DISEASE NOTE

OCCURRENCE OF *XANTHOMONAS AXONOPODIS* PV. *POINSETTIICOLA* ON *EUPHORBIA PULCHERRIMA* IN ITALY

V.M. Stravato[1], G. Carannante[1] and M. Scortichini[2]

[1]Genista srl, S.S. Flacca Km 9,5, 04022 Fondi (Latina), Italy
[2]Istituto Sperimentale per la Frutticoltura, Via di Fioranello, 52, I-00040 Ciampino aeroporto, Roma, Italy

Pot-grown plants of poinsettia (*Euphorbia pulcherrima* Willd. *ex* Klotzsch) cv Primero with leaf symptoms were observed on October 2003 in a commercial plant nursery, in the province of Latina (central Italy). The leaf symptoms appeared as black spots surrounded by a yellow halo. In some cases, spots coalesced. No symptoms were observed on petioles and stems. Leaf tissue taken from the margin of the lesions was crushed in mortars containing sterile physiological saline. From the suspensions, 0.1 ml aliquots of the serial ten-fold dilutions were spread on YDC and nutrient agar and incubated at 24°C for four days. The resulting yellow colonies were used in biochemical and pathogenicity tests as well as for comparison by SDS-PAGE of whole-cell protein extracts. All the isolates were negative in oxidase reaction, presence of arginine dihydrolase, nitrate reduction, presence of catalase and urease; they were positive in esculin, starch and gelatin hydrolysis. All isolates showed an oxidative metabolism. In addition, they showed the same protein profile as *Xanthomonas axonopodis* pv. *poinsettiicola* (Patel *et al.*) Vauterin *et al.* (synonym: *X. campestris* pv. *poinsettiicola* type A) NCPPB 531. For the pathogenicity tests, plants of the cv Sunlight were dusted with celite and the inoculum ($1\text{-}2 \cdot 10^7$ cfu ml^{-1}) rubbed on leaves with a cotton swab and rinsed with sterile water. All tested isolates reproduced the symptoms observed in the greenhouse. Re-isolations yielded the same colony type as observed in primary isolation. We conclude that the causative agent of the disease was *X. axonopodis* pv. *poinsettiicola*. To our knowledge this is the first record of this disease of *E. pulcherrima* in Italy and Europe.

Vautern L., Hoste B., Kersters K., Swings J. 1995. Reclassification of *Xanthomonas*. *International Journal of Systematic Bacteriology* **45**: 472-489.

Corresponding author: M. Scortichini
Fax: +39.06.79340158
E-mail: mscortichini@yahoo.it

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DISEASE NOTE

FIRST REPORT OF *GENICULOSPORIUM CORTICIOIDES* ON COMMON OAK IN ITALY

R. Causin, V. Finozzi, L. Montecchio and S. Mutto Accordi

Dipartimento TeSAF, Sezione di Patologia vegetale, Università degli studi di Padova, Viale dell'Università 16, I-35020 Legnaro, Italy

From twigs, leaves and buds collected in Fagarè wood (Cornuda, north-eastern Italy) from typically declining *Quercus robur* L., 14 fungal strains were isolated. Among them, *Geniculosporium corticioides* (Ferraris and Saccardo) de Hoog, anamorph of *Hypoxylon serpens* (Pers. *ex* Fr.) Kickx. was isolated with a total frequency of 26% from the above-indicated tissues. Artificial inoculations 3 cm from the collar of 40 asymptomatic 1 year-old seedlings were carried out using mycelial plugs produced on PDA, while 40 seedlings were treated with sterile PDA as control. All plants were grown in greenhouse and a half of them were submitted to drought stress (5/8 of the field capacity). Independently from the soil hydric content, after 28 days all seedlings inoculated with the fungus died, with pronounced necrosis at the inoculation point. Samplings from the necrotized woody tissues 1 cm above the inoculation point lead to the re-isolation of the fungus revealing its high pathogenicity, known outside Italy for the teleomorphic phase. No fungi were isolated from the control plants that remained viable.

Rogers J.D., 1974. *Hypoxylon serpens*: cytology and taxonomic considerations. *Canadian Journal of Botany* **53**: 52-55.

Corresponding author: R. Causin
Fax: +39.049.8272885
E-mail: roberto.causin@unipd.it

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DISEASE NOTE

LEAF SPOT CAUSED BY *ALTERNARIA ALTERNATA* ON *IMPATIENS WALLERANA* IN ARGENTINA

S. Wolcan

Comisión de Investigaciones Científicas, Centro de Investigaciones de Fitopatología, Facultad de Ciencias Agrarias y Forestales, UNLP, 60 y 119, 1900 - La Plata, Buenos Aires, Argentina

Busy lizzie (*Impatiens wallerana* Hook), the main flowering potted grown in Buenos Aires Province (Morisigue *et al*., 2002), is a popular worldwide potted or landscape ornamental. In autumn 1999, plants cultivated in nurseries, commercial greenhouses and gardens, showed symptoms of leaf spot. Lesions began as brown "pinpoints" that became circular (2.5-3 mm) spots with reddish-purple margins, whitish center and sometimes-chlorotic halo affecting leaves and calyx. Spots were similar to those caused by *Pseudomonas syringae* on this ornamental. When spots were numerous, leaves and calyx turned chlorotic and dropped. Plants of different cultivars (single or double flowers and different colors) were susceptible to the disease at different stages of growth, mainly from autumn to early summer. Two *Alternaria* spp. were isolated on potato dextrose agar from symptomatic leaves. For pathogenicity tests, plants of four cultivars, with and without injuries, were sprayed separately with conidial suspensions of the two *Alternaria* spp. ($5 \cdot 10^5$ conidia ml^{-1}) and kept in greenhouse at 17-23°C. Controls were sprayed with sterile water and all the plants were covered with plastic bags for the first 36 h. Depending on the cultivar, after 18-25 days, typical symptoms resembling the original ones were observed only on plants inoculated with one of the *Alternaria* spp.. Plants that were inoculated with the other *Alternaria* sp. and the controls remained symptomless. The pathogenic species produced conidiophores single or in clusters, bearing obclavate, pyriform, brown conidia with short beaks, in chains. (5 to 8 conidia) that were sometimes branched. They measure 21 to 50 µm x 10 to 15 µm, with 5 to 8 transverse septa and 0 to 3 longitudinal ones. Based on the morphological characteristics, the pathogen was identified as *A. alternata* (Fr.) Keiss. This is the first report of leaf spot on *I. wallerana* in Argentina and it seems to be the first report of *A. alternata* on *Impatiens* spp..

Morisigue D., Villanova I., Abate F., Morita M., Nishiyama K., 2002. Relevamiento de la actividad florícola y plantas ornamentales del Gran Buenos Aires. In: *Proceedings of 1er Congreso Argentino de Floricultura y Plantas Ornamentales-4tas Jornadas Nacionales de Floricultura*, Buenos Aires 2002.

Corresponding author: S. Wolcan
Fax: +54 221 4252346
E-mail: swolcan@intear1.com.ar

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DISEASE NOTE

FIRST REPORT OF THE ASSOCIATION OF A DEFECTIVE SATELLITE DNA β MOLECULE WITH A BIPARTITE GENOME BEGOMOVIRUS CAUSING POTATO LEAFCURL DISEASE IN INDIA

K.S. Usharani, A. Srivastava, K.V. Padmalatha and V.G. Malathi

Advanced Center for Plant Virology, Division of Plant Pathology, Indian Agricultural Research Institute, New Delhi, 110012, India

Potato leaf curl disease (PoLCD) in India is caused by a sap-transmissible, bipartite genome begomovirus (Usharani *et. al.*, 2003) that was identified as a distinct strain of *Tomato leaf curl New Delhi virus* (ToLCNDV-Pot). Attempts were made to detect satellite DNA molecules, if any, associated with the disease by using a PCR approach. Amplification of total DNA extracted from infected potato plants using β01/β02 primers (Briddon *et. al.*, 2003) yielded a 0.7kb amplicon, which was cloned and sequenced (Genebank No. AY395873). Analysis of sequence revealed that it is a defective DNA β molecule (PoLCDßΔ01Ind) that lacks the A-rich region and the CI open reading frame, while containing the satellite conserved region (SCR) of *ca.* 115 bp with the begomovirus origin of replication (Briddon *et al.*, 2003). Repeated efforts to obtain full length bDNA from diseased potato samples were unsuccessful. PoLCDßΔ01Ind shared >90% nt similarity with the DNA β molecule associated with Okra leaf curl virus from Pakistan (OLCDßO2Pak, AJ316030) and *Bhendi yellow vein mosaic virus* from India (BYVMDß02-lnd, AJ308425). To date, either full-length or defective satellite DNA β molecules have been found associated only with Old World monopartite genome begomoviruses. This is the first report in which a DNA β molecule, albeit defective, has been found associated with a bipartite genome Old World begomovirus.

Briddon R.W., Bull S.E., Amin L., Idris A.M., Mansoor S., Bedford I.D., Dhawan P., Rishi N., Siwatch S.S., Abdel-Salam A.M., Brown J.K., Zafar Y., Markham P.G., 2003. Diversity of DNA beta, a satellite molecule associated with some monoparitite Begomoviruses. *Virology* **312,** 106-121.

Usharani K.S., Surendranath B., Paul-Khurana S.M.P., Garg I.D., Malathi V.G., 2003. Potato leaf curl-a new disease of potato in northern India caused by a strain of *Tomato leaf curl New Delhi virus. New disease reports* (http://www.bspp.org.uklndr).

