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Graminicolous Fungi of Virginia: Fungi in Collections 1995 - 2003

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ABSTRACT

Fungus-grass associations recognized in Virginia from 1995 to 2003 are recorded. Many associations are new to the United States (59), eastern United States (2), and Virginia (21); others extend the known distribution for those previously discovered. These reports contribute to the natural history of Virginia.

INTRODUCTION

This report describes collections of fungi identified as members of Poaceae in Virginia since 1995 when such collections were last described (Roane & Roane, 1994, 1996, 1997). Our objectives and procedures were described in those reports but will be summarized here.

When a grass bearing fungi was studied, samples were incubated 2 - 4 days in a moist chamber, and all sporulating fungi were identified using manuals and monographs cited. Any fungus not listed by Farr et al. (1989) and Farr et al. (no date) was presumed to be a new record for the U.S.A. (NR, U), east of the Mississippi (NR, EU), or for Virginia (NR, V). Most of the fungi found have been described before on some host but a new host for a fungus implies a new record. No fungi were cultured and no attempt was made to establish or prove pathogenicity; only presence was established. Where material was adequate, a dried original specimen was preserved along with dried incubated material. An acquisition number was assigned to each collection; ROO-10 refers to collection 10 of 2000. Plant Clinic numbers refer to the year and specimen number sent to the V.P.I. & S.U. Plant Clinic (ex.: Pl. Cl. 00-351). Since no fungi were cultured, in general, nomenclature of grasses and fungi presented by Farr et al. (1989) was followed. Later revisions of nomenclature are noted. Because of their frequency in the text, Roane and Roane will be cited as R & R, Shoemaker and Babcock as S & B, and Ellis and Ellis as E & E; these are listed completely in the references.

Agropyron repens (L.) Beauv. Syn., *Elytrigia repens* (L.) Nevski - quackgrass
Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul., ergot. As stated previously (R & R, 1996), this fungus is widespread on *A. repens*; pseudosclerotia are readily observed on spikes approaching maturity. A specimen collected July 11, 2003 was received from a Fairfax Co. horse farm with the complaint that 30 horses were having neurological incoordination in early June, a time too early for the appearance of ergot peudosclerotia (RO3-16, Pl. Cl. 03-689). Thus, horses were not suffering from ergotism. An additional collection was made July 22, 2003 near the Norfolk Southern Rwy. and Rt. 660

in Montgomery Co.; two other fungi were identified in this collection (RO3-19). See below.

Phaeosphaeria tritici (Garov.) Hedjar. was identified on collection RO3-19 (see above). Ascospores were typical of *Phaeosphaeria* spp., being 13-21 X 3-5 μm, 3-septate, enlarged penultimate cell (S & B, 1985, p.1536). (NR, U). This fungus was found on *Aegilops cylindrica* in 1995 (R & R, 1996) and in 2003 on *Panicum virgatum* (see *P. virgatum* in this report).

Basidiomycotina:

Puccinia recondita Rob. ex. Desm., II, III, was collected July 22, 2003 near Rt. 660 and the N. S. Rwy. in Montgomery Co. (R03-19). Apparently this fungus is widespread on grasses in the Appalachian Highlands. It has been collected on about 20 species (R & R , 1996, 1997).

Deuteromycotina - Coelomycetes:

Stagonospora nodorum (Berk.) Cast. & Germ., causing leaf spots and tip wilt, was collected Aug. 24, 2003 on Butt Mt. at the communication towers area, Giles Co. (R03-29). This fungus was long known as *Septoria nodorum* Berk. and is at times very damaging to wheat, especially as a cause of the glume blotch disease. It was reported on 8 other grasses by R & R (1996, 1997).

Agrostis spp. – bentgrass

When one attempts to key out species of *Agrostis*, three species are difficult to distinguish (**a**) *A. alba*, (**b**) *A. gigantea* and (**c**) *A. stolonifera*. In Farr et al (1989), **a** and **c** are synonyms; **b** is called redtop, **c** is creeping bentgrass. Roane (1991) lists **a** and **c** as distinct species but does not recognize **b**. In Fernald (1950) **a** includes **c**; **a** and **b** are distinct. Hitchcock & Chase (1950) recognize **a** and **c**, but not **b**. On the advice of T. J. Wieboldt, curator of the Massey Herbarium at V.P.I. & S.U., I have used **b** as the preferred name for all three. This is the only name appearing in Atlas of Virginia Flora (Harvill, 1992).

In the list of fungi, *Agrostis* spp. will be referred to by number:

1. *Agrostis canina* L. - velvet bentgrass.

2. *A. gigantea* Roth (including *A. alba* L., *A. palustris* Huds., *A. stolonifera* L.) - redtop,

creeping bentgrass.

3. *A. hiemalis* (Walter) B.S.P. (Also spelled *A. hyemalis*) - hairgrass, winter bentgrass.

4. *A. perennans* (Walter) Tuck. - autumn bentgrass.

5. *A. tenuis* Sibth. (= *A. capillaris*) - colonial bentgrass.

Ascomycotina:

Sclerotinia homoeocarpa F. T. Bennett, causing dollar spot of bent and other grasses, is reported in Virginia by Farr et al. (1989) on **1**, **2**, & **5**, who cites Sprague (1950) as the source. Although I have not collected it, several specimens have been received by the Plant Clinic over the years.

Basidiomycotina:

Puccinia coronata Cda., II, III, crown rust, was collected on **2** at the Butt Mt. communication tower area, Giles Co., Aug. 24, 2003 (R03-33a). Farr et al. (1989) list *Agrostis* spp. as hosts in Kentucky and West Virginia, not Virginia. R & R (1996) reported it on **2** and **4**.

Puccinia recondita Rob. ex Desm., II, III, collected below Gatewood Dam, Pulaski Co., Aug. 17, 2003, on **4** (R03-24) was colonized by *Sphaerellopsis filum*, see below. (NR, V)

Thanatephorus cucumeris (A.B. Frank) Donk causing brown patch is reported by Farr et al. on **1**, **2**, and **5**. It is frequently received on **2** and **5** by the Plant Clinic.

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. was found on **2** in Bland Co. on Dismal Creek Rd. near junction with road to Sugar Run, July 27, 2003 (R03-18).

Curvularia lunata (Wakk.) Boed. also occurred on the collection above (R03-18). Farr et al. (1989) report it on **5** in Virginia.

Drechslera erythrospila (Drechs.) Shoem. was collected on **2** (R03-33a) at the Butt Mt. communication tower site, Giles Co., Aug. 24, 2003 and on **3** (R03-9) in a Blacksburg residential area July 3, 2003 (NR, V). Farr et al. (1989) list it on **1** and **2**.

