

## ON THE GENUS *SOLENOPEZIA* (FUNGI, LACHNACEAE): *PEZIZA SOLENIA* AND ICBN ART. 58 – A SLEEPING DOG BITES BACK\*

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**Summary:** De Candolle described *Peziza solenia* in 1805, erroneously believing his fungus to be an Ascomycete, but it is a Basidiomycete. *Peziza solenia* DC. was later treated as a synonym of *Solenia fasciculata* Pers. It has been sleeping in that synonymy ever since. In 1873 Peck described a true Discomycete, *Peziza solenia* Peck. The name is a later homonym, validly published but illegitimate. Under Article 58 of the current *International Code of Botanical Nomenclature* (ICBN) epithets of such illegitimate names are available for transfer to another genus, but the new name takes new authorship and dates from the transfer. *Peziza solenia* Peck has been transferred into four other genera, all belonging to the Hyaloscyphaceae or Lachnaceae. The first author to transfer Peck's species was Saccardo, who placed it in a new genus, *Solenopezia* Sacc. Several authors proposed *S. solenia* as the «type species» of the genus, but of these the only acceptable lectotypification was that by Raitviir in 1973. The authorities for all four combinations need to be changed to agree with Article 58 of the *ICBN* with Peck's name and date deleted and Saccardo's name and date substituted. An alternative solution using the *ex* formulation is advocated here

**Key words:** *Belonidium*, *Dasyscyphus*, *Lachnella*, International Code of Botanical Nomenclature

**Resumen:** Sobre el género *Solenopezia* (Fungi, Lachnaceae): *Peziza solenia* y el art. 58 del CINB— Un perro dormido vuelve a morder. De Candolle describió *Peziza solenia* en 1805, creyendo erróneamente que era un Ascomycete pero es un Basidiomycete. *Peziza solenia* DC. fue tratada posteriormente como sinónimo de *Solenia fasciculata* Pers. Así ha estado durmiendo en esa sinonimia. En 1873 Peck describió un Discomycete verdadero, *Peziza solenia* Peck. Este nombre es un homónimo posterior, válidamente publicado pero ilegítimo. Bajo el Artículo 58 del *Código Internacional de Nomenclatura Botánica* (ICBN) epítetos de nombres ilegítimos están disponibles para transferirlos a otro género, pero el nuevo nombre lleva la autoría y la fecha de la transferencia. *Peziza solenia* Peck ha sido transferido a cuatro géneros distintos de Hyaloscyphaceae o de Lachnaceae. Saccardo fue el primer autor en transferir la especie de Peck, ubicándola en un género nuevo, *Solenopezia*. Varios autores propusieron *S. solenia* como «especie tipo» del género, pero la primera lectotipificación aceptable fue la de Raitviir, 1973. Las autoridades de las cuatro transferencias necesitan ser corregida de acuerdo con el Artículo 58 del *ICBN*, eliminando el nombre de Peck y sustituirlo por el de Saccardo. Se propone como solución alternativa usar *ex* en estos casos.

**Palabras clave:** *Belonidium*, *Dasyscyphus*, *Lachnella*, Código Internacional de Nomenclatura Botánica.

### PUBLICATION AND TYPIIFICATION OF *SOLENOPEZIA*

The genus *Solenopezia* Sacc. (Saccardo, 1889) was erected to include 7 species. Though the *Index Genericorum (Plantarum)* (Farr *et al.*, 1979) and the website version thereof, <<http://rathbun.si.edu/botany/ing/>>, both indicate that the type was not designated, *NCU-3: Names in Current Use for Extant Plant Genera* (Greuter *et al.*, 1996) states unequivocally that the type species of the generic name is *Solenopezia solenia* (Peck) Saccardo, based

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on *Peziza solenia* Peck (Peck, 1873, 1878), but fails to indicate who proposed that typification. Seaver (1930) was the first to designate this species as the generic [lecto]type, but his typifications in that era are all suspect, since he was an avowed follower of the American Code of Botanical Nomenclature, which held that the first species listed or illustrated in a new genus was automatically the type. That position is rejected under the International Code of Botanical Nomenclature (ICBN) (currently the St. Louis Code, Greuter *et al.*, 2000). Nannfeldt (1932) cited *S. solenia* as the «pseudotypus» for the genus, *i.e.*, a first species typification, and thus did not typify the generic name as claimed by Raitviir (1973) and by Haines (1989). The earliest acceptable

lectotypification of the generic name seems to be that by Raitviir (1973), with *Peziza solenia* Peck. It is likely he was accepting the supposed typification by Nannfeldt, since he did not specify that his was a new lectotypification. Raitviir (1991) again designated that species as type. Apparently no other species has been proposed as a lectotype.

