

# 琉球大学学術リポジトリ

## 沖縄で発生する疫病菌類 (3)

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# The Genus *Phytophthora* Found in Okinawa\*

By

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3. *Phytophthora colocasiae* Racib. in Parasitische Algen und Pilze, Java's. I, Batavia, p. 9, 1900. (Butler & Kulkarni, Mem. Dep. Agrice. India, V, p. 233, pl. I-IV, 1913; Saccardo, Syll. Fung. XVI, p. 396; Wilson, Mycol. VI, p. 59, 1914; Waterhouse, The Genus *Phytophthora* p. 21-22, 1956).

Hab. in Okinawa. on *Colocasia esculentum* Schott (Satoimo) Ishikawa, Ishikawa City (Sept. 20, 1965, p-11). on *Colocasia* sp Nakai (Taimo) Ishikawa, Ishikawa City (Sept. 20, 1965, p-12).

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

The non-septate hyphae 3~4  $\mu$  thick. The sporangia-bearing hyphae are prominent only when they appear slightly above the substratum from which they emerge, significantly swollen at the apex and delimited by a cross wall to form a

sporangium, which appears usually elongated, ovoid, more or less compressed, rounded on both sides, very irregular, and fairly thick walled. At the apex the sporangial wall is very strongly thickened, in this special part of the wall a swollen plug always develops. At maturity the sporangia fall off, together with a short pedicel; placed in water a very large number of swarm spores form inside, which, when the above-mentioned apical plug is dissolved, become kidney-shaped and possess two cilia. In water they soon come to rest and germinate, forming a small secondary sporangium which can continue growth at the apex, or form, one or two new swarmspores.

The sporangia (without the pedicel) are 48~55  $\mu$  long, 19~22  $\mu$  wide, the pedicel 3~7  $\mu$  long, the swarmspores 15~18  $\mu$  long, 9~12  $\mu$  wide.

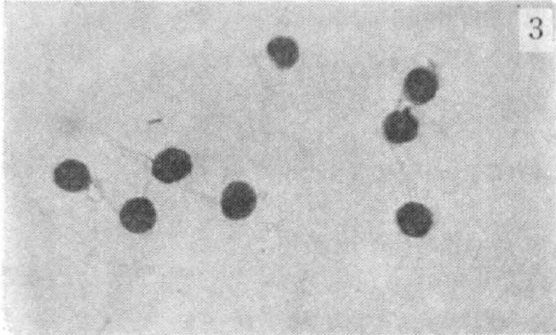
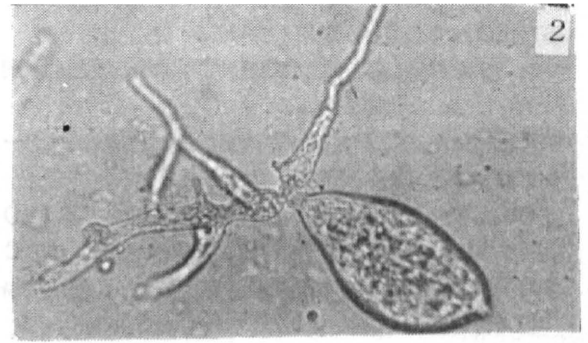
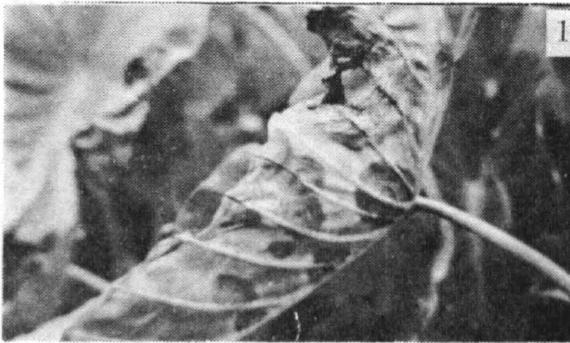


Photo:

1. Symptoms of *Phytophthora Colocasiae* on *Colocasia esculentum*.
2. Direct germination of sporangium of *P. colocasiae* (X600).
3. Zoospores of *P. colocasiae* showing flagella (X600).

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