Exserohilum halodes (Drechs.) Leonard & Suggs was found on the Dismal Ck. Rd. site (R03-18), Bland Co. on **2**, July 27, 2003. Farr et al. (1989, p.704) list *E. halodes* as a synonym of *E. rostratum* , but Ellis (1971, pp. 409-410) shows the spore morphology of these to be distinct and recognizes both species. Collection R03-18 clearly fits *E. halodes* of Ellis (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc. is one of the most ubiquitous species on grasses, having been found previously on 38 species (R & R, 1994, 1996, 1997). Strangely there are no reports in Farr et al. (1989) on *Agrostis* spp. in Virginia and surrounding states. It was collected on Dismal Ck. Rd. in eastern Bland Co., July 27, 2003 on **2** (R03-18). Spores measured 9-11X 3-4 µm. (NR, V).

Phaeoseptoria urvilleana (Speg.) Sprague was found on glumes and lemmas of **2** infected with the seed nematode, *Anguina agrostis* (Steinbuch, 1799) Filipjev, 1936, collected at the Butt Mt. site Aug. 24, 2003 (R03-33b). Spores measured 30-50 X 4-6 µm, were 8-9-septate, constricted at the septa, yellow to light brown. This species is considered to be saprophytic; it has been identified previously on 5 other species (R & R, 1994, 1996). (NR, V). Separation of the genera *Phaeoseptoria* and *Stagonospora* appears to be based on colored spores in the former and hyaline spores in the latter. The former are saprophytic; the latter parasitic (Sprague, 1950).

Although this compilation is of fungi, the recognition of the bentgrass nematode on **2** is the first for this nematode in Virginia. Its occurrence will be noted elsewhere. A full description is given by Thorne (1961).

Septoria passerinii Sacc. was collected on **4** at the site below Gatewood Dam, Pulaski Co., Aug. 17, 2003 (R03-24). Spores measured 32-37 X 2 µm. This fungus has been previously collected on **2** and **4**; it is common on barley in Virginia (R & R, 1994, 1996).

Sphaerellopsis filum (Biv.-Bern. ex Fr.) Sutton, a parasite of rusts, occurred on *Puccinia recondita* collected on **4** below Gatewood Dam, Pulaski Co., Aug. 17, 2003, and is noted above (R03-24). (NR, U).

Stagonospora arenaria (Sacc.) Sacc. occurred on **4** at the Gatewood Dam site, Pulaski Co., Aug 17, 2003 (R03-24). Spores measured 32-37 X 2 µm, were mostly 4-septate and curved.

Wojnowicia hirta Sacc. was collected on **2** at the Butt Mt. towers, Giles Co., Aug. 24, 2004. It was associated with wilted leaf tips (R03-33a) (NR, U). Sprague (1950) considered *W. hirta* to be *Hendersonia crastophila* Sacc. Farr et al. (1989) and Sutton (1980) consider *H. crastophila* to be a synonym of *W. hirta.*

Andropogon spp.

Collections were made on only two species of *Andropogon*:

1. *A. gerardii* Vitm. - big bluestem
2. *A . virginicus* L. - broomsedge

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem. was collected on **2** at Montgomery Tunnels, Montgomery Co., July 9, 1996. (R96-4). (NR, U).

Cerebella andropogonis Ces., the cause of blackheads or false smut, was collected on **1** at Kentland Farm, the V.P.I. & S.U. research farm at Whitethorne, Montgomery Co., Oct. 4, 2000 (R00-3). See comments under *Bothriochloa caucasicum*. Most records for this fungus are from southern and western U.S.A. (Farr et al., 1989). (NR, V).

Deuteromycotina - Coelomycetes:

Phoma sorghina (Sacc.) Boer., Doren, and van Kest. (= *Phyllosticta sorghina* Sacc.) was collected on **2** on the ridge of Brush Mt. 1/4 mi. west of U.S. 460, Montgomery Co., Aug. 5, 2001 (R01-18). This is a commonly occurring fungus having been reported previously on 16 grass species. Farr et al. (1989) list no *Phoma* spp. on *Andropogon* but it was reported on **2** by R & R, (1996).

Wojnowicia hirta Sacc. was collected on **2** at Montgomery Tunnels, Montgomery Co., July 9, 1996 (R96-4). See notes under *Agrostis*. (NR, U).

Anthoxanthum odoratum L. – sweet vernalgrass

Deuteromycotina - Hyphomycetes:

Drechslera biseptata (Sacc. & Roum.) Richardson & E. M. Fraser was collected in a pasture on the shore of Claytor Lake about 1 mi. below the State Park, Pulaski Co., June 10, 2003 (RO3-6). Spores measured 23-32X 11-12 μm, were 2-3-septate, ovoid to broadly clavate. *D. dematioidea* (Bubák & Wrób.) Subr. & Jain is more common on *A. odoratum* and is similar as shown by Ellis (1971); this collection is clearly *D. biseptata*. (NR, U).

Microdochium bolleyi (R. Sprague) De Hoog & Herm. was collected at the same site (R03-6). The identity of this fungus is uncertain; conidia measured 3-4X 0.6-1.0 μm, smaller than described by Sprague (1950, p. 289). (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G.W. Wils. was common on blades and sheaths in collection (R03-6).

Bothriochloa caucasicum (Trin.) C.E. Hubbard - Caucasian bluestem.

Deuteromycotina - Hyphomycetes:

Cerebella andropogonis Ces., the cause of blackheads or false smut was first noticed on inflorescences of this host Oct. 1, 2000, at Kentland Farm, Montgomery Co. The host is a relatively recent introduction in the U.S. and was being evaluated as a forage crop. The fungus was observed annually on plants sown in a field opposite the

main entrance to Kentland Farm (R00-2). An additional collection was made on Oct. 12, 2003 (R03-39). Its identity was established by Lori M. Carris of Washington State University. Descriptions and illustrations have been published by Sprague (1950) and Ellis (1971). See also *Andropogon gerardii* above. It is reported previously in Virginia on carpet grass, *Axonopus affinis* Chase (Farr et al., 1989). (NR, U).

Curvularia cymbopogonis (C. W. Dodge) Groves & Skolko was associated with leaf spots on an Oct. 12, 2003 (RO3-39) collection from Kentland Farm. Conidia measured 38-55 X 14-18 µm, were 4-septate with a protruding hilum and conformed to the morphology as illustrated by Ellis (1971, p. 454). This species is reported on Andropogoneae in tropical and subtropical regions by Farr et al. (1989) and in Jamaica by Ellis (1971). (NR, U).

Bromus spp. – brome grass, chess, cheat

1. *Bromus catharticus* Vahl - rescue grass.
2. *B. ciliatus* L. - fringed brome.
3. *B. purgans* L. - Canada brome.
4. *B. sitchensis* Trin. - no common name.

