

Short Communication

Irpicomycetes cornicola sp. nov. from *Cornus florida* in JapanTsuneo Watanabe¹⁾ and Itsumi Narita²⁾¹⁾ Forestry and Forest Products Research Institute, P. O. Box 16, Tsukuba Science City, Ibaraki 305, Japan²⁾ Saitama Prefectural Ornamental Plants Research Center, Kushibiki, Fukaya, Saitama 366, Japan

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Irpicomycetes cornicola sp. nov. from *Cornus florida* in Japan is described and illustrated.Key Words—agar culture; *Cornus florida*; Deuteromycotina; *Irpicomycetes cornicola* sp. nov.

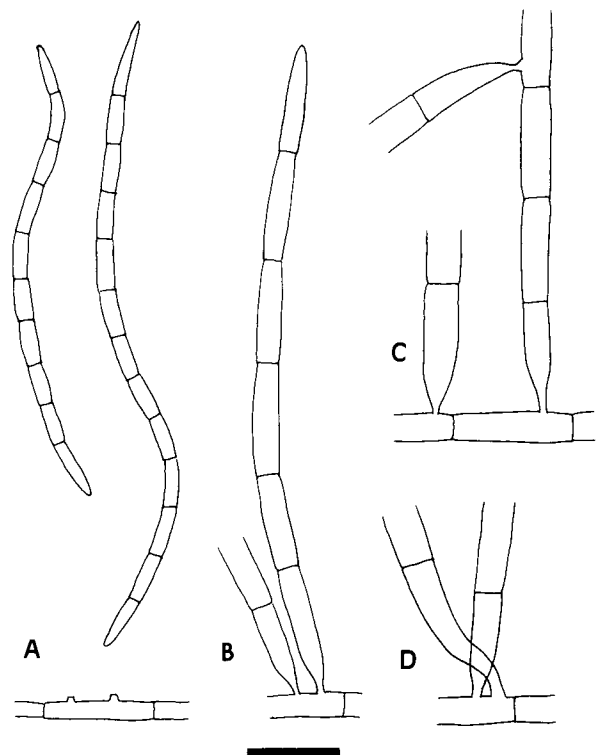
The genus *Irpicomycetes* Deighton was established by Deighton in 1969, and it includes only one species, *I. schiffnerulae* Deighton, which is only known from the type collection. This fungus is a hyperparasite on *Schiffnerula solani* Hansf. on *Solanum melongena* L. found in Kuala Lumpur, Western Malaysia. This genus is morphologically characterized by its obclavate-filiform, concolorous and indistinctly pluriseptate aleurioconidia. These conidia are formed singly and terminally on conidiophores produced laterally from certain hyphal cells, one to four or more from one cell (Deighton, 1969). The fungus, which sporulated apparently actinomycete-like under a dissecting microscope, was occasionally observed on water agar with 5–8 mm long twig tissue segments (Fig. 3) during an etiological study of a decline of *Cornus florida* L. at Fukaya, Saitama, Japan. In further study, it was found to be a new species belonging to the genus *Irpicomycetes*, differing from *I. schiffnerulae* in its non-hyperparasitic nature and larger conidia with more numerous septation.

Irpicomycetes cornicola T. Watanabe, sp. nov. Figs. 1–13
 Coloniae in agar decocto tuberosum post 7 dies ad 22°C 10–11 mm diam attingentes, subelevatae, fuscogriseae vel griseolatrovirentes, reverso atrovirenti vel paene atro. Mycelium ex hyphis ramosis, septatis, hyalinis, subhyalinis vel brunneis, laevibus, 2–3 µm crassis compositum. Conidiophora hyalina vel subhyalina, laevia, micronematosa, mononematosa, brevina, solitaria vel aggregata. Cellulae conidiogenae holoblasticae, acrogenae, cylindricae. Conidia hyalina vel subhyalina, laevia, solitaria, simplicia vel ramosa, cylindrica, curvata, sursum attenuata, aliquando truncata ad basim, 2–16-septata, 65.7–174(–231) × 1.8–3.7 µm.

