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Key words

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Abstract Novel species of microfungi described in the present study include the following from South Africa: *Camarosporium aloes*, *Phaeococcomyces aloes* and *Phoma aloes* from *Aloe*, *C. psoraleae*, *Diaporthe psoraleae* and *D. psoraleae-pinnatae* from *Psoralea*, *Colletotrichum euphorbiae* from *Euphorbia*, *Coniothyrium prosopidis* and *Peyronellaea prosopidis* from *Prosopis*, *Diaporthe cassines* from *Cassine*, *D. diospyricola* from *Diospyros*, *Diaporthe maytenicola* from *Maytenus*, *Harknessia proteae* from *Protea*, *Neofusicoccum ursorum* and *N. cryptoaustrale* from *Eucalyptus*, *Ochrocladosporium adansoniae* from *Adansonia*, *Pilidium pseudoconcavum* from *Greyia radlkoferi*, *Stagonospora pseudopaludosa* from *Phragmites* and *Toxicocladosporium ficiniae* from *Ficinia*. Several species were also described from Thailand, namely: *Chaetopsina pini* and *C. pinicola* from *Pinus* spp., *Myrmecridium thailandicum* from reed litter, *Passalora pseudotithoniae* from *Tithonia*, *Pallidocercospora ventilago* from *Ventilago*, *Pyricularia bothriochloae* from *Bothriochloa* and *Sphaerulina rhododendricola* from *Rhododendron*. Novelties from Spain include *Cladophialophora multiseptata*, *Knufia tsunedae* and *Pleuroascus rectipilus* from soil and *Cyphellophora catalaunica* from river sediments. Species from the USA include *Bipolaris drechsleri* from *Microstegium*, *Calonectria blephiliae* from *Blephilia*, *Kellermania macrospora* (epitype) and *K. pseudoyuccigena* from *Yucca*. Three new species are described from Mexico, namely *Neophaeosphaeria agaves* and *K. agaves* from *Agave* and *Phytophthora ipomoeae* from *Ipomoea*. Other African species include *Calonectria mossambicensis* from *Eucalyptus* (Mozambique), *Harzia cameroonensis* from an unknown creeper (Cameroon), *Mastigosporella anisophylleae* from *Anisophyllea* (Zambia) and *Teratosphaeria terminaliae* from *Terminalia* (Zimbabwe). Species from Europe include *Auxarthron longisporum* from forest soil (Portugal), *Discosia pseudoartocreas* from *Tilia* (Austria), *Paraconiothyrium polonense* and *P. lycopodinum* from *Lycopodium* (Poland) and *Stachybotrys oleronensis* from *Iris* (France). Two species of *Chrysosporium* are described from Antarctica, namely *C. magnasporum* and *C. oceanitesii*. Finally, *Licea xanthospora* is described from Australia, *Hypochnicium huinayensis* from Chile and *Custingophora blanchettei* from Uruguay. Novel genera of *Ascomycetes* include *Neomycosphaerella* from *Pseudopentameris macrantha* (South Africa), and *Paramycosphaerella* from *Brachystegia* sp. (Zimbabwe). Novel hyphomycete genera include *Pseudocatenomycopsis* from *Rothmannia* (Zambia), *Neopseudocercospora* from *Terminalia* (Zambia) and *Neodeightoniella* from *Phragmites* (South Africa), while *Dimorphiopsis* from *Brachystegia* (Zambia) represents a novel coelomycetous genus. Furthermore, *Alanphillipsia* is introduced as a new genus in the *Botryosphaeriaceae* with four species, *A. aloes*, *A. aloeigena* and *A. aloetica* from *Aloe* spp. and *A. euphorbiae* from *Euphorbia* sp. (South Africa). A new combination is also proposed for *Brachysporium torulosum* (Deightoniella black tip of banana) as *Corynespora torulosa*. Morphological and culture characteristics along with ITS DNA barcodes are provided for all taxa.

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Bipolaris drechsleri Manamgoda & Minnis, *sp. nov*.

Etymology. Named in honour of Charles Drechsler (1892–1986), a USDA scientist who worked on this group of fungi.

Leaf spots irregular, small, distinct, purplish, with dark margin, surrounded by a chlorotic halo. *Conidiophores* macronematous, arising singly or in groups of two to three, straight to flexuous, cylindrical, geniculate in upper part, simple or with one dichotomous branch, pale brown, septate, smooth-walled, (74–)95–300(–602) × 4–6 µm ($\bar{x}$ = 250, SD = 152, n = 35; $\bar{x}$ = 5, SD = 1, n = 35). *Conidiogenous cells* integrated, intercalary, with sympodial proliferation, monotretic or polytretic, dark brown, with circular scars. *Conidia* solitary, curved or straight, ellipsoidal, obclavate, obclavate-ellipsoidal, rostrate, rarely obovoid, apex and base obtuse, smooth-walled, pale to dark golden-brown, sometimes paler in end cells, (39–)50–80(–102) × (10–)13–19(–20) µm ($\bar{x}$ = 66, SD = 14, n = 125; $\bar{x}$ = 16, SD = 3, n = 125), 3–10-distoseptate ($\bar{x}$ = 7), septa accentuated; hilum inconspicuous or slightly protuberant, dark brown to black; germinating with a germ tube at each end of conidia.