Ascomycotina:

Blumeria graminis (DC.) E. O. Speer (Syn. - *Erysiphe graminis* DC.) powdery mildew on **1** was sent to the Plant Clinic (Pl. Cl. 99-620) from Shenandoah Co. by Agent B. Clark on May 2, 1999 (R00-13). (NR, V).

Basidiomycotina:

Puccinia recondita Rob. ex Desm., II, causing leaf rust on **4**, was sent to the Plant Clinic

(Pl. Cl. 02-1293) from the Lamar Rhodes Farm, Dayton, Rockingham Co. on Sept. 11, 2002 (R02-2). This grass, **4**, was being grown for seed. (NR, U).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. occurred on **4** from the Rockingham Co. site described above (R02-2). (NR, U).

Fusarium avenaceum (Fr.:Fr.) Sacc. spores were produced on incubated leaves of **4** from the Rockingham Co. site (R02-2). (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta agropyri-repentis (R. Sprague) Punithalingham was collected on **2** & **3** in 2001. On each host the fungus was associated with striking brown leaf spots with yellow margins. Host **2** came from elevation of about 3700 ft. on Buffalo Mt., Floyd Co., July 15, 2001 (R01-9); **3** came from a road bank along Walker Ck., Rt. 708 near Rt. 622, Giles Co., July 23, 2001 (R01-13). Conidia of this fungus measured 15-19 X 3 µm, and because the septum is not medianly located, Sprague (1950, p. 150) placed it in the genus *Apiocarpella*. Sprague also described *Ap. bromi* {syn. *Ascochyta macrospora* (Speg.) Melnik} on *B. anomalus*. Conidia of *A. macrospora* are much larger, 27-31 X 6-9 µm (Sutton, 1980, p. 45). (NR, U, **2**).

Colletotrichum graminicola (Ces.) G. W. Wils. was collected on **3** on the Rt. 708, Giles Co. site described above, July 23, 2001 (R01-13). Although common on many grasses, it is not listed on **3** by Farr et al. (1989) in the eastern states. (NR, V).

Calamagrostis porteri Gray – reedgrass

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. was collected at the Butt Mt. communication towers at a craggy overlook, Giles Co., Aug. 24, 2003 (RO3-27). Farr et al. (1989) do not list this host. (NR, U).

Chasmanthium latifolium (Michx.) Yates (Syn. *Uniola latifolia*) - wild oats.

Ascomycotina:

Paraphaeosphaeria michotii (West.) O. Eriks. was collected between the New R. and Rt. 625, below the Big Falls, (= McCoy Falls) Giles Co., Oct. 31, 2003 (R03-44). Ascocarps occurred on pedicels: the 2-septate, dark brown, spores are constricted at the septa and measure 13-18 X 5-6 μm. It is illustrated by S & B (1985). (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. occurred on culms, blades, and sheaths in the collection above (R03-44). It was collected at the same site in 1989 (R & R, 1997).

Phoma sorghina (Sacc.) Boer., Dorenb. & van Kest. with ovoid spores measuring 5-7 X 2.5 -3.5 μm occurred on blades in the collection above (R03-44). (NR, U).

Cynodon dactylon (L.) Pers. – Bermudagrass

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem., associated with leaf spots, was collected at three new locations; Sept. 8, 2001 near the N. S. Rwy. tunnel, Eggleston, Giles Co. (RO1-22); by Agent Billie Jean Lester, Surry, Surry Co., Sept. 20, 2001 (R01-26, Pl. Clinic 01-1492); by Agent Matt Rowe, Virginia Beach, Nov. 7, 2003 (R03-48), Pl. Clinic 03-1187). No doubt, this fungus will be found wherever *C. dactylon* grows in Virginia.

Bipolaris specifera (Bainier) Subr. was collected at the Eggleston, Giles Co. site above, Sept. 8, 2001 (R01-22); it may also have been a leaf spotting fungus. Conidia measured 25-29 X 8-10 μm and were straight with 3 septa. It has been retained in *Curvularia* by some authors. (NR, V).

Curvularia lunata (Wakk.) Boedijn occurred on incubated leaves of the Virginia Beach collection cited above (R03-48, Pl. Clinic 03-1187). Conidia measured 20-22 X 8, were 3-septate, end cells hyaline, middle two cells dark. (NR, V).

Curvularia senegalensis (Speg.) Subr. was mixed with *C. lunata* in the Virginia Beach collection (R03-48, Pl. Clinic 03-1187). Conidia measured 24-30 X 8-9 μm, were 4-septate, dark only in central cell, curved, smooth. It is listed on sugarcane in Hawaii by Farr et al. (1989) and is illustrated by Ellis (1971). (NR, U).

Fusarium avenaceum (Fr.:Fr.) Sacc. was also present on the Virginia Beach collection (R03-48). It is reported only in Oregon on *C. dactylon* by Farr et al. (NR, EU).

Nigrospora sphaerica (Sacc.) Mason appeared on incubated leaves of the Virginia Beach collection. It has been found on 17 other grass species in Virginia but Farr et al. (1989) do not report it on *C. dactylon.* (NR, U).

Dactylis glomerata L. – orchardgrass

Basidiomycotina - Uredinales:

Uromyces dactylidis Otth, II, III, causing leaf rust, was collected in grass testing plots on Kentland Farm, the V.P.I. & S.U. research farm, Montgomery Co., Oct. 4, 2000 (R00-7); it is common in Virginia.

Deuteromycotina - Hyphomycetes:

Cercosporidium graminis (Fkl.) Deighton, causing leaf streak was identified on two Plant Clinic specimens in 2003. One, designated Pl. Clinic 266 (R03-1), was collected by P. Sforza in Orange Co., Apr. 16, 2003 and was identified by Mary A. Hansen. A specimen of cv. Hallmark was collected by Agent B. Clark in Shenandoah Co., Aug. 25, 2003 (Pl. Clinic 03-1000, R03-32). This is a common fungus on orchardgrass.

Drechslera triseptata (Drechs.) Subr. & Jain, was found on dying orchardgrass from the Southern Piedmont Research Station, Blackstone, Nottoway Co., Aug. 27, 1996 (R06-6). According to Luttrell (1951), this fungus should be in the genus *Bipolaris* because its germination is from the basal cell. Spores measured 27-35 X 10-11 µm and were uniformly 3-septate. (NR, V).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. occurred on the Kentland Farm collection described above (*Uromyces*) (R00-7). This is a common fungus on grasses in Virginia.

Stagonospora arenaria (Sacc.) Sacc. was collected at the intersection of Rt. 613 and the Appalachian Trail, Giles Co., June 23, 1996 (R96-2). It is common on orchardgrass (R & R, 1996).

