Report of the Nomenclature Committee for Fungi: 15

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Secretary Norvell's previous Committee for Fungi formal report (Report 14) appeared in Taxon 57: 637–639 (2008); the current report constitutes Committee recommendations determined from votes received by the Secretary during the April 28–July 3 (2009) voting period. Those voting on Fungal Ballot 2009-1 were J.L. Crane (Urbana-Champaign IL), V. Demoulin (Liege), D.L. Hawksworth (Madrid), T. Iturriaga (Caracas), P.M. Kirk (Egham), P.-G. Liu (Kunming), T. May (Melbourne), L.L. Norvell (Portland OR), S.R. Pennycook (Auckland), C. Printzen (Frankfurt), S.A. Redhead (Ottawa), S. Ryman (Uppsala), and D. Triebel (München). One member did not return a ballot.

A 9-vote minimum is required for the 14-member committee to recommend or reject a proposal for conservation. Committee recommendations are conclusive for seven of eight formal conservation proposals. Two additional recommendations resulted from the Committee's discussion to clarify the minimal standards for validation and requirements of Art. 32 with respect to two phylum names. Outcomes are reported as YES : NO : MORE DISCUSSION+ABSTENTION. Percentages were determined from our membership total (14) and not from the number of actual ballots returned (13).

Proposals published in Taxon to conserve or reject

(1732) Conserve the name *Pseudocercospora* against *Stigmina* and *Phaeoisariopsis* (*Hyphomycetes*). Proposed by Braun & Crous. Taxon 55(3): 803. (2006). Votes — 10 : 2 : 1 (71.4% recommend conservation.)

SUMMARY: The somewhat controversial proposal was prompted by early molecular data that suggested merging three genera (*Pseudocercospora, Stigmina, Phaeoisariopsis*) among which one, *Pseudocercospora,* comprises 1000 species. Conservation of *Pseudocercospora* would not rule out using *Stigmina* and *Phaeoisariopsis* for independent genera, while — as one committee member noted — "failure to conserve *Pseudocercospora* as the name for the combined genus would be nomenclaturally disastrous."

The previous 1 May 2007 ballot delivered 10 votes supporting Prop. 1732 and 5 votes for discussion. In view of the 2009 71% majority and addition of only two new comments since 2007, the Committee now recommends conserving the name *Pseudocercospora* over *Stigmina* and *Phaeoisariopsis* for the combined genus.

(1739) Conserve the name *Boletus applanatus* against *B. lipsiensis* (*Basidiomycota*). Proposed by Redhead, Ginns & Moncalvo. Taxon 55(4): 1029–1030. (2006). Votes — 12 : 0 : 1 (85.7% recommend conservation.)

SUMMARY: A well-known ganoderma first published by Batsch (1796) as *Boletus lipsiensis* is also commonly accepted under the epithet '*applanatus,'* introduced by Persoon in 1800. The taxon in question has been subject to much misidentification and nomenclatural confusion. A recent Niemelä & Miettinen type study (2008, Taxon 57: 963-966) concludes that the designated type represents the taxon usually called *G. applanatum.*

The previous 1 May 2007 ballot delivered 15 votes supporting Prop. 1739 and 1 vote for discussion. Despite extensive discussion, no opinion has changed isince 2007.

Chair Vincent Demoulin raises, among other points, the following rebuttal to the Committee (summary by Secretary Norvell) — Closely in contact with Steyaert (1961, Bull. Jard. Bot. Etat Bruxelles 31:69–83; 1967, Bull. Soc. Roy. Bot. Belgique 100: 189–211) and Jahn (1963, Westfälische Pilzbrief 4: 1–143) during their successful research to untangle the two European species *G. applanatum* (*G. lipsiense*) and *G. europaeum* (*G. adspersum*), Demoulin (a polypore specialist engaged in extensive tree surveys who still encounters frequent problems in distinguishing atypical ganodermas) stresses that in Europe *Ganoderma* identification remains difficult and that many non-European specimens are still wrongly identified as *G. applanatum.*

Demoulin also (rightly) rejects the argument that a name should be retained once the taxonomy behind it is settled (e.g., being able to differentiate *Betula pendula* from *B. pubescens* is no reason to use *Betula alba*). In the past, it was necessary to retain ambiguous names in a restricted concept, making many bibliographical references of doubtful value. However, the change in starting point for fungal nomenclature in 1981 led to the demise of *G. applanatum* in favour of *G. lipsiense,* as already pointed out by the proposers of the date change (Demoulin & al., Taxon 30: 52-63, 1981). Since then

G. lipsiense has slowly but regularly replaced *G. applanatum,* a move that Demoulin finds unjustifiable to reverse through conservation after almost 30 years.

