Disease Notes

First Report of Pinewood Nematode (*Bursaphelenchus xylophilus*) in Mexico. L. David Dwinell, USDA Forest Service, Southeastern Forest Experiment Station, 320 Green Street, Athens, GA 30602. Plant Dis. 77:846, 1993. Accepted for publication 27 March 1993.

In March 1992, the pinewood nematode (*Bursaphelenchus xylophilus* (Steiner & Buhrer) Nickle) was recovered from logs of *Pinus estevesii* (Mart.) Perry in the state of Nuevo León above Horsetail Falls, in an area of Mexico called La Botella. The trees had been killed by bark beetles and subsequently attacked by cerambycids. Foraging and larval entrance holes and larvae characteristic of *Monochamus* spp. (Coleoptera: Cerambycidae), vectors of the pinewood nematode, were noted. Pinewood nematodes were extracted from wood samples, and their population increased on fresh, nematode-free chips of *P. strobus* L. Pathogenicity was determined by inoculating six 2-yr-old seedlings of *P. sylvestris* L. (1). After 3 mo, four of the inoculated seedlings had wilted and died. The pinewood nematode was reisolated from the dead or dying seedlings. The uninoculated seedlings remained healthy. It was concluded that the pinewood nematode had been transmitted during oviposition of the vector to the dead or dying pines and was a secondary associate. This is the first report of *B. xylophilus* in Mexico.

Reference: (1) L. D. Dwinell. Plant Dis. 69:440, 1985.

***Solanum lycocarpum*: A Natural Host of *Stemphylium solani*.** L. S. Boiteux, G. P. Henz, and L. de B. Giordano, CNPH/EMBRAPA CP 0218, 70359-970 Brasilia (DF), Brazil. Plant Dis. 77:846, 1993. Accepted for publication 25 February 1993.

Circular, light-gray lesions caused by *Stemphylium solani* G.F. Weber were found on leaves of *fruta-de-lobo* (*Solanum lycocarpum* St. Hill.) plants growing near tomato germ plasm lines heavily infected with the fungus. Identification of the pathogen was based on morphology of conidia and conidiophores (1). Plants (15 days old) of *S. lycocarpum* and tomato (*Lycopersicon esculentum* Mill. 'Rutgers') were inoculated under greenhouse conditions (22–26 C) with 20 ml of a spore suspension adjusted to 10^4 conidia per milliliter of *S. solani*. Light-gray spots appeared on the leaves of both species 6–8 days after inoculation. *S. solani* was reisolated from those lesions. *S. lycocarpum* is a perennial native plant quite common in the *cerrado* (savannah) area of central Brazil where processing tomatoes are becoming a major crop. Our finding indicates that this plant species may play an important role as a source of inoculum for tomatoes in Brazil by keeping *S. solani* viable from season to season.

Reference: (1) G. F. Weber. Mycologia 20:516, 1930.

First Report of *Exserohilum rostratum, Curvularia senegalensis*, and *Nigrospora oryzae* Infecting Kenaf in Texas. B. A. Mullin, C. G. Cook, and R. L. Schading, Conservation and Production Systems Research Unit, USDA-ARS, 2413 E. Highway 83, Weslaco, TX 78596. Plant Dis. 77:846, 1993. Accepted for publication 16 March 1993.

In trial nurseries at over 20 locations in the United States, kenaf (*Hibiscus cannabinus* L.) is being tested by the USDA Agricultural Research Service for fiber production for use in paper and pulp industries. In 1991, foliar samples showing shoot tip blight or necrotic lesions were collected from Beaumont and Rincon, Texas. Three fungi were isolated from diseased tissues on acidified PDA: *Curvularia senegalensis* (Speg.) Subramanian, *Exserohilum rostratum* (Drechs.) K.J. Leonard & E.G. Suggs, and *Nigrospora oryzae* (Berk. & Broome) Petch. *C. senegalensis* and *E. rostratum* were isolated from shoots and leaves. Inoculation of excised kenaf leaves with *C. senegalensis* followed by incubation in a moist chamber at 27 C resulted in sunken lesions surrounded by a zone of water-soaked tissue accompanied by sporulation; inoculation of intact leaves resulted in round, reddish brown lesions with tan centers. Spore dimensions averaged 23 × 9.3 μm; conidia had three or four septa and showed bipolar germination. *E. rostratum* produced severe water-soaked or sunken lesions accompanied by chlorosis on excised kenaf leaves inoculated and incubated in a moist chamber at 27 C. Spore dimensions of isolates ranged from 96 × 14.6 μm with seven to 14 septa to 245.8 × 12.8 μm with 18 septa. Germination was unipolar on agar but also bipolar on leaves. *N. oryzae* was isolated from foliar lesions and produced round, reddish brown lesions with tan centers on excised leaves inoculated and incubated at 27 C in a moist chamber. Spore dimensions were 15 × 13 μm. All three fungi were successfully reisolated, satisfying Koch's postulates for proof of pathogenicity.

First Report of Leaf Scald, Caused by *Xanthomonas albilineans*, of Sugarcane in Mexico. J. E. Irvine and J. M. Amador, Texas Agricultural Experiment Station, Weslaco 78596-8399; M. I. Gallo R. and C. M. Riess, Xafratec, Córdoba, Veracruz, Mexico; and J. C. Comstock, USDA-ARS, Sugarcane Field Station, Canal Point, FL 33438. Plant Dis. 77:846, 1993. Accepted for publication 10 February 1993.

On 17 February 1992, tillers with white striping on the leaves symptomatic of leaf scald were observed in a field of sugarcane (*Saccharum* interspecific hybrid Mex 64-1487) near the Antigua River in Veracruz, Mexico. Symptoms were again observed on 4–5 May 1992 in young regrowth of the harvested field and in two additional fields of Mex 64-1487. Mature plants of old cane of unknown identity showed symptoms, including profuse germination of lateral buds, sprouts with white scalded areas, reddened vascular bundles, and scalded mature leaves. A medium selective for *Xanthomonas albilineans* (Ashby) Dowson (1) was inoculated with samples prepared from all infected fields. Cell suspensions from colonies were spotted onto a nitrocellulose membrane, heated at 80 C for 2 hr, and tested by EIA in Florida with a monoclonal antibody from A. M. Alvarez (University of Hawaii). A positive reaction for *X. albilineans* serovar 1 was obtained from most isolates. Foliar symptoms of leaf scald in Tabasco seen by Jorge Victoria in 1990 (*personal communication*) suggest a more widespread occurrence.

Reference: (1) M. J. Davis et al. (Abstr.) Phytopathology 81:1223, 1991.

First Report of Leaf Spot Caused by *Phaeoseptoria eucalypti* in the Mediterranean Area. A. Belisario, Agricultural and Forest Research Center (CSAF), Via di Casalotti, 300, 00166 Rome, Italy. Plant Dis. 77:846, 1993. Accepted for publication 17 February 1993.

Leaf spots on mature trees of *Eucalyptus camaldulensis* Dehnh. and *E. globulus* Labill. were first noted in early summer 1991 in two different plantations of a farm near Rome, Italy. Foliar symptoms included irregular, small, angular, pale green yellowish to light purple spots (2–5 mm in diameter) mainly bounded by the veinlets. Infection resulted in severe defoliation, principally on the lower branches. Substomatal pycnidia were produced in the lesions, and conidia emerged in long, black, curled cirrhi. The size and morphology of the pycnidia (80–130 μm) and the predominantly four- to five-celled dark conidia (37–63 × 4–6 μm) were within the range reported for *Phaeoseptoria eucalypti* Hansf. (2). Isolations from infected tissue and single-spore isolates on several media (CMA, MEA, and PDA) yielded slow-growing, compact colonies that were white to grayish, depending on the medium. Pathogenicity was verified by inoculating 2-yr-old plants of *E. globulus* and *E.* × *trabutii* with a suspension of 2 × 10^5 conidia per milliliter. Leaf lesions and sporulation appeared after about 1 mo and were similar to those observed in nature. The fungus was reisolated from the newly developing spots. *P. eucalypti* has been reported from several countries, mainly in the Southern Hemisphere, on a wide variety of *Eucalyptus* spp. of the subgenus *Symphyomyrtus* (1). This is the first report of Phaeoseptoria leaf spot in the Mediterranean area.

References: (1) N. S. Knipscheer et al. S. Afr. For. J. 154:56, 1990. (2) J. Walker. Proc. Linn. Soc. N.S.W. 87:162, 1962.

Occurrence of Johnsongrass Mosaic Virus on Sorghum in Venezuela. M. J. Garrido and G. E. Trujillo, Facultad de Agronomía, Universidad Central de Venezuela, Apartado 4579, Maracay 2101, Venezuela. Plant Dis. 77:847, 1993. Accepted for publication 2 November 1992.

A sorghum virus isolate from Maracay induced symptoms on maize (*Zea mays* L.) and sorghum (*Sorghum bicolor* (L.) Moench) resembling those caused by maize dwarf mosaic virus (MDMV). Mechanical inoculations with sap from infected plants transmitted the virus to johnsongrass (*S. halepense* (L.) Pers.), oat (*Avena sativa* L.), and some differential sorghum cultivars (1). The thermal inactivation point of the virus was 55–60 C, the dilution end point was 10^{-2} to 10^{-3}, and longevity in vitro was 2–3 days at 20–25 C. The virus was transmitted from sorghum to sorghum nonpersistently by *Rhopalosiphum maidis* (Fitch). Electron microscopy revealed flexuous rods 750–830 nm long. Reactions positive in agar double-diffusion tests to antisera specific for johnsongrass mosaic virus (JGMV) and negative to antisera specific for MDMV-A and sugarcane mosaic virus-MB identified the virus as JGMV. This is the first report of JGMV in Venezuela.

Reference: (1) M. Tosic et al. Plant Dis. 74:549, 1990.

First Report of *Armillaria* sp. in Thailand. C. G. Shaw III, USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO 80526-2098, and Dhanee Phanichapol, Royal Forestry Department, Bangkok, Thailand. Plant Dis. 77:847, 1993. Accepted for publication 29 April 1993.

In January 1992, we found mycelial fans and rhizomorphs of an *Armillaria* sp. on upturned roots of a recently windblown tree of *Castanopsis* sp. (Fagaceae) in a mixed, nondeciduous hardwood forest at 1,600 m on Mt. Doi Intanon, Chiang Mai Province, Thailand. The fungus was isolated onto OPP medium (1). Cultures were characteristic of an *Armillaria* sp., but their abundant aerial rhizomorphs were atypical. Pairings with voucher isolates of known North American species of *Armillaria* were incompatible (P. Wargo, *personal communication*), indicating no affinity with these species. This is the first report of an *Armillaria* sp. in Thailand and one of only a few from this region. We know of unconfirmed reports from Malaysia and Vietnam, but of no reports from Laos, Cambodia, or Burma. No other instances of *Armillaria* were found during additional exploring in northern Thailand. We are now trying to determine the species of this isolate.

Reference: (1) P. Russell. Nature 177:1038, 1956.

Pathogenicity of the Columbia Root-Knot Nematode (*Meloidogyne chitwoodi*) to Onions. B. B. Westerdahl, C. E. Anderson, and E. M. Noffsinger, Department of Nematology, University of California, Davis 95616; H. L. Carlson, University of California, Intermountain Research and Extension Center, Tulelake 96134; P. A. Roberts, Department of Nematology, University of California, Riverside 92521; and A. Weiner, Division of Plant Industry, California Department of Food and Agriculture, 1220 N Street, Sacramento 95814. Plant Dis. 77:847, 1993. Accepted for publication 5 April 1993.

