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Graminicolous Fungi of Virginia: Fungi Associated with Genera *Aegilops* to *Digitaria*

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ABSTRACT

Fungus-grass associations for grass species in the genera *Aegilops* through *Digitaria* occurring in Virginia are listed here below. Included are associations we have found and those from other published lists. New associations for Virginia are designated as new records (NR, V), for the United States (NR, U) and for eastern U.S. (NR, EU); the last named implies east of the Mississippi River. We made no attempt to determine whether or not a fungus is parasitic although many fungi are clearly the cause of lesions. Rust and powdery mildew fungi are obligate parasites; smut fungi are obviously parasitic. In our observations, the mere presence of a fungus is sufficient for us to regard it as a member of our mycoflora.

INTRODUCTION

Many fungi are known to occur on grasses in Virginia. We recently published an annotated list of those associated with cereals (Roane & Roane, 1994). Incidental to our travels around Virginia we have been collecting and identifying graminicolous fungi for many years. Since our retirement in 1986, we have engaged in a more concerted effort to find such fungi. Even so, the ensuing reports show a concentration of effort in Montgomery and the surrounding counties. The Coastal Plain and Piedmont species are poorly represented; there is little we can do to rectify the haphazardness of our collections. However, numerous host-fungus associations we have encountered are previously unreported for Virginia and several are unreported for the United States. Therefore, we deem it important to record our observations and to integrate them with those previously reported. This assemblage of reports will add to the literature on the natural history of Virginia.

The grasses of Virginia were recently listed by Roane (1991) and distribution maps for most species have been published by Harvill et al. (1986). In order to simplify the accessibility of our notations, the host species will be listed alphabetically; for each host the fungus species will be listed under its major fungus class. Thus, the procedures to be followed are generally those of Farr et al. (1989), and Roane & Roane (1994). New records will be designated by NR followed by V, EU, or U, symbolizing Virginia, Eastern United States (generally east of the Mississippi River), or United States, respectively, based upon the records and distributions given by Farr et al. (1989). Our collections are designated by year and accession number (ex., 90-32). There was no

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effort to determine by inoculation whether fungi were pathogenic or saprophytic and no fungi were isolated or cultured. Thus, all determinations were made from structures *in situ*. Specimens were often incubated in moist chambers to stimulate sporulation.

Prior to 1940, the federal plant research station was Arlington Farm, site of the Pentagon Building. Several plant pathologists working there lived in northern Virginia. Since some were forage crop and turfgrass specialists, they collected and identified fungi on both native and introduced species. This will account for some of the records on seemingly exotic species which were cultivated and evaluated for various purposes. Most of the records are unavailable concerning the locality and date of collection. They are listed as occurring in Virginia by Farr et al. (1989) who cite Agricultural Handbook No. 165 (1960) as the original source of information. Those fungi listed by Farr et al. as being in Virginia and which we have not collected will be listed generally without comment at the end of each host genus and will be designated by the symbols My, M, O, A, B, Dh, and Dc for Myxomycetes, Mastigomycotina, Oomycetes, Ascomycotina, Basidiomycotina, Deuteromycotina-Hyphomycetes, and Deuteromycotina-Coelomycetes. We will also designate State Parks by S.P.

We have issued some preliminary reports on this work (Roane & Roane, 1984, 1985, 1991).

Aegilops cylindrica L., goatgrass

Only one colony of *A. cylindrica* is known to us; it lies strung out for one-half mile along the railroad west of Whitethorne in Montgomery Co. All fungi were identified from collections made there; all records are new for Virginia, most are new for the United States.

Ascomycotina:

Mycosphaerella sp. - A species of *Mycosphaerella* was common on senescent leaves (Coll. 95-26C). Ascospores were fusiform, biseriate in the ascus and measuring 12-15 X 3.5-4.0 m. The fungus appears to fit *M. recutita* (Fr.) Johanson (Dennis, 1978; Ellis & Ellis, 1985). If properly identified, we have found it on other grasses. We hesitatingly report it as new. (NR, U).

Phaeosphaeria tritici (Garov.) Hedjaroude was mixed with the *Mycosphaerella* collection above (95-26C), but only two ascomata were found. The fungus was assigned to *P. tritici* based on the description by Shoemaker and Babcock (1989). (NR, U).

Basidiomycotina - Uredinales:

Puccinia recondita Roberge ex Desmaz., leaf rust. A few uredineal pustules occurred on leaves collected June 14, 1990 (90-32). A nearby wheat nursery may have furnished inoculum. (NR, U).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoemaker. One incubated leaf (Coll. 95-26C, June 27, 1995) produced dark brown, 6-9-septate conidia measuring 60-72 X 18-23 μm, typical of this species. Since we found the fungus in a relatively small sample, it is probably common on *A. cylindrica*. (NR, U).

Fusarium avenaceum (Fr.:Fr.) Sacc. An incubated spike, (Coll. 96-26D, June 27, 1995) produced masses of salmon or peach colored, 3-5-septate macroconidia meas-

uring 48-62 X 3-4 µm. As noted above, our sample was very small; therefore, this fungus is probably a common colonizer of *A. cylindrica* spikes. (NR, U).

Fusarium sporotrichioides Sherb., head blight. A collection of June 12, 1991 (91-35B) was found to have spikes colonized by a *Fusarium* sp. with macroconidia measuring 27-45 X 3-5 µm and having 1-5 septa but mostly 3 septa. The spores were broader and shorter than those of *F. avenaceum*. *Fusarium acuminatum* was observed on *A. cylindrica* by Sprague (1950) causing root rot; no head blights have been reported. (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta graminea R. Sprague & Johnson, on senescent leaves. Only one collection, June 14, 1990, has been found (90-32). Pycnidiospores measured 12-19 X 4-6 µm much broader than in the following species. (NR, U).

Ascochyta sorghi Sacc. was associated with leaf spots and was prevalent on senescent leaves. We have found this fungus on all specimens of the host. Pycnidiospores measured 12-18 X 2-3 µm Collections have been made in three different years (90-32, 91-35A,-B, 95-13) all in June. (NR, EU).

Colletotrichum graminicola (Ces.) G. W. Wilson, anthracnose, occurred on leaves and culms of every collection we made. The fungus produced lesions and colonized senescent structures. It occurs in the several collections we made (90-32, 91-35A,-B, 95-13, 95-26A), and on V.P.I. & S.U. Herbarium specimens from Campbell Co. (VPI & SU Herb. No. 13458), Clark Co. (No. 13459), Rockingham Co. (No. 18466), and Russell Co. (No. 13455).

Stagonospora nodorum (Berk.) Castellani & Germano, node rot. This fungus is well known as *Septoria nodorum* (Berk.) Berk. causing glume blotch of wheat. Collections exist from June 12, 1991 and June 27, 1995 (91-35A, 95-26B). (NR, U).

Agropyron repens (L.) Beauv., syn., *Elytrigia repens* (L.) Nevski, quackgrass

Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul., ergot. This fungus is widespread on *A. repens* and is easily recognized by the prominent purplish pseudosclerotia protruding from spikelets as the host nears maturity. Specimen 82-Ar-7 of our collection is the anamorphic stage *Sphacelia segetum* Lev., which precedes the sclerotial stage. Farr et al. (1989) describe *C. purpurea* as occurring in the range of the host.

Erysiphe graminis DC., syn., *Blumeria graminis* (DC.) E.O. Speer, powdery mildew, occurs throughout the range of the host (Farr et al., 1989), thus is widespread on *A. repens* in Virginia. Collections 83-Ar-7, and 91-15 are from Blacksburg, Montgomery Co., June 14, 1983, and May 2, 1991, respectively.

Mycosphaerella recutita (Fr.) Johnson, associated with leaf spots, was collected June 27, 1995 on Kentland Farm (VPI & SU), Whitethorne, Montgomery Co. Ascomata had no paraphyses; ascospores were biseriate, hyaline, 1-septate, cylindrical, measuring 12-13 X 4 µm. Identification was based on the description by Ellis & Ellis (1985). (NR, U).

Phomatospora dinemasporium Webster is described as being widespread on dead grass stems (Ellis & Ellis, 1985, p. 465). It is most frequently found in the anamorphic stage, *Dinemasporium strigosum* (Pers.:Fr.) Sacc. It was found on *A. repens* in

Blacksburg, Montgomery Co., July 11, 1989 (89-Ar-1), on overwintered stems. (NR, U).

Phyllachora graminis (Pers.:Fr.) Nitschke, tar spot, occurs frequently on *A. repens* in Montgomery Co. We have two collections (82-Ar-10, 84-Ar-7) made in July and October, 1982 and 1984, respectively. (NR, V).

Basidiomycotina - Uredinales:

Puccinia coronata Corda, crown rust, may be found on *A. repens* in Montgomery Co. throughout the host's growing season. Apparently it survives in the uredinal stage as the alternate hosts, *Rhamnus* spp., are uncommon in this area. We have two collections from Montgomery Co., 91-15, 91-42, made May 2, and June 12, 1991, respectively. (NR, V).

P. graminis Pers., black stem rust, occurs sporadically on grasses in the mountains of western Virginia. We have encountered it on *A. repens* only once (83-Ar-1) in Montgomery Co. near the junction of Rts. 657 and 685 in November, 1983. (NR, V).

P. recondita Roberge ex Desmaz., leaf rust, is common on *A. repens* in the Montgomery Co. region of Virginia yet Farr et al. (1989) report its occurrence only from West Virginia and South Dakota. We have collections made in June from Whitethorne, Montgomery Co. (90-34, 95-25) and Claytor Lake S.P., Pulaski Co. (89-11). (NR, V).

Basidiomycotina - Ustilaginales:

Urocystis agropyri (Preuss.) Schroet., flag smut, occurs in the northeastern states as far south as Pennsylvania, according to Farr et al. (1989). Specimens were collected in June 1982 and July 1983 from the same colony of *A. repens* in Montgomery Co. in successive years (82-Ar-6, 83-Ar-6), thus extending its range into southwestern Virginia. (NR, V).

Deuteromycotina - Coelomycetes:

Ascochyta graminea (Sacc.) R. Sprague & A. G. Johnson was found on specimens from a single colony of *A. repens* in Blacksburg. Spores were 13-16 X 3.5-5.0 µm, generally shorter and broader than in *A. sorghi*; it was collected May 2, 1991 in Montgomery Co. (91-15). NR, U.

A. sorghi Sacc. was found in Blacksburg and near Whitethorne, Montgomery Co. May 2, and June 12, 1991. Spores measured 12-20 X 2-4 µm. Farr et al. (1989) list it only as in Massachusetts in Eastern U.S. (NR, V).

Additional species reported as occurring in Virginia (Farr et al., 1989): *Drechslera gigantea* (Heald & Wolf) Ito, *D. tritici-repentis* (Died.) Shoem.

