Disease Notes

First Report of a Root Rot Caused by *Rosellinia necatrix* on Camellia in Spain. J. P. Mansilla, O. Aguín, and M. C. Salinero, Estación Fitopatológica "Do Areeiro," Subida a la Robleda s/n, E-36153 Pontevedra, Spain. Plant Dis. 86:813, 2002; published on-line as D-2002-0426-01N, 2002. Accepted for publication 8 March 2002.

Camellias are widely cultivated in gardens and grown in nurseries for plant and flower production in northwestern Spain. *Camellia japonica* L. is most frequently grown, but many other camellia species and hybrids are also produced. In spring 1998, plants of *Camellia* sp. from a garden were observed to be affected by a root fungal pathogen, that formed a white mycelium that covered most of the roots, while aboveground plant parts showed a general decline. Infected roots were macerated and discolored. Fragments of the infected roots were surface-sterilized and placed in petri dishes containing potato dextrose agar and incubated at 24°C in the dark. The fungus formed a white mycelium that turned black in 1 week, developing pyriform swellings characteristic of *Rosellinia necatrix* Prill (1). To confirm pathogenicity, inoculum of the isolate was produced on wheat (*Triticum aestivum* L.) seeds autoclaved in glass vessels for 30 min at 120°C. Wheat seed cultures were started from disks of *R. necatrix* mycelium and grown at 24°C in the dark for 30 days. Pathogenicity tests were conducted on 48 2-year-old plants of the hybrid *Camellia* × *williamsii* cv. Mary Phoebe Taylor, which had been grown in 1.5-liter pots (one plant per pot) filled with soil in a glasshouse. The *R. necatrix* isolate was inoculated by adding 30 g of infected wheat seeds to each pot. The inoculum was mixed thoroughly with the substrate before potting. Another set of pots was left uninoculated, and served as a control. All pots were randomly arranged in a growth chamber at 22 to 24°C with a 12-h photoperiod. Seventeen days after inoculation, aerial symptoms of chlorosis and leaf fall were observed, while control plants remained symptomless. Inoculated plants died 3 months after inoculation. *R. necatrix* was reisolated from roots of all infected plants. To our knowledge, this is the first report of a root rot of camellia caused by *R. necatrix*, a pathogen causing white root rot mainly in deciduous fruit crops.

Reference: (1) S. Freeman and A. Sztejnberg. Pages 71-73 in: Methods for Research on Soilborne Phytopathogenic Fungi. The American Phytopathological Society, St. Paul, MN, 1992.

Two New Races of *Phytophthora phaseoli* from Lima Bean in Delaware. T. A. Evans, C. R. Davidson, J. D. Dominiak, R. P. Mulrooney, and R. B. Carroll, Department of Plant and Soil Sciences, University of Delaware, Newark 19717; and S. H. Antonius, ADM-ASI, Caldwell, ID 83605. Plant Dis. 86:813, 2002; published on-line as D-2002-0424-01N, 2002. Accepted for publication 19 March 2002.

Downy mildew, incited by *Phytophthora phaseoli* Thaxt., is the most important disease of lima bean (*Phaseolus lunatus* L.) on the east coast of the United States. It has been a serious threat to commercial lima bean production in Delaware, Maryland, and New Jersey for the past 5 years. Growers have attempted to manage this disease using resistant cultivars and copper hydroxide fungicides. In August and September 1995, a new pathogenic race of *P. phaseoli* was isolated from infected pods of the lima bean cv. Packer in a production field near Milton, DE. Races of *P. phaseoli* are determined using a modification of a cultivar differential developed by Wester (3). The cv. 184-85, which is resistant to races A, B, C, and D (1), is susceptible to the new race, designated as E. In August 2000, another new pathogenic race of *P. phaseoli* was isolated from infected pods of cv. 184-85 near Middletown, DE. The lima bean line BG2-408, which is resistant to races A, B, C, D, and E, is susceptible to the new race, designated as F. Symptoms produced on lima bean plants infected by races E and F are similar to each other, and to those produced by all other races. All races of *P. phaseoli* have the same cultural characteristics on lima bean pod agar. Evaluations of in field weather station data and disease occurrence indicate that races E and F may have temperature maxima greater than 32°C, whereas race D has a maximum of less than 32°C (2). During the 2000 growing season, 118 isolates of *P. phaseoli* were collected from 44 production fields in Delaware and the eastern shore of Maryland, with 86% characterized as race E and 5% as race F.