Peck's species surely needs to be recognized as very unusual in the Hyaloscyphaceae—or, preferably in the recently proposed family Lachnaceae Raitv. [as (Nannf.) Raitv.] (Raitviir, 2004)—and the genus *Solenopezia* is apparently recognized for it by many modern workers (Cantrell & Hanlin, 1997; Haines, 1989; Raitviir 1973, 1991, 1993, 1995, 2003; Raitviir et al., 1991; Seaver 1930, [not 1951], Wu, 2002). All species of this unusual genus have a sterile collar extending beyond the hymenium, with hyaline hairs on the interior surface of the collar, resulting in a white, interior fringe. These hairs are frequently very different in morphology from the brown, thick-walled hairs that cover the receptacle as well as the outer surface of the collar. I know of no other genus in the Hyaloscyphaceae or Lachnaceae with such features. Nonetheless, *P. solenia* has been transferred to three other genera, as *Belonidium solenia* (Peck) Raitv. (Raitviir 1970), *Dasyscyphus* [as 'Dasyscypha'] *solenia* (Peck) Dennis (Dennis, 1963), and *Lachnella*<sup>2</sup> *solenia* (Peck) Seaver (Seaver, 1951). Another generic name for this genus is *Niveostoma* Svrcek (1988), based on *Dasyscyphus* [as 'Dasyscypha'] *leucostomus* Rehm (1881), a species that was transferred to *Solenopezia* by Raitviir et al. (1991) as *S. leucostoma* (Rehm) Raitv., Haines & E. Müller. The two species carefully described in that important, seminal paper, plus three others, *S. darvazica* Raitv. (Raitviir, 1993), *S. lamoureaana* Raitv. (Raitviir, 1995), and *S. groenlandica* Raitv. (Raitviir, 2003) constitute the five currently accepted species of the genus. The CABI online *Index Fungorum* <<http://www.indexfungorum.org/Names/Names.asp>> at present records 22 names proposed in the genus, 17 of which belong elsewhere.

## PEZIZA SOLENIA PECK IS ILLEGITIMATE: A SLEEPING DOG BITES BACK

None of the writers on *Solenopezia* or on the combinations based on *Peziza solenia* Peck were apparently aware that Peck's species name is illegitimate, as it is a later homonym of *Peziza solenia* DC. (De Candolle, 1805). In his treatment De Candolle cited as synonyms both *Peziza solenia candida* Pers.<sup>3</sup> and *Solenia candida* «Hoffm.» (a later homonym of *S. candida* Pers. 1794). Other workers quickly recognized that both Persoon's species and De Candolle's are Basidiomycetes, though seldom treated as synonyms. De Candolle's species was treated later by Persoon (1822) as *Solenia fasciculata* Pers., probably to avoid creating a tautonym, and De Candolle's *P. solenia* was listed there as a synonym. Fries (1822, 1832), Streinz (1862), and Mussat (1901) repeat that synonymy. DeCandolle's name has, for all practical purposes, been forgotten, quietly sleeping in that synonymy since 1822.

Article 58 of the ICBN covers this situation. In many earlier editions of the Code this was Note 1 of Article 72. In the «Tokyo» Code (Greuter et al., 1994) it became part of Art 58, and in the current «St. Louis» Code (Greuter et al, 2000) it is the only guideline still remaining in Art. 58, but includes an added example that clarifies our case here. Even though Peck's species is illegitimate, it was validly published, and the epithet can be transferred to another genus. What happens is that the name then loses its original author in such a transfer, and the transferring author's name is substituted, the name treated—not as a new combination but as a new name—in this case as a new species name, with the original description and type designation (if any) intact. Saccardo (1889) was the first to transfer Peck's epithet to another genus, when he proposed the new combination *Solenopezia solenia* (Peck) Sacc. Art. 58 of the Code informs us that this is an incorrect citation, and that we must cite this as *Solenopezia solenia* Sacc.,<sup>4</sup> and that the name

<sup>2</sup>*Lachnella* Fr. was long used for Discomycetes. Its type species is a Basidiomycete, and the name has been taken up for use in the Marasmiaceae. When one consults CABI's useful *Index Fungorum* on the worldwide web, it is disconcerting to see *Lachnella solenia* referred to as belonging to the Marasmiaceae, a reflection of how difficult it is to have databases reflect changes in taxonomy and nomenclature. The generic name is currently assigned to the Basidiomycetes, but the species name is clearly that of an Ascomycete. See also footnote 5, below.

<sup>3</sup>The trinomial may well have been intended as indication of some infrageneric rank for *solenia* as Persoon (1801) abandoned the generic name *Solenia* that he had proposed in 1794, only to take it up again in 1822.

<sup>4</sup>The only citations I have encountered using this formulation, i.e., without Peck's name in parentheses, are in Mussat's (1901, p. 270) and Seaver's (1951) synonymies, and those were the result of both authors' unfortunate convention that left the original author's name out of all combinