Since Kang (1966), occurrence of many marine algal species has been reported from Korea (Lee and Kang, 1986; 2002; Kang and Nam, 2011). Up to now, about 900 species have been recorded in the Korean marine algal flora (Boo and Ko, 2012). In the course of a survey of indigenous biological resources, three marine algal species, Umbraulva olivascens (P.J.L. Dangeard) G. Furnari (Ulvaceae), Bryopsis minor Womersley (Bryopsidaceae), Sargassum polycystum C. Agardh (Sargassaceae), were collected from Korea, and morphological and taxonomic notes on these species are given here. This is the first record of those three species from Korea.

**Notes on Three Marine Algal Species from Korea**

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**Abstract**


**Key words**: First record, Umbraulva olivascens, Bryopsis minor, Sargassum polycystum, Korea

first record of those three species from Korea.

**Umbraulva olivascens** (P.J.L. Dangeard) G. Furnari in Catra, Alongi, Serio, Cormaci & G. Furnari 2006 (Fig. 1)

**Korean name**: Gu-meong-cho-rok-gal-pa-rae nom. nov. (구멍초록갈파래: 신청).

**Specimens examined**: KOSPAL 0000126293, PKNU 0000126294, PKNU 0000126295 (Gujwa: 25.xi.2011).

**Habitat**: Epilithic in subtidal.

**Morphology**: Thalli up to 5-10 cm high, epilithic,

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solitary, erect from discoid holdfast, olive-green in color; blades rigid, elliptical to linear, with undulate margin having protuberances, sometimes with perforation, 80-120 μm thick in upper part, 300-400 μm in basal part; cells elliptical to polygonal, 10-15 × 12-20 μm in surface view; rhizoidal cells dark olive green, numerous near basal portion; chloroplast parietal, with 1-3 pyrenoids.

Remarks: *Umbraulva* was recently established based on distinct olive-green colored blade, containing siphonaxanthin pigment, subtidal habitat and molecular evidence (Bae and Lee, 2001). Three species are currently recognized in this genus. Of these, *U. japonica* (type) and *U. amamiensis* have been reported from Korea (Bae and Lee, 2001). *Umbraulva olivascens* described from Roscoff differs from the two species in presence or absence of perforations on blade, undulate margin and fluorescence. Our plants have rigid thalli in distinct olive-green color in subtidal as *Umbraulva*. They are identified as *U. olivascens* based on the undulate margin and perforations on blade, although those specimens show more or less small size (5-10 cm) and elliptical to linear shape rather than big size (10-20 cm) and orbicular to irregularly round shape found in *U. olivascens*. This is the first record of *U. olivascens* from Korea.

*Bryopsis minor* Womersley 1955 (Fig. 2)


Specimens examined: KOSPAL 0000126298, PKNU 0000126299, PKNU 0000126300 (Gujwa: 25.xi.2011).

Habitat: Epiphytic on other algae.

Morphology: Thalli up 15-30 cm high, attached by discoid holdfast, up to 0.5-1.0 cm in diam.; stem erect, terete, 1-2 cm long, 2-4 mm broad; axes terete to triquetrovus, with numerous cylindrical to oval elevated cryptostomata 200-300 μm long, 2-5 mm in diam.; lateral branches well developed; leaves arranged spirally, long, elliptical to lanceolate, entire to slightly serrulate in margin, with usually distinct midrib bearing spines near basal portion, 5-50 mm long, 2-20 mm broad; cryptostomata scattered on all parts of thallus; vesicle absent to rare, ovoid.

**Sargassum polycystum** C. Agardh 1824 (Fig. 3)

Korean name: Dol-gi-mo-ja-ban nom. nov. (돌기모자반: 신칭).

Specimens examined: KOSPAL 0000126298, PKNU 0000126299, PKNU 0000126300 (Gujwa: 25.xi.2011).

Habitat: Growing on rock near lower intertidal to subtidal.

Morphology: Thalli up 15-30 cm high, attached by discoid holdfast, up to 0.5-1.0 cm in diam.; stem erect, terete, 1-2 cm long, 2-4 mm broad; axes terete to triquetrovus, with numerous cylindrical to oval elevated cryptostomata 200-300 μm long, 2-5 mm in diam.; lateral branches well developed; leaves arranged spirally, long, elliptical to lanceolate, entire to slightly serrulate in margin, with usually distinct midrib bearing spines near basal portion, 5-50 mm long, 2-20 mm broad; cryptostomata scattered on all parts of thallus; vesicle absent to rare, ovoid.
[Fig. 1] *Umbraulva olivascens* (P.J.L. Dangeard) G. Furnari. A, Habit of vegetative plant; B, Basal discoid holdfast (arrow); C, Non-rhizoidal cells in transverse section of upper thallus; D, Rhizoidal cells in transverse section of basal thallus; E, Epidermal cells in surface view; F, Protuberances along undulate margin.
Fig. 2 Bryopsis minor Womersley. A, Habit of vegetative plant without distinct main axis; B, Naked basal portion of thallus; C, Details of lateral branches; D, Branches with basal constriction (arrows) lacking septum; E, Rhizoidal holdfast; F, Round chloroplasts with central pyrenoid.
[Fig. 3] *Sargassum polycystum* C. Agardh. A, Habit of vegetative plant; B, Details of vegetative branches; C, Axis with many projections; D, Elliptical to lanceolate leaves with distinct midrib; E, Details of leaves with spines (arrows) along midrib; F, Triquetrous main axis in transverse section.
Remarks: Since Agardh (1824), *Sargassum polycystum* has been reported from many East Asian countries including China and Japan. However, occurrence of this species has not been reported from Korea. *Sargassum polycystum* appears to be distinct from other Korean *Sargassum* species in having cylindrical to oval elevated projections (= cryptostomata) on all parts of thallus, entire to slightly serrulate margin with distinct midrib bearing spines and in lacking or having rarely vesicle (the present study). These features are found in our specimens. So our Korean specimens are identified as this species based on the present and previous observations (Agardh, 1824; Chiang et al., 1992; Yoshida, 1998; Kraft, 2009). This is the first record of *S. polycystum* from Korea.

References


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