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A NEW SPECIES OF *HELICOMINA*

By

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An unknown, interesting fungus belonging to the Helicosporae was found on the living leaves of *Deutzia crenata* SIEB. et ZUCC. forma *angustifolia* REG.** collected at Nara Park in Nara city, Nara Pref., October 20, 1956; it was recognized as a new species belonging to the genus *Helicomina* in this study.

The genus *Helicomina*, which was first described in 1948 by L. S. OLIVE in his "Taxonomic Notes on Louisiana Fungi-I", is clearly distinguished from the original genus *Helicoma* by its parasitic nature to vascular plants. The genus *Helicoma* is usually saprophytic and recognized to be occurring in either salt water or terrestrial habitats. The present fungus differs from all other known species of *Helicoma* by the size of conidia and by its parasitism.

This fungus, also, is easily distinguishable from some species of the genus *Helicoceras* by the absence of any conspicuous constrictions at the septa of the conidia.

As regards the color, OLIVE stated when he established his new genus *Helicomina*, that both conidiophores and conidia were dark colored. In the present fungus, however, they are both entirely colorless.

Further, the writer failed to isolate this fungus artificially on several media by transplantation of its hypha or conidia from the colonies parasitic on infected plants.

He has little doubt in coming to the decision that the present fungus belongs to the *Helicomina* as mentioned above, but he recognizes it as a new species belonging to the genus *Helicomina*.

Helicomina deutziae YOKOYAMA sp. nov.

Parasiticis in foliis viventibus, coloniis hypophyllis, farinaceis vel

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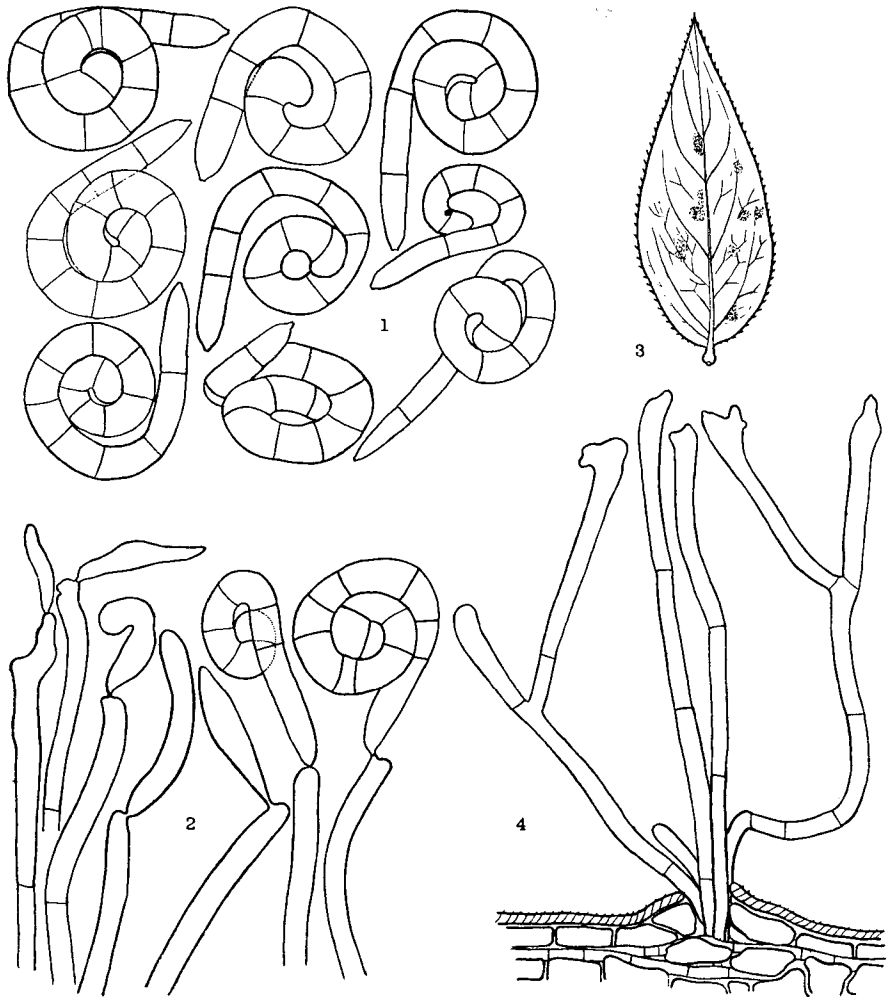


Fig. 1. Conidiospores.

Fig. 2. Conidiophores bearing a single acrogenous helicoidal conidiospore.

Fig. 3. Colonies on the under surface of the leaf.

Fig. 4. Conidiophores arising from the stoma of the host plant.

effusis, "cotton" similitudinem praestantibus, deinde fuliginosis, 5-6 mm latis in diametro. Myceliis praecipue inter cellulas sitis. Conidiophoris erectis et rectis, simplicibus vel ramosis, in effusis fasciculis, per stomat plantae hospitalis emergentibus, 2-8 septatis, sed constrictiones in septis exiguae sunt, $50-130 \times 5-7 \mu$, cellulis apicalibus frequenter inflatis, generaliter in fine singulum conidium ferentibus, hyalinis. Conidiis

primo simplicibus et rectis, quando in apice germinant, deinde gradatim curvatis et septatis, denique glomeratis in duabus dimensionibus. Filamentis 6–15 septatis, sed generaliter 10–14 septatis, septis exiguis, 6–9 μ crassis, obtuse rotundatis in fine distali, crassitudine diminuta in fine basali, diametro spirarum 30–40 μ , semel vel bis glomeratis, hyalinis.

Specimen typicum in Herb. Univ. Hokkaido conservatum. T. YOKOYAMA No. 995.

Hab. in foliis vivis *Deutziae crenatae* SIEB. et ZUCC. f. *angustifoliae* REG., Nara, Prov. Yamato. (T. YOKOYAMA No. 995–typus, No. 996. Die 20. Octobris 1956).

Parasitic on living leaves; colonies are hypophyllous, giving farinaceous or effuse cottony appearance, then become fuliginous, 5–6 mm. in diameter; mycelia are chiefly intercellular. Conidiophores arising in effuse clusters through the stoma of host plants, erect and straight, simple or subdichotomous, 2–8 septate, but constrictions at the septa are inconspicuous, 50–130 \times 5–7 μ , apical cells are frequently inflated, usually bearing single conidium terminally, hyaline. Conidia are simple and straight when they germinate at apical end, then gradually curve and septate, finally coil in two dimensions, 6–15 septate, but generally 10–14 septate, septa are inconspicuous; the filament 6–9 μ thick, bluntly rounded at the distal end, tapering at the basal end; diameter of coiled spore 30–40 μ , 1–2 times coiled, hyaline.

Type specimen described in this paper is preserved in the Herbarium of the Botanical Institute, Faculty of Agriculture, Hokkaido University, Sapporo, Japan.

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