Dichanthelium spp. – panic grasses

1. *Dichanthelium acuminatum* (Swartz) Gould & Clark - southern panic grass.
2. *D. boscii* (Poir.) Gould & Clark - no common name.
3. *D clandestinum* (L.) Gould - deer tongue.
4. *D. dichotomum* (L.) Gould - forking panic.

Dichanthelium spp. were formerly *Panicum* spp. For synonomy of the above spp., see Roane (1991).

Ascomycotina:

Phomatospora dinemasporium J. Webst. in its anamorphic stage, *Dinemasporium strigosum* (Pers.: Fr:) Sacc., was collected on **4** on the ridge of Brush Mt., 1 mi. west of U.S. 460, Montgomery Co., June 11, 2001. (R01-03). See E & E (1985, p. 465) and Sutton (1980, p. 458). (NR U).

Deuteromycotina - Hyphomycetes:

Curvularia lunata (Wakk.) Boed. was found on **2** on Rt. 714, Little Meadows Rd., Giles Co., Aug. 24, 2003 (R03-31). It is common on Virginia grasses, having been reported on 18 other species (R & R, 1996, -97). (NR, U).

Deuteromycotina - Coelomycetes:

Septoria tandilensis Speg. occurred on **1** and **3** at 3700' on Buffalo Mt., road to summit, Floyd Co., July 15, 2001 (R01-8). It is common on deer tongue in the Appalachian Mts. of Virginia.

Stagonospora simplicior Sacc. & Briard., associated with leaf spots, occurred on **2** at the Rt. 714 site above, on Aug. 24, 2003 (R03-31). It has been collected on 4 other grass species in Virginia (R & R, 1996, 1997).

Digitaria ischaemum (Schreb.) Schreb. ex Muhl. - smooth crabgrass

Deuteromycotina - Hyphomycetes:

Curvularia lunata (Wakk.) Boed. occurred on a specimen sent to the Plant Clinic from Ruckersville, Greene Co., on Sept. 26, 2003, by Agent Bill Clements. See comments under *Dichanthelium* (Pl. Clinic 03-1111, R03-37). (NR, U).

The following fungi were found in the same collection (R03-37):

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. Common on many grasses.

Coniothyrium psamnae Oudem. occurred sparingly; not sufficiently for a record.

Phaeoseptoria urvilleana (Speg.) Sprague like other species of this genus are saprophytic. This specimen was identified from Sprague's key (1950, p. 185). It has been found on 7 other grass species (R & R., 1996, 1997); see also comments under *Agrostis*, this publication. (NR, U).

Echinochloa crusgalli (L.) Beauv. – barnyard grass.

Deuteromycotina - Hyphomycetes:

Exserohilum halodes (Drechs.) Leonard & Suggs was collected 1/2 mi. west of Tom's Ck. bridge, between N. S. Rwy. and fence for Kentland Farm, Whitethorne, Montgomery Co., Oct. 12, 2003 (R03-41). See comments about synonomy under *Agrostis*, this paper. (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. associated with sheath lesions was collected at the Stroubles Ck. bridge on Coal Hollow Rd., = Rt. 705, Montgomery Co., July 22, 2003 (R03-13). It has been collected only once before on this host (R & R, 1997).

Stagonospora culmicola (Sacc.) Cast. & Germ. was collected at the Whitethorne site (03-41), Oct. 12, 2003. The synonomy of this fungus is given by Farr et al. (1989). (NR, U).

Eleusine indica (L.) Gaertn. – goosegrass

Deuteromycotina - Hyphomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils, was collected at Belspring at N.S. Rwy. near end of Depot St., Pulaski Co., Oct. 21, 2001 (01-33). the fungus was fruiting on all aerial plant parts. (NR, V).

Elymus spp. – wild rye

1. *Elymus canadensis* L. - Canada wild rye
2. *E. riparius* Wiegand - wild rye

Ascomycotina:

Phyllachora graminis (Pers:Fr.) Nitschke was on **2** at the banks of New R., on Rt. 625, just below 'Big Falls' or McCoy Falls, Giles Co., Oct. 31, 2003 (R03-45). Ascospores measured 13-18 X 3-5 µm, longer than usual. Farr et al. (1989) list other Virginia *Elymus* spp. as hosts, but *E. riparius* is not included; *P. graminis* was listed on it by R & R (1997).

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem. occurred on **2** in this collection from the Big Falls (R03-45). (NR, U)

Deuteromycotina - Coelomycetes:

Phoma sp. having reniform conidia measuring 6-8 X 2-3 µm, was associated with the *Phyllachora* spots on **2** above (R03-45).

Stagonospora arenaria (Sacc.) Sacc. occurred on leaves from the Big Falls collection on **2** above (R03-45). (NR, U). It was also collected on **1** along the banks of New R. at the mouth of Crab Ck., Montgomery Co., Aug. 14, 2002 (R02-1). (NR, V)

Septoria elymi Ell. & Ev. was mixed with *S. arenaria* on **1** in the collection of R02-1 above. (NR, V).

Eragrostis spp. – lovegrass

1. *Eragrostis cilianensis* (All.) Lutati - stinkgrass.

2. *E. pectinacea* (Michx.) Nees. - tufted lovegrass.

3. *E. poaeoides* Beauv. ex Roem. & Schultz - little lovegrass.

Basidiomycotina - Ustilaginales:

Ustilago spermophora Berk. & Curtis ex De Toni in Sacc. was collected on **2** near N.S. Rwy. tunnel at Eggleston, Giles Co., Sept. 8, 2001 (R01-21). It was also collected on **2** at the end of Depot St., near the N.S. Rwy., Belpring, Pulaski Co., Oct. 21, 2001 (R01-31). (NR, U). Collections reported previously were on **1** (R & R, 1997).

Bipolaris nodulosa (Berk. & Curtis) Shoem. occurred on **2** at m.p. 273, N.S. Rwy. near W. River Rd., on the construction road to Spring Hollow Dam, Roanoke Co., (Oct. 8, 2000 (R00-8). Spores measured 47-58 X 16-17 µm, were 6-septate with occasional protruding hilum. (NR, U).

Curvularia protuberata R. R. Nelson & C. S. Hodges occurred on **2** at the N. S. Rwy. m.p. 273 site above (R03-14) on July 23, 2003. Spores measured 28-35 X 11-14 µm, were 4-septate and had a protruding hilum. Although new for this host, it has been collected on 5 other grasses (R & R, 1996, 1997). (NR, U).

Exserohilum monoceras (Drechs.) Leonard & Suggs sporulating at the nodes of **1** was collected from Roane's garden, Blacksburg, Montgomery Co., Oct. 3, 2003 (03-38). Spores measured 73-78 X 16-20 µm, were 7-septate with protruding hilum. This fungus is confused in the literature with *E. rostratum* but the differences are clearly illustrated by Ellis (1971) (NR, U). It was also collected on **2** at the N. S. Rwy. site above, July 23, 2003 (R03-14). (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc. also occurred on **2** at the N.S. Rwy. m.p. 273 site, July 23, 2003 (R03-14). It has been found on 37 other grasses in Virginia (R & R, 1996, 1997).

