

Disease Notes (continued)

First Report of Rust on *Salvia coccinea* in Louisiana. G. E. Holcomb and R. A. Valverde, Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge 70803. Plant Dis. 79:426, 1995; published on-line as D-1995-0307-01N, 1995. Accepted for publication 27 February 1995.

Numerous blackish-brown, raised telia of *Puccinia salviicola* Dietel & Holw. were observed on stems of Texas sage, *Salvia coccinea* Juss. ex J. Murr., cultivars Bicolor, Lactea, and Punicea, in Baton Rouge in December 1994. Although other *Salvia* species (*S. leucantha* Cav., *S. guaranitica* St.-Hil., and *S. elegans* Vahl.) were present in the same planting, only *S. coccinea* was infected with the pathogen. Cinnamon-brown uredinial and occasional telial pustules were observed on leaves of infected plants. The pathogen was identified by following the key of Baxter and Cummins (1) and based only on uredinial and telial characteristics: urediniospores 19–25 × 21–27 µm, prominently echinulate with two equatorial pores; telia blackish-brown, teliospores puccinioid with thin-walled pedicels attached at right angles to the septum, 18–28 × 35–50 µm, wall appearing smooth, 2.7–4.6 µm thick, pore of upper cell apical and pore of lower cell next to septum. Although *S. coccinea* is native from South Carolina to Texas, this rust has been previously reported only from Florida (1903) and Texas (1908) (1).

Reference: (1) J. W. Baxter and G. B. Cummins. *Lloydia* 14:201, 1951.

Velvetleaf as a Host for *Septoria glycines*. G. L. Hartman, USDA/ARS, and G. B. Lee, Department of Plant Pathology, University of Illinois, Urbana-Champaign. Plant Dis. 79:426, 1995; published on-line as D-1995-0317-01N, 1995. Accepted for publication 10 March 1995.

Brown spot of soybean (*Glycine max* (L.) Merr.), caused by *Septoria glycines* Hemmi and velvetleaf (*Abutilon theophrasti* Medik.) (1) occur in most soybean production areas. Soybean and velvetleaf leaves with lesions were collected at the Agronomy/Plant Pathology South Farm and disinfested with 0.5% NaOCl for 2 min, rinsed twice with tap water, and incubated on sterile moist filter paper in glass dishes for 4 days. Isolates were cultured on potato-dextrose agar at 23 C under continuous fluorescent light for 15 days. Colonies were black with globose or subglobose black pycnidia that produced hyaline, slightly curved, one- to five-septate conidia that were 9.8–37.8 µm × 1.4–1.9 µm from velvetleaf and 14–42 µm × 1.4–2.1 µm from soybean. Cross inoculations using two soybean and one velvetleaf isolate on soybean cv. Williams and velvetleaf were conducted twice in the greenhouse. Leaf lesions and pycnidia developed on both plant species, but not on noninoculated control plants. Lesions on velvetleaf had irregular margins without surrounding chlorosis and were somewhat larger than the smooth-margin lesions surrounded by chlorosis found on soybean. *Septoria glycines* was reisolated from the infected leaves of both hosts, and was morphologically similar to the original isolates. *Septoria glycines* has been reported only on a limited number of legume species, but this report suggests that it may infect other hosts.

Reference: (1) L. W. Mitich. *Weed Technol.* 5:523, 1991

A New *Alternaria* Leaf Blight Disease on Tomato in North Florida. D. O. Chellemi, University of Florida, North Florida Research and Education Center, Quincy, FL 32351 and D. Mueller, Glades Crop Care Inc., Jupiter, FL 33458. Plant Dis. 79:426, 1995; published on-line as D-1995-0320-02N, 1995. Accepted for publication 14 March 1995.

In June of 1993, small, irregularly shaped leaf lesions with dark brown centers surrounded by yellow margins were observed on *Lycopersicon esculentum* Mill. 'Sunny,' 'Colonial,' and 'Agriset 761' grown in the North Florida tomato production region. Lesions began on the margins of older leaves, lacked any visible signs of concentric rings, and eventually coalesced, resulting in defoliation. An *Alternaria* species with short-beaked conidia grew from symptomatic leaf pieces plated on water agar. Single-spore isolates grown on dilute potato-carrot agar (1) produced unbranched chains of 7–10 conidia (10–15 × 50–60 µm) after 5–7 days at 27 C. Pathogenicity was determined by spraying a conidial suspension containing ca. 1×10^6 conidia ml⁻¹ onto 4-wk-old tomato Sunny seedlings and onto both immature and mature green fruit. Detached fruits had been