References: (1) C. R. Davidson et al. Biol. Cult. Tests 2001:V80. (2) R. A. Hyre and R. S. Cox. Phytopathology 43:419, 1953. (3) R. E. Wester. Phytopathology 60:1856, 1970.

First Report of the Pathogenicity of *Rhizoctonia solani on Salvinia molesta* and *S. minima* in Florida. M. B. Rayachhetry, Fort Lauderdale Research and Education Center, University of Florida, Fort Lauderdale 33314; T. R. Center, Nova High School, Fort Lauderdale, FL 33314; and T. D. Center, P. Tipping, P. D. Pratt, and T. K. Van, USDA-ARS, Invasive Plant Research Laboratory, Fort Lauderdale, FL 33314. Plant Dis. 86:813, 2002; published on-line as D-2002-0425-01N, 2002. Accepted for publication 18 March 2002.

Salvinia molesta Mitchell (giant salvinia) and *S. minima* Baker (common salvinia) are exotic aquatic ferns that have invaded drainage basins in Texas, Louisiana, Alabama, Arizona, California, Florida, Georgia, Hawaii, Mississippi, North Carolina, and Oklahoma (2). These ferns rapidly colonize bodies of water and form thick mats, displace native species, disrupt recreational activities like boating and fishing, block drainage and irrigation intakes, interfere with electricity generation, and degrade water quality (1). Patches of water-soaked lesions were observed on the pinnules and rachises of screenhouse-grown *S. molesta* plants in Florida. Mycelia spread centrifugally from these patches and caused diseased plants to disintegrate and sink. Brown-to-black sclerotia were formed on and around the disintegrated plants. A fungus was consistently isolated from symptomatic tissues of *S. molesta* plants. Seven-day-old cultures turned buff-colored and produced sclerotia on potato dextrose agar, while cultures on water agar were hyaline and produced black sclerotia. Both types of sclerotia were not differentiated into rind and medulla. The mycelia branched at right angles from the main hyphae, were constricted at the base of the angle, and had a septum after the constriction. Vegetative cells were multinucleate. The fungus was identified as *Rhizoctonia solani* Kühn (3,4). Koch's postulates were performed to confirm pathogenicity on *S. molesta* and *S. minima*. Seven-day-old cultures of *R. solani* that were grown in potato dextrose broth were filtered through four layers of cheesecloth and washed with distilled water. Fourteen grams of the mycelial residue was suspended in 28 ml of distilled water and macerated in a small blender for 30 s to obtain a mycelial suspension. Healthy *S. molesta* and *S. minima* plants grown in screenhouse-tanks were immersed in tap water supplemented with 1 drop per 4 liters of surfactant (Tween 80), rinsed thoroughly, and approximately 40 g of the plants was floated in plastic jars (18.5 cm diameter × 7.5 cm high) filled to a depth of 5 cm with tap water. Three jars each of *S. molesta* and *S. minima* were misted with 1.5 ml of the mycelial suspension. Individual jars were covered with a clear plastic lid with a 2.5-cm-diameter hole in the center for ventilation. These jars were placed in a growth chamber maintained at 28 (+1)°C and 12-h fluorescent light cycles. Typical water-soaked lesions appeared on pinnules within 3 to 7 days, spread rapidly, and resulted in disintegration of pinnules and rachises. *R. solani* was consistently reisolated from symptomatic tissues of both *Salvinia* species. To our knowledge, this is the first report confirming pathogenicity of *R. solani* on *S. molesta* and *S. minima*. This fungus should be further evaluated as a potential mycoherbicide for control of *Salvinia* species.

