

## DISEASE NOTE

NEW RECORD OF *ACIDOVORAX AVENAE* SUBSP. *CATTLEYAE* ON ORCHID IN ITALYM. Scortichini<sup>1</sup>, D. D'Ascenzo<sup>2</sup> and M.P. Rossi<sup>1</sup>

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Pot-grown plants of orchid (*Phalaenopsis* hybrid) cv Alice Girl with leaf spot symptoms were observed in a commercial glasshouse near Pescara (central Italy). Leaves bore circular-elliptical spots, sometimes with a water-soaked appearance, that turned blackish forming cavities in the parenchyma. Some leaves died. Tissue from lesion margins was ground in a mortar containing sterile saline, 0.1 ml aliquots of serial ten-fold dilutions were plated on nutrient agar and incubated at 25-27°C for three days. The resulting cream-coloured colonies were analysed in biochemical and pathogenicity tests and by SDS-PAGE of whole-cell protein extracts. All isolates accumulated poly- $\beta$ -hydroxybutyrate, did not produce fluorescent pigments on medium B of King *et al.* (1954), hydrolysed starch, utilised L-arabinose, D-galactose and ethanoalamine as carbon source and caused a hypersensitivity reaction in tobacco cv White Burley. In addition, they showed the same protein profile as a reference strain (PD3516, Wageningen) of *Acidovorax avenae* subsp. *cattleyae* (Pavarino) Willems *et al.*

Pathogenicity tests were made according to Stovold *et al.* (2001). *Phalaenopsis* plants were covered with plastic bags 12 h before and for 24 h after inoculation. Leaves were wounded with a sterile syringe and inoculated by wiping with a cotton wool swab impregnated with the bacterial suspension ( $1.2 \cdot 10^7$  cfu ml<sup>-1</sup>). All isolates tested reproduced the original symptoms. Re-isolations yielded the same colony type as in the primary isolation. We conclude that the causative agent of the disease was *A. avenae* subsp. *cattleyae*. To our knowledge this is the first record of this disease of *Phalaenopsis* hybrid in Italy since its discovery by Pavarino in 1911. Other hosts of this pathogen are *Cattleya*, *Cypripedium*, *Dendrobium*, and *Ornithocephalum*.

King E.O., Raney M.K., Ward D.E., 1954. Two simple media for the demonstration of pyocyanin and fluorescin. *Journal of Laboratory and Clinical Medicine* **44**: 301-307.

Stovold G.E., Bradley J., Fahy P.C., 2001. *Acidovorax avenae* subsp. *cattleyae* (*Pseudomonas cattleyae*) causing leafspot and death of *Phalaenopsis* orchids in New South Wales. *Australasian Plant Pathology* **30**: 73-74.

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