# Disease Notes

**First Report of Periwinkle Twig Blight Caused by *Colletotrichum dematium* in Florida.** R. T. McMillan, Jr., and W. R. Graves, Department of Plant Pathology, University of Florida, TREC, Homestead 33031. Plant Dis. 77:428, 1993. Accepted for publication 17 November 1992.

*Colletotrichum dematium* (Pers.) Grove, which causes twig blight disease on periwinkle (*Catharanthus roseus* (L.) G. Don), was isolated from plants of *C. roseus* 'Pretty in Pink' from a commercial nursery in Dade County, Florida, in the spring of 1991. The species of *Colletotrichum* was identified by the Commonwealth Mycological Institute, Kew, England. Foliar blight and sporulation of the fungus resulting from inoculation of *C. roseus* plants with a spore suspension were identical in all respects to those resulting from natural infection. Symptoms consisted of wilting of the shoot tips followed by chlorosis and ultimately necrosis of the shoot tips. Necrotic tissues were typically covered with masses of acervuli with setae. The isolate produced falcate conidia as well as abundant sclerotia on the host and in culture, which is typical of *C. dematium*. The pathogen has been reported in India on *Vinca rosea* L. (1). This appears to be the first occurrence of *C. dematium* on *C. roseus* in the United States.

*Reference*: (1) V. G. Mhaiskar. Plant Dis. Rep. 51:480, 1967.

**First Report of Japanese Pear Black Spot Caused by *Alternaria kikuchiana* in France.** A. Baudry, J. P. Morzières, and P. Larue, Direction Régional de l'Agriculture et de la Forêt d'Aquitaine, G.R.I.S.P., B.P. 81, 33883 Villenave d'Ornon Cédex, France. Plant Dis. 77:428, 1993. Accepted for publication 23 September 1992.

In 1991, black spots were observed on leaves and fruit from 3-yr-old plants of Japanese pear (*Pyrus serotina* Rehd. 'Nijisseiki') in one commercial orchard in southwestern France (Landes Department). Lesions on leaves were large black spots with an average diameter of 10 mm. Lesions on fruit were larger than those on leaves and resulted in cracking. *Alternaria kikuchiana* Tanaka (syn. *A. alternata* (Fr.:Fr.) Keissl.) was isolated consistently from necrotic tissues onto malt-agar medium. Pathogenicity was verified by spray-inoculating healthy Nijisseiki fruit with a suspension of $5 \times 10^4$ conidia per milliliter and incubating the fruit at 22 ± 1 C. The lesions that developed on inoculated fruit were similar to those observed in the field. Koch's postulates were completed by reisolating *A. kikuchiana* from inoculated fruit. This is the first report of Japanese pear black spot in France and although the disease is not yet considered important, local climatic conditions favor its spread and it may become so in the future.

**Tomato Pith Necrosis Caused by *Pseudomonas corrugata* in Argentina.** Adriana M. Alippi, Lía Ronco, and Héctor E. Alippi, Cátedra de Fitopatología, Facultad de Agronomía, Universidad Nacional de La Plata, c.c. 31, 1900, La Plata, Argentina. Plant Dis. 77:428, 1993. Accepted for publication 15 October 1992.

In 1991, apical chlorosis of leaves, adventitious roots, and gray to brown blotches on stems were observed on commercial greenhouse tomato (*Lycopersicon esculentum* Mill.), causing important losses on hybrids Carmelo, Ceibo, Simona, and Lerica. When stems were split, the pith cavities were hollow and the vascular systems were brown. Bacteria consistently isolated from diseased stems formed yellowish colonies, often with green centers, on NDA. The strains produced blue-green diffusible pigment on NDA but were nonfluorescent on King's medium B. A blue-diffusible pigment (orange-brown under UV light) was produced on glucose-peptone agar within 48 hr. Colonies were raised with wrinkled centers or margins. The bacteria were gram-negative rods, aerobic, non-spore-forming, and with poly-β-hydroxybutyrate inclusions. Strains hydrolyzed gelatin but not starch and grew at 37 C. They were positive for catalase, oxidase, and utilization of L-(+)-arabinose, D-mannitol, and D-glucose. They were negative for levan, arginine dihydrolase, and utilization of D-(+)-cellobiose. All strains induced a hypersensitive response in tobacco plants and produced a rot of onion slices and necrosis of lettuce but did not cause soft rot of potato. Pathogenicity was demonstrated by injection-inoculation into the stems at the point of cotyledon attachment on tomato cvs. Platense and Royal Casino. Six weeks after inoculation, the bacterium was recovered from the induced stem lesions, which were similar to those originally described. The microorganism was identified as *Pseudomonas corrugata* Roberts and Scarlett (1,2). This is the first report of tomato pith necrosis in Argentina and South America.