In the Tulelake Basin of California, young plants, about 15 cm in height, in a field of processing onions (*Allium cepa* L. 'Southport White Globe') showed symptoms of severe stunting and root galling. The soil was a silty clay loam with 10–12% stable organic matter typical of this region. Adult female root-knot nematodes were isolated from the root galls and were identified on the basis of perineal patterns as *Meloidogyne chitwoodi* Golden, O'Bannon, Santo, & Finley. Onions have not been reported previously as a host for this nematode, and several cultivars are reported to be nonhosts (1). Pathogenicity was confirmed in a greenhouse experiment utilizing the same cultivar. Onion seedlings were inoculated with juveniles from greenhouse cultures originating from a field in the Tulelake Basin used for research on this nematode since 1983. Inoculated plants were stunted and had galled roots from which adult females with egg masses were isolated and confirmed, by the perineal patterns, to be *M. chitwoodi*. Knowledge that all onion cultivars are not resistant to *M. chitwoodi* or that biotypes of this nematode may have different pathogenicity to onions is important in developing crop rotation programs for nematode management.

Reference: (1) H. Mojtahedi et al. J. Nematol. 19:545, 1987.

Fruit Rot of Squash cv. Orangetti in Florida. R. M. Sonoda, University of Florida, IFAS, AREC, Fort Pierce 34954; H. S. Paris, ARO, Newe Ya'ar Experiment Station, P.O. Haifa, Israel; and T. S. Shubert and N. E. El-Gholl, Florida Department of Agriculture and Consumer Services, Gainesville 32602. Plant Dis. 77:847, 1993. Accepted for publication 6 April 1993.

In November 1991, lesions were observed on about 5% of the mature fruit of *Cucurbita pepo* L. 'Orangetti', an orange-skinned, orange-fleshed spaghetti squash (1) in a planting at Fort Pierce, Florida. *Fusarium semitectum* Berk. & Ravenel and *Didymella bryoniae* (Auersw.) Rehm were frequently isolated, and *F. oxysporum* Schlechtend.:Fr. and *Colletotrichum gloeosporioides* (Penz.) Penz. & Sacc. in Penz were occasionally isolated, from separate lesions. No lesions were observed on fruit of adjacent *C. pepo* cv. Vegetable Spaghetti. Disks (4 mm diameter) of actively growing fungi on potato-dextrose agar were transferred into wounds (4 mm diameter, 4–6 mm deep) made on surface-sterilized, unblemished Orangetti and Vegetable Spaghetti fruit. Inoculated and uninoculated wounds were covered with cellophane tape, and fruit were incubated at 24 ± 2 C. One week after inoculation, mean lesion diameter for *F. semitectum, D. bryoniae, F. oxysporum*, and *C. gloeosporioides* on Orangetti fruit was 31.4, 74.6, 21.6, and 35.0 mm, respectively. The fungi were reisolated from lesion margins on Orangetti. There were no lesions on inoculated Vegetable Spaghetti fruit. This is the first report of these four fungi causing fruit rot of a *C. pepo* spaghetti squash cultivar in Florida.

Reference: (1) H. S. Paris et al. Hassadeh 66:254, 1985.

First Report of *Dendrophthoe falcata* on *Pinus kesiya*. C. G. Shaw III, USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO 80526-2098, and Dhanee Phanichapol, Royal Forestry Department, Bangkok, Thailand. Plant Dis. 77:847, 1993. Accepted for publication 29 April 1993.