Demoulin further notes that the Niemelä and Miettinen type study actually supports retaining *G. lipsiense* because (quoting the authors) "They have been widely used, *G. applanatum* with a very a variable species concept and *G. lipsiense* (Batsch) G.F. Atk. more exactly for a common European taxon. For this reason we use the name *G. lipsiense* below, until the identity of *G. applanatum* becomes explained." Finally, Demoulin notes that his on-going effort to typify *G. lipsiense* explains (in part) his slow response to the proposal.

Despite the above rebuttal, the Committee nonetheless recommends by an 86% majority conserving *Boletus applanatus* against *B. lipsiensis.*

(1742) Conserve the name *Lyophyllum* with a conserved type (*Basidiomycota*). Proposed by Redhead, Hofstetter, Clémençon, Moncalvo & Vilgalys. Taxon 55(4): 1034–1036 (2006). Votes — 10 : 0 : 3 (71.4% recommend conservation). [Keep for further debate??]

SUMMARY: Recent molecular analyses reveal the original type, *Lyophyllum leucophaeatum,* to be distant from other grey-brown lyophyllums and more closely related to colorful 'Calocybe'-clade taxa. One taxonomic option is to establish most of the grey-brown pigmented *Lyophyllum* species to a new genus and importing the brightly pigmented species into *Lyophyllum*. The proposers note, "application of the name *Lyophyllum* to a taxonomic group primarily consisting of brightly pigmented species while simultaneously excluding the grey-brown taxa would be a nearly 180° reversal of the current situation where *Calocybe* are colourful and *Lyophyllum* are grey-brown, and would lead to general confusion and great resistance among mycologists." They offer as a preferred alternative naming and conserving a new type for what has come to be regarded as the 'typical' (e.g., grey-brown pigmented) *Lyophyllum* species.

The proposal continues to be viewed favorably by the majority of Committee members, with a 71.4% majority on Ballot 2009-1 now agreeing with the previous 64.7% majority (May 2007 — 11 : 1 : 6) to recommend conserving *Lyophyllum* with *L. semitale* (replacing Karsten's originally designated *L. leucophaeatum*) as type.

(1756) Conserve the name *Roccellina* against *Roccellaria* (lichenized *Ascomycota*). Proposed by Tehler. Taxon 56(1): 254–255 (2007). Votes — 11 : 0 : 2 (78.6% recommend that *Rocellina* be conserved.). [Printzen raises some good points that other members may not have considered: keep for further debate??]

SUMMARY: The author contrasts the widespread acceptance of *Roccellina,* proposed by Darbishire in 1898 and now represented by 27 taxa, to the monotypic and less well-known *Roccellaria,* established a year earlier by the same author. Molecular analyses showing *Roccellaria* nested within a paraphyletic *Roccellina* suggest that if the two taxa are combined into one taxon, the better-known name should have precedence.

(1757) Conserve the name *Psilocybe* (*Basidiomycota*) with a conserved type. Proposed by Redhead, Moncalvo, Vilgalys, Matheny, Guzmán-Dávalos & Guzmán. Taxon 56(1): 255–257. (2007). Votes — 13 : 0 : 0 (92.9% recommend conservation of the genus *Psilocybe* with *P. semilanceata* as type.)

SUMMARY: Recent molecular analyses support fragmentation of a large well-known genus into two major clades. The name *Psilocybe* is almost universally associated with its hallucinogenic representatives, despite the fact that the currently accepted lectotype of the polyphyletic genus is the "common moss inhabiting, non-hallucinogenic species, *P. montana." Psilocybe montana* is supported in the major non-hallucinogenic clade that, if generically segregated, would leave "the hallucinogenic species without a generic name." Additionally, Donk's 1962 lectotypification of *P. montana* was preceded by a Clements & Shear's 1931 lectotypification [of *P. merdaria*] and so "cannot be superseded except by conservation." Prop. 1757 proposes to conserve the name *Psilocybe* with the well-known hallucinogenic *P. semilanceata,* which itself was accepted by many authors as lectotype between 1938-1968). The name *Deconica* (typified by *Agaricus physaloides* Bull.) is available for the non-hallucinogenic clade.