References: (1) K. L. S. Harley and D. S. Mitchell. J. Aust. Inst. Agric. Sci. 47:67, 1981. (2) C. C. Jacono et al. Castanea 66:214, 2001. (3) B. Sneh et al. Identification of *Rhizoctonia* Species. The American Phytopathological Society, St. Paul, MN, 1991. (4) C. C. Tu and J. W. Kimbrough. Bot. Gaz. 139:454, 1978.

(*Disease Notes* continued on next page)

First Report of the Parasitic Plant *Orobanche aegyptiaca* Infecting Olive. H. Eizenberg, S. Golan, and D. M. Joel, Department of Weed Research, ARO, Newe Ya'ar Research Center, P.O. Box 1021, Ramat Yishay 30095, Israel. Current address of H. Eizenberg, Department of Crop and Soil Science, Crop Science Building 331B, Oregon State University, Corvallis 97331;Plant Dis. 86:814, 2002; published on-line as D-2002-0429-02N, 2002. Accepted for publication 24 April 2002.

Broomrapes (*Orobanche* spp.) are obligatory parasitic plants that infect the root system of vegetables and field crops worldwide resulting in severe damage. Five broomrape species are known as significant parasites of crops in Israel: *O. aegyptiaca* Pers., *O. cernua* Loefl., *O. cumana* Wallr., *O. crenata* Forssk., and *O. ramose* L. (1,2). Recently, *O. aegyptiaca* was found to parasitize roots of young olive trees (*Olea europaea*) in a 1-year-old plantation located in Esdraelon Valley, Israel (voucher specimens deposited in Newe-Ya'ar Weed Herbarium, Ramat Yishay, Israel). To our knowledge, this is the first time that a tree in general and olive in particular has been reported to serve as host for *O. aegyptiaca*. Washing the root system clearly verified connections between the parasite and olive roots. Cross sections of an attachment site confirmed the development of functional haustoria. Trees were planted in a field where tomatoes had been previously parasitized by *O. aegyptiaca* for several years. In April 2001, many *O. aegyptiaca* plants emerged under each olive tree in a total area of 0.3 ha. Additional emergence of *O. aegyptiaca* was observed until July 2001. The high level of *Orobanche* infection did not lead to visible damage in the trees. However, the mature parasite developed massive amounts of seeds, serving to increase the population of *O. aegyptiaca* in the field.

References: (1) D. M. Joel and H. Eizenberg. Three *Orobanche* species newly found on crops in Israel. Phytoparasitica 30:187, 2002. (2) C. Parker and C. R. Riches. Parasitic Weeds of the World. CAB International, Wallingford, UK, 1993.

First Report of Musk Thistle Rust (*Puccinia carduorum*) in California and Nevada. D. M. Woods and M. J. Pitcairn, California Department of Food and Agriculture, Sacramento 95832; and D. G. Luster and W. L. Bruckart, USDA-FDWSRU, Frederick, MD 21702. Plant Dis. 86:814, 2002; published on-line as D-2002-0429-01N, 2002. Accepted for publication 19 March 2002.

Musk thistle, *Carduus nutans* L., is an introduced weed of pastures, rangelands, and natural areas in much of North America. *Puccinia carduorum* Jacky, an autoecious rust fungus from Turkey, has been evaluated for biological control of musk thistle since 1978, including a field study near Blacksburg, VA, from 1987 to 1990. After release of the fungus in Virginia, rusted musk thistle was found in eight eastern states by 1992, in Missouri by 1994 (1), and in Oklahoma by 1997 (2). A rust disease was discovered on musk thistle near Mt. Shasta, CA, on 22 September 1998, and near Mogul, NV, on 12 August 1999. The pathogen was identified as *P. carduorum* on the basis of pathogenicity on musk thistle and urediniospore morphology (ovate spores, 21 µm diameter, three germ pores equatorial in location, and echinulations over the upper two-thirds to three-quarters of urediniospores). Ribosomal RNA internal transcribed spacer DNA sequences (ITS1 and ITS2) were identical to those from the isolate obtained after the field release in Virginia, verifying that the California isolate is *P. carduorum*. The initial California infestation was observed on a few plants late in the season, and by September 2000, nearly 100% of plants were infected. The occurrence of *P. carduorum* in California is apparently the result of natural, unaided spread of the fungus on musk thistle from the East Coast of the United States.