Corresponding author: V.G. Malathi
Fax: +91.11.25842113
E-mail: vgmalathi@rediffimail.com

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DISEASE NOTE

GONIAGNATHUS GUTTULINERVIS (KIRSCHBAUM), NEW NATURAL HOST OF THE STOLBUR SUBGROUP 16SrXII-A PHYTOPLASMA IN SARDINIA

R. Garau[1], A. Sechi[1], G. Tolu[1], V.A. Prota[1], A. Lentini[2] and U. Prota[1]

Dipartimento di Protezione delle Piante – Sezioni di [1]Patologia vegetale e di [2]Entomologia agraria, Università degli Studi, Via De Nicola 1, 07100 Sassari, Italy

Grapevine yellows induced by phytoplasmas of the stolbur subgroup (16Sr XII-A) occur in Sardinia (Italy), sometimes with a fairly high incidence. In 2003, the average infection rate in cv Chardonnay was estimated to be around 17%. As infections are expanding locally in certain vineyards, epidemiological investigations were initiated to assess the presence and composition of the extant Auchenorrincha populations. Sweep net sampling was done every forthnight from May to November 2003 in diseased vineyards. Among the different leafhopper species that were captured, *Goniagnathus guttulinervis* was consistently present from August to November, with a peak of 53 adults in October. DNA was extracted according to Doyle and Doyle (1990) from samples collected in September and October, each made of five individuals, and amplified by one step PCR with universal primers R16F2/R16R2 followed by nested PCR with specific primers R16(I)F1/R16(I)R1. Amplicons were digested with the restriction endonuclease *MseI* and electrophoresed in 2% agarose gel. A phytoplasma of the subgroup 16SrXII-A (stolbur) was detected in two samples of seven collected in September but in none of the three samples collected in October. The identification of a seemingly novel natural host of stolbur phytoplasma, which adds to those known to be involved in the transmission of grapevine yellows (Boudon Padieu, 2003), opens new interesting epidemiological perpectives, which are now being investigated together with some molecular aspects.

Boudon-Padieu E., 2003.The situation of grapevine yellows and current research directions: distribution, diversity, vectors, diffusion and control. In: *Extended Abstracts 14th Meeting of ICVG, Locorotondo* 2003, 47-53.

Doyle J.J., Doyle J.L., 1990. Isolation of plant DNA from fresh tissue. *Focus* **12**: 13-15.

Correspondig author: R. Garau
Fax: +39.079.229316
E-mail: garau@uniss.it

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DISEASE NOTE

FIRST REPORT OF *SQUASH MOSAIC VIRUS* IN TURKEY

B.K. Caglar[1], M.E. Güldür[2] and M.A. Yilmaz[1]

[1]Department of Plant Protection, Çukurova University, Adana, Turkey
[2]Department of Plant Protection, Harran Univesity, Urfa, Turkey

Widespread symptoms of a possible virus disease were repeatedly observed in melon crops (*Cucumis melo*) grown in the provinces of Mersin, Adana, and Urfa (south-west Turkey). Affected plants showed mild to chlorotic mottling of the leaves, deformation of the blades, and chlorotic patches on the fruits. A virus was consistenly recovered from symptomatic leaf samples from different areas by mechanical transmission to herbaceous hosts. Symptoms in inoculated melon seedlings were the same as those observed in the field. ELISA tests of leaf extracts from naturally and artificially infected melon plants gave positive reactions with two antisera to *Squash mosaic virus* (SqMV; genus *Comovirus*, family *Comoviridae*), supplied either by Dr. H. Lecoq (INRA, Montfavet, France) or a Turkish company (Lojistic). Since the seeds used to establish the crops had been imported from abroad and SqMV is known to be seed-borne, seeds from imported seed batches were obtained from the farms where the disease occurred. SqMV was consistently detected by ELISA in germinated seeds from all batches. SqMV has several strains for three of which (Kimble, Arizona and Melon) partial sequences are available (Hu *et al*., 1993; Haudenshield and Palukaitis, 1998). Strain-specific primers, designed by using Genbank sequences AF059533 (Kimble strain), AF059532 (Arizona strain), and M96148 (Melon strain), were used in PCR assays for amplifying reverse transcribed viral RNA extracted from diseased plants. Amplicons of the expected size (579 bp) were obtained only with primers specific to the Kimble strain. This is the first report of the occurrence of SqMV in Turkey, where it has probably been introduced with imported seeds.

Haudenshield J.S., Palukaitis P., 1998. Diversity among isolates of squash mosaic virus. *Journal of General Virology* **79**: 2331-2341.

Hu J.S., Pang S.Z., Nagpala P.G., Siemieniak D.R., Slighton J.L., Gonsalves D., 1993. The coat protein gene of squash mosaic virus, cloning, sequence analysis, and expression in tobacco protoplasts. *Archives of Virology* **130**:17-31.

Corresponding author: M.A. Yilmaz
Fax: +322.338.6381
E-mail: yilmazma@cu.edu.tr

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