Agrostis spp., bentgrass, hairgrass, redtop

Eleven species of *Agrostis* L. are listed by Roane (1991) as occurring in Virginia. Some are turf grasses and some are Coastal Plains species. We have identified fungi on five species. Farr et al. (1989) list several fungi from Virginia that we have not encountered. These will be appended to the end of our list. Here the host species are numbered; in the text, the numbers will refer to these hosts:

1. *Agrostis alba* L. (including *A. stolonifera* L.), redtop.
2. *A. gigantea* Roth. - *Agrostis alba, A. gigantea, A. palustris*, and *A. stolonifera* are taxonomically related and the latter three may be subspe-

cies of *A. alba*. A specimen identified as *A. gigantea* by T. F. Wieboldt, V.P.I. & S.U. Herbarium, was found to harbor several interesting fungi. A single collection was made along Stroubles Ck. on the university farm between the beef and swine barns, Blacksburg, Montgomery Co., Sept. 2, 1994.

3. *A. hiemalis* (Walt.) B.S.P. (also *A. hyemalis*), hairgrass.
4. *A. perennans* (Walt.) Tuck, autumn bentgrass.
5. *A. scabra* Willd., rough bentgrass.

Ascomycotina:

Epichloe typhina (Pers.:Fr.) Tul., causing choke disease, was found in a large colony of ***4*** growing in an abandoned logging road on the south slope of Gap Mt. about 5 mi. west of highway U.S. 460, northwestern Montgomery County, July 1983 and 1984 (83-Ap-1, 83-4, 84-Ap-7b). A strong mushroom-like odor was associated with developing stromata. The colony was observed throughout the summer for two years. A brief report has been published (Roane & Roane, 1984).

Mycosphaerella tulasnei (Jancz.) Lindau occurred on sheaths of ***4*** at the choke site on Gap Mt., Montgomery Co., July 14, 1984 (84-Ap-7a). The fungus clearly fitted the description of *M. tulasnei* given by Sprague (1950). (NR, EU).

Phaeosphaeria nigrans (Roberge ex Desmaz.) L. Holm occurred on foliage of a collection of ***4*** from under trees south of the swimming pavillion at Claytor Lake S.P., Pulaski Co., Aug. 2, 1989 (89-27). Ascospores were 5-septate, 20-22 X 4-5 µm, the second cell enlarged. This is a plurivorous fungus and, thus, could occur on many grass hosts (Shoemaker & Babcock, 1989). (NR, U).

Basidiomycotina:

Puccinia coronata Corda, crown rust, occurred on ***1*** along Stroubles Ck. below the U.S. 460 by-pass, V.P.I. & S.U. farm, Montgomery Co., Sept. 2, 1994 (94-50). Typical teliospores (stage III) bearing terminal processes were present. (NR, V). Stages II and III were prevalent on ***4*** at the choke site above, viz., south slope of Gap Mt., Montgomery Co. (83-Ap-1, 83-4, 84-Ap-7). Farr et al. (1989) do not list *A. perennans* as a host. (NR, U).

Puccinia graminis Pers., stages II and III, black stem rust, was collected on ***1*** at the Stroubles Ck. site above (NR, V), and on ***2*** at the same location (94-53). (NR, EU).

Puccinia recondita Roberge ex. Desmaz., II, III, was collected on ***5*** along Big Reed Island Ck. above the confluence with Greasy Ck. in Carroll Co., Apr. 19, 1992 (92-14). (NR, V).

Thanatephorus cucumeris (A. B. Frank) Donk is listed by Farr et al. (1989) as a cause of brown patch of ***1*** in Virginia. The fungus is better known by its anamorphic name, *Rhizoctonia solani* Kuehn. It is frequently found on specimens sent to the V.P.I. & S.U. Plant Clinic.

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem. fruited on incubated leaves of ***2*** collected along Stroubles Ck., V.P.I. & S.U. farm, Sept. 2, 1994 (94-53). (NR, U).

Curvularia geniculata (Tracey & Earl) Boedijn appeared on incubated leaves of ***3*** collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-59-1). (NR, U).

Drechslera dematioidea (Bubák & Wróbl) Subram. & Jain, causing leaf spot and wilted leaves was collected in our yard in Blacksburg, Montgomery Co. on *1* July 16, 1990 (90-55). Conidia measured 24-45 X 14-17 μm and had 3-4-septa. (NR, V).

Drechslera erythrospila (Drechsl.) Shoem. causing a red leaf spot was collected on *1* along the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-2). Conidia measured 35 X 100 μm and were 2-10-septate. It is common on *1* in Virginia. A collection on *4* came from the hiking trail at the Mt. Rogers Recreation Area Headquarters, Rt. Va. 16, Smyth Co., Aug. 14, 1994 (94-29). Although it is widespread on other *Agrostis* spp., it is not reported on *4*. (NR, U).

Mastigosporium rubricosum (Dearn. & Barth.) Nannf. (Sprague, 1950; pp. 402-405) was found on *3* along War Branch Trail off Rt. 613, Giles Co., June 24, 1990 (90-42). It appears to be a primary pathogen. (NR, U).

Nigrospora sphaerica (Sacc.) Mason and *Stemphylium botryosum* Wallr. appeared within 24 hr on incubated leaves of *3* collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-59-1). (NR, U, both fungi).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc. causing wilted leaves was collected on *1* in our yard, Blacksburg, Montgomery Co., July 16, 1990 (90-55). (NR, V).

Colletotrichum caudatum (Sacc.) Peck fruited on a few leaves of *2* collected along Stroubles Ck., V.P.I. & S.U. farm, Montgomery Co., Sept. 2, 1994 (94-53). This fungus is also known as *Ellisiella caudata* (Peck) Sacc. Spores feature a tapering appendage (NR, U).

Colletotrichum graminicola (Ces.) G. W. Wils., the anthracnose fungus, is for grasses an omniphyte. If we search long enough, we may find it colonizing all grasses in our region. We have found it on four of the five *Agrostis* spp. examined. On *1* it was common on leaves and culms collected along Stroubles Ck., V.P.I. & S.U. farm, Montgomery Co., Sept. 2, 1994 (94-50), and along the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-2). (NR, V). We collected it on *2* along Stroubles Ck., Sept. 2, 1994 (94-53). (NR, U). It occurred on plants of *4* under trees at Claytor Lake S.P., Aug. 2, 1989 (89-27). (NR, U). We found it on *5* collected along Big Reed Island Ck. above the confluence with Greasy Ck., Carroll Co., April 19, 1992 (92-14). (NR, U). Ubiquitous as it is, this fungus has not been reported previously by Farr et al. (1989) on any *Agrostis* sp. in Virginia.

Phyllosticta anthoxella R. Sprague was collected on *4* at the Mt. Rogers Recreation Area Headquarters on Va. 16, Smyth Co., Aug. 14, 1994 (94-29). Pycnospores were bacilliform, 5-7 X 1.0-1.5 μm. It was reported previously only from Oregon on *Anthoxanthum* (Farr et al. 1989). (NR, U).

Phyllosticta sorghina Sacc. occurred on newly wilted leaves of *3* collected at the Eastern Virginia Research Station, Warsaw, Richmond Co., May 26, 1982 (82-Ah-5) and at Hungry Mother, S.P., Smyth Co., Sept. 3, 1989 (89-59-2). (NR, U). It occurred on *4* along the Appalachian Trail, west slope of White Top Mt., Grayson Co., above 5000', Aug. 31, 1989 (89-59). (NR, U).

Note: *P. sorghina* is assigned to *Phoma sorghina* (Sacc.) Boerema, Doren., & Van Kest. by Farr et al. (1989). The distinction between the genera appears to be arbitrary.

Septoria spp. are sometimes very difficult to separate. Although we have assigned our collections to two species, variation in spore morphology may have led us to err. No *Septoria* spp. are listed on *Agrostis* spp. east of the Mississippi River by Farr et al. (1989).

Septoria passerinii Sacc. having 3-septate spores measuring 24-35 X 1.5-2.0 µm was collected on ***4*** on Gap Mt., Montgomery Co., July 14, 1984 (84-Ap-7). (NR, U). It was also found on ***1*** along the lake shore at Hungry Mother S.P., Smyth Co., Aug. 29, 1989 (89-41). Spores were 3-septate, occasionally 4-septate, measuring 20-30 X 1.5-2.0 µm mostly 25-28 X 1.8 µm. (NR, U).

Septoria secalis Prill. & Delacroix having 3-septate spores measuring 21-50 X 2-3 µm has been collected on ***3*** & **4**. A collection with 1-4-septate, mostly 3-septate spores measuring 35-47 X 2.5-3.5 µm was found causing leaf spots on ***3*** at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-59-2). (NR, U). It was also found on ***4*** under trees at Claytor Lake S.P., Pulaski Co., Aug. 2, 1989 (89-27). Spores were 3-septate, measuring 21-35 X 2.0-2.5 µm. A collection causing leaf spots on ***4*** from the Mt. Rogers Recreation Area Headquarters, Va. 16, Smyth Co., Aug. 14, 1994 (94-29) had 3-septate spores measuring 35-50 X 2-3 µm. (NR, U).

Note: *Septoria passerinii* and *S. secalis* have different spore widths. Sprague (1950), whose key and descriptions we have used, lists *S. secalis* on rye but *S. secalis* var. *stipae* Sprague on *Agrostis*. The var. *stipae* has spores about 10 µm longer than *S. secalis*. Otherwise, they are similar.

Stagonospora foliicola (Bres.) Bubák occurred on newly wilted leaves of ***3*** collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989. Spores were typical of those illustrated by Sprague (1950, fig. 57A). (NR, U).

Sphaerellopsis filum (Biv.-Bern. ex Fr.) Sutton is not a parasite of grasses. We found it parasitizing *Puccinia coronata* on ***4*** collected on Gap Mt. at the rust collection site above, Montgomery Co., Aug. 16, 1983, Aug. 14, 1984 (83-Ap-1, 84-Ap-7) and parasitizing *P. recondita* on ***5*** along Big Reed Island Ck. in Carroll Co., Apr. 19, 1992 (92-14).

In addition to our collections, the following are reported by Farr et al. (1989) to occur on *Agrostis* spp. in Virginia. The letters preceding each fungus group are explained at the end of the introduction.

O - *Pythium aphanidermatum* (Edson) Fitzp. on *A. alba* and *A. capillaris* L.; A - *Phyllachora graminis* (Pers.:Fr.) Nitschke on *A. alba; Sclerotinia homoecarpa* Bennett on *A. alba, A. canina*, and *A. capillaris*; B - *Thanatephorus cucumeris* (A. B. Frank) Donk on *A. alba, A. canina*, and *A. capillaris*; Dh - *Curvularia lunata* (Wakk.) Boedijn on *A. alba; Drechslera gigantea* (Heald & Wolf) Ito on *A. alba, D. triseptata* (Drechsl.) Subr. & Jain on *A. alba*; Dc - *Cheilaria agrostis* Lib. on *A. alba*.

Andropogon gerardii Vitman, big bluestem

Ascomycotina:

Phyllachora americana D. G. Parbery, causing tar spot, occurred along Va. 8, 1 mi. N. of Rt. 807, in a field next to Dodds Creek, Floyd Co., Sept. 26, 1994 (94-57). Although cited by Farr et al. (1989) as occurring on *Andropogon* sp., it had only been collected on *A. gerardii* in Georgia and Florida. (NR, V).

Basidiomycotina:

Puccinia andropogonis Schwein., II, III, causing a rust, was collected at the site above (94-57). It is prevalent throughout the eastern states (A.H. 165, 1960).

Deuteromycotina - Hyphomycetes:

Fusarium sambucinum Fuckel was parasitic on *Phyllachora americana* collected at the Va. 8 site above (94-57). (NR, V).

Nigrospora sphaerica (Sacc.) Mason appeared in incubated leaves collected along Sinking Creek in Giles County near the Craig Co. line, Oct. 3, 1994 (94-69). Most likely it is a saprophyte. (NR, V).

Tetraploa aristata Berk. & Broome appeared on incubated leaves from the Va. 8 site (94-57). No doubt this is a saprophyte. (NR, V). *T. ellisii* is listed by Farr et al. (1989) as occurring on *Andropogon* sp. in Alabama.

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. was collected near the Norfolk Southern Rwy., S. of Va. 114, Montgomery County, Nov. 7, 1982 (82-Ag-11), and along Sinking Creek in Giles County near the Craig Co. line, Oct. 3, 1994 (94-69). (NR, V).

Phyllosticta andropogonivora R. Sprague & Rogers was found on a V.P.I. & S.U. Plant Clinic specimen (Cl. no. 94-1219) sent in from James City County, Aug. 11, 1994 (94-36). We also collected it at the Va. 8 site above, Sept. 26, 1994 (94-57). These are the first collections from the eastern states. (NR, EU).

Andropogon virginicus L., broomsedge

Basidiomycotina:

Uromyces andropogonis Tracy, III, was collected at the marina cove in Claytor Lake S.P., Pulaski Co. on overwintered culms, Apr. 17, 1991 (91-10); stages II and III were found on fall culms, Nov. 2, 1987, in the same area (87-Av-1). This rust fungus-host association is common in the eastern states (Farr et al., 1989).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils. was collected along the lake shore in Claytor Lake S.P., Pulaski Co., in June 1989, and Aug. 2, 1989 (89-7, 89-16). (NR, U).

Phoma sorghina (Sacc.) Boerema., Doren., & Van Kest. occurred with *C. graminicola* in the June collection (89-7). Spores measured 4-5 X 1.5-2.0 µm. These spores are smaller than those of other species reported on *Andropogon*. (NR, U).

Deuteromycotina - other:

Rhizoctonia solani Kuehn, causing summer blight is common on broomsedge at Claytor Lake S.P. We have observed it many times and collected it in June 1989 (89-7). (NR, V).

Other fungi reported by Farr et al. (1989) to occur on *Andropogon* spp. in Virginia are:

A - *Balansia henningsiana* (Moell.) W. W. Diehl on *A. scoparius* Michx. (see also Diehl, 1950), *Phyllachora luteo-maculata* (Schwein.) Orton on *A. virginicus*; B - *Puccinia ellisiana* Thuem. on *A. virginicus, Sorosporium ellisii* G. Winter on *A.*

gerardii, S. everhartii Ellis & B. T. Galloway on *A.* spp. (unspecified), *Sphacelotheca monilifera* (Ellis & Everh.) Clinton on *A. glomerata* Vitm., *S. seymouriana* Clinton on *A. gerardii.*

Anthoxanthum odoratum L., sweet vernalgrass

Ascomycotina:

Phaeosphaeria eustoma (Fuckel) L. Holm was collected at the marina cove, Claytor Lake S.P., Pulaski Co., May 30, 1991 (91-23). (NR, U). No ascomycete has been reported on this grass (Farr et al., 1989). (NR, U).

Basidiomycotina:

Puccinia graminis Pers., II, was collected on the VPI & SU Horticulture Farm (now the Market Place Shopping Center), Montgomery Co., June 28, 1989 (89-Ao-2) and on Kentland Farm, VPI & SU, Montgomery Co., June 13, 1990 (90-33). Both specimens were identified by J. F. Hennen, Purdue Univ., former curator of rust collections. A collection was made at the picnic area parking lot, Fairy Stone S.P., Patrick Co., May 23, 1993 (93-5). Although known from several eastern states, it has not been reported from Virginia (Farr et al., 1989). (NR, V).

Puccinia recondita Roberge ex. Desmaz. came from Claytor Lake S.P., Pulaski Co., May 30, 1991 (91-23). This is a new host for this fungus according to Farr et al. (1989) but Cummins (1971) lists *Anthoxanthum* sp. as a host. (NR, U).

Deuteromycotina - Hyphomycetes:

Cercosporidium graminis (Fuckel) Deighton was collected at Kentland Farm, Whitethorne, Montgomery Co., June 13, 1990 (90-33). This fungus has a wide host range but has not been recorded on this host before (Farr et al., 1989). (NR, U).

Drechslera dematioidea (Bubák & Wróbl.) Subram. & P. C. Jain, causing leaf spot, was collected at several locations: VPI & SU Horticulture Farm (now the Market Place Shopping Center), Montgomery Co., June 22, 1989 (89-Ao-1); Claytor Lake S.P. in the picnic area Aug. 11, 1989 (89-32), and June 17, 1990 (90-37); at the marina cove, May 30, 1991 (91-23), Pulaski Co.; Adner, Gloucester Co., June 24, 1991 (91-44); Rt. 619, Indian Valley, Floyd Co., July 4, 1991 (91-60); Blue Ridge Pkwy., near Goundhog Mt., Carroll Co., June 18, 1995 (95-21). Although it is a common leaf spotter on *Anthoxanthum* and is reported in several eastern states, this fungus has not been reported from Virginia (Farr et al., 1989). (NR, V).

Volutella ciliata (Alb. & Schwein.) Fr. fruited on incubated leaves collected in the picnic parking area, Fairy Stone S.P., Patrick Co., May 25, 1993 (93-5). This is probably a strict saprophyte. It is not listed by Farr et al. (1989); Ellis & Ellis (1985) describe it as, "Very common on dead herbaceous plants, Oct.-Apr., and best seen in the field after a shower of rain." It has a fringe of long white setae at the base of the sporodochium. (NR, U).

Note: In contrast, *Amerosporium atrum* (Fuckel) Höhn., is similar in appearance but has dark setae at the base. We have encountered both fungi on several grass collections.

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc., associated with purple-brown leaf spots and dead leaf tips, was collected at the picnic parking area, Fairy Stone S.P., Patrick Co., May 23, 1993 (93-5) and along the Blue Ridge Pkwy., near Groundhog Mt., Carroll Co., June 18, 1995 (95-21). It was reported previously only from West Virginia (Farr et al., 1989). (NR, V).

Colletotrichum graminicola (Ces.) G. W. Wils., causing anthracnose, was collected twice at Claytor Lake S.P., Pulaski Co., once in the picnic area Aug. 11, 1989 (89-32) and once at the marina cove, May 30, 1991 (91-23). It was also collected in the picnic area parking lot at Fairy Stone S.P., Patrick Co., May 23, 1993 (93-5). The only eastern states report for this fungus-host association is from Kentucky (Farr et al., 1989). (NR, V).

Phyllosticta anthoxella R. Sprague was collected on leaves at the VPI & SU Horticulture Farm (now The Market Place), June 23, 1989 (89-Ao-2). Spores were slightly colored pale olive, 8-10 X 1.0-1.5 μm. This fungus is reported from Oregon only (Farr et al., 1989). (NR, EU).

P. minutaspora R. Sprague was present on the same collection (89-Ao-2). Spores measured 3.5-5.0 X 1.0-1.5 μm or about one-half the length of those of *P. anthoxella*. This fungus is not reported on *Anthoxanthum* (Farr et al., 1989). (NR, U).

Stagonospora arenaria Sacc. associated with purple-brown leaf spots, was collected in the picnic area, Claytor Lake S.P., Pulaski Co., June 17, 1990 (90-37); at Adner, Gloucester Co., June 24, 1991 (91-44); and at the picnic area parking lot, Fairy Stone S.P., July 24, 1994 (94-19). (NR, U). See note below.

S. maculata (Sacc.) Sacc., associated with leaf spots was collected at the picnic area, Claytor Lake S.P., Pulaski Co., Aug. 11, 1989 (89-32). (NR, U). See note below.

S. nodorum (Berk.) Cast. & Germano, associated with brown leaf spots, was collected at the VPI & SU Experiment Station, Warsaw, Richmond Co., May 15, 1982 (82Ao1). (NR, U). See note below.

Note: Spore measurements for the above: *S. arenaria*, 27-42 X 3-4 μm, not constricted at the septa; *S. maculata*, 26-32 X 3.5-4.0 μm, constricted at the septa; *S. nodorum*, 28-32 x 3-4 μm, usually broadest at the base. This fungus was prevalent on wheat nearby. None of the species has been reported on *Anthoxanthum* (Farr et al., 1989). Spore measurements and morphologies of the fungi conform to those given by Sprague (1950).

Sphaerellopsis filum (Biv.-Bern. ex Fr.) Sutton, was parasitic on *Puccinia recondita* in the Claytor Lake S.P. collection of May 30, 1991 listed above (91-23).

Farr et al. (1989) list no additional fungi on *A. odoratum* in our region.

Aristida oligantha Michx., prairie three-awn

Ascomycotina:

Monographella nivalis (Schaffnit) E. Müller & von Arx was collected on overwintered plants in a field off Country Club Dr., Blacksburg, Montgomery Co., Apr. 7, 1995 (95-3). (NR, U).

Deuteromycotina - Hyphomycetes:

Curvularia inaequalis (Shear) Boedijn appeared quickly on incubated leaves collected at edge of parking lot next to woods behind the marina-swimming area, Claytor Lake S.P., Pulaski Co., Oct. 30, 1995 (95-48). (NR, U).

C. protuberata Nelson & Hodges appeared on incubated, overwintered plants collected in the field behind Gables Shopping Center, Blacksburg, Montgomery Co., April 7, 1995 (95-3). (NR, U).

C. trifolii Boedijn appeared quickly on incubated leaves and culms collected near M.P. 126 at Mason's Knob overlook, Blue Ridge Pkwy., Roanoke Co., Oct. 23, 1995 (95-44). (NR, U).

Species of *Alternaria, Cladosporium*, and *Stemphylium* also fruited on all *Aristida* collections.

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, was collected at the Gables Shopping Center site and date as above (95-3). (NR, U).

Ellisiella caudata Sacc. was collected at the Pembroke rock quarry, Giles Co., Apr. 2, 1995 (95-6). (NR, U).

In addition, Farr et al. (1989) list the following on *Aristida* spp. in Virginia:

A - *Balansia aristidae* (Atk.) Diehl on *Aristida* sp.; B - *Uromyces seditiosus* F. Kern on *A. purpurascens* Poir.

Arrhenatherum elatius (L.) J. Presl. & K. Presl., tall oatgrass

Ascomycotina:

Phaeosphaeria luctuosa (Niessl) Otani & Mikawa occurred on dead culms at 607 Lucas Dr., Blacksburg, Montgomery Co., Sept. 12, 1989 (89-Ae-3). (NR, U).

P. nodorum (E. Müller) Hedj. occurred on leaves and culms at the old VPI & SU Horticulture Farm (now The Market Place), Montgomery Co., June 28, 1989 (89-Ae-1), and at 607 Lucas Dr., Blacksburg, Montgomery Co., June 23, 1989 (89-Ae-3). (NR, U).

Basidiomycotina:

Puccinia coronata Corda, II, III, crown rust, was collected at Rt. 700 and Sinking Ck., Giles Co., Nov. 14, 1981 (81-Ae-1); at 607 Lucas Dr., Blacksburg, Montgomery Co., July 8, 1983 (83-Ae-1); June 25, 1989 (89a), June 27, 1990 (90-52), June 21, 1995 (95-24); and at North Main St. near U.S. 460, July 1991 (91-x). It is reported by Farr et al. (1989) only in West Virginia of the eastern states. (NR, V).

Deuteromycotina - Hyphomycetes:

Rhynchosporium orthosporum Caldwell, causing scald, was collected at Pearisburg, Giles Co., near the Norfolk Southern Rwy., June 14, 1989 (89-Ae-1). (NR, U).

Spermospora avenae (R. Sprague & Johnson) R. Sprague, a cause of red leather leaf, was collected at 607 Lucas Dr., Blacksburg, Montgomery Co., July 8, 1983 (83a), at the Pearisburg site above (89-Ae-1), and at the old VPI & SU Horticulture Farm, Montgomery Co., June 7, 1989 (89-Ae-2b). It is reported in the eastern states only from West Virginia (Farr et al., 1989). (NR, V).

S. subulata (R. Sprague) R. Sprague, causing blast, occurred in collection 89-Ae-21 above. Sprague (1950) illustrates *S. subulata* conidia as having a distal whip-like extension and Guba (1961) pictures *S. avenae* as having tapered extensions on each end. Both spore types were present but on different lesions (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta brachypodii (Sydow) R. Sprague & Johnson was collected at Rt. 700 and Sinking Ck., Giles Co., Nov. 14, 1981. Spores are broader than those of *A. sorghi*, the only other species recorded on *A. elatius* (Farr et al., 1989; Sprague, 1950). (NR, U).

Stagonospora avenae (Frank) Bissett was collected on the old VPI & SU Horticulture Farm, Montgomery Co., June 7, 1989 (89-Ae-2b) and at 607 Lucas Dr., Blacksburg, Montgomery Co., June 21, 1995 (95-24). It is known from West Virginia and Pennsylvania (Farr et al., 1989). (NR, V).

S. arenaria Sacc. was collected near M.P. 19, Blue Ridge Pkwy., on the Nelson-Augusta Co. line, June 25, 1991. (NR, U).

In addition, Farr et al. (1989) report B- *Ustilago avenae* (Pers.) Rostr., the cause of loose smut, as occurring in Virginia.

Arthraxon hispidus (Thunb.) Makino

No fungi have been reported previously on *A. hispidus* in Virginia (Farr et al., 1989).

Deuteromycotina - Hyphomycetes:

Bipolaris cynodontis (Marignoni) Shoem. was found on a specimen (VPI & SU Weed Ident. No. 93-288) sent from Albemarle Co., Aug. 12, 1993. (NR, U).

Periconia circinata (Mangin) Sacc. fruited on incubated leaves collected July 9, 1989, 1 mi. S. of the Floyd-Franklin line on Rt. 860 (89-Ah-1a). (NR, U).

Ramulispora sorghi (Ellis & Everh.) Olive & Lefebvre was also collected at the Rt. 860 site (89-Ah-1b). (NR, U).

Deuteromycetes - Coelomycetes:

Phyllosticta minutaspora Sprague fruited on dead leaf tips collected at the Rt. 860 site above (89-Ah-1b). (NR, U).

A *Phyllosticta* sp. having conidia measuring 9-10 X 3.5-4.0 μm fruited on the Albemarle Co. collection above. It has characteristics of *P. bromivora* Sprague (spores measuring 6-11 X 3.0-3.8 μm) but fits neither *Phyllosticta* perfectly. We refrain from assigning our specimen.

Arundinaria gigantea (Walt.) Muhl., giant cane

We have collected giant cane from only one site, the Experiment Station property at Holland, Suffolk (formerly Nansemond Co.).

Basidiomycotina:

Puccinia arundinaria Schwein., rust, was collected April 16, 1982 (82-Ag-1). A sample was sent to the J. C. Arthur Herbarium, Purdue University where its identity was verified by J. F. Hennen. Farr et al. (1989) report it from southeastern states but not specifically from Virginia. (NR, V).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc. was also collected April 16, 1982 (82-Ag-1). No *Ascochyta* spp. have been reported on giant cane (Farr et al., 1989). (NR, U).

Farr et al. (1989) report only one other fungus on leaves of giant cane from Virginia, *Sclerotium sacidioides* Speg. This was the type specimen from which Spegazzini described the fungus. It is unknown elsewhere.

Axonopus affinis Chase, carpetgrass

We have not collected specimens of carpetgrass but Farr et al. (1989) list Dh-*Cerebella andropogonis* Ces., the cause of black heads, as occurring in Virginia. The fungus is illustrated and described by Ellis (1971).

Brachyelytrum erectum (Schreb.) Beauv., long-awned woodgrass

Specimens of *B. erectum* have been collected from three sites; only one fungus was detected.

Deuteromycotina - Coelomycetes:

Stagonospora brachyelytri Greene was collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-42); in the woods behind the cabins at Claytor Lake S.P., Pulaski Co., June 21, 1991 (91-54); and at the Mt. Rogers Recreation Area Headquarters, Rt. 16, Smyth Co., Aug. 14, 1994 (94-27). The fungus is associated with elongated leaf spots (Sprague, 1950), and apparently is widespread in eastern states (Farr et al., 1989). (NR, V).

Bromus spp., brome grass, chess, cheat

In order to conserve space, the host species are listed and numbered. In the collection records, the hosts will be cited by number.

1. *B. ciliata* L. - fringed brome.
2. *B. commutatus* Schrad. - hairy class.
3. *B. inermis* Leyss. - smooth brome.
4. *B. japonicus* Thunb. ex Murray - Japanese brome.
5. *B. latiglumis* (Shear) Hitchc.
6. *B. purgans* L. - Canada brome.
7. *B. sterilis* L. - barren brome.
8. *B. tectorum* L. - downy cheat

Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul., ergot occurs in almost all stands of *3*. We collected it only along Prices Fork Road opposite the entrance to Hethwood, Montgomery Co., Aug. 15, 1983 (83-Bi-1). Farr et al. (1989) report the fungus from the entire range of *3*.

Phaeosphaeria herpotrichoides (De Not.) L. Holm, associated with leaf spots on *5* was collected at the Craig Ck. Recreation Area, Jefferson National Forest, Oriskany, Botetourt Co., July 31, 1994. (NR, U).

P. luctuosa (Niessl) Otani & Mikawa, was collected on *1* near the mouth of Norris Run, N.W. Montgomery Co., July 1981 (81-Bc-1). Farr et al. (1989) report no *Bromus* spp. as hosts of this fungus. (NR, U).

P. nigrans (Roberge ex Desmaz.) L. Holm. has been collected on ***4*** near Graysontown, Pulaski Co., June 11, 1990, (90-27) (NR, U); on ***6*** Rt. 712, Ellett, Montgomery Co., June 6, 1990, (90-22) (NR, U); on ***7*** at the Rt. 613 bridge over Little R., Snowville, Montgomery Co., June 11, 1990 (90-29). (NR, U).

Phyllachora graminis (Pers.:Fr.) Nitschke, causing tar spot, was collected on ***1*** at Eggleston, Giles Co., Nov. 15, 1981 (81-Bc-2). (NR, U).

Basidiomycotina:

Puccinia recondita Roberge ex Desmaz., leaf rust, stage III, was collected on ***1*** near the mouth of Norris Run, N.W. Montgomery Co., July 1981 (81-Bc-1), (NR, U); on ***6*** at Claytor Lake S.P., Pulaski, June 1989 (89-8); stages II, III, on ***6*** in same area, Sept. 1991 (92-6); on ***6*** on W. bank of New R., 1.5 mi above Pembroke, Giles Co., Aug. 13, 1994 (94-30). These are (NR, U) for ***6***.

Ustilago bullata Berk. in Hook., loose smut, was collected on ***3*** in a forage testing nursery on the old Agronomy (Kipps) Farm, VPI & SU, Blacksburg, Montgomery Co., Oct. 17, 1957. Although Farr et al. (1989) give a long list for this fungus on *Bromus* spp., there are no citations for Virginia. (NR, V).

Deuteromycotina - Hyphomycetes:

Bipolaris sorokiniana (Sacc.) Shoem., causing leaf spot on ***8*** was collected at Lovers Leap Overlook, U.S. 58, Patrick Co., May 23, 1993 (93-7). It has been found in Virginia on ***3*** but not on ***8***, according to Farr et al. (1989). (NR, V).

Drechslera bromi (Died.) Shoem., leaf spot of brome grasses, has been collected on ***3*** at the old Agronomy (Kipps) Farm, VPI & SU, Montgomery Co., May 31, 1956 and Aug. 15, 1960 (56-Bi-1), and July 10, 1985 (85-Bi-2) (NR, V); on ***6*** along Rt. 860, near Endicott, Franklin Co., July 9, 1989 (89-46) (NR, U); on ***7*** near Graysontown, Pulaski Co., July 11, 1990 (90-26), near the Rt. 613 bridge across Little R., Snowville, Montgomery Co., July 11, 1990 (90-29). (NR, U).

Periconia atra Corda appeared on incubated dead stems of ***1*** collected at Eggleston, Giles Co., Nov. 15, 1981 (81-Bc-2). (NR, U). This species is not listed by Farr et al. (1989).

P. macrospinosa Lefebvre & Johnson appeared on incubated leaves of ***7*** collected at the Little R. bridge, Rt. 613, Snowville, Montgomery Co., June 11, 1990 (90-29).

Rhynchosporium secalis (Oudem.) J. J. Davis, causing scald, was collected on ***3*** opposite Hethwood Shopping Center, Prices Fork Rd., Montgomery Co., June 26, 1982 (82-Bi-1). It is common on **3** in Montgomery and surrounding counties but we have only a single collection. East of the Mississippi R., it is reported only from New Hampshire (Farr et al., 1989). (NR, V).

Spermospora subulata (R. Sprague) R. Sprague, was collected at the Glade Rd. Plant Pathology field plot area, Montgomery Co., on ***3***, June 14, 1994 (94-7). Although it colonizes other *Bromus* spp., it is not previously reported on ***3*** (Farr et al., 1989). (NR, U).

Deuteromycotina - Hyphomycetes:

Ascochyta agropyri-repentis (R. Sprague) Punithalingham, described by Sprague as *Apiocarpella agropyri* (Sprague, 1950), was collected on ***6*** on Rt. 860, S. slope of the Blue Ridge, Franklin Co., July 9, 1989 (89-46). It may not belong in *Apiocarpella*

as stated by Sutton (1980), but neither is it typical of *Ascochyta*. Three-celled conidia are frequent and in two-celled conidia, the septum is nearer the basal tip. (NR, U).

Ascochyta sorghi Sacc., associated with leaf spots, was collected on ***2*** at the old Horticulture Farm, V.P.I. & S.U. (now The Market Place Shopping Center), Montgomery Co., June 15, 1982 (82-Bco-1); on Gap Mt., 1.5 mi. W. of U.S. 460, Montgomery Co., June 14, 1994; on Brush Mt., in N.W. corner of Roanoke Co., June 24, 1994 (94-16); on ***4*** at The Market Place, June 15, 1982 (82-Bj-1); at Franklin St. and N.S. Rwy., Christiansburg, Montgomery Co.; near Graysontown, Pulaski Co., June 11, 1990 (90-27); at the Little R. bridge on Rt. 613, Montgomery Co., June 11, 1990 (90-30); near the superintendent's house, Claytor Lake S.P., Pulaski, May 30, 1991 (91-25); along N.S. Rwy., 1.5 mi. W. of Whitethorne, Montgomery Co., June 6, 1995 (95-17); on ***6***, S. slope of Blue Ridge, Rt. 860, near Endicott, Franklin Co., July 9, 1989 (89-46); on Rt. 712, Ellett, Montgomery Co., June 6, 1990 (90-22); on ***7*** near Graysontown, Pulaski Co., June 11, 1990 (90-26); at Little R. bridge on Rt. 613, Montgomery Co., June 11, 1990 (90-29); on Rt. 700, 1 mi. below Mt. Lake, Giles Co., May 26, 1991 (91-16); on ***8*** at the old Agronomy (Kipps) Farm, June, 1982 (82-Bt-1). All collections on ***2, 4, 8*** are NR, V. All collections on ***6, 7*** are NR, U. The fungus appears to be a common parasite, causing leaf spots on *Bromus* spp. in the region around Blacksburg.

Colletotrichum graminicola (Ces.) G. W. Wils., the cause of anthracnose, was collected on ***1*** on Rt. 708, in N.W. Montgomery Co., July 1981 (81-Bc-1), (NR, U); on ***3*** on the old Agronomy (Kipps) Farm, Montgomery Co., July 3, 1984 (84-Bi-1), (NR, V); on ***4*** near Graysontown, Pulaski Co., June 11, 1990, (90-27), (NR, U); on ***6***, S. slope of Blue Ridge on Rt. 860, Franklin Co., July 9, 1989 (89-46); and at Ellett on Rt. 712, Montgomery Co., June 6, 1990 (90-22), (NR, V); on ***7*** at 607 Lucas Dr., Blacksburg, Montgomery Co., July 16, 1990 (90-54), (NR, U). This fungus is sometimes pathogenic but it is difficult to tell whether it caused disease or was saprophytic. Since it is so easily detected, it is surprizing that it has not been found on more species than are listed by Farr et al. (1989).

Phaeoseptoria festucae var. *muhlenbergia* R. Sprague ex Punithalingham was found on blades collected on ***2*** at the Glade Rd., Plant Pathology field plot area, Montgomery Co., June 14, 1994 (94-7). Several *Phaeoseptoria* spp. have been found on grasses but only *P. aira* has been reported on a bromegrass and that from Alaska (Farr et al., 1989). (NR, U).

Phloeospora graminearum R. Sprague & Hardison was collected on ***4*** at Ellett, Rt. 712, Montgomery Co., June 6, 1990 (90-23), and near Graysontown, Pulaski Co., June 11, 1990 (90-27), (NR, U); on ***7*** also at Ellett on Rt 712, June 6, 1990 (90-24), and near Graysontown, Pulaski Co., June 11, 1990 (90-26). (NR, U). No *Phloeospora* spp. are reported on *Bromus* spp. by Farr et al. (1989).

Stagonospora bromi Smith & Ramsb., causing a purple-brown leaf spot, was collected on ***3*** at the old Agronomy (Kipps) Farm, Montgomery Co., June 1955 (55-Bi-1). (NR, V).

S. montagnei Cast. & Germano, (= *S. graminella* Sacc.), associated with leaf spots on ***8*** was collected at the Lovers Leap Overlook on U.S. 58, Patrick Co., May 23, 1993, (93-7). (NR, U).

Deuteromycotina - other:

Rhizoctonia solani Kuehn, causing sharp eyespot, was collected on ***6*** on Rt. 712, Ellett, Montgomery Co., June 6, 1990 (90-22). (NR, U).

Calamagrostis spp., reed grass

We have made no collections of *Calamagrostis* in Virginia. However, Farr et al. (1989) report B - *Ustilago striiformis* (Westend.) Neissl as occurring on *C. scribneri* Beal in Virginia; this grass is known only from Washington, Oregon, and Rocky Mountain states. The origin of this questionable report is Fischer (1953).

Cenchrus spp., sandbur

No collections have been made from *Cenchrus* spp.; however, Farr et al. (1989) report A - *Balansia claviceps* Speg., inflorescence blight on *C. echinatus* L. in Virginia where the grass is not known to occur. More than likely, the host was *C. pauciflorus* Benth. (= *C. longispinus* (Hack.) Fern.), which is widespread in Virginia (Roane, 1991).

Chasmanthium spp., wild oats

This genus includes grasses formerly in the genus *Uniola*. No fungi are listed for Virginia in this genus by Farr et al. (1989). We will list our collections under *Uniola*.

Chloris verticillata Nutt., windmill grass

The fungi listed below came from a colony of windmill grass growing in traffic islands at Franklin Rd., and Avenham Ave., Roanoke, collected Aug. 17, 1994.

Ascomycotina:

Leptosphaerulina trifolii (Rost.) Petr., was fruiting on freshly wilted leaves. Although considered primarily as a pathogen of forage legumes, this fungus also colonizes several grass species. Ascospores were muriform, 29-37 X 13-19 μm and were produced in broadly ovate to irregularly saccate asci measuring 85-90 X 50-60 μm (95-35) (see Graham & Luttrell, 1961). (NR, U).

Basidiomycotina:

Ustilago chloridicola Henn., inflorescence smut. This fungus is reported to be only in California by Farr et al. (1989). (NR, EU).

Deuteromycotina - Hyphomycetes:

Bipolaris specifera (Bainier) Subram. fruited quickly on incubated leaves (94-35). (NR, U).

B. zeicola Stout also fruited quickly on incubated leaves (94-35). (NR, U).

Nigrospora sphaerica (Sacc.) Mason was present on newly wilted leaves (94-35). (NR, U).

Cinna arundinacea L., stout woodreed

Ascomycotina:

Phyllachora graminis (Pers.) Fuckel, tar spot, was collected at Gloucester Court House, Aug. 8, 1993 (93-16). It has been known from Virginia for many years (Sprague, 1950).

Basidiomycotina:

Puccinia recondita Roberge ex Desmaz., II, was also collected at Gloucester C.H. (93-16). (NR, V).

Deuteromycotina - Coelomycetes:

Colletotrichum graminicola (Ces.) G. W. Wils., causing anthracnose, was collected at the lake shore, along Va. 16, Hungry Mother S.P., Smyth Co., Sept. 1, 1989 (89-35). (NR, U).

Deuteromycotina - Hyphomycetes

Nigrospora sphaerica (Sacc.) Mason, appeared quickly on incubated leaves collected with *C. graminicola* above (89-35). (NR, U).

In addition, Farr et al. (1989) list A - *Epichloe typhina* (Pers.:Fr.) Tul., and B - *Puccinia graminis* Pers. as occurring in Virginia.

Cinna latifolia (Trevir) Griseb., drooping woodreed

Ascomycotina:

Phaeosphaeria cinnae Shoem. & Babcock, was collected along a stream beside the Blue Ridge Parkway between Rocky Knob and Mabry Mill, Floyd Co., July 24, 1994 (94-21). (NR, U). Shoemaker & Babcock (1989) report specimens only from *C. arundinacea* in Ontario.

Cynodon dactylon (L.) Pers., Bermudagrass

Plasmodiophoromycetes:

Polymyxa graminis Ledingham was identified in roots of plants collected in Broaddus Flats near U.S. 360, Hanover Co., April 7, 1982 (82-Cd-1), and Aug. 23, 1983 (83-Cd-1). This fungus is the vector for three cereal viruses in Virginia. (NR, V).

Basidiomycotina:

Ustilago cynodontis (Henn.) Henn. has been sent to the Plant Clinic at V.P.I. & S.U. several times. A specimen in the class files was received in July 1964; a specimen from Pittsylvania Co., was received in the Clinic June 20, 1991 (91-43). (NR, V).

Deuteromycotina - Hyphomycetes:

Acremoniella verrucosa Tognini appeared on incubated leaves collected on the old Agronomy (Kipps) Farm, V.P.I. & S.U., Montgomery Co., Nov. 11, 1981 (81-Cd-1). The identity was established from the description and illustration given by Ellis (1971). (NR, U).

Bipolaris cynodontis (Marig.) Shoem., was the primary fungus in the collection above (81-Cd-1). Other collections are from Wingina, Nelson Co., Aug. 1, 1984 (84-Cd-1), Montgomery Tunnels, Montgomery Co., Sept. 12, 1989 (89-43) and July 22, 1995 (95-31). The fungus is common on Bermudagrass in this region throughout the growing season and has been known from Virginia for many years.

Deuteromycotina - Coelomycetes:

Amerisporium atrum (Fuckel) Höhn., appeared on incubated leaves collected at Montgomery Tunnels, Montgomery Co., July 22, 1995 (95-31). It is illustrated by von Arx (1981). (NR, U).

Ascochyta sorghi Sacc. was present on leaves in the collection above (95-31). (NR, U.).

Colletotrichum graminicola (Ces.) G. W. Wills. was also in the collection from Montgomery Tunnels (95-31). Surprisingly, it has not been reported on *Cynodon* in eastern states (NR, EU).

Dactylis glomerata L., orchardgrass

Mastigomycotina - Oomycetes:

Sclerospora graminicola (Sacc.) J. Schröt., appeared on one stem of *D. glomerata* in the backyard of our residence at 607 Lucas Dr., Blacksburg, Montgomery Co., July 12, 1995 (95-28). The plant had yellowed upper leaves and elongated spikelet structures. Lemmas were elongated up to 5 cm and were modified to have sheaths and blades, complete with ligules and collars. Sporangiophores and sporangia were present on some spikelets; a photograph is available. Spores are papillate, ovoid to globose, measuring 11-12 X 10-11 μm. Since *Sclerophthora macrospora* (Sacc.) Thir., Shaw, and Naras., was the suspected fungus, a search was made for oospores; none was found. Sporangiospores measured in the low range for *S. graminicola* given by Weston (1924), i.e., 12-34 X 10-20 μm much smaller than sporoangiospores of *S. macrospora*, i.e., 60-70 X 38-52 μm (Sprague, 1950). A disease known as yellow tufts occurs in turf grasses in Virginia and is attributed to *S. macrospora*, but its presence has not been published. Even though the symptoms suggest to us that *S. macrospora* is the probable cause, no flooding occurred where the specimen was collected. Flooding is usually a prerequisite for infection by *S. macrospora*. Therefore, because the fungus has small sporangia and lacks oospores, we have assigned it to *S. graminicola*. (NR, U).

Ascomycotina:

Claviceps purpurea (Fr.:Fr.) Tul., the ergot fungus, has been collected at the old Agronomy Farm, Montgomery Co., July 1982 (82-Dg-2); on Gap Mt., off the forest service road 5 mi. W. of U.S. 460, Montgomery Co., July 10, 1983 (83-Dg-1); in the Roane backyard, Blacksburg, Montgomery Co., July 31, 1990 (90-74); on Rt. 619, Indian Valley, Floyd Co., July 4, 1991 (91-58), and at Dickey Ridge Recreation Center, Skyline Dr., Warren-Rappahannock Co. line, July 11, 1991 (91-62). Farr et al. (1989) list it as occurring in eastern states.