Colletotrichum graminicola (Ces.) G. W. Wils. also occurred on **2** at m.p. 273 (03-14). It is the most commonly occurring fungus on grasses in Virginia but is not listed by Farr et al. (1989) on **2**. (NR, U).

Phoma sorghina (Sacc.) Boer., Doren., and van Kest. (=*Phyllosticta sorghina* Sacc.) also occurred on **2** at m.p. 273 July 23, 2003 (R03-14). Spores measured 5 X 2-3 µm. It has been found on 18 other grasses in Virginia (R & R, 1996, 1997). (NR, U).

Festuca spp. – fescue

1. *Festuca elatior* L. - tall meadow fescue.

2. *F. obtusa* Biehler - nodding fescue.

3. *F. ovina* L. - sheep fescue.

Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul. on **1** was sent to the Plant Clinic by Battlefield Equine, Haymarket, Fairfax Co., July 11, 2003 (Pl. Clinic 688, R03-17). The sender questioned whether this might have caused incoordination among horses in early June. The horse problem probably occurred before ergot pseudosclerotia could have developed. In addition, the animals would prefer grazing lower blades over mature culms and inflorescenses. It was suspected but not proven that *Acremonium coenophialum* Morgan-Jones & Gams caused the horse problem. See also comments under *Agropyron repens*, this report.

Phaeosphaeria herpotrichoides (De Not.) L. Holm was collected on spikelets of **3** on Rt. 708 beside Walker Ck. near Rt. 622 bridge, Giles Co., July 23, 2001 (R01-12). This fungus is reported on other *Festuca* spp. from the far west but not on *F. ovina* (Farr et al., 1989). (NR, U).

P. nigrans (Rob. ex Desm.) L. Holm was found on spikelets of **1** in the Battlefield Equine collection cited above (R03-17). The two *Phaeosphaeria* spp. reported here can be distinguished using keys to *Leptosphaeria* spp. by Ellis & Ellis (1985) and to *Phaeosphaeria* in the monograph by S & B (1989).

Deuteromycotina - Hyphomycetes:

Fusarium moniliforme Sheld. was present on spikelets of **1** in the Battlefield Equine collection (R03-17). It is reported as a root rotting fungus on **1** in Washington by Farr et al. (1989) who cite Sprague (1950) as a source. See notes under *Claviceps* above. (NR, V).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc. occurred in spikelets of **1** in the Battlefield Equine collection cited above (R03-17).

Colletotrichum graminicola (Ces.) G. W. Wils. was collected on **3** at the Walker Ck. site (R01-12).

Stagonospora arenaria (Sacc.) Sacc. was collected on **2** along the Chestnut Ridge Trail above the Virgin Timber off Rt. 613, Giles Co., July 30, 2003 (R03-8). It was associated with leaf spots. Conidia measured 41-45 X 4 μm, were 3-5-septate, mostly 4-septate. (NR, U).

Glyceria striata (Lam.) Hitchc. - fowl mannagrass

Deuteromycotina - Coelomycetes:

Stagonospora tridentis R. Sprague & C. T. Rogerson was collected near Buck Dam on New R. Trail, Carroll Co., June 1, 2003. This fungus is very similar to *S. smolandica* Eliasson as described and illustrated by Makela (1977). It has been found previously only on *Tridens flavus* (R & R, 1997). (NR, U).

Holcus lanatus L. – velvet grass

Basidiomycotina - Uredinales:

Puccinia coronata Cda., II, III, occurred on *H. lanatus* at the communication towers on Butt Mt., Giles Co., Aug. 27, 2003 (R03-34).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. was also collected at the Butt Mt. site above (R03-34). Farr et al. (1989) do not list *Holcus* as a host of this fungus. (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wilson occurred on most blades and sheaths of *Holcus* collected at the Butt Mt. site (R03-34). Apparently, velvet grass is a common host of this fungus (R & R, 1997).

Leersia virginica Willd. – whitegrass

Ascomycotina:

Phaeosphaeria eustoma Fkl. was collected below Gatewood Dam, Pulaski Co., Aug. 17, 2003 (R03-26) and above Toms Ck. bridge on Rt. 725, Poverty Ck. Rd., Montgomery Co., Sept. 26, 2003. Spores measured 13-16 X 5-6 µm, were 3-septate, widest at the penultimate cell, frequently constricted at the second septum and had a large vacuole in each cell. Since the length, constriction, and vacuoles did not match the published morphology (S & B, 1989) of other graminicolous *Phaeosphaeria* spp., I sought expert help from Amy Y. Rossman and Margaret E. Barr who concurred on *P. eustoma* (personal correspondence). It is noteworthy that the early names were *Leptosphaeria leersiana* Sacc. and *L. leersiae* Passerini but *Leersia* is not listed as a host in U.S. or Canada (S & B, 1989). (NR, U).

Deuteromycotina - Hyphomycetes:

Bipolaris leersia (Atk.) Shoem. associated with leaf spots, was also present in the collection above (R03-26).

Lolium multiflorum Lam. – Italian ryegrass

Deuteromycotina - Hyphomycetes:

Drechslera siccans (Drechs.) Shoem. occurred on a specimen that was sent to the Plant Clinic (PI. Ck. 03-519, R03-47) for plant identifications. The fungus causes a leaf spot and is widespread on *Lolium* spp. in Virginia.

Microstegium vimineum (Trin.) Comus – Japanese stiltgrass

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem. with spores measuring 36-58 X 10-11 µm, 5-8-septa, was collected on frosted leaves along Rt. 625 just below the Big Falls of New R., Giles Co., Oct. 31, 2003, (R03-46). This host is not listed by Farr et al. (1989) but it is common in the Alleghany Highlands of Virginia. (NR, U).

Bipolaris sorokinianum (Sacc.) Shoem. with spores measuring 41-50 X 14-15 µm, 5-8-septa was collected near the N.S. Rwy. tunnel at Eggleston, Giles Co., Sept. 8, 2001 (R01-24). (NR, U).

Curvularia lunata (Wakk.) Boed. also occurred on the collection above (R01-24). Spores were 3-septate, measuring 25-32 X 10-13 µm. (NR, U).

Miscanthus sinensis Anderss. – Eulalia

Ascomycotina:

Paraphaeosphaeria michotii (Westendorp) Eriksson with brown, 2-septate ascospores measuring 16-20 X 5-6 µm occurred in leaf spots and wilted leaf tips on var. *variegatus* cv. Morning Light from Saunders Nursery, Piney R., Nelson Co., July 31, 2001 (01-15). This fungus is illustrated by E & E (1985) and described by S & B (1989, p. 1592). (NR, U).