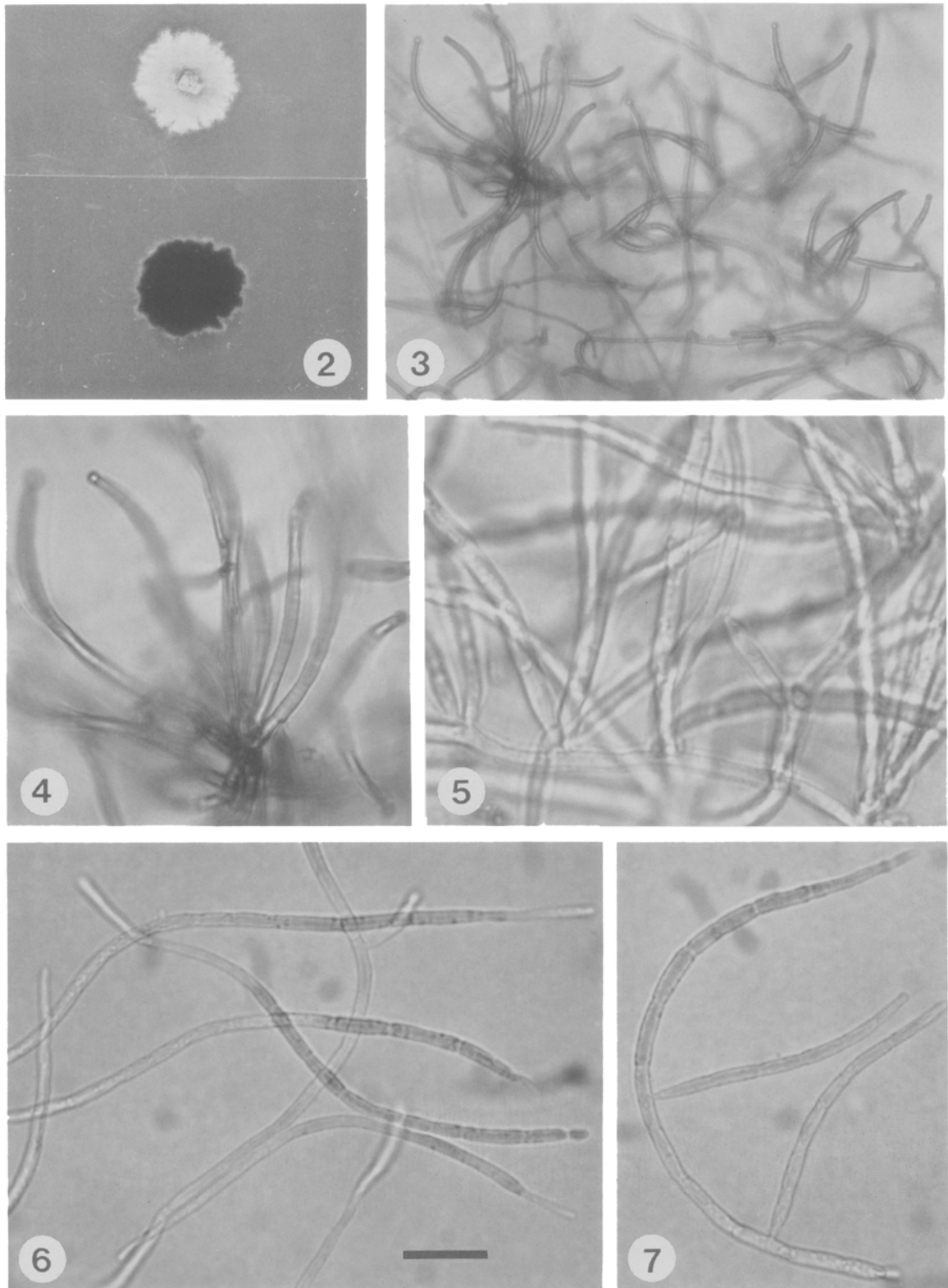
Holotypus: Cultura siccata isolata a ramunculis *Corni floridae* L., Fukaya, Saitama, Japonica, 20 Jun. 1993, T. Watanabe leg. (TW 93-107, FFPRI 425383).