surface sterilized by immersing them in a solution containing 250 µg ml⁻¹ NaClO, or wounded with carborundum dust, or both surface sterilized and wounded, or left untreated. Inoculated plants and fruit were exposed to artificial dew for 48 hr at 22 C and then maintained in a greenhouse at 29 C (day) and 21 C (night). Seven days after inoculation, disease symptoms developed on inoculated foliage. Morphologically identical *Alternaria* spp. were consistently isolated from necrotic leaf tissue. Lesions did not develop on tomato fruit even after ripening. The causal fungus differs from *A. alternata* f. sp. *lycopersici* (2) by its larger conidia formed in unbranched chains and its inability to infect fruit. Although the causal fungus is morphologically distinguishable among known tomato pathogens, E. G. Simmons (*personal communication*) suggests that it be treated at present as one taxon of a species-complex referred to as "*Alternaria* sp. in Group 1 of Simmons" (1). The disease is referred to as "*Alternaria* leaf blight of tomato." A voucher specimen has been deposited in the Gainesville herbarium (FLAS).

Reference: (1) E. G. Simmons, and R. G. Roberts, *Mycotaxon* 58:109, 1993. (2) R. G. Grogan et al. *Phytopathology* 65:880, 1975.

Occurrence of Fusarium Rot of Stored Garlic in Israel. M. Koch and Z. Taanami, Agricultural Research Organization, Bet Dagan, Israel. Plant Dis. 79:426, 1995; published on-line as D-1995-0321-01N, 1995. Accepted for publication 8 March 1995.

Bulbs from a varietal screening of garlic (*Allium sativum* L.) were harvested in May 1994 and stored at ambient temperature in net bags in a screenhouse. A spongy, yellow-brown rot of cloves began to develop 1 mo after harvest in bulbs of late-harvested cultivars, especially those that had secondary sprouting before harvest. Symptoms usually began from the bulb base and affected individual cloves within the bulb to varying degrees. *Fusarium oxysporum* (Schlechtend.:Fr.) was isolated from infected cloves. Cloves were inoculated with this strain by inserting a piece of mycelial mat from a 5-day-old culture grown on potato-dextrose agar into the base. Cloves were stored at high humidity overnight in a plastic bag and then were stored dry at room temperature for 1 mo. During this time characteristic rotting developed at the bulb base. *Fusarium oxysporum* was reisolated from inoculated cloves. Onion seedlings soaked 15 min in a spore suspension of the culture and grown in sterile sand in a greenhouse developed wilting symptoms typical of *F. oxysporum* f. sp. *cepae*. An unusually late rain is thought to have favored disease. Symptoms similar to those described have been reported from commercial growers, especially of late-harvested elephant garlic. This is the first report of Fusarium rot affecting garlic in Israel.

Powdery Mildew of *Eustoma* Caused by *Leveillula taurica* in California. S. T. Koike, S. A. Tjosvold, and I. D. Greene. University of California Cooperative Extension, Salinas 93901. Plant Dis. 79:426, 1995; published on-line as D-1995-0323-01N, 1995. Accepted for publication 17 March 1995.

In October 1994, commercial greenhouse plantings of the cutflower *Eustoma grandiflorum* Raf. = *Lisianthus russellianus* Hook) in Monterey County, CA, were found to be extensively colonized by a powdery mildew fungus. Lesions associated with infections became chlorotic and in some cases caused the leaf to twist slightly. Conidia and conidiophores of *Leveillula taurica* (Lév.) G. Arnaud (anamorph: *Oidiopsis taurica* (Lév.) E. S. Salmon) (1) emerged from stomata on both abaxial and adaxial surfaces of the leaves. Conidia were borne singly, rarely catenulate, and consisted of two morphological types. Pyriform-tonavicular conidia measured 54.5–57.9 × 17.6–19.1 µm. Cylindrical conidia measured 50.5–54.5 × 17.8–19.2 µm. The *L. taurica* teleomorph was not found on the plants. Surveys conducted in and around the greenhouses failed to detect other plants infected with *L. taurica*. This is the first report of *L. taurica* on any species of *Eustoma* and the first report of powdery mildew on commercially produced *Eustoma* cultivars. This is also the first occurrence of *L. taurica* on any plant in the Gentianaceae. The extensive powdery mildew growth resulted in severe disease symptoms on numerous cultivars, forcing growers to discard large numbers of flowers.

Reference: (1) H. J. Boesewinkel. *Bot. Rev.* 46:167, 1980.