Erysiphe graminis DC. (now *Blumeria graminis* (DC.) E.O. Speer), causing powdery mildew, was collected on Gap Mt., 5 mi. W. of U.S. 460, Montgomery Co., July 3, 1982 (8I-Dg-1). It is known from the eastern states (Farr et al., 1989).

Phaeosphaeria eustoma (Fuckel) L. Holm, occurred on leaves of plants 0.5 mi. W. of Whitethorne, Montgomery Co., June 9, 1991 (91-30). Shoemaker & Babcock (1989) list *D. glomerata* as a host in Canada. (NR, U).

Basidiomycotina:

Puccinia graminis Pers., stem rust, was collected at the Glade Rd., Plant Pathology plots Nov. 28, 1960 (60-Dg-1), Nov. 19, 1983 (83-Dg-2); at the Kipps farm Oct. 12, 1981 (81-Dg-1), Sept. 16, 1982 (82-Dg-4), and Sept. 25, 1982 (82-Dg-3); at the Roane yard July 31, 1990 (90-5) and at Lucas and Dickerson Dr., Blacksburg, July 1993 (93-24); the foregoing are from Montgomery Co.; at Claytor Lake S.P., Pulaski Co.,

Oct. 3, 1982 (82-Dg-6). The fungus has been known on this host in Virginia for many years.

Uromyces dactylidis Otth, stages II, III, rust, was collected at Williamsburg, James City Co., 1948 (48-Dg-1); on the old Agronomy (Kipps) Farm, Montgomery Co., Sept. 27, 1962; and at the Glade Rd. Plant Pathology plots, Aug. 20, 1957, Montgomery Co., (57-Dg-1), at Rt. 700 and Sinking Ck., Giles Co., Nov. 14, 1981 (81-Dg-5); on the V.P.I. & S.U. Horticulture Farm (now The Market Place) Montgomery Co., July 12, 1989 (89-Dg-4); at Claytor Lake S.P., Pulaski Co., June 17, 1990 (90-36); at in the Roane backyard, Montgomery Co., July 1993 (93-24).

Ustilago striiformis (Westend.) Niessl, stripe smut, was collected on the Kipps farm, Montgomery Co., May 31, 1955 (55-Dg-1). Fischer (1953) lists it as from Virginia and eastern states.

Deuteromycetes - Hyphomycetes:

Arthrobotrys oligospora Fresen. appeared on incubated leaves having scald-like lesions collected at the old Horticulture Farm (The Market Place), Montgomery Co., July 18, 1989 (89-Dg-5). The fungus is illustrated by Ellis & Ellis (1985). No doubt it is a saprophyte. (NR, U).

Bipolaris sorokiniana (Sacc.) Shoem. occurred on leaves collected 0.5 mi. W. of Whitethorne, Montgomery Co., June 9, 1991 (91-39). The fungus occurred on nearby barley. (NR, U).

Cercosporidium graminis (Fuckel) Deighton was collected at Williamsburg, James City Co., June 1948 (48-Dg-1); the Glade Rd. Plant Pathology plots, Montgomery Co., Sept. 1955 (83-Dg-2) and May 25, 1990 (90-11); at the old Horticulture Farm (The Market Place), Montgomery Co., July 12, 1989 (89-Dg-4); at Lucas and Dickerson Dr., Blacksburg, Montgomery Co., July 1993 (93-24); from County Agent, Hanover Co., Sept. 2, 1994 (Plant Clinic 94-1385); at Roane residence, Lucas Dr., Blacksburg, Montgomery Co., July 17, 1995 (95-29).

Drechslera dactylidis Shoem., causing leaf spot, was sent to the Plant Clinic from Hanover Co., May 1, 1989 (89-Dg-1). Orchardgrass is not commonly grown in eastern Virginia; the fungus was believed to cause the grass to die out. (NR, V).

Fusarium acuminatum Ellis & Everh. occurred on leaves collected at the Kipps farm Sept. 16, 1982 (82-Dg-4). Although it is listed as a root colonizing fungus (Farr et al., 1989), it has been found on leaves of several grasses. (NR, EU).

Mastigosporium rubricosum (Dearn. & Barth.) Nannf., causing eyespot, was collected on Rt. 613 at the N. end of Mt. Lake, Giles Co., June 24, 1990 (90-45). (NR, V).

Nigrospora sphaerica (Sacc.) Mason, appeared on leaves of plants sent to the Plant Clinic from Hanover Co., Sept. 2, 1994 (94-46). The fungus often appears on incubated leaves of various grasses and may be a saprophyte. (NR, U).

Rhynchosporium orthosporum Caldwell causing scald, has been collected on the S. slope of Gap Mt., 5 mi W. of U.S. 460, Montgomery Co., July 3, 1982 (82-Dg-1); at the old Horticulture Farm (The Market Place), Montgomery Co., Sept. 19, 1989 (89-48); at the lake shore, Claytor Lake S.P., Pulaski Co., June 17, 1990 (90-36); in Roane's yard, Blacksburg, Montgomery Co., July 1, 1994 (94-9) and July 17, 1995 (95-29); at Groundhog Mt., Blue Ridge Pkwy., Carroll Co., June 18, 1995 (95-23). (NR, V).

Deuteromycotina - Coelomycetes:

Ascochyta graminea (Sacc.) R. Sprague & Johnson, associated with leaf spots, was collected 0.5 mi. W. of Whitethorne, Montgomery Co., June 9, 1991 (91-30). Spores measured 14-17 X 4-5 μm. (NR, U).

A. sorghi Sacc., associated with leaf spots, was collected on Rt. 613 at the ridge overlooking Stoney Ck. Valley (= then the junction with Appalachian Tr.), Giles Co., June 24, 1990 (90-45). Spores measured 12-19 X 1.5-3.0 μm on the average, slenderer than those of *A. graminea*. (NR, V).

Colletotrichum graminicola (Ces.) G. W. Wils., causing anthracnose, has been found in many collections. In Montgomery Co., at several locations in Blacksburg, Oct. 1981 (81-Dg-2); Oct. 12, 1981 (81-Dg-4); Nov. 11, 1983 (83-Dg-2); May 30, 1990 (90-16); July 1993 (93-24); on the old Horticulture Farm (The Market Place) July 12, 1989 (89-Dg-4); at Camp Fincastle, Botetourt Co, Oct. 29, 1989 (89-67); at Rustburg, Campbell Co., July 13, 1993 (93-15); at Groundhog Mt., Blue Ridge Pkwy., Carroll Co., June 18, 1995 (95-23); at Delaplane, Fauquier Co. (Plant Clinic no. 89-2318), Aug. 30, 1989 (89-Dg-6); on Rt. 613 at N. end of Mt. Lake, Giles Co. June 24, 1990 and May 26, 1991 (90-45, 91-20); along the lake shore, Claytor Lake S.P., Pulaski Co., Oct. 3, 1982, July 14, 1989, and June 17, 1990 (82-Dg-6, 89-8, 90-36). The fungus has been known on *D. glomerata* in Virginia for many years. No doubt it can be found wherever the grass grows.

Dilophospora alopecuri (Fr.) Fr., causing twist, was found at the eastern continental divide, old Horticulture Farm (The Market Place), Montgomery Co., June 26, 1989 (89-Dg-3). Williams (1964) reported its occurrence in Virginia but did not list a collection site.

Pestalotiopsis disseminata (Thuem.) Stayaert. A fungus fitting the description of *Pestalotia disseminata* Thuem. as described by Guba (1961, p. 139), appeared on incubated leaves collected on N. Main St. near U.S. 460, Blacksburg, Montgomery Co., May 30, 1990 (90-16). It appeared to be saprophytic; no representatives of this genus are reported on grasses (Farr et al., 1989). (NR, U).

Phoma sorghina (Sacc.) Boerema., Doren., and Van Kest., occurred on leaves collected 0.5 mi. W. of Whitethorne, Montgomery Co., June 9, 1991 (91-39). Spores measured 4-6 X 2.3 μm thus fitting well within the dimensions given by Sprague (1950). (NR, U).

Sphaerellopsis filum (Biv.-Bern. ex. Fr.) Sutton (= *Darluca filum*) is a parasite of rusts. It was found in *Puccinia graminis* on *D. glomerata* collected at the Glade Rd. Plant Pathology plots, Blacksburg, Montgomery Co., Nov. 28, 1960 (see above, 60-Dg-1). (NR, U).

Stagonospora arenaria (Sacc.) Sacc., causing purple-brown leaf blotch, has been collected from the Rocky Mount area, Franklin Co., Apr. 30, 1990 (90-12); Rt. 770 and Sinking Ck., Giles Co., June 12, 1993 (93-10); and the following sites in Montgomery Co.: S. slope Gap Mt., 5 mi W. of U.S. 460, July 3, 1982 (82-Dg-1); the Kipps farm, Sept. 16, 1982 (82-Dg-5); Glade Rd. Plant Pathology plots, Nov. 9, 1983 (83-Dg-2); near Pandapas Pond, June 9, 1985 (85-Dg-1); on the old Horticulture Farm (The Market Place) July 12, 1989 (89-Dg-4); Roane's backyard, Blacksburg, July 1990 (91-36); 0.5 mi. W. of Whitethorne, June 9, 1991 (91-39). Spores of *S. arenaria*

measure 25-60 X 2.5-5.0 µm and are nearly cylindrical, not constricted at the septa; compare with *S. maculata* below. (NR, V).

S. maculata Castallani & Germano, purple leaf spot, is characterized by shorter, wider, boat-shaped spores, constricted at the septa, measuring 27-40 X 4.8-6.5 µm. Specimens were collected at Rustburg, Campbell Co., July 13, 1993 (93-15); at Groundhog Mt., Blue Ridge Pkwy., Carroll Co., June 18, 1995 (95-23); in Roane's yard, Blacksburg, Montgomery Co., Oct. 1981, July 12, 1995, and July 17, 1995 (81-Dg-1, 95-28, 95-29); along the lake shore, Claytor Lake S.P., Pulaski Co., June 17, 1990 (90-36); on Brush Mt. near the Audie Murphy monument, Roanoke Co., June 14, 1994 (94-10). The two *Stagnospora* spp. sometimes occur in mixed infections; both are widespread in Virginia. (NR, V).

Deuteromycotina - other:

Rhizoctonia solani Kuehn, causing foliage blight, was collected along the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-3). According to Farr et al. (1989), Drake (1958) reported *R. solani* on *D. glomerata*. Drake said that *R. solani* occurred on *Lotus* cvs. planted in mixed stands with *D. glomerata*. Thus, this is the first report of *R. solani* on *D. glomerata* in Virginia. (NR, V).

Danthonia, oatgrass

Three species of *Danthonia* occur in Virginia; we have identified fungi occurring on *D. spicata* (L.) Beauv. ex. Roem. & Schult., and *D. compressa* Aust.