References: (1) A. B. A. M. Baudoin and W. L. Bruckart. Plant Dis. 80:1193, 1996. (2) L. J. Littlefield et al. Plant Dis. 82:832, 1998.

European Pines May Be Simultaneously Infected by More Than One Species of *Heterobasidion*. P. Gonthier, M. Garbelotto, and G. Nicolotti, University of Torino, DIVAPRA—Plant Pathology, via L. da Vinci 44, I-10095 Grugliasco, Italy. Plant Dis. 86:814, 2002; published on-line as D-2002-0506-01N, 2002. Accepted for publication 24 April 2002.

Heterobasidion annosum (Fr.:Fr.) Bref. s*ensu lato*, one of the most damaging root and butt rot agents on conifers, was recently segregated into three species in Europe based on morphology, intersterility grouping (ISGs), and host preferences (3). These species include: *H. annosum* (Fr.) Bref. *sensu stricto* (ISG P) on *Pinus*, other conifers and some hardwoods; *H. parviporum* Niemelä & Korhonen (ISG S), primarily on *Picea*; and *H. abietinum* Niemelä & Korhonen (ISG F) on *Abies*. In the summer of 1998, a Swiss stone pine (*Pinus cembra* L.), growing at 1,900 m in a mixed spruce (*Picea*) and larch (*Larix*) forest in the Aosta Valley (northwest Italian Alps), was found infected by *H. parviporum* and *H. annosum sensu stricto*. The pine (approximately 14 m tall and at least 75 years old) was without crown symptoms, but the stem, stump, and all the main roots showed internal decay. Disks, 3 to 4 cm thick, were cut consecutively from the roots, stump, and stem, incubated, and examined for conidiophore production. After 8 days, 63 isolates were obtained from all disks taken from the stump and roots, and from disks taken up to 4 m above the collar in the stem. Isolates were identified by polymerase chain reaction (PCR) of mitochondrial and nuclear markers (2) and by sexual compatibility with testers of each European *Heterobasidion* spp. The stem and one root were colonized by *H. parviporum* while the other roots and most of the stump was colonized by *H. annosum sensu stricto*. Somatic incompatibility tests among conspecific isolates suggested that there was only one genet of each species. The coexistence of different *Heterobasidion* spp. (ISGs) in the same tree has been reported only in *Pinus ponderosa* Dougl. ex Laws. in California (1) and in *Picea abies* (L.) Karst. in Europe (4). To our knowledge, this is the first report of *H. annosum sensu stricto* on *P. cembra* and of a European pine to be simultaneously infected by more than one species of *Heterobasidion*.

References: (1) M. Garbelotto et al. Phytopathology 86:543, 1996. (2) P. Gonthier et al. Can. J. Bot. 79:1057, 2001. (3) T. Niemelä and K. Korhonen. Taxonomy of the genus *Heterobasidion*. Pages 27-33 in *Heterobasidion annosum*, Biology, Ecology, Impact and Control. CAB International, Wallingford, UK, 1998. (4) R. Vasiliauskas and J. Stenlid. Can. J. Forest Res. 28:961, 1998.

First Report of *Tomato yellow leaf curl virus* Associated with Beans, *Phaseolus vulgaris*, in Cuba. Y. Martínez Zubiaur, M. Quiñones, and D. Fonseca, Phytopathology Department, National Center for Animal and Plant Health, P.O. Box 10, San Jose de las Lajas, Habana, Cuba; and J. L. Potter and D. P. Maxwell, Department of Plant Pathology, University of Wisconsin—Madison 53706. Plant Dis. 86:814, 2002; published on-line as D-2002-0515-01N, 2002. Accepted for publication 5 May 2002.