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem. fruited on a single senescent leaf tip collected at Riverbend Nursery, Floyd Co., July 12, 2001 (R01-06). (NR, U).

Curvularia lunata (Wakk.) Boed. occurred on wilted leaf tips of the Saunders Nursery collection above (R01-15). Spores were 3-septate, measuring 18-32 X 8-16 µm. (NR, U).

Colletotrichum graminicola (Ces.) G. W. Wils. was present in several collections. The var. *zebrinus* is very susceptible in the yellow leaf bands. A collection was obtained in the yard at 605 Lucas Dr., Blacksburg, Montgomery Co., Nov. 22, 2003 (R03-50); three collections of var. *zebrinus* came from potted plants, Riverbend Nursery, Floyd Co., July 12, 2001 (R01-07); Meadowbrook Nursery, Prices Fork, Montgomery Co., July 12, 2003 (R03-11); Saunders Nursery, Piney River, Nelson Co., July 31, 2001 (R01-16). Farr et al. (1989), do not list *Miscanthus*; thus, all fungi are new. (NR, U).

Muhlenbergia spp. – muhly grass

1. *Muhlenbergia mexicana* (L.) Trin. - wirestem muhly.
2. *M. schreberi* Gmelin - nimblewill.
3. *M. sylvatica* (Torr.) Torr. - woodland muhly.
4. *M. tenuiflora* (Willd.) B.S.P. - slender-flowered muhly.

Ascomycotina:

Phyllachora vulgata Theiss. & Syd., causing tar spot was collected on **2** at Kentland Farm, the VPI & SU research farm, Whitethorne, Montgomery Co., Sept. 26, 2001 (R01-25), and on **4** below Gatewood Dam, Pulaski Co., Aug. 17, 2003 (R03-25).

Basidiomycotina - Uredinales:

Puccinia schedonnardi Kell. & Swing., II, was collected on **1** between Rt. 625 and the N.S. Rwy. below the Big Falls of New R., Giles Co., Oct. 31, 2003 (R03-43).

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marig.) Shoem., causing leaf blotch, was collected at four sites and on three species: On **1** between Rt. 625 and New R. below the big Falls, Giles Co., Oct. 31, 2003 (R03-43) and in the Blacksburg Town Park behind 607 Lucas Dr., Montgomery Co., Nov. 12, 2003 (R03-47); on **2** at Kentland Farm, Whitethorne, Montgomery Co., opposite the entrance gate, Sept. 26, 2001 (R01-25); on **3** on the ridge road of Brush Mt. about 1 mi. west of U. S. 460, Montgomery Co., Oct. 10, 2001 (R01-29).

Fusarium avenaceum (Fr.:Fr.) Sacc. occurred on **2** in the Kentland Farm collection cited above (R01-25). (NR, EU).

Deuteromycotina - Coelomycetes:

Ascochyta graminea (Sacc.) Sprague & Johnson occurred on **1** in the Town Park collection cited above (R03-47). The 1-septate spores measured 10-15 X 4-5 µm, were sometimes constricted at the septum. The fungus fits well with the description and illustration by Sprague (1950). (NR, U).

Panicum spp.

1. *Panicum capillare* L. - witchgrass.
2. *P. philadelphicum* Bernh. ex Trinius - no common name.
3. *P. virgatum* L. - switchgrass.

Ascomycotina:

Phaeosphaeria culmorum (Auersw.) Leucht. occurred on **2** at Rt. 725, Poverty Ck. Rd. near bridge over Toms Ck., Montgomery Co., Sept. 26, 2003 (R03-36).

Ascospores were 22 X 6 µm, 3-septate; the fungus was identified from the description by S & B (1989). (NR, U).

P. tritici (Garov.) Hedjar. occurred on **3** at Riverbend Nursery, Floyd Co., Aug. 11, 2003 (Pl. Clinic 03-900, R03-22). Ascospores measured 19 X 4-5 µm, were 3-septate; the fungus was identified from description by S & B (1989). Ascospores of *P. culmorum* are stouter than those of *P. tritici.* (NR, U).

Basidiomycotina - Uredinales:

Puccinia emaculata Schwein., II, III on **3** was submitted to the Plant Clinic (P. C. 98-1861, R98-1) Oct. 20, 1998 by the Warren Co. Agricultural Agent, C. C. Childs, who claimed it was causing serious damage to sheaths and blades. The fungus was present in forage grass test plots on Kentland Farm, Montgomery Co., Oct. 4, 2000 (R00-4). (NR, V).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. associated with leaf spots on **3** was sent to the Plant Clinic Aug. 11, 2003 (Pl. Cl. 03-900, R03-22), from Riverbend Nursery, Floyd Co.

Pyricularia grisea (Cooke) Sacc. occurred on **1** near the Forage Grass Test plots, Kentland Farm, Montgomery Co., Oct. 4, 2000 (R00-9). (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils, occurred on potted plants of **3** at Riverbend Nursery, Floyd Co., July 12, 2001 (R01-5) and on plants in the Forage Grass Test plots at Kentland Farm, Montgomery Co., Oct. 4, 2000 (R00-4).

Phoma sorghina (Sacc.) Boer., Doren., & van Kest. on **3** was sent to the Plant Clinic from Riverbend Nursery, Floyd Co., Aug. 11, 2003 (Pl. Cl. 03-900, R03-22).

Phalaris arundinacea L. – reed canary grass

Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul., ergot, was collected on plants between Stroubles Ck. and road to fraternity housing, VPI & SU campus, Montgomery Co., Aug. 11, 2001 (R01-20). Although Farr et al. (1989) report ergot in Eastern States, they did not report it from Virginia (NR, V).

Deuteromycotina - Coelomycetes:

Stagonospora foliicola (Bres.) Búbak, causing tawny leaf spot, was collected along New R. 1/2 mi. above the mouth of Stroubles Ck., Montgomery Co., July 10, 1996 (R96-5). This is a common fungus on this host in the New R. valley.

Phleum pratense L. – timothy

Deuteromycotina - Hyphomycetes:

Cladosporium phlei (C. T. Gregory) G. A. De Vries, associated with purple eyespots, was present on samples sent to the Plant Clinic by Scott Baker, Animal Science Agent, Bedford Co., Apr. 24, 1999 (Pl. Cl. 99-383, R00-12). *C. phlei* was also present in a collection from Rt. 725, Poverty Ck. Rd., Montgomery Co., Aug. 10, 2003, (R03-21).