Culture characteristics — Colonies (35–)45–60(–70) mm diam on PDA (Difco) after 5 d at 25 °C in dark, white when young, becoming whitish grey at maturity; margin irregular, effuse, velvety, concolorous; stromata not formed in culture. Reverse black, with white margin.

Habitat — On living leaves of *Microstegium vimineum* and other grasses as in Kleczewski et al. (2012).

Distribution — USA (Indiana, Maryland, West Virginia).

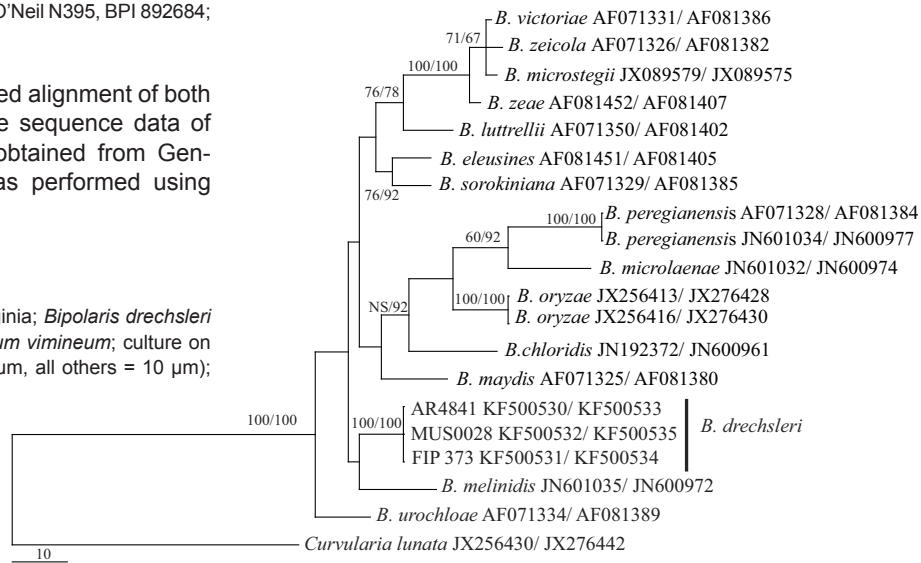
Typus. USA, Indiana, Big Oaks Wildlife Refuge, on living leaves of *Microstegium vimineum*, 2010, *N. Kleczewski* (holotype BPI 892682; ex-type culture AR4841 = CBS 136207, MycoBank MB 805272).

Additional material examined. USA, West Virginia, Arnoldsburg, on living leaves of *Microstegium vimineum*, *N. Kleczewski*, BPI 892683; culture MI036 = CBS 136208; Maryland, Montgomery Co., Wheaton, Brookside Garden, on an unidentified ornamental grass, Oct. 1995, N. O'Neil N395, BPI 892684; culture FIP 373= CBS 136245.

Phylogenetic analysis — A concatenated alignment of both ITS and GPDH loci was made using the sequence data of *B. drechsleri* and *Bipolaris* sequences obtained from GenBank. A maximum likelihood search was performed using the RAxML BlackBox v. 7.6.3 in CIPRES Science Gateway platform (Miller et al. 2010). Parsimony trees were inferred by PAUP v. 4.0b10 (Swofford 2003) using a heuristic search option with 1 000 random sequence additions. The alignment and tree were uploaded to TreeBASE (ID 14626).

Notes — The host *Microstegium vimineum*, common name Japanese stilt grass, is an annual grass in the *Poaceae*, subfamily *Panicoideae*, tribe *Andropogoneae*. Currently, *M. vimineum* is one of a number of serious non-native invasive species in the eastern United States (Flory et al. 2011). The fungal genus *Bipolaris* includes a number of grass pathogens (Manamgoda et al. 2011). Recently a new species occurring on *Microstegium vinimeum* was described as *B. microstegii* (Crous et al. 2012a). *Bipolaris drechsleri* has conidial dimensions similar to *B. microstegii*, but *B. drechsleri* has shorter conidiophores and conidiophores with more proliferations than *B. microstegii*. Overlapping conidial dimensions between species is common in the genus *Bipolaris* (Sivanesan 1987) and a phylogenetic species recognition criterion is essential for defining species in this genus (Manamgoda et al. 2011). Comparing ITS and GPDH with the available data in GenBank revealed that the fungus belongs in *Bipolaris* sensu Manamgoda et al. (2012). *Bipolaris microstegii* is phylogenetically close to *B. victoriae* and *B. zeicola*, but the latter two species do not show a close phylogenetic relationship with *B. drechsleri*, which clusters with *B. melinidis*.

Phylogram generated from maximum parsimony analysis based on combined ITS and GPDH gene sequences. Parsimony bootstrap values/RAxML rapid bootstrapping estimations ≥ 60 % are shown above the branches. GenBank numbers of included sequences for each species are given as ITS/GPDH.



Colour illustrations. Collection site in West Virginia; *Bipolaris drechsleri* (AR 4841). Symptom development on *Microstegium vimineum*; culture on PDA; conidiophores and conidia (scale bar = 50 µm, all others = 10 µm); conidiophores; conidia.

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