*References*: (1) F. L. Lukezic. Phytopathology 69:27, 1979. (2) C. M. Scarlett et al. Ann. Appl. Biol. 88:105, 1978.

**Leaf Spot of Carnation Caused by *Cladosporium echinulatum* in Hawaii.** E. E. Trujillo and N. Nagata, Department of Plant Pathology, University of Hawaii, Honolulu 96822. Plant Dis. 77:428, 1993. Accepted for publication 24 November 1992.

In 1990, *Cladosporium echinulatum* (Berk.) G.A. De Vries was isolated from leaf spots on 2-wk-old transplants of an unidentified cultivar of carnation (*Dianthus caryophyllus* L.) collected from two farms in Kula, Maui, Hawaii. Leaf spots were round to oblong, measuring 3–5 × 2–3 mm. The necrotic spots were tan to light gray and were surrounded by a 1- to 2-mm-wide maroon border with a chlorotic halo. Black conidiophores and conidia were often visible on necrotic tissue. Inoculation of carnation cv. Petersons Red Sim with $10^4$ to $10^5$ conidia per milliliter of two pure culture isolates of the pathogen produced symptoms in 2 wk at daily mean temperatures of 25–12 C. The first stage of symptom development was purple spots 1 mm in diameter; these later enlarged and developed into typical lesions as observed in the field. Koch's postulates were fulfilled by reisolation of the pathogen. The pathogenicity test was repeated several times. Arbeláez (1) reported that this leaf spotting pathogen of carnation is a major problem in Colombia but of minor importance elsewhere. This is the first documented report of a Cladosporium leaf spot of carnation in Hawaii.

*Reference*: (1) G. Arbeláez. Acta Hortic. 216:151, 1988.

**First Report of Nectria Twig Blight on Apple Trees in Malawi, Africa.** J. Debons, Oregon State University, Corvallis 97331; Eric Chilembwe, Bvumbwe Agricultural Research Station, Ministry of Agriculture, P.O. Box 5748, Limbe, Malawi; W. S. Braunworth, Jr., Department of Horticulture, Oregon State University, Corvallis 97331; and C. E. D. Mainjeni, Bvumbwe Agricultural Research Station, Ministry of Agriculture, P.O. Box 5748, Limbe, Malawi. Plant Dis. 77:428, 1993. Accepted for publication 21 January 1993.

Nectria twig blight, caused by *Nectria cinnabarina* (Tode:Fr.) Fr., was first observed in 1987 on three of the most important low-chilling-requirement apple cultivars (Anna, Ein Shemer, and Dorsett Golden) at the Bvumbwe Agricultural Research Station, Malawi, and in the area surrounding the station; the disease has become worse during successive seasons. Wilting first appeared on leaves of 3- to 4-yr-old trees in November during the rainy season. Dead leaves on infected twigs showed symptoms resembling those associated with fire blight. Secondary symptoms, including sunken cankers, were associated primarily with pruning activities. Cankers were characterized by a margin of wood discoloration below the bark and by the presence of black, globose perithecia of the fungus. *N. cinnabarina* was identified by comparison of symptoms and etiology with the description of Nectria twig blight in the *Compendium of Apple and Pear Diseases* (American Phytopathological Society). High-chilling-requirement cultivars (Rome Beauty, Golden Delicious, and Alexander) did not show symptoms. The severity of the disease in Malawi may be due to conditions induced by pruning, defoliation, and water stress. The disease may reduce the lifetime of susceptible apple cultivars and dictate stricter measures for control, namely, sanitation and protection at pruning and defoliation.