Colonies on potato dextrose agar (PDA) 10–11 mm diam after 7 day at 22°C, somewhat raised, dark gray to dark grayish green, reverse dark green to almost black.

Average colony diam (mm) of 7-day-old cultures are 7.2, 10.2, 9.4, and 4.0, at the respective temperatures of 19, 22, 25, and 28°C. Mycelium non-aerial, composed of branched, septate, subhyaline or brown, smooth, 2–3 µm wide hyphae. Conidiophores hyaline to subhyaline, smooth, micronematous, mononematous, short, solitary or aggregated. Conidiogenous cells holoblastic, acrogenous, cylindrical. Conidia hyaline to subhyaline, smooth, usually curved, simple or branched forming

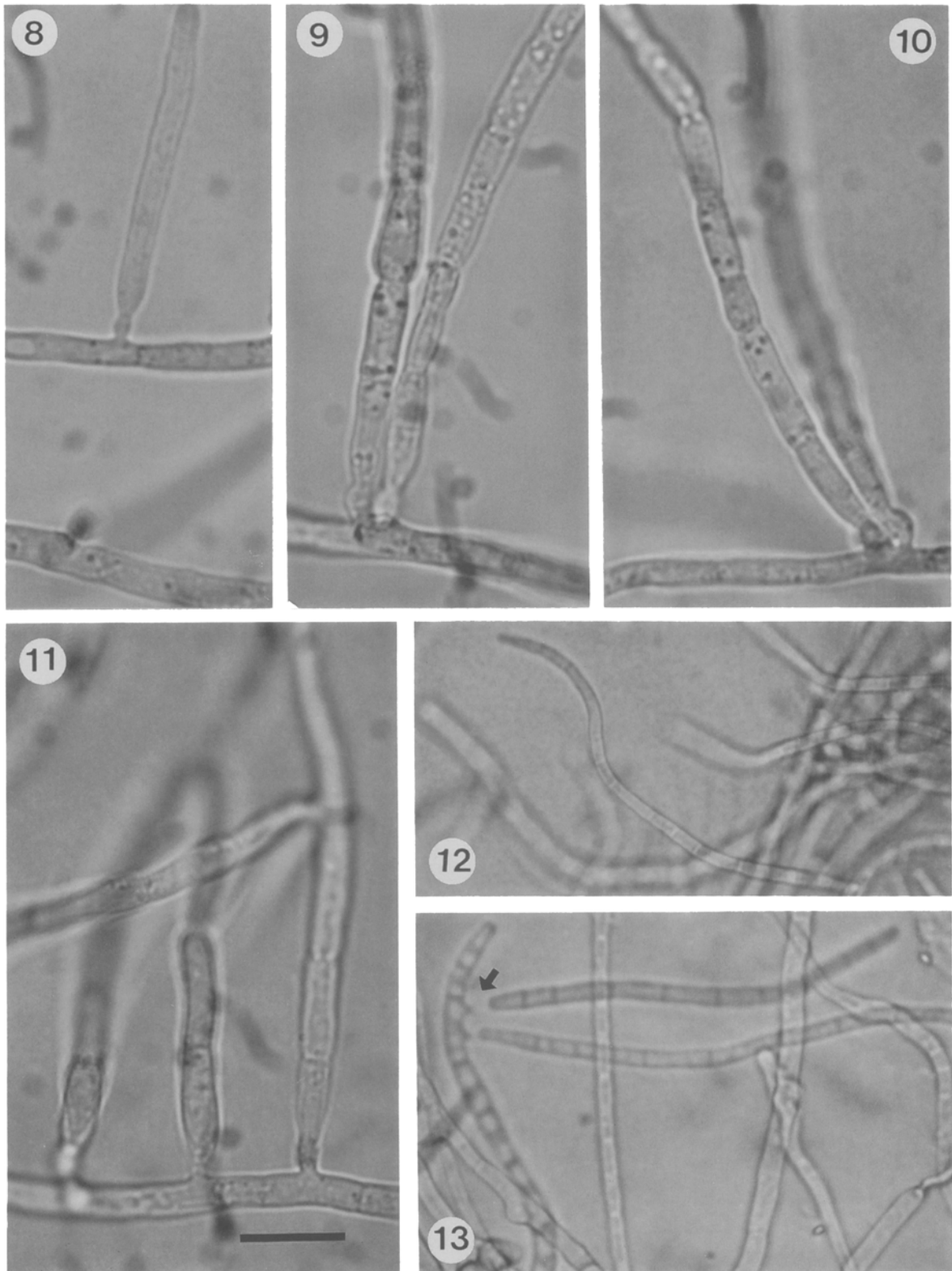
Fig. 1. *Irpicomycetes cornicola*.

