5–12.5 × 3.5–4.5 μm ............................. E. soleiformis


Perithecia 75–150 μm in diameter, the wall dark green around the ostiole and ± hyaline below; ostiole 20–50 μm in diameter. Asci 45–70 × 9–12 μm, 32-spored. Ascospores 6.5–9 × 2–3 μm, 2-celled, colorless, lacking appendages.

Previously known from Europe. Most American collections were collected in relatively dry habitats.


Interestingly, the bryophyte substrate for one of the collections from Madison County, Missouri, *Aulacomnium androgynum*, is a new record for Missouri and indeed for the entire Interior Highlands. It has been segregated as *W. R. Buck 40028A* and deposited in NY.


Perithecia 90–140 μm in diameter, the wall dark green. Asci 40–55 × 8–11 μm, 8-spored. Ascospores 9.5–12.5 × 3.5–4.5 μm, 2-celled, colorless, lacking appendages.

Previously known from Europe and Marion Island. The two American collections were found in a very humid *Thuja* swamp.

Specimens examined: United States. Wisconsin. ONEIDA COUNTY: Town of Minocqua, Patterson Hemlocks State Natural Area, 1.2 mi S of St. Hwy 70 on West Clear Lake Road, 45°53'49"N, 89°58'28"W, ca. 450 m, growing on downed *Thuja* trunk, 29 Apr 2002, *W. R. Buck 41784, 41802* (both NY).

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**Literature Cited**


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