**First Report of Aerial Blight of *Coleus forskohlii* Caused by *Rhizoctonia solani* in India.** R. S. Shukla, S. Kumar, H. N. Singh, and K. P. Singh, Central Institute of Medicinal and Aromatic Plants, Lucknow 226016, India. Plant Dis. 77:429, 1993. Accepted for publication 13 October 1992.

*Coleus forskohlii* (Willd.) Briq. (Lamiaceae) is a rich source of the drug Coleonol, which is used to treat glaucoma, congestive cardiomyopathy, and asthma (1). Severe leaf infections occurred in experimental plantations at Lucknow during cool, cloudy, rainy weather during July–September 1990 and 1991. Symptoms included water-soaked leaf spots that increased rapidly in size and became light tan to brown and necrotic. Severe infections resulted in defoliation and death of plants. A *Rhizoctonia* sp. was isolated from infected leaves on potato-dextrose agar and identified as *R. solani* Kühn on the basis of mycelial and sclerotial characters; identification was confirmed by CAB IMI No. 333041. Pathogenicity of the isolate was confirmed on 6- to 8-wk-old *C. forskohlii* plants, and Koch's postulates were completed by reisolating the pathogen.

*Reference*: (1) M. P. Dubey et al. J. Ethnopharmacol. 3:1, 1981.

**Association of *Magnaporthe poae* with a Patch Disease of Creeping Bentgrass in Florida.** M. L. Elliott, Fort Lauderdale Research and Education Center, University of Florida, Fort Lauderdale 33314. Plant Dis. 77:429, 1993. Accepted for publication 6 October 1992.

During the summer months, pure creeping bentgrass (*Agrostis stolonifera* L.) golf course putting greens at Orlando (1987) and Palm Beach (1991) showed typical patch disease symptoms, including irregular chlorotic or necrotic patches (30 to 60 cm in diameter) containing wilted plants with rotted roots colonized by a dark, ectotrophic fungus. This fungus was isolated from symptomatic roots at each location by means of selective (SM-7) and nonselective (PDA with streptomycin) media. Teleomorphs were produced on wheat grown on water agar only and inoculated with an opposing mating type (ATCC 64411 and 64412) of *Magnaporthe poae* Landschoot & Jackson (1). Both *M. poae* mating types were isolated, "A" in Orlando and "a" in Palm Beach. In greenhouse studies, Koch's postulates were satisfied with bentgrass cultivars Penncross and SR-1020 grown in sterilized soil for 3 mo, then infested with the pathogen and incubated at temperatures greater than 28 C. After 6–8 wk, plants appeared wilted and roots were black and rotted. Because of their intolerance to high temperatures and humidity, *Agrostis* spp. are not recommended for putting greens in the subtropical climate of Florida. Furthermore, *M. poae* appears to be pathogenic to bentgrass under these conditions, although pathogenicity has yet to be proved in the field. This is the first report of an association of *M. poae* with a patch disease of bentgrass.

*Reference*: (1) P. J. Landschoot and N. Jackson. Mycol. Res. 93:59, 1989.

**First Report of Resistance of *Phytophthora infestans* to Metalaxyl in Eastern Washington and Southwestern British Columbia.** K. L. Deahl and S. P. DeMuth, USDA-ARS, Vegetable Laboratory, Plant Sciences Institute, Beltsville, MD 20705; G. Pelter, Washington State University, Pullman 99164; and D. J. Ormrod, British Columbia Ministry of Agriculture, Fisheries and Food, Surrey, V3S 4P9 Canada. Plant Dis. 77:429, 1993. Accepted for publication 11 December 1992.