Ascomycotina:

Atkinsonella hypoxylon (Peck) Diehl, black choke, was found on *D. spicata* along the hiking trail in woods behind the swimming area, Claytor Lake S.P., Pulaski Co., June 21, 1991 (91-52), and on *D. compressa* along the Blue Ridge Pkwy., between Rocky Knob and Mabry Mill, Patrick Co., June 18, 1995 (95-22). Diehl (1950) cites specimens in herbaria from Virginia as early as 1918 but does not state which species was the host. The fungus is generally distributed in eastern states on *D. compressa* and *D. spicata* (Farr et al., 1989).

Basidiomycotina:

Ustilago residua G. P. Clinton, panicle smut, was collected on *D. spicata* along the War Spur Trail off Rt. 613 (Salt Sulphur Tnpk.), Giles Co., June 22, 1980, and May 26, 1991 (80-Ds-1, 91-18); and on the S. slope of Gap Mt., 1.5 mi. W. of U.S. 460, Montgomery Co., May 31, 1989 (89-76). It was collected on *D. compressa* on the War Spur Trail June 24, 1990 (90-44). The fungus has long been known on *Danthonia* spp. in Virginia (Farr et al., 1989).

Deuteromycotina - Hyphomycetes:

Curvularia geniculata (Tracy & Earle) Boedijn, leaf mold, was collected on *D. spicata* at White Top Mt., Smyth-Grayson Co. line, Aug. 31, 1989 (89-69); and on S. slope of Gap Mt., 5 mi. W. of U.S. 460, Montgomery Co., July 3, 1982 (82-Ds-2). (NR, U).

Drechslera campanulata (Lév.) Sutton, causing leaf spot, was collected on *D. spicata* along Forest Service road 630 off Rt. 621, N.E. Montgomery Co., June 9, 1991 (91-40). (NR, U).

Microdochium bolleyi (R. Sprague) DeHoog & Hermanides-Nijhot, was found associated with bright tan leaf spots in *D. spicata* plants collected on the south slope of Gap Mt., Montgomery Co., 5 mi. W. of U.S. 460 on July 3, 1982 and 1 mi. W. of U.S. 460, May 31, 1989 (82-Ds-1, 89-Ds-1). (NR, EU).

Spermospora subulata (R. Sprague) R. Sprague occurred on incubated leaves of *D. compressa* collected on the Blue Ridge Pkwy., Patrick Co., June 18, 1995 (95-22). (NR, U).

Volutella ciliata (Alb. & Schwein.) Fr., produced scattered sporodochia on incubated leaves of *D. spicata* collected on Forest Service road 630 off Rt. 621, N.E. Montgomery Co., June 9, 1991 (91-40). (NR, U). See Ellis & Ellis (1985).

Deuteromycotina - Coelomycetes

Amerosporium atrum (Fuckel) Höhn., appeared on incubated leaves of *D. spicata* collected along the Forest Service road, S. slope of Gap Mt., 5 mi. W. of U.S. 460, Montgomery Co., July 3, 1982 (82-Ds-2). (NR, U).

Colletotrichum graminicola (Ces.) G. W. Wils., anthracnose, was collected on *D. spicata* along the Forest Service road 630 off Rt. 631, N.E. Montgomery Co., June 9, 1991 (91-40). It is reported only from N.W. United States (Farr et al., 1989). (NR, EU). It also occurred on *D. compressa* along the Blue Ridge Pkwy, Patrick Co., June 18, 1995 (95-22). (NR, EU).

Phomatospora dinemasporium J. Webster, occurred on incubated leaves of *D. compressa* from the Blue Ridge Pkwy. site above, collected June 18, 1995 (95-22). (NR, U).

Pseudoseptoria donacis (Pass.) Sutton, causing halo spot, occurred on leaves of *D. spicata* collected 1 mi. W. of U.S. 460 on S. slope of Gap Mt., Montgomery Co., July 3, 1982 (82-Ds-2). Spores were lunate, measuring 15-29 X 2.5 µm. Sprague (1950) describes the variability of spores from different localities and hosts. Most records are from N.W. United States; our collection is rare for eastern states. (NR, U).

Stagonospora simplicior Sacc. & Briard or *S. brachyelytri* Greene was collected on *D. spicata*. Spores were cylindrical to slightly tapered, with rounded ends, sometimes slightly constricted at the three septa, cells vacuolate as on *S. simplicior*, measuring 22-25 X 6-7 µm (very uniform). Spores of *S. simplicior* are broader and longer, 28-38 X 8-9 µm; those of *S. brachyelytri* are 13-33 X 5-7 µm (Sprague, 1950). We tentatively assign our collection to *S. brachyelytri*. *S. subseriata* (Desmaz.) Sacc. is known on a western *Danthonia* but it has boat-shaped spores. In any case, our collection made June 9, 1991, on Forest Service road 630, off Rt. 631, N.E. Montgomery Co. is a NR, U.

In addition, Farr et al. (1989) list A - *Epichloe typhina* (Pers:Fr.) Tul, causing choke, on *D. compressa* in Virginia and on *D. spicata* in eastern U.S.

Dichanthelium spp., panic grasses

Dichanthelium (formerly subgenus of *Panicum*) is represented by 20 species in Virginia (Roane, 1991). Many of those listed by Hitchcock & Chase (1950) have been reduced to synonyms by Gould, Clark, & Shaw (Gould and Clark, 1983). We have identified fungi on eight former *Panicum* spp., now regarded as *Dichanthalium* spp. In the discussion, species will be referred to by number; for synonyms, see Roane (1991); in Farr et al. (1989), see under *Panicum*.

1. *D. acuminatum* (Swartz.) Gould & Clark, southern panic.
2. *D. boscii* (Poir.) Gould & Clark, no common name.
3. *D. clandestinum* (L.) Gould, deer tongue.
4. *D. commutatum* (Schult.) Gould & Clark, variable panic.
5. *D. depauperatum* (Muhl.) Gould, starved panic.
6. *D. dichotomum* (L.) Gould, forking panic.
7. *D. laxiflorum* (Lam.) Gould, loose-flowered panic.

Ascomycotina:

Mycosphaerella allicina (Fr.:Fr.) Vestergr. occurred on ***6*** in the Audie Murphy Monument area, Brush Mt., near Craig-Roanoke Co. line, June 24, 1994 (94-14). Ascospores were 1-septate, constricted, cells unequal, hyaline, 17-19 X 6-7 μm. See Ellis & Ellis, p. 464 (1985). (NR, U).

Paraphaeosphaeria michotii (Westend.) O. Eriksson, was collected on leaves of ***1***. The fungus was associated with bright tan lesions on leaves collected along the lake shore at Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-4). See Ellis & Ellis pp. 464, 540 (1985). (NR, U).

Phyllachora punctum (Schwein.) Orton & Stevens has been collected on ***1*** along the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-4) (NR, U); on ***2*** along the lake-ridge trail, Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-37); and along Mt. Rogers Recreation Area Hdqtrs. nature trail Va. 16, Smyth Co., Aug. 14, 1994 (94-28), (NR, U); on ***3*** at Little R. bridge on Rt. 613, Montgomery Co., Aug. 4, 1989 (89-22) and along Va. 8 & Dodds Ck., S. of Floyd, Oct. 3, 1994 (95-9); on ***4*** along lake-ridge trail, Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-39), (NR, U). In addition, *D. depauperatum* and *D. sphaerocarpon* (Ell.) Gould are listed by Farr et al. (1989) as hosts of this fungus in Virginia.

Basidiomycotina:

A rust fungus occurred on ***2*** at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-38). No teliospores were present. Specimens were sent to J. F. Hennen of the Arthur (Rust) Herbarium, Purdue Univ. but he could not make a positive identification. *Puccinia emaculata* Schwein. and *Uromyces graminicola* Burrill are reported to occur in Virginia on unidentified *Panicum* spp. (Farr et al., 1989) which in the revised genus may include *Dichanthelium* spp.

Deuteromycotina - Hyphomycetes:

Exserohilum monoceras (Drechs.) Leonard & Suggs, was associated with elliptical, zonate, brown lesions on ***3*** collected on the lake shore, Claytor Lake S.P., Pulaski Co., Aug. 11, 1989 (89-33). (NR, U).

Microdochium bolleyi (R. Sprague) DeHoog & Herm.-Nijhof, associated with circular, tan leaf spots, was collected on ***2, 4, 5*** in a small area off the Gap Mt.-Poverty Ck. Forest Service Rd. 1.5 mi. W. of U.S. 460, Montgomery Co., May 28-31, 1989 (89-Db-1, 89-De-1, 89-Dd-1); and on ***6*** Forest Service Rd. 630 of Rt. 621, N.E. Montgomery Co., June 9, 1991 (91-33). (NR, U on all hosts).

Nigrospora sphaerica (Sacc.) Mason, was present on dead culms of living plants of ***1*** collected on the old Horticulture Farm (The Market Place), Montgomery Co., Sept. 19, 1989 (89-49). (NR, EU).

Pyricularia grisea (Cooke) Sacc., associated with bright tan leaf spots on ***1*** was collected at the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-4). (NR, U).

Ramularia graminicola Peck, was associated with leaf spots on ***2*** collected on the lake-ridge trail, Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-37); and was associated with linear to elliptical leaf spots on ***3***, collected on the old Horticulture Farm (The Market Place), Montgomery Co., June 21, 1989 (89-5). The description of this fungus is given by Sprague (1950). Peck's (1891) original description was not available. Although our collection satisfactorily fits *Ramularia,* the specific epithet may be questioned; however, this genus has not been found previously on ***2*** and ***3***. (NR, U).

Tetraploa aristata Berk. & Broome was associated with leaf streaks on ***3***, collected on the old Horticulture Farm (The Market Place), Montgomery Co., Oct. 11, 1989 (89-54). (NR, U).

Deuteromycotina - Coelomycetes:

Ascochyta sorghi Sacc., was collected on ***3*** by Diane Reaver along Sinking Ck. at the end of Rt. 770, 4 mi. E. of Newport, Giles Co., July 13, 1990 (90-53). (NR, U).

Chaetoseptoria sp., associated with small brown spots occurred on *7*, collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-77). Pycnidia at first submerged, erumpent, smooth, later becoming nearly superficial and crowned with 10 or more brown, acute, 2-5-septate setae, up to 160 μm long. Pycnidiospores measured 60-70 X 1.5-2.0 μm, were 2-5-septate (mostly 3-sep.). A second collection on ***1*** came from the old Horticulture Farm (The Market Place), Montgomery Co., Sept. 19, 1989 (89-49). Pycnidia measured only up to 45μm and spores were 45-60 X 1 μm smaller, than in the Smyth Co. collection. Only *C. vignae* on *Vigna unguiculata* (L.) Walp. is listed by Farr et al. (1989). This fungus genus is not listed on grass hosts. (NR, U).

Colletotrichum graminicola (Ces.) G. W. Wils., causing anthracnose, was collected on ***2*** at Adner, Gloucester Co., Sept. 24, 1989 (89-51). (NR, U).

Phomatospora dinemasporium J. Webster, occurred on *7* collected at Hungry Mother S.P., Smyth Co., Sept. 3, 1989 (89-77). (NR, U). This fungus is described and illustrated by Sutton (1980).