Dendrophthoe falcata (L.f.) Ettingsh. (Loranthaceae) is a leafy mistletoe parasitic on over 300 hosts in Pakistan, India, Southeast Asia, and northern Australia (1). Even though the host list now numbers 401 (F. Hawksworth, *personal communication*), only three are conifers and, prior to this report, only one was in the Pinaceae (*Pinus roxburghii* Sargent, in India). In January 1992, we visited a natural stand of pole-sized *P. kesiya* Royale ex Gord. at about 800 m elevation in the Chiang Dao district of northern Thailand. Many of these pines contained numerous branch swellings bearing shoots of *D. falcata*. This is the first report of *D. falcata* on *P. kesiya*. There are numerous hosts for *D. falcata* in Thailand, but *P. kesiya* is the only conifer. Whether this marked difference in numbers of angiosperm and gymnosperm hosts is related to their relative abundance in the parasite's range, to differential parasitism, or to other factors is unknown and under study.

Reference: (1) B. Singh. Bull. Lucknow Nat. Bot. Gard. 69:1, 1962.

First Report of Botryosphaeria Canker on Bradford Pear in Louisiana. G. E. Holcomb, Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge 70803. Plant Dis. 77:847, 1993. Accepted for publication 12 May 1993.

In December 1992, a severe canker disease was observed on container-grown Bradford pear trees (*Pyrus calleryana* Decne.) in a nursery in Baton Rouge. Numerous sunken, brown cankers of various sizes, and at times encircling branches and the main trunk, occurred on 40% of 200 trees 2.5 cm in diameter. A group of six trees 7–8 cm in diameter were in an advanced state of decline from multiple severe infections. A fungus identified as the anamorph of *Botryosphaeria dothidea* (Moug.:Fr.) Ces. & De Not. produced conidia in pycnidia on canker surfaces and was consistently isolated from discolored wood. Pathogenicity tests were positive, and the fungus was reisolated from dormant Bradford pear twigs that had been wound-inoculated with mycelia and spores produced on potato-dextrose agar and held in moist chambers for 5–10 days. This is the first report of *B. dothidea* on Bradford pear in Louisiana and the first report of its occurrence in a nursery environment on this host (1)

Reference: (1) J. M. Mullen et al. Plant Dis. 69:726, 1985.

Salute to APS Sustaining Associates

This section is designed to help APS members understand more about APS Sustaining Associates. Information is supplied by company representatives. Each month features different companies. A complete listing appears in each issue of *Phytopathology*.

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Great Lakes Chemical Corporation. Contact: James E. Sargent, Manager, Agricultural Chemicals Development, Phytopathology, P.O. Box 2200, West Lafayette, IN 47906; 317/497-6354, Fax: 317/463-7176. An international diversified specialty chemical company with key products in many fields, Great Lakes's expertise ranges from flame retardants to drilling fluids, water sanitizers to toxicology testing services, and chemical intermediates for agrichemicals to electronic circuitry. Already the world leader in production of bromine chemicals, including the versatile agricultural fumigant, methyl bromide, Great Lakes has become the leading maker of furfural and furfural-based specialty chemicals derived from agricultural waste materials and used in a wide range of products including novel plant protection products. Each year an extensive effort is made to expand the uses for its standard-setting agricultural chemicals through grant-supported research and to discover better products to both produce and protect food and fiber. Amended labeling is expected soon to allow use of Agribrom horticultural algaecide as a plant disease control material for certain ornamental plants.

Griffin Corporation. Contact: Mark Crawford, P.O. Box 1847, Valdosta, GA 31603; 912/249-5271, Fax: 912/244-5978. Griffin Corporation has been serving agriculture since 1935, beginning as a seed retail store and progressing into an important agricultural chemical manufacturer. With headquarters in Valdosta, Georgia, Griffin has four business units with research, manufacturing, sales, and marketing functions in the Americas, Europe, Africa, and Asia. Griffin manufactures and markets its own brands of high-quality fungicides, insecticides, and herbicides, which are used for a wide variety of crops in virtually every major agricultural market worldwide. All Griffin products are marketed by Griffin Corporation globally.

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