In 1989 and 1990, late blight caused by *Phytophthora infestans* (Mont.) de Bary produced severe damage to home-garden tomatoes and commercial potato fields in northwestern Washington, despite treatment of the latter with the systemic fungicide metalaxyl (Ridomil). Prior testing (1) had shown that 71% of field isolates from this area were highly resistant to metalaxyl in fungicide-amended rye agar media and in potato tuber and leaf disk bioassays (more than 90% of the isolates sporulated on tuber disks in the presence of $\geq 10$ $\mu$g/ml of metalaxyl). In 1991, the survey was expanded to include samples of potato with late blight (200 diseased leaflets, stems, and tubers collected at random) from irrigation circles in eastern Washington and also from 12 fields in southwestern British Columbia that had experienced failure of metalaxyl control after recommended spray programs. All *P. infestans* isolates were designated as resistant, intermediate, or sensitive to metalaxyl, according to Shattock et al (2) and based similarly on percent growth in the presence of 10 $\mu$g/ml of metalaxyl relative to the metalaxyl-free control; these isolates showed >60%, 10–60%, and <10% growth, respectively (i.e., sensitive isolates failed to grow at concentrations greater than 10 $\mu$g/ml of metalaxyl in fungicide-amended media). All 21 isolates from eastern Washington showed high- or intermediate-level resistance to metalaxyl. Among 30 isolates from southwestern British Columbia, 17 (57%) were highly resistant, eight (27%) showed intermediate-level resistance, and five (16%) were sensitive to metalaxyl. In most cases, the in vitro response of a specific isolate was similar to the range of sensitivity expressed in in vivo leaf and tuber disk bioassays at a given fungicide concentration. The increase in potato late blight at these sites may be due to selection for metalaxyl-resistant isolates of *P. infestans*, and continued monitoring of this species for shifts in sensitivity to this fungicide is warranted.

*References*: (1) K. L. Deahl et al. Am. Potato J. 68:605, 1991. (2) R. C. Shattock et al. Plant Pathol. 37:4, 1988.

**First Report of Verticillium Wilt of *Impatiens wallerana* Caused by *Verticillium dahliae* in the United States.** N. J. Taylor, Department of Plant Pathology, 2021 Coffey Road, The Ohio State University, Columbus 43210. Plant Dis. 77:429, 1993. Accepted for publication 7 December 1992.

Specimens of garden impatiens or sultana (*Impatiens wallerana* J.D. Hook [= *I. sultanii* J.D. Hook]) from a landscape planting were received in the Ohio Plant and Pest Diagnostic Clinic. Plants showed wilting, stunting, leaf drop, stem dieback, and, where water was limited, occasional plant death. Black streaks were present in the vascular system of affected plants. Impatiens had been grown in this landscape site for several years. *Verticillium dahliae* Kleb. was consistently isolated from these plants. Disease-free plants produced from seed of *I. wallerana* were inoculated by immersing cut roots in a suspension of *V. dahliae* inoculum ($1.5 \times 10^5$ conidia per milliliter). Within 3 wk, inoculated plants showed the symptoms described, except that under greenhouse conditions with plentiful water, plant death was not observed. The fungus was reisolated from stems. This is the first report of Verticillium wilt on *I. wallerana* in the United States.

**First Report of Bean Yellow Mosaic Virus in Spain.** M. Sáiz, S. Castro, G. Carazo, J. Romero, and C. de Blas, Departamento de Protección Vegetal, CIT-INIA, Apartado 8111, 28080 Madrid, Spain. Plant Dis. 77:429, 1993. Accepted for publication 7 December 1992.

Common bean (*Phaseolus vulgaris* L.) plants showing symptoms of viral disease were collected from open fields and greenhouses at Villa del Prado, Madrid, Spain. Using light and electron microscopy and ELISA with monoclonal anti-PTY, we identified a virus isolate as a member of the potyvirus group. This isolate was identified as bean yellow mosaic virus (BYMV) by: 1) host range, 2) positive reaction with two different anti-BYMV (ATCC PV68 and G-164-25) in the plate-trapped form of ELISA and immunosorbent electron microscopy, and 3) reverse-transcription polymerase chain reaction amplification with primers designed by a partial BYMV sequence (1). In our surveys for bean viruses in different regions of Spain we have frequently detected bean common mosaic virus, but this is the first time BYMV was found infecting *P. vulgaris* or any other crop in Spain.

*Reference*: (1) J. Hammond and R. W. Hammond. J. Gen. Virol. 70:1961, 1989.