

Disease Notes

The Occurrence of Enlarged Stipules on Leaves of Sweet Cherries with X-Disease in New York. S. V. Thomson, Department of Biology, Utah State University, Logan 84322; B. C. Kirkpatrick, Department of Plant Pathology, University of California, Davis 95616; T. A. Chen, Department of Plant Pathology, Rutgers University, New Brunswick, NJ 08903; and D. Rosenberger, New York State Agricultural Experiment Station, Cornell University, Highland, NY 12528. *Plant Dis.* 77:756, 1993. Accepted for publication 5 April 1993.

The field diagnosis of X-disease of sweet cherry (*Prunus avium* (L.) L.) is difficult and often depends on the presence of unevenly ripening fruit and subjective foliar symptoms. Fruit symptoms are present for only a few weeks of the year, and diagnosis is difficult when fruit is absent. Enlarged stipules have been consistently associated with leaves of sweet cherries with X-disease growing only on mazzard rootstock throughout most of the season in Utah but have not been reported previously from other geographic areas where X-disease occurs. This has led to speculation that the Utah strain might be different from that observed in California or in the eastern United States. Observations in 1991 of X-disease in sweet cherry trees on mazzard rootstock in New York revealed that enlarged stipules were associated with trees of some cultivars but were not detected on some undetermined cultivars; accurate identification was difficult in the old mixed-cultivar plantings. The Utah and New York infections were confirmed to be X-disease with a DNA probe specific for X-disease. The New York infections were also confirmed to be X-disease by ELISA and immunofluorescence with monoclonal antibodies. These results indicate a strong relationship between the California, Utah, and New York X-disease mycoplasma-like organism. The expression of enlarged stipules is not unique to the Utah X-disease syndrome and might be a useful diagnostic feature in other areas where X-disease is present.

Reduced Incidence of Iarviruses in Almond and Peach in California. J. K. Uyemoto, R. H. Beede, J. H. Connell, M. Vivero, and F. T. Yoshikawa, USDA-ARS and Cooperative Extension Service, University of California, Davis 95616. *Plant Dis.* 77:756, 1993. Accepted for publication 6 April 1993.

Previous surveys (1,2) showed that 20–25% of almond (*Prunus dulcis* (Mill.) D. Webb) and peach (*P. persica* (L.) Batsch) trees were infected with Prunus necrotic ringspot virus (PNRSV) and/or prune dwarf virus (PDV). To strengthen the California State nursery stock certification program, the nursery industry in 1988 supported an enzyme-linked immunosorbent assay (ELISA) program aimed at detection of PNRSV and PDV in scion- and seed-source trees and exclusion of infected sources from propagation. Over 30,000 potential source trees were tested by ELISA during 1990 and 1991. To evaluate the effectiveness of this effort, some current and year-old plantings of almond and peach were sampled in April 1992. Succulent leaves were removed from five trees of almond and 10 of peach per cultivar per orchard and tested for both viruses by ELISA. In July, budwood was taken from selected orchards and graft-indexed onto Shirofugen flowering cherry (*P. serrulata* Lindl.). Assay results revealed that among ELISA-tested nursery stocks, four of 175 almond trees were infected by PNRSV. Of 210 peach trees, two tested positive for PDV and three tested positive for PNRSV. The diseased almond trees were located in one planting of cv. Butte; nine other collections of Butte trees were negative by ELISA, and two of these collections were reconfirmed as healthy by Shirofugen assays. In peach, ELISA detected trees infected by a single virus in separate orchards, and one collection containing a single PDV-infected tree was also positive by Shirofugen

assays. In contrast, all 10 peach trees in a new planting of nursery stock not previously tested by ELISA were determined by ELISA to be infected with PNRSV and PDV. These results indicate that the ELISA program has reduced the incidence of ilarviruses in recent plantings of almond and peach.

References: (1) J. K. Uyemoto et al. *Calif. Agric.* 43:14, 1989. (2) J. K. Uyemoto et al. *Plant Dis.* 73:217, 1989.

Southern Blight Caused by *Sclerotium rolfsii* on the Australian Native Ferns *Angiopteris evecta* and *Marattia salicina*. C. A. Rugg and B. A. Summerell, Royal Botanic Gardens, Mrs MacQuaries Road, Sydney, New South Wales 2000, Australia. *Plant Dis.* 77:756, 1993. Accepted for publication 30 November 1992.

Disease symptoms typical of southern blight were observed on a king fern (*Angiopteris evecta* (Forster f.) Hoffm.) grown in a glasshouse. Leaves were wilted and yellow, and the stem bases, crown, and roots were brown and rotted. Abundant white mycelia and small white (later turning brown) spherical sclerotia were present on the stem bases, crown, and potting mix. *Sclerotium rolfsii* Sacc. was isolated onto potato-dextrose agar from affected tissue. Sclerotia were harvested from 28-day-old cultures. Five plants each of *A. evecta* and the related potato fern (*Marattia salicina* J. Sm.) were inoculated with 0.5 g (approximately 400) of fresh sclerotia per kilogram of potting mix and grown in a glasshouse at 25–35 C. Uninoculated plants of each species served as controls. After 8 wk, inoculated plants of both species showed symptoms characteristic of southern blight and one plant of each species had died; after 16 wk, more plants had died. Plants used as controls remained healthy. *S. rolfsii* was reisolated from diseased plants. This is the first report of disease due to *S. rolfsii* on these two ferns, which have recently been exploited for horticultural display purposes.

First Report of *Cristulariella moricola* Causing Zonate Leaf Spot on Muscadine Grape. T. B. Brenneman, University of Georgia, Coastal Plain Experiment Station, Tifton 31793; J. F. Hadden, ISK Biotech Corp., Omega, GA 31775; and J. M. Ruter, University of Georgia, Coastal Plain Experiment Station, Tifton 31793. *Plant Dis.* 77:756, 1993. Accepted for publication 29 January 1993.

Zonate leaf spot lesions were observed on muscadine grape (*Vitis rotundifolia* Michx.) foliage adjacent to a pecan (*Carya illinoensis* (F. A. Wagenheim) K. Koch) orchard in Mitchell County, Georgia. Conidia (propagative units) of *Cristulariella moricola* (Hino) Redhead were observed on lesions, and the fungus was isolated from lesions on leaves of muscadine and pecan. One isolate from each host was grown on potato-dextrose agar, and mycelial plugs were used to inoculate wounded and nonwounded leaves on rooted cuttings of wild muscadine and of the commercial muscadine cultivar Fry. After incubation for 1 wk in moist chambers at 18–30 C, both genotypes showed symptoms and conidia had formed on lesions. Wounding was required for consistent infection. Lesions were larger on the wild muscadine than on Fry, and the isolate from pecan caused the largest lesions. The pathogen was easily reisolated from the lesions. This is the first report of zonate leaf spot on *V. rotundifolia*, although other *Vitis* species are known hosts (1). Wild muscadine grapes could be an inoculum source for zonate leaf spot in pecans, where losses can be severe, or in cultivated muscadines.

Reference: (1) J. C. Trolinger et al. *Plant Dis. Rep.* 62:710, 1978.

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The photograph on the cover of wheat blast caused by *Pyricularia grisea* should be credited to F. A. Paiva and A. C. P. Goulart.