

DISEASE NOTES OR NEW RECORDS

Occurrence of *Oidiopsis* sp. on *Chamaelaucium uncinatum* in ArgentinaS. M. Wolcan^{A,C} and Y. Sato^B^AComisión de Investigaciones Científicas BA, CIDEFI, Facultad de Ciencias Agrarias y Forestales, UNLP, 60 y 119, (1900) La Plata, Buenos Aires, Argentina.^BCollege of Technology, Toyama Prefectural University, Kurokawa, Kosugi-machi, Imizu-gun, Toyama 939-0398, Japan.^CCorresponding author. Email: swolcan@speedy.com.ar

Abstract. Powdery mildew of *Chamaelaucium uncinatum*, caused by *Oidiopsis* sp., is recorded for the first time in Argentina. Although the teleomorph stage was not found, the characteristics of the fungus were similar to those of the anamorph of *Leveillula taurica* and might be identified as *Oidiopsis sicula*. Other than Australia, the centre of origin of this host, this is the first country where this disease has been reported. Descriptions of the symptoms and the pathogen are provided.

Geraldton waxplant (*Chamaelaucium uncinatum*, family Myrtaceae) is an Australian native shrub that produces flowering branches used in bouquets. This is a worldwide-cultivated plant because of its ornamental value. It was introduced into Argentina (Buenos Aires Province) in the 1990s and is cultivated in greenhouses in the outskirts of La Plata. During autumn to spring of 2004, plants producing cut flowers and others used for production of cuttings, showed signs of powdery mildew. Although four cultivars of *C. uncinatum* were cultivated in the same plots in the greenhouses, only cv. B.M. violet showed the marked signs and symptoms of the powdery mildews. Leaves of basal branches were the most affected. Petioles and some portions of the needlelike leaves were covered by whitish fungal structures formed by conidiophores and conidia (Fig. 1). Flower peduncles and calyx were also affected. Underneath the fungal colonies necrotic reddish–brown tissues were observed. Leaves and buds were detached and fell when severely infected.

Cylindrical, erect conidiophores emerged from stomata. They usually had a long foot-cell $112\text{--}206\ \mu\text{m} \times 7.5\ \mu\text{m}$, followed by another one $112\text{--}157\ \mu\text{m} \times 7.5\ \mu\text{m}$ and 1–2 shorter cells. Conidia formed singly, primary conidia \pm lanceolate, apically usually pointed, approximately $(60\text{--})63\text{--}78\text{--}(81) \times 15\text{--}18\text{--}(21)\ \mu\text{m}$, [exceptionally $(56\text{--})67\text{--}94\text{--}(101)\ \mu\text{m} \times 19 \times 30\ \mu\text{m}$]. Secondary conidia \pm ellipsoid to cylindrical, sometimes irregular, approximately the same size as the primary ones. Primary and secondary conidia produced germ tubes apically, subapically or arising from the sides,

of the *polygoni* type (Hirata 1942, 1955), with slightly or well-developed two-lobed or multi-lobed appressoria both in the terminal and basal positions. The apex of the germ tube can be swollen or forked (Fig. 2).

Based on the features mentioned above, the pathogen was identified as the anamorphic genus *Oidiopsis*. Ascomata were not observed. The characteristics of the fungus are closely similar to those of the anamorph of *Leveillula taurica* (Lév.) Arnaud and, therefore, it might be identified as *Oidiopsis sicula* Scal. (Braun 1987). A specimen is held in



Fig. 1. Typical signs and symptoms of powdery mildew caused by *Oidiopsis* sp. on leaves of *Chamaelaucium uncinatum* cv. NB Violet.

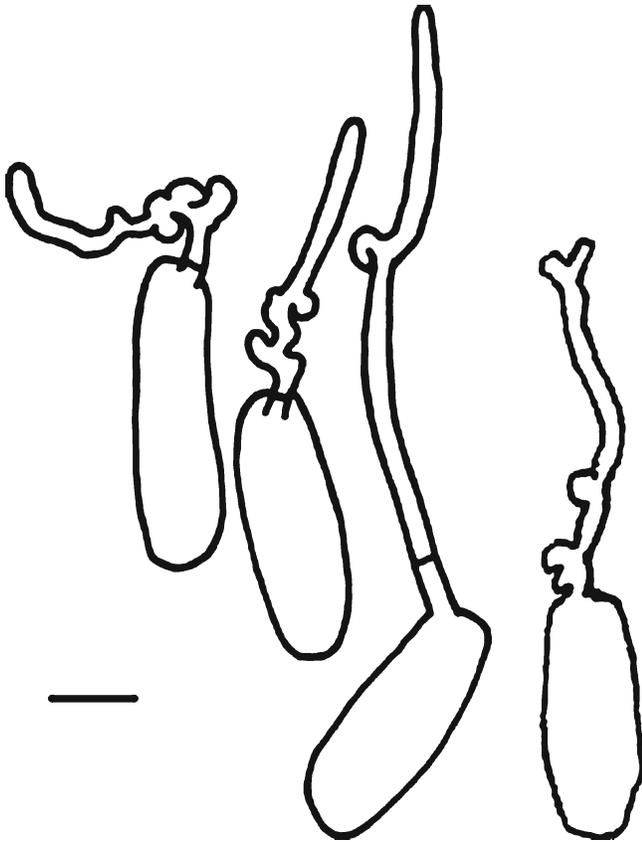


Fig. 2. Conidial germ tubes of *Oidiopsis* sp. on *Chamaelaucium uncinatum*. Bar line = 20 μ m.

the Herbarium of the Instituto Spegazzini de La Plata, Buenos Aires, Argentina with the accession number 47422.

To verify the pathogenicity of this *Oidiopsis* sp. to different cultivars of *C. uncinatum*, plants of cvv. N.B. violet (violet coloured flowers), N.B. orchid (rose), petticoat (red

and snowflake (white) were inoculated. Detached branches of cv. N.B. violet with consistently mildewed leaves were gently pressed on healthy leaves of three plants of each cultivar growing in pots. Two non-inoculated plants were used as control. The inoculated plants as well as the diseased branches were covered with plastic bags for 48 h and kept at 22–25°C. Non-inoculated plants were maintained in the same conditions in another compartment. Less severe powdery mildew symptoms than those occurring in natural infections were observed only on cv. N.B. violet 20–23 days after the inoculation. Control plants and the other cultivars remained healthy. Because of the severity of the disease, these facts might be considered when the cultivars for a plantation are chosen.

Amano (1986) first recorded the occurrence of *Oidium* sp. and *L. taurica* on *C. uncinatum* in Australia. This is the first record of *Oidiopsis* sp. on *C. uncinatum* in Argentina and it appears to be the first report of *Oidiopsis* sp. on *C. uncinatum* subsequent to the report from Australia.

References

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