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[資料] The Genus *Phytophthora* Found in Okinawa (1)

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The Genus *Phytophthora* Found in Okinawa (1) *

By

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1. *Phytophthora allii* Sawada in Trans. Form. Nat. Hist. Soc. 19, p. 1. 1914. (Sawada, Spec. Rep. Agric. Sta. Formosa XI, p. 36, pl. I-II, 1915; Saccardo, Syll. Fung. XXIV, p. 36; Tanaka, Mycol. IX, p. 249, 1917; Waterhouse, The Genus *Phytophthora* p. 4, 1956).

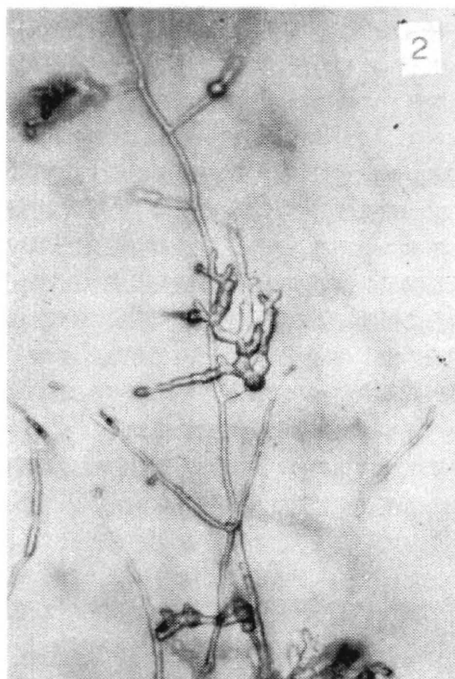
Hab. in Okinawa. on *Allium fistulosum* L. (Negi) Kokuba, Naha Dity (Nov. 2, 1964, P-5).

Description of the fungus: (Reprinted from the Genus *Phytophthora* by Waterhouse, 1956)

Forming a cottony white mycelial mass on diseased portions of leaves and flowers of *Allium fistulosum*. Hyphae filiform, hyaline, thin-walled, with granular contents, continuous when young but always septate when old, much branched 3-8 μ across, penetrating the cell walls of the host tissue. Haustoria not observed. Conidiophores appear through stomata of the host or sometimes break through the epidermal tissue, mostly accompanied by hyphae; conidiophores filiform, fine, single or branching

pseudodichotomously or rather irregularly ramose, 140-480 \times 4-6 μ ; conidia terminal, globular, ovoid, obovoid or lemon-shaped, hyaline, apically mamillate with a hemispherical papilla 5-10 μ high, 40-74 \times 30-50 μ , averaging 49.4 \times 36.5 μ , with or without a thickened septum at the base; falling off not rarely with a portion of persistent conidiophore at the end, producing 15-60 zoospores or germinating with germ tube.

Oogonial formation was observed in cultures on media made of bean agar and lima bean agar. Oogonia spherical, thin-walled, 17-26 μ (average 20.7 μ) in diameter, containing one oospores; oospores spherical, colourless or pale honey-yellow, 14-23 μ (averaging 16.9 μ) in diameter, walls 0.5-1.5 μ thick. Antheridium tightly surrounding the stalk of the oogonium, then becoming attached close to the wall of oogonium at the lower portion not far from the juncture of the stalk, usually round to obovoid, 8-18 \times 10-14 μ



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Photo:

1. *A. fistulosum* was inoculated with *P. allii*.
2. Swelled hophae of *P. allii*, grown on Potato agar medium (X150).
3. Sporangia of *P. allii* (X150).

