

## Occurrence of *Fuligo gyrosa* Causing Slime Mold of Oriental Melon

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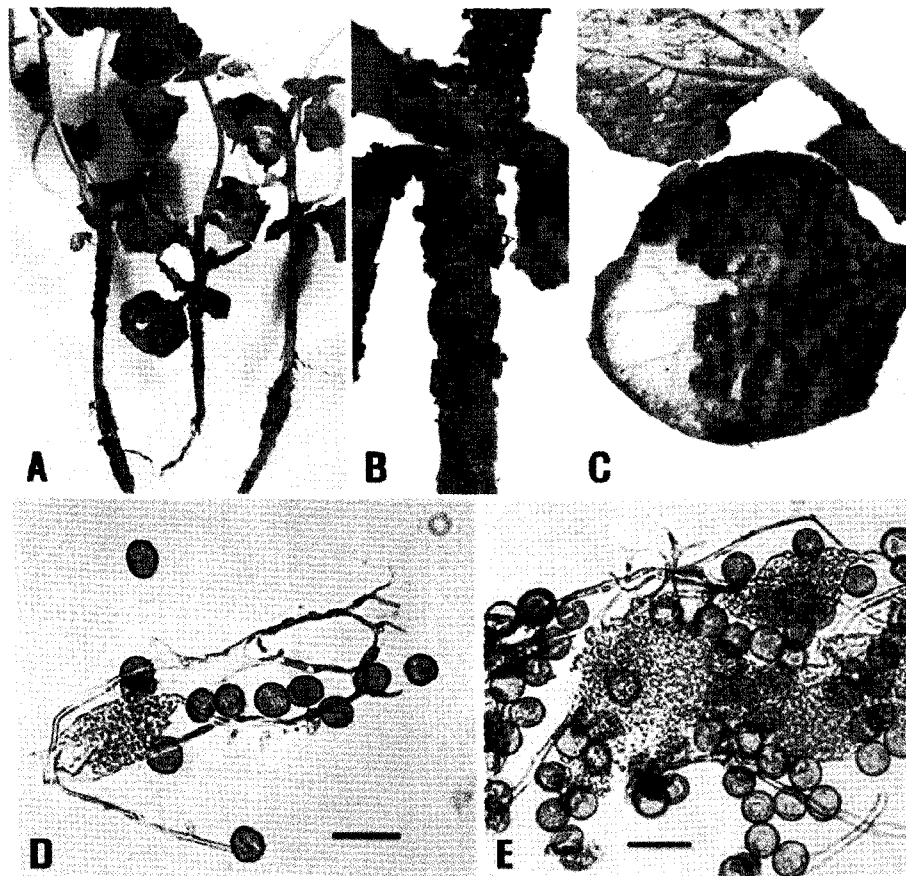
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Recently, a severe slime mold infestation affected oriental melon plants in fields in Chilgok county, Gyeongbuk province, Korea. Specimens were collected from the fields and examined for identification. A species of Myxomycetes, *Fuligo gyrosa*, was identified based on its morphological characteristics. This is the first report that *F. gyrosa* causes slime mold of oriental melon.

**KEYWORDS :** *Cucumis melo* var. *makuwa*, *Fuligo gyrosa*, Oriental melon, Slime mold

Oriental melon (*Cucumis melo* L. var. *makuwa* Makino) is a popular vegetable which is cultivated primarily in Asian countries. The plant is widely grown throughout Korea. During a disease survey performed in July, 2009, slime

mold was observed on up to 10% of oriental melon plants grown in greenhouses in Chilgok county, Gyeongbuk province, Korea. Slime mold appeared as gray to dark gray fruiting bodies on the surface of stems, leaves, and



**Fig. 1.** Slime mold symptoms on oriental melon plants observed in the field and morphological features of the causal organism, *Fuligo gyrosa*. A, oriental melon plants infected with *F. gyrosa*; B and C, fruiting bodies of the organism on the plants; D and E, capillitium with lime nodes and spores of the organism. Each scale bar represents 20  $\mu$ m.

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petioles of the oriental melon plants (Fig. 1A~C). While the surface growth was not damaging to some of the affected plants, severely infected plants were retarded in growth and their lower leaves blighted later.

Morphological characteristics of slime mold specimens collected from affected oriental melon plants were ascertained by stereo and compound microscopy. A species of Myxomycetes, *Fuligo gyrosa* (Rostaf.) Jahn, was identified (Fig. 1D and E) based on the morphological characteristics described previously (Farr, 1981; Feest and Burggraaf, 1991; Martin and Alexopoulos, 1969; Yamamoto, 1998). This is the first report that *F. gyrosa* causes slime mold of oriental melon. The specimen of the slime mold has been deposited in the HCCN (Herbarium Conservation Center of NAAS, RDA, Suwon, Korea).

***Fuligo gyrosa* (Rostaf.) Jahn, Ber. Deuts. Bot. Ges. 20:272. 1902.**

**(Synonym: *Physarum gyrosum* Rostaf.)**

Fruiting bodies are produced in the form of convoluted or rosette-like plasmodiocarps. The conglutinate fruiting bodies measure 1.8~20 mm in diameter. Plasmodiocarps are sessile, gray to dark gray, 0.2~0.5 mm in diameter, about 1.0 mm tall, and laterally compressed. The peridium is single and encrusted with rosy or red lime. The capillitium has elongate white lime nodes. Spores are pale

brown to brown, spherical, minutely spinulose and measure 7.5~12.0  $\mu\text{m}$  in diameter. The plasmodium is white to pale yellow.

**Specimen examined.** PF09011, Gisanmyeon Jukjeonri, Chilgok county, Gyeongbuk province, Korea, July 13, 2009.

**Note.** This species is known to occur on dead or living plants, fallen leaves and rotten woods (Martin and Alexopoulos, 1969; Yamamoto, 1998). In the present study, it was revealed that the species produces fruiting bodies on stems, leaves, and petioles of oriental melon.

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