Phoma sorghina (Sacc.) Boerema, Doren., & Van Kesteren, with ellipsoid pycnidiospores measuring 3-9 X 2-3 μm was collected on ***3*** at the old Horticulture Farm (The Market Place), Montgomery Co., Oct. 11, 1989 (89-54). (NR, U).

Phyllosticta anthoxella R. Sprague, having bacillar-shaped, guttulate spores measuring 5-7 X 0.8-1.5 μm associated with linear stripes on overwintered culms of ***3***, was collected at the lake shore, Claytor Lake S.P., Pulaski Co., Mar. 25, 1991 (91-4). The species from which this fungus was originally collected by Sprague (1950), *Anthoxanthum odoratum* L., was growing close to the stand of ***3***. (NR, U).

Phyllosticta healdii R. Sprague, having biguttulate oval spores, measuring 11-15 X 3.5-5.0 μm was collected on ***1*** at the lake shore, Claytor Lake S.P., Pulaski Co., July 14, 1989 (89-4), (NR, EU); and on ***6*** near the Audie Murphy Monument on Brush Mt., N.W. Roanoke Co., June 24, 1994 (94-14). (NR, U). Sprague (1950) described *P. healdii* from *Panicum huahucae* Ashe, included by Gould & Clark (1983) in ***1*** *D. acuminatum* (Roane, 1991).

Septoria arechavaletae Wint. was collected on *6* on Forest Service Rd. 630 off Rt. 621, N.E. Montgomery Co., June 9, 1991 (91-33). Spores were 3-8-septate, filiform-vermiform 50-100 X 1.0-1.2 µm Sprague (1946) questions the validity of this species and suggests it should be included in *S. tandilensis*. The only collection of *S. arechavaletae* to date was that of Fairchild on *Panicum capillare* L. in Virginia (Sprague 1946). We hesitatingly call our collection a NR, U.

S. tandilensis Speg., causing a leaf spot, was collected along the lake shore at Claytor Lake S.P., Pulaski Co. on *1* July 14, 1989, and on *3* Oct. 10, 1988. Pycnidia were very prevalent in lesions on leaves in the collections. (NR, V).

Stagonospora simplicior Sacc. & Briard, associated with elliptical leaf spots on *2* & *3* has been collected on *2* at Hungry Mother S.P., Smyth Co., Sept. 3, 1989, and at Adner, Gloucester Co., Sept. 24, 1989. (NR, U). It was collected on *3* on Gap Mt., 1 mi. W. of U.S. 460, Montgomery Co., July 1985; at Rt. 613 and Little R., Montgomery Co., Aug. 4, 1989; on the lake-ridge trail, Hungry Mother S.P., Smyth Co., Sept. 3, 1989; and on the lake shore Claytor Lake S.P., on overwintered stems, Mar. 25, 1991. (NR, U).

Digitaria spp., crabgrasses

Roane (1991) lists five species of *Digitaria* in Virginia; we have collected and identified fungi on only two species.

1. *D. ischaemum* (Schreb.) Schreb. ex. Muhl.
2. *D. sanguinalis* (L.) Scop.

Ascomycotina:

Pleospora sp. or *Pyrenophora* sp. We have found an ascomycetous fungus with sunken to erumpent, smooth pseudothecia, bearing cylindric to slightly saccate bitunicate asci, and muriform, dark brown, ascospores, with 3-5 transverse septa, constricted at the septa, blunt on one end, more tapering on other, measuring 29-36 X 11-17 µm, occurring on frosted leaves of *1* at Camp Fincastle, Botetourt Co., Oct. 29, 1989. More careful work is needed before we can make a definite determination. Nothing approaching *Pyrenophora* or *Pleospora* has been reported on crabgrass.

Basidiomycotina:

Ustilago syntherismae (Schwein.) Peck, has been identified on *1* from Augusta Co., (V.P.I. & S.U. Pl. Clinic no. 82-2794), Oct. 6, 1982 (82-Di-2); from Collinsville at U.S. 220 (Business) and Rt. 732, Henry Co., Sept. 25, 1994; from Christiansburg, Montgomery Co., Sept. 28, 1982 (82-Di-1); on *2* from Roane's yard, Blacksburg, Montgomery Co., Oct. 12, 1981 (81-Ds-1); on *1*, Sept. 16, 1995 (95-36) and *2* Sept. 8, 1991, both in the cabin area, Claytor Lake S.P., Pulaski Co. There are previous reports on *1* and *2* and also on *D. filiformis* (L.) Koel. from Virginia (Farr et al., 1989). Although the hosts flower from June to October, smutted racemes do not appear before late August in Virginia.

Deuteromycotina - Hyphomycetes:

Curvularia intermedia Boedijn appeared on incubated leaves of *1* collected at U.S. 220 & Rt. 732, Collinsville, Henry Co., Sept. 25, 1994 (94-58). Spores were asymetrical, 3-septate, middle septum median, having an inconspicuous hilum, and measuring 25-32 X 15-18 µm. The fungus is illustrated by Ellis (1971). (NR, U).

Curvularia trifolii (Kauf.) Boedijn was collected on frost-killed leaves of *1* from Camp Fincastle, Botetourt Co., Oct. 29, 1989. Like *C. intermedia, C. trifolii* has 3-septate, asymmetrical spores, but the enlarged second cell forces the middle septum below the median. There is a protruding hilum. (NR, EU).

Pyricularia grisea (Cooke) Sacc. occurs commonly on *2* throughout Virginia. Collections have been made from Charlotte, King & Queen, Montgomery, and Pulaski Cos. beginning in early August. Oddly, the fungus occurs on *1* & *2* throughout their ranges, but we have no records of it on *1*.

Tetraploa aristata Berk. & Broome was collected on *2* at Broaddus Flats, Hanover Co., Aug. 23, 1983. (NR, U).

Deuteromycotina - Coelomycetes:

Collectotrichum graminicola (Ces.) G. W. Wils., was collected on *1* near the woods behind the marina at Claytor Lake S.P., Pulaski Co., Oct. 30, 1995 (95-49). (NR, V).

DISCUSSION AND SUMMARY

We have listed fungi on Virginia grass genera *Aegilops* through *Digitaria* (A through D). We have made no effort to determine whether the fungus in an association is saprophytic or parasitic. When we incubated plant parts, *Alternaria, Cladosporium*, *Epicoccum*, and *Penicillium* invariably appeared. We regarded them as saprophytes and ignored them. The fungi we reported seemed to be associated with a symptom or disintegration of the host we collected. Despite our position, we recognize that some of our reported fungi may be only saprophytes but their frequent association with different components of the incubated material prompted us to accept them as a regularly occurring partner. Their presence is recognized, and they are regarded as elements of our mycoflora. Many associations are reported as new for the United States (NR, U), for eastern United States (NR, EU), or for Virginia (NR, V). The large number of new records may be attributed to the fact that no one before us has collected extensively the fungus-grass associations occurring in Virginia.

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LITERATURE CITED

Anonymous. 1960. Index of Plant Diseases in the United States. U.S. Dept. Agric. Handbook No. 165. Washington, D.C. 531 pp.

Arx, J. A. von. 1981. The Genera of Fungi Sporulating in Pure Culture. J. Cramer, Vaduz, Germany. 424 pp.

Cummins, G. B. 1971. The Rust Fungi of Cereals, Grasses and Bamboos. Springer-Verlag, N.Y. 570 pp.

Dennis, R. W. G. 1978. British Ascomycetes. J. Cramer, Vaduz, Germany. 585 pp.

Diehl, W. W. 1950. *Balansia* and the Balansiae in America. Agric. Monograph No. 4. U.S. Dept. Agric. 82 pp. & 11 pl.

Drake, C. R. 1958. Diseases of birdfoot trefoil in six southeastern states in 1956 and 1957. Plant Dis. Reptr. 42:145-146.

Ellis, M. B. 1971. Dematiaceous Hyphomycetes. Commonwealth Mycological Inst., Kew, Surrey, England. 608 pp.

Ellis, M. B., and J. Pamela Ellis. 1985. Microfungi on Land Plants: An Identification Handbook. Macmillan Publ. Co., New York. 818 pp.

Farr, D. F., G. F. Bills, G. P. Chamuris, and A. Y. Rossman. 1989. Fungi on Plants and Plant Products in the United States. Amer. Phytopathological Soc. Press., St. Paul, Minn. 1252 pp.

Fischer, G. W. 1953. Manual of the North American Smut Fungi. The Ronald Press Co., New York. 343 pp.

Gould, F. W., and R. B. Shaw. 1983. Grass Systematics. 2nd ed. Texas A & M Press, College Station, Tex. 347 pp.

Graham, J. H., and E. S. Luttrell. 1961. Species of *Leptosphaerulina* on forage plants. Phytopathology 51:680-693.

Guba, E. F. 1961. Monograph of *Monochaetia* and *Pestalotia*. Harvard Univ. Press, Cambridge, Mass. 342 pp.

Harvill, A. M., Jr., T. R. Bradley, C. E. Stevens, T. F. Wieboldt, D. M. E. Ware, and D. W. Ogle. 1986. Atlas of the Virginia Flora. Va. Botanical Associates, Farmville, Va., 2nd ed. 135 pp.

Hitchcock, A. S., and Agnes Chase. 1951. Manual of Grasses of the United States. 2nd ed. U.S. Dept. Agric. Misc. Publ. 200. 1051 pp.

Roane, C. W., and M. K. Roane. 1984. *Epichloe typhina* in colonies of *Agrostis perennans*. (Abstr.). Phytopathology 74:758.

Roane, C. W., and M. K. Roane. 1991. New hosts for graminicolous fungi in Virginia. 1989-1990. (Abstr.). Va. J. Sci. 42:189.

Roane, C. W., and M. K. Roane. 1994. Graminicolous fungi of Virginia: Fungi associated with cereals. Va. J. Sci. 45:279-296.

Roane, M. K. 1991. The grasses of Virginia. Va. J. Sci. 42:3-100.

Roane, M. K., and C. W. Roane. 1984. New hosts of fungi found on small grains, corn and perennial forage grasses. (Abstr.). Phytopathology 74:792.

Roane, M. K., and C. W. Roane. 1985. New hosts for fungi found on grasses in Virginia. (Abstr.). Phytopathology 75:628.

Roane, M. K., and C. W. Roane. 1991. Graminicolous fungi new to Virginia: 1989-1990. (Abstr.). Va. J. Sci. 41:188.

Shoemaker, R. A., and C. E. Babcock. 1989. *Phaeosphaeria*. Can. J. Bot. 67:1500-1599.

Sprague, R. 1946. Additions to the Fungi Imperfecti on grasses in the United States. Mycologia 38:52-64.

Sprague, R. 1950. Diseases of Cereals and Grasses in North America. The Ronald Press Co., New York. 538 pp.

Sutton, B. C. 1980. The Coelomycetes. Commonwealth Mycological Inst., Kew, Surrey, England. 696 pp.

Weston, W. H., Jr. 1924. Nocturnal production of conidia by *Sclerospora graminicola*. J. Agric. Res. 27:771-784 & 2 pl.

Williams, A. S. 1964. Twist disease of orchardgrass in Virginia. Plant Dis. Reptr. 48:119.