The proposers offered an alternate proposal (proposal B, not placed on the ballot) that would "leave the typification as generally, but incorrectly, accepted until now", with *P. montana* as type, after explaining that the previously proposed *P. merdaria* is atypical of the clade and noting that then a new name would be needed for the hallucinogenic clade.

All responding Committee members unanimously voted to conserve *Psilocybe* with *P. semilanceata* as type.

(1770) Conserve *Calvatia* nom. cons. (*Basidiomycota, Lycoperdaceae*) against an additional name, *Lanopila*. Proposed by Coetzee & van Wyk. Taxon 56(2): 598–599. (2007). Votes — 13 : 0 : 0 (92.9% recommend conservation.).

Summary: *Calvatia* is a well-known name for a cosmopolitan genus represented by >35 medium- to large-sized puffball species that dehisce through irregular fragmentation of the peridia. Typified by *Lanopila wahlbergii* (now a synonym of *Calvatia argentea*), the earlier named *Lanopila* was incorporated into *Langermannia* 44 years ago, during which time the name fell from common use. Kreisel's 1992 reincorporation of *Langermannia* into *Calvatia* leaves *Lanopila* as a nomenclatural threat to *Calvatia*.

All Committee members responding unanimously recommend conserving the name *Calvatia* against *Lanopila.*

(1792) Conserve the name *Phaeographis,* with a conserved type, against *Creographa, Ectographis, Flegographa, Hymenodecton, Platygramma,* and *Pyrographa (Ascomycota: Ostropales: Graphidaceae*). Proposed by Lücking, Kalb, Staiger & McNeill. Taxon 56(4): 1296–1299. (2007). Votes — 12 : 0 : 1 (85.7% recommends conservation of *Phaeographis.*)

Summary: *Graphina*, *Phaeographina*, and *Phaeographis* were twice proposed for conservation, once in 1930 and again in 1981. Conservation was not recommended due to the 'uncertain taxonomic application' of the names. The 1981 proposal was debated for 11 years, rejected due to unsettled taxonomy, reopened for further debate for 6 years and twice more rejected.

The new proposal addresses Staiger's concept of the *Graphidaceae* that finally sorts out morphologically and molecularly the taxonomic relationships among the genera. The Committee recommends conservation of *Phaeographis* with *P. dendritica* as conserved type.

Special recommendations: clarification on minimal standards for valid publication of higher level taxa

BACKGROUND: The names *Ascomycota* Cavalier-Smith and *Blastocladiomycota* T. James as accepted in Hibbett et al. (A higher-level phylogenetic classification of the *Fungi.* MYCOL. RES. 111: 509–547) have been adopted in the 10th edition of the DICTIONARY OF THE FUNGI. Discussion preceding publication of the Hibbett et al. paper, centered on whether the names met the minimal standards for valid publication. General Committee Secretary Fred Barrie requested clarification under Art. 32.4 from the Nomenclature Committee for Fungi regarding whether a descriptive statement satisfies the requirements of Art. 32.1(d).

The purpose of the two proposals — whether to recommend acceptance of or reject *Ascomycota* Cav.-Sm. and *Blastocladiomycota* Doweld — is to establish limits under Art. 32.1(d) and examples for Art. 32.4.

Ascomycota Cavalier-Smith: The phylum name *Ascomycota* Cavalier-Smith satisfies the requirements of Art. 32 and meets the minimal standards for validation. Votes — 11 : 1 : 1 (78.6% recommend acceptance of *Ascomycota* Cav.-Sm.).

SUMMARY: M. E. Barr (MYCOLOGIA 75: 1-13, 1983) first introduced the name *Ascomycota* (at the division level) but without providing an explicit diagnosis and author citation. Although the name was used by mycologists sporadically thereafter, Cavalier-Smith (1998, Biological Reviews 73: 247) was the first to distinguish *Ascomycota* from *Basidiomycota* (at the phylum level), proposing it as a new name and providing a very short Latin diagnosis*:* "sporae intracellulares." A group of concerned mycologists asked the General Committee for a clarification (under 32.4) as to whether the short descriptive statement satisfies the requirements of Art. 32.1(d), and the General Committee referred the question to the Committee for Fungi for its recommendation.

