

**Title** First report of *Pestalotiopsis virgatula* causing pestalotiopsis fruit rot on rambutan in Hawaii  
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### Abstract

Rambutan (*Nephelium lappaceum* Linn.) is a tropical, exotic fruit that has a rapidly expanding niche market in Hawaii. Diseased rambutan fruit was commonly observed in orchards in the Hilo and Kona districts of Hawaii Island during 2006. In surveys conducted in January, symptoms appeared as dark brown-to-black spots on mature fruit and blackened areas at the base of spinterns (hair-like projections) of mature and immature fruits. Pieces of infected fruit (cv. R167) were surface sterilized for 2 min in 0.5% NaOCl, plated on potato dextrose agar, and incubated at  $24 \pm 1^\circ\text{C}$  for 7 days. The fungus growing on PDA was pale buff with sparse, aerial mycelium and acervuli containing black, slimy spore masses. All isolates had five-celled conidia. Apical and basal cells were hyaline, while the three median cells were olivaceous; the upper two were slightly darker than the lower one. Conidia ( $n = 40$ ) were  $20.3 \pm 0.1 \times 6.8 \pm 0.1 \mu\text{m}$ . There were typically three apical appendages averaging  $16.8 \pm 0.2 \mu\text{m}$  long. The average basal appendage was  $3.8 \pm 0.1 \mu\text{m}$  long. The fungus was initially identified as *Pestalotiopsis virgatula* (Kleb.) Stey. on the basis of conidial and cultural characteristics (3). The identification was confirmed by molecular analysis of the 5.8S subunit and flanking internal transcribed spacers (ITS1 and ITS2) of rDNA amplified from DNA extracted from single-spore cultures with the ITS1/ITS4 primers (1,4) and sequenced (GenBank Accession No. EU047943). To confirm pathogenicity, agar pieces, 3 mm in diameter, from 7-day old cultures were used as inoculum. Five mature fruit from rambutan cv. R134 were rinsed with tap water, surface sterilized with 0.5% NaOCl for 2 min, wounded with a needle head, inoculated in the laboratory, and maintained in a moist chamber for 7 days. Lesions resembling symptoms that occurred in the field were observed on fruit after 7 days. No symptoms were observed on fruit inoculated with agar media. The fungus reisolated from diseased fruit was identical to the original isolates, confirming Koch's postulates. The disease appears to be widespread in Hawaii. Preharvest symptoms may have the potential to affect postharvest fruit quality if fruits are not stored at the proper conditions. *Pestalotiopsis* spp. have been reported on rambutan in Malaysia, Brunei, and Australia (2). To my knowledge, this is the first report of *P. virgatula* causing fruit spots on rambutan in Hawaii.