Drechslera phlei (J. H. Graham) Shoem., a cause of leaf streak, was also present in the Bedford sample (R00-12) and in the collection along Rt. 725, near Toms Ck. Bridge, Montgomery Co., Aug. 10, 2003 (R03-21). The fungus was also on a sample

sent to the Plant Clinic by Agent Bobby Clark, Shenandoah Co., July 30, 2003 (Pl. Cl. 03-849, R03-20)

D. triseptata (Drechs.) Subr. & Jain (syn., *D. dictyoides* (Drechs.) Shoem.), a cause of leaf spot, was also present in the Bedford sample (R00-12). See Drechsler (1923) for distinction between the above two species under *Helminthosporium dictyoides* and *H. triseptata.*

Poa annua L. – annual bluegrass

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. was colonizing senescent stems in the lawn in front of Hillcrest, VPI & SU campus, Montgomery Co., May 16, 2003 (R03-3). *B. sorokiniana* can cause leaf spots on *P. annua* in western USA but in this collection was saprophytic. (NR, EU).

Deuteromycotina – Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. colonized senescent culms of the Hillcrest collection (R03-3). (NR, V).

Setaria faberi Herrm. – giant foxtail

Deuteromycotina – Hyphomycetes:

Bipolaris setariae (Sawada) Shoem., causing leaf spot, occurred near the N.S. Rwy. tunnel, Eggleston, Giles Co., Sept. 8, 2001 (R01-23).

Curvularia lunata (Wakk.) Boed., was present on leaves of the collection above (R01-23).

Pyricularia grisea (Cooke) Sacc., causing blast, was also present on leaves of the Eggleston collection (R01-23).

Sorghastrum nutans (L.) Nash – Indian grass

Deuteromycotina - Coelomycetes:

Stagonospora simplicior Sacc. & Briand, causing leaf spot, occurred on the Brush Mt. ridge road, W. of U.S. 460, opposite the transmission tower, Montgomery Co., Oct. 20, 2001. (R01-28).

Sorghum halepense (L.) Pers. – johnsongrass

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils, causing leaf spots, i. e., anthracnose, was collected near the N.S. Rwy. tunnel, Eggleston, Giles Co., July 23, 2001. (R01-11)

Sphenopholis nitida (Biehler) Lams.-Scribn. - no common name

Deuteromycotina - Coelomycetes:

Stagonospora avenae (Frank) Bisset, associated with leaf spots, was collected at the overlook for Spring Hollow dam, Roanoke Co., July 10, 2001 (R01-1). Spores measured 37-38 X 2.5-3.0 µm, were 3-septate. (NR, U).

Sporobolus vaginiflorus (Torr.) A. Wood ex A. Gray - poverty dropseed

Ascomycotina:

Trichothyrina nigroannulata (Webster) P. Ellis was collected at the back of the N.S. Rwy. yard in Radford, Montgomery Co., Oct. 20, 2000 (R00-13). This fungus was identified from the description and illustrations by E & E (1985, p. 467, fig. 1790)

and from the description and illustrations under the synonym *Microthyrium nigroannulatum* Webster by Dennis (1978, p. 481, pl. XL). It is not listed by Farr et al. (1989). (NR, U).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokinianum (Sacc.) Shoem. was collected along the construction road for Spring Hollow Dam at N.S. Rwy. m.p. 273, Roanoke Co., on Sept. 24, 2000 (R00-6) and at the same site on Oct. 8, 2000 (R00-10). (NR, U).

Curvularia protuberata Nelson & Hodges, developed on incubated leaves from both collections cited above (R00-6, -10). Spores measured 29-56 X 10-14 µm, with 4 septa. Ellis (1971) gives the spore dimensions as 27-35 X 10-14 µm for *C. protuberata* and 45-66 X18-28 µm for *C. andropogonis* (Zimm.) Boed. By length, the collection fits better into the latter; by width, it fits better into the former. From illustrations by Ellis it fits best into the former. In either case, it is a NR, U.

Exserohilum halodes (Drechs.) Leon. & Suggs, characterized by thick septa at both ends, was collected along the roadway between N.S. Rwy. and Kentland Farm, 1/2 mi. W. of Whitethorne, Montgomery Co., Oct. 12, 2003 (R03-40). It was also collected at the N.S. Rwy. yard in Radford, Oct. 20, 2000 (R00-13). Spores measured 65-105 X 16-19 µm, were 7-8-septate and are illustrated by Ellis (1971, fig. 279). (NR, U).

Nigrospora sphaerica (Sacc.) Mason emerged from incubated leaves collected at the Spring Hollow road cited above (R00-6). (NR, U).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. was present on three collections: At the Spring Hollow Dam construction road near N.S. Rwy. m.p. 273 (R00-6) and (R00-10), and at the N.S. Rwy. yard in Radford (R00-13). (NR, U).

Stenotaphrum secundatum (Walter) Kuntze - St. Augustine grass

Deuteromycotina - Hyphomycetes:

Pyricularia grisea (Cooke) Sacc., the cause of gray leaf spot, was sent to the Plant Clinic from Smithfield, Isle of Wight Co., July 3, 2001 (Pl. Cl. 01-894, R02-3). (NR, V).

Tridens flavus (L.) Hitchcock – purple top

Basidiomycotina - Uredinales:

Puccinia windsoriae Schwein., II, III, rust, was sent to the Plant Clinic from Cumberland Co., Sept. 22, 2002 (Pl. Cl. 02-1378, R02-3).

Tripsacum dactyloides (L.) L. – gamagrass

A single colony is known in Montgomery Co. between Rt. 603 and the N.S. Rwy. about 1/2 mi. south of the Ironto exit on -81. This colony has been visited annually since its discovery in 1991.

Deuteromycotina - Hyphomycetes:

Aureobasidium zeae (Narita & Hiritsuke) Dingley associated with small reddish brown leaf lesions, have falcate, 1-celled spores measuring 22-28 X 3.0-3.5 µm, was collected Oct. 7, 2001 (R01-27). (NR, U).

Rhynchosporina tridentis Sprague & C. T. Rogerson, associated with eyespot leaf lesions, was collected on Sept. 24, 2000 (R00-1). This fungus is similar to *A. zeae* and, in fact, these may be the same fungus. Spores are also falcate, measuring 15-19 X 2.5

µm; thus, are smaller than those of *A. zeae*, above but slightly larger than those of *R. tridentis* given by Sprague and Rogerson (1958). It is common on *Tridens flavus* in fields surrounding this site. (NR, U).

Fusarium avenaceum (Fr.:Fr.) Sacc., first collected in 1994 (R & R, 1997) at this site, was collected again on Sept. 24, 2000 (R00-1) and on Oct. 7, 2001 (R01-27).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) Wils. is persistent at the Montgomery Co. site, having first been collected in 1991. It was collected again in Sept. 24, 2000 (R00-1).

