

Urospora neglecta (Kornmann) Lokhorst & Trask 1981: 385

Contributed by **Louis A. Hanic**

Basionym: *Hormiscia neglecta* Kornmann 1966: 417.

Type Locality:

Helgoland, Germany.

Habitat:

On bedrock, boulder and cobble in the mid to upper intertidal zone.

Northeast Pacific Distribution:

Occurring throughout the coast of Alaska from the Arctic Ocean to Southeast Alaska and south to Washington State. Culture studies have confirmed its occurrence from Homer, AK, to southern British Columbia (Hanic 2005).

Vegetative morphology:

The macroscopic, gametophytic phase is a uniseriate filament that can reach 3.0 cm in length. The multinucleate cells of the filament are squat, quadrate, or barrel-shaped, 13-70 μm diameter (average 40 μm), 18-50 μm long (average 31 μm). The holdfast consists of 1-12 (average 4.5) rhizoidal cells in field material, and 1-7 (average 2.9) in culture. The microscopic, sporophytic codium phase is colonial and can be visible macroscopically.

Reproductive morphology:

This species has an alternation of heteromorphic generations. Gametophytic plants are dioecious, and gametes are anisogamous. Female gametes resemble those of *U. penicilliformis* but are about one-third larger: 13.9 μm long x 4.5 μm diameter, flagella 19.2 μm long; they are capable of parthenogenesis. Male gametes are pale yellow, without stigma, and are spherical to ovate, 5.0 μm long x 3.3 μm diameter, flagella 18.1 μm long, not parthenogenetic. Cultured codium zygotes reach 300 μm long (1-2 mm in nature), with a narrow stalk 1/3 to 1/2 the overall length of the codium, becoming fertile only after cold shock (10-20 days at -10 to -18°C) and producing 100s of zoospores, 22.7 μm long x 7.7 μm diameter, often not released but germinating within the codium.

Important References:

- Hanic, L.A., 2005. Taxonomy, gamete morphology and mating types of *Urospora* (Ultrichales, Chlorophyta) in North America. *Phycologia* 44: 183-93.
- Kornmann, P. and P.-H. Sahling, 1978. *Meeresalgen von Helgoland*. Biologische Anstalt Helgoland. Hamburg, 289 pp.
- Lokhorst, G.M. and B.J. Trask. 1981. Taxonomic studies on *Urospora* (Acrosiphoniales, Chlorophyceae) in western Europe. *Acta Bot. Neerl.* 30: 353-431.