Although Art. 36 [covered by Art. 32.1(e), not Art. 32.1(d)] specifies Latin requirements, the Latin should be considered here as well. Under Art. 32.2, the important question regards whether the author published a statement that — in his opinion — distinguished the *Ascomycota* from the *Basidiomycota* (the only two taxa he compared). It appears obvious that Cavalier-Smith was purposely trying to validate many higher-level taxa by fulfilling the requirements of the Code.

A 78.6% Committee consensus is that the name *Ascomycota* Cavalier-Smith is valid.

***Blastocladiomycota* Doweld clarification:** The phylum name *Blastocladiomycota* Doweld satisfies the requirements of Art. 32 and meets the minimal standards for validation. Votes — 2 : 9 : 2 (~64% do not consider that the name meets minimal standards for validation).

Summary: Secretary Barrie suggested the Committee for Fungi consider (a) whether the General Committee need worry about names published above the rank of family (where the principle of priority does not apply) and (b) whether Doweld's statement represents a description (even if not diagnostic as defined in Art. 32.2) and, if so, need a description be diagnostic.

In his 2001 110-page 'Prosyllabus Tracheophytorum ...' (cf. Taxon 53: 231-232, 2004), Alexander Doweld proposed many new names for bryophytes, flowering plants, conifers, ferns, club mosses, most with Latin diagnoses and typifications noted in linked footnotes; he also treated algae, protozoans, fungi, sponges, and miscellaneous other groups in the appendix (pp. 67–79), where he relied heavily on previously published synopses. For *Fungi* he relied particularly on Eriksson & Winka (1997, Supraordinal taxa of *Ascomycetes,* Myconet 1(1): 1–16) and Cavalier-Smith (1998, op. cit.).

In the appendix, Doweld proposed to validate the name *Blastocladiomycota* as a nomen novum for the infra-phylum name, *Allomycotina* Cavalier-Smith (1998: 246), by referring to the Latin ("*zoospora cilio unico instructa*") under *Allomycotina,* a name typified by the genus *Allomyces* but one for which the formal family name ('*Allomycetaceae*') had never been proposed. Doweld (in accordance with but not citing Art. 16.1) replaced all higher-level names not based upon legitimate family names with names based upon those with legitimate family names. *Blastocladiomycota,* which cannot be interpreted as a nomen novum based as it is on two potentially two different types (*Blastocladia*, *Allomyces*), must be interpreted as a wholly new name that requires a Latin description or diagnosis to be valid.

Here, as defined by Art. 32.2, the inadequacy of the Latin diagnosis is at question: Cavalier-Smith's brief Latin diagnosis for *Allomycotina* (translated as "with uniciliate zoospores;" 1998, p. 266) makes sense within the framework of his own classification

(*Allomycotina* < subphylum *Melanomycotina* < phylum *Archemycota* < subkingdom *Eomycota*) where subphyla within *Archemycota* were differentiated by features of the Golgi apparati. His framework permitted differentiation of infra-phyla *Allomycotina* and *Zygomycotina* based on presence of uniciliate zoospores because the other uniciliate taxa in *Archemycota* were in a different subphylum (*Dictyomycotina*), where the class *Chytridiomycetes* was placed.

On the other hand, Doweld's application of a Latin diagnosis appropriate within one classification framework to a taxon in a different classification scheme fails because the diagnosis does not serve to differentiate *Blastocladiomycota* from *Chytridiomycota* while placing the two phyla together in one subkingdom (*Mucorobiotina*) where many taxa in both phyla produce uniciliate zoospores. *Blastocladiomycota* and *Chytridiomycota* are thus not differentiated from each other. Taken out of context, the cited Latin fails to be a "statement of that which in the opinion of its author [Doweld] distinguishes the taxon from other taxa" (Art. 32.2). Because Doweld fails to distinguish the phyla in subkingdom *Mucorobiotina* from each other, "*zoospora cilio unico instructa*" does not fulfill Art. 32.1d and the Latin phrase cannot be considered a diagnosis.

A 64.3% majority of the Committee feels that the phylum name *Blastocladiomycota* Doweld does not satisfy the requirements of Art. 32.