Triticum aestivum L. – wheat

Ascomycotina:

Gaeumannomyces graminis (Sacc.) Arx & D. Olivier, the cause of take-all, was sent to the Plant Clinic by Essex Co. Agent, Mar. 24, 1995 (Pl. Cl. 95 - 198, R95-4). This fungus occurs sporadically on wheat and other grasses throughout Virginia.

Basidiomycotina - Uredinales:

Puccinia striiformis West., II., causing stripe rust, appeared on wheat in the State Wheat Test and in the Advanced Wheat Test at Kentland Farm, Montgomery Co., and was collected June 15, 2000 (R00-5) by wheat breeder Carl Griffey. Specimens were sent to the USDA Cereal Disease Laboratory at Washington State University, Pullman, WA for identification as to race. This is the first time stripe rust is known to spread into Virginia. Its normal distribution includes Pacific Coast states, Texas, Idaho, and Montana. A full account was published by Chen et al. (2002). Stripe rust was found again at Kentland Farm in 2001, at Raphine, Augusta Co., in 2002, and at Painter, Accomack Co., Warsaw, Richmond Co., and at Kentland Farm in 2003, all in wheat test plots. Classifications as to race were PST-80 in 2000 and 2001; PST-77-78-80, and -98 in 2002; and PST-98 and -100. Because of the late-season appearance, it is believed that spores were blown in each year from the central Mississippi Valley (personal communication from C. Griffey). (NR, V).

Deuteromycotina - Hyphomycetes:

Drechslera tritici-repentis (Died.) Shoem. was collected on the cv. Sisson at the D. E. Brann Farm, Christiansburg, Montgomery Co., May 19, 2003 (R03-2). This fungus is listed under its teleomorph, *Pyrenophora tritici - repentis* by Farr et al. (1989) and was previously reported as such on wheat and rye (R & R, 1994).

Deuteromycotina - Coelomycetes:

Ascochyta brachypodii (Syd.) Sprague and Johnson occurred in the take-all specimen cited above (R95-4). Identity was based upon the key, description and illustrations by Sprague (1950). It has a wide host range, and was reported previously from Virginia on oats and barley (R & R, 1994). (NR, U).

Zea mays L. – maize, corn

Basidiomycotina - Uredinales:

Puccinia polysora Underw., the cause of southern corn rust, was sent to the Plant Clinic by Agent W. Lawrence of Chesapeake, Aug. 23, 2003 (Pl. Cl. 03-961, R03-30). While generally confined to southern states, it is occasionally observed in Virginia. (R & R, 1994).

Deuteromycotina - Hyphomycetes:

Bipolaris maydis (Nisik. & Miyake) Shoem., the cause of southern leaf blight, was present on leaves sent to the Plant Clinic Aug. 12, 2003 (Pl. Cl. 03-915, R03-23), from Cohoke Farms, Essex Co. A more comprehensive discussion of this fungus was given by (R & R, 1994) under its teleomorph, *Cochliobolus heterostrophus* (Drechs.) Drechs.

Exserohilum turcicum (Pass.) Leon. & Suggs, the cause of northern leaf blight, occurred in Roane's garden, Blacksburg, Montgomery Co. Aug. 26, 1995 (R95-32). Formerly very common on corn in the New R. Valley, it is controlled by resistant hybrids.

Zoysia japonica Steud. – Japanese lawngrass

Basidiomycotina - Uredinales :

Puccinia zoysiae Diet., causing rust, occurred on two specimens sent to the Plant Clinic in 2003. One was sent in by S. Buckner from Louisa C. H., June 30, 2003 (Pl. Cl. 03-44, R03-10); the second was sent by Agent Leanne DuBois, James City Co., Nov. 9, 2003, (Pl. Cl. 03-1200, R03-49). Zoysia rust has been submitted to the Plant Clinic several times before.

(NR, V).

Deuteromycotina - Hyphomycetes:

Curvularia affinis Boed. appeared on incubated leaves of collection R03-10 above. It was identified from the key and illustrations by Ellis (1971). Spores were 4-6-septate (mostly 4 -), 34-43 X 11-12 μm which is larger than given by Ellis (27-39 X 8-13). It is listed only on water hyacinth by Farr et al. (1989).

C. lunata (Wakk.) Boed. appeared on incubated leaves of collection R03-49 above. The 3-septate spores measured 17-22 X 7-9 μm and are illustrated by Ellis (1971). This fungus is fairly common in Virginia but is not reported on this host by Farr et al. (1989). (NR, V).

Myrothecium verrucaria (Albert. & Schwein.) Ditmar : Fr. produced navicular to oval, yellow brown conidia measuring 7-10 X 3μm on sessile sporodochia when incubated in moisture for 2-4 days (Ellis, 1971, p. 115): This fungus appeared on leaves of collection R03-49 above. (NR, U).

Deuteromycotina - Coelomycetes:

Pyrenochaeta fallax Bres., having oblong conidia measuring 5-6 X 1.0-1.5 μm, produced profusely in long tendrils, occurred on incubated leaves of collection R03-49 above. (NR, U).

Sphaerellopsis filum (Biv. - Bern. ex Fr.) Sutton, is a parasite of rust fungi in general, in this case on *Puccinia zoysiae* in both collections above (R03-10, -49). (NR, V).

Stagonospora montagnei Cast. & Germ., synonym *S. graminella* (Sacc.) Sacc., appeared on incubated leaves of collection R03-10 above. It was keyed to *S. graminella* in Sprague (1950). No *Stagonospora* spp. are reported on *Zoysia* by Farr et al. (1989). (NR, U).

DISCUSSION

In this report, 59 new grass-fungus associations are listed for the United States (NR, U), 2 for eastern United States (NR, EU), and 21 for Virginia (NR, V). A new record is claimed if the association is not listed by Farr et al. (1989) and Farr et al. (No date). Obviously, there might be some fallacy in this approach because some overlooked

reports may exist. In that case, I apologize to overlooked authors. Nevertheless, there is not much activity in grass-fungus research except for turf and forage species and most associations among these have already been reported. Since many collections reported here were made in out-of-the-way places, it is no surprise that many new associations were found and since most collections reported here came only from Montgomery and surrounding counties, many more new associations await discovery.

These reports represent a contribution to the natural history of Virginia. Most collections have been sent to the National Fungus Collections, U.S. Dept. of Agriculture, Beltsville, Md., where they await cataloguing. Sometimes, a collection was so minimal, no material was preserved.

Finally, the study of fungi on Virginia grasses remains a fertile field for research for trained mycologists. Coastal Plain and Piedmont counties are poorly represented in these reports. Many grass hosts state-wide have not been examined.

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I would like to dedicate this publication to my deceased wife, Martha K. Roane, who had she lived would have continued working with me in this project.

LITERATURE CITED

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