A. Conidia and hyphal cells after detachment of conidia. B-D. Intact and partial conidia on hyphal cells. Note the branched conidium (C). Scale bar: A=20 µm; B-D=10 µm.



Figs. 2-7. *Irpicomyces cornicola*.

2. Twelve-day-old PDA colonies (above: surface; below: reverse). 3. Habit on water agar. 4. Close-up of a part of Fig. 3. 5. Aggregates of conidia on short conidiophores. 6, 7. Detached simple (6) and branched (7) conidia. Scale bar: 2 = 15 mm; 3 = 50 μ m; 4-7 = 20 μ m.



Figs. 8-13. *Irpicomycetes cornicola*.
8-11. Intact (8) and partial conidia (9-11) on hyphal cells. 12, 13. Intact conidia. Note hyphal cells after detachment of conidia (arrow). Scale bar: 8-11 = 10 μm ; 12, 13 = 20 μm .

secondary conidia, cylindrical, gradually tapering towards the ends, occasional truncate basally, 2-16-septate (mostly 10-13-septate), $65.7-174(-231) \times 1.8-3.7 \mu\text{m}$. Sporulation occurred readily within 3 days after inoculation on PDA. The optimum temperature for sporulation is 25°C , determined on PDA and WA by the number of conidia readily detached in water. For example, the numbers per plate of conidia of 3-day-old PDA cultures are 1.08×10^4 , 5.94×10^4 , 1.04×10^5 , and 1.04×10^4 , at the respective temperatures of 19, 22, 25, and 28°C .

Hab.: Water agar culture from twigs of flowering dogwood (*Cornus florida*), Fukaya, Saitama, Japan.

Material examined: Culture from twigs of flowering dogwood, Fukaya, Saitama, Japan, 20 June, 1993, T. Watanabe, {Holotype: TW 93-107 (dried and living) (FFPRI 425383)}; (living) (MAFF 425383) deposited in the Herbarium, Forestry and Forest Products Research Institute (FFPRI) and National Institute of Biological Resources, Ministry of Agriculture, Forestry and Fisheries (MAFF) at Tsukuba, Japan.

Based on the simple, solitary, terminal filiform conidia, the fungus resembles species of the genera *Cer-*

cospora Fresenius, *Mycocentrospora* Deighton, and *Pseudocercospora* Deighton (Deighton, 1972; 1973). However, *I. cornicola* differs from the latter fungi because it forms aleuriospores and its conidiophores are micronematous, but the latter fungi form sympodulospores and their conidiophores are macronematous.

This fungus is the second known species of *Irpicomycetes*, although its hyperparasitic nature has not been tested. This may be the first report on the culture of a fungus belonging to this genus, because no description of the culture of *I. schiffnerulae* was given.

Literature cited

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