Beans with yellow mosaic and/or leaf crumple symptoms were collected in three fields in the southern area of the province of Havana, Cuba in December 2001 and February 2002. DNA was extracted from the fresh bean leaves of 25 samples (1). Dot blot hybridization was performed at high stringency with a specific probe for *Tomato yellow leaf curl virus* (TYLCV). The specific probe was prepared by alkaline phosphatase labeling of the polymerase chain reaction (PCR) fragment amplified with primer pair, PTYIRv21/PTYIRc287, containing the intergenic region (IR) of TYLCV, and chemiluminescent hybridization was completed as described by the manufacturer (AlkPhos Direct Labeling and Detection Systems, Amersham Pharmacia Biotech Inc., Piscataway, NJ). Four of the samples had positive hybridization signals. PCR was performed with overlapping primers for TYLCV (2) with the DNA extract from sample 01-44, which gave a positive hybridization signal with the TYLCV probe, and a 2.8-kb fragment was obtained. This fragment was cloned in pGem T-Easy (pBeTY44) and partially sequenced. Greater than 96% nt identity was obtained for the 591 nt of the IR and 504 nt of the N-terminus of the *Rep* gene with TYLCV (GenBank Accession No. AF260331). Also, PCR was completed on 11 of the 25 samples with the degenerate primer pair PAL1v1978/PAR1c715 for DNA-A (3). Eight samples gave fragment sizes of 1.4 kb and one sample gave a fragment of 1.3 kb. The 1.3-kb fragment from sample number 01-50 was cloned in pGem T-Easy (pBeBG50) and partially sequenced. Pairwise nucleotide comparisons with *Bean golden yellow mosaic virus* (BGYMV, GenBank Accession No. M91604) were 95% for 719 nt of the N-terminus of the *Rep* gene. These results are consistent with the association of both TYLCV and BGYMV in beans and have important implications for future disease management strategies.

References: (1) G. P. Accotto et al. Eur. J. Plant. Pathol. 106:179, 2000. (2) M. K. Nakhla et al. Plant Dis. 78:926, 1994. (3) M. Rojas et al. Plant Dis. 77:340, 1993.

First Report of *Arceuthobium hawksworthii* in Honduras. R. Mathiasen and B. Howell, School of Forestry, Northern Arizona University, Flagstaff 86011; and J. Melgar, Fundacion Hondureña de Investigacion Agricola, P.O. Box 2067, San Pedro Sula, Honduras, C.A. Plant Dis. 86:815, 2002; published on-line as D-2002-0501-01N, 2002. Accepted for publication 24 April 2002.

The dwarf mistletoe *Arceuthobium hawksworthii* D. Wiens & C. G. Shaw (Viscaceae) has only been reported from the Mountain Pine Ridge area of Belize (1). We observed this dwarf mistletoe parasitizing its principal host, Caribbean pine (*Pinus caribaea* Morelet var. *hondurensis* (Senecl.) Barrett & Golf.) (1), 10 km east of Gualaco, Department Olancho, Honduras (elevation 800 m). Several trees were severely infected, and some dwarf mistletoe-associated mortality was observed at this location. The identification of *A. hawksworthii* was confirmed by comparing specimens collected from Honduras with specimens from Belize, which are deposited at the Deaver Herbarium, Northern Arizona University, Flagstaff. The mistletoes *Psittacanthus angustifolius* Kuijt and *P. pinicola* Kuijt (Loranthaceae) were also observed at this location parasitizing Caribbean pine. However, infection by both of these mistletoes was not severe, and no mistletoe-associated mortality was observed. Specimens of these mistletoes from Caribbean pine have been deposited at the Herbario, Escuela Nacional de Ciencias Forestales, Siguatepeque, Honduras. To our knowledge, this is the first report of *A. hawksworthii* from Honduras and extends its range approximately 350 km to the east-southeast of the Mountain Pine Ridge in Belize. This is also the first report *P. angustifolius* on Caribbean pine, but *P. pinicola* commonly infects this host in northern Honduras and Belize (2).

References: (1) F. G. Hawksworth and D. Wiens. Dwarf mistletoes: biology, pathology, and systematics. Agric. Handb. 709, 1996. (2) J. Kuijt. Ann. Mo. Bot. Gard. 74:511, 1987.

Severe Outbreak of Leaf Spot and Blight Caused by *Botrytis cinerea* on Majesty Palm in Southern Italy. G. Polizzi, Dipartimento di Scienze e Tecnologie Fitosanitarie, University of Catania, Via Valdisavoia 5, 95123 Catania, Italy. Plant Dis. 86:815, 2002; published on-line as D-2002-0513-01N, 2002. Accepted for publication 6 May 2002.

Sicily is the most important region of Italy for ornamental palm cultivation. Majesty palm (*Ravenea rivularis* Jum. & H. Perrier) is one of the most stately palms for cultivation in the tropics and subtropics, and has been recently cultivated in containers for indoor and outdoor use in eastern Sicily. *R. rivularis*, which grows on river banks, is native to Madagascar, and appears to behave as a rheophyte in the seedling stage. This palm is not frost tolerant and will grow in full sun but tends to grow best in partly shaded areas or under greenhouses conditions. Between December and March in 1999, 2000, and 2001, a severe leaf spot and blight was observed on young (6-month- to 3-year-old) plants of majesty palm growing in plastic-covered houses and in open fields in nurseries in Sicily. Affected plants had brown necrotic spots and gray mold on the necrotic leaf tissues. No symptoms were detected in mature (4- to 5-year-old) plants grown in the same nurseries. To isolate the casual agent of the disease, 160 small pieces of tissue cut from leaf spots collected in four nurseries were surface sterilized (20 s in $HgCl_2$ at 1 g/liter), washed with sterile water, and plated on potato dextrose agar (PDA). In addition, conidia and conidiophores were scraped from the leaf surface, suspended in sterile water, and streaked on the agar surface. After 2 days, single hyphal tips were transferred to PDA. *Botrytis cinerea* Pers.:Fr. was consistently isolated from affected leaf tissues. Colonies of *B. cinerea* on PDA were at first colorless and became gray to brown with the development of conidia, which ranged from 5.5 to 10 × 7 to 12 µm (average 7.5 × 9). Sclerotia were black, irregular in size and shape, and from 1.4 to 4.5 × 1.5 to 2.7 mm. Inoculating 8-month-old seedlings of *R. rivularis* tested pathogenicity of six isolates obtained from different nurseries. Wounded (with a needle) and nonwounded leaves of 10 plants (9 wounds per plant) were sprayed with 20 ml of a conidial suspension (10^5 conidia/ml) of each isolate. An equal number of noninoculated plants were used as controls. All plants where incubated in a greenhouse at ambient temperature (21 ± 2ºC) and 72 h of continuous leaf wetness. Five days after inoculation, leaf spots appeared on most of the wounded (approximately 80%) and the nonwounded (about 10%) leaves. No symptoms were observed on control plants. Koch's postulates were satisfied by reisolation of the fungus on PDA. On the basis of 3 years of observations in eastern Sicily, majesty palms were more readily infected by *B. cinerea* after rainfall, and freezing temperatures injured young plants. Leaf blight caused by *B. cinerea* was previously reported in Liguria (northern Italy) on *Phoenix canariensis* (1). The fungus does not appear to be a major disease problem in cultivated ornamental palms other than *R. rivularis* in Sicily or southern Italy. However, *B. cinerea* could be a limiting factor in the cultivation of majesty palm in eastern Sicily, and protective fungicides, especially in winter, are necessary for limiting losses. To my knowledge, this is the first report of *B. cinerea* leaf spot and blight on *R. rivularis*.

Reference: (1) A. Garibaldi et al. Malattie delle piante ornamentali. Calderini Edagricole, Bologna, 2000.

Severe Outbreaks of Bunch Rots Caused by *Rhizopus stolonifer* and *Aspergillus niger* on Table Grapes in Chile. B. A. Latorre, S. C. Viertel, and I. Spadaro, Pontificia Universidad Católica de Chile, Casilla 306-22, Santiago, Chile. Plant Dis. 86:815, 2002; published on-line as D-2002-0522-01N, 2002. Accepted for publication 13 May 2002.

Severe outbreaks of bunch rots (BR) have occurred recently during harvest of table grapes (*Vitis vinifera* L.) in Chile. Previously, BR was almost exclusively associated with *Botrytis cinerea* Pers.:Fr. (2,3); however, in 2000 to 2002, BR symptoms were associated with black molds and possibly nonfilamentous yeasts and bacteria. Cvs. Thompson Seedless, Flame Seedless, Ruby Seedless, and Red Globe were severely affected. Symptoms start at the pedicels as soft, watery rots that partially or completely decay infected berries. Longitudinal cracks are produced, a black mold usually develops along the crack fissures, and the skin of the berry turns light gray. Isolations on potato dextrose agar acidified with 1 N lactic acid (APDA) at 0.5 ml/liter, consistently yielded *Rhizopus stolonifer* (Ehrenb. ex Fr.) Vuillemin and *Aspergillus niger* Tiegh. *R. stolonifer* on APDA produced a white-to-gray aerial and nonseptate mycelium, black and globose sporangia with an elliptical collumela, one-celled, globose to oval, striated, almost hyaline sporangiospores, rhizoids, and stolons. *A. niger* produced septate mycelium. Single-celled, black, rough walled, globose conidia developed on short chains on the second phialides at the tip of globose, upright conidiophores. Mature (soluble solids >16%) detached berries of cv. Thompson Seedless were inoculated with sporangiospores (≈10^7 spores per ml) of *R. stolonifer* isolates RS6, RS52, RS73, and RS79 and conidia (≈10^8 conidia per ml) of *A. niger* isolates AN12, AN69, and AN75. When berries were aseptically punctured with a sterile hypodermic syringe prior to inoculation, 60 to 86.7% and 42.5 to 100% of berries were infected with *R. stolonifer* and *A. niger*, respectively, and both developed BR symptoms (significantly different from control berries) after 48 h in humid chambers at 23°C. Injuries were needed for infection since no infection or only 23.3% of noninjured berries were infected with *R. stolonifer* and *A. niger*, respectively. For both pathogens, there was a significant ($P < 0.043$) interaction between isolates and the presence or absence of injuries. Both pathogens were successfully reisolated on APDA. Fungicide sensitivity tests were performed on detached cv. Thompson Seedless berries challenged by placing an ≈6 µl-drop of inoculum suspension (10^6 or 10^7 spores per ml of *R. stolonifer* isolate RS52 and *A. niger* isolate AN12, respectively) on injured berries. Pyraclostrobin (0.067 mg/ml) mixed with nicobifen at 0.134 mg/ml (BAS 516 01 F at 0.201 mg a.i./ml, BASF) and copper oxide at 1.2 mg/ml (Cuprodul 60 WP, Quimetal Chile) significantly ($P < 0.01$) inhibited infection (100% control) by *R. stolonifer* and *A. niger*. *R. stolonifer* was completely controlled by dicloran at 1.88 mg/ml (Botran 75 WP) and partially controlled by captan at 1.6 mg/ml (Captan 80 WP), but *A. niger* was not controlled by either fungicide. To our knowledge this is the first report of *R. stolonifer* causing BR of table grape in Chile (4). The severe outbreaks may be associated with warm weather conditions during harvest and injuries caused by birds, insects, or cultural practices. Infection caused by *R. stolonifer* or *A. niger* may be followed by sour rot organisms (yeasts or bacteria), as has been suggested elsewhere (1,2).

References: (1) E. Gravot et al. Phytoma 543:36, 2001. (2) W. B. Hewitt Page 26 in: Compendium of Grape Diseases, American Phytopathological Society, St. Paul, MN, 1994. (3) B. A. Latorre and G. Vásquez. Aconex (Chile) 52:16, 1996. (4) F. Mujica and C. Vergara. Flora Fungosa Chilena. Universidad de Chile, Facultad de Agronomía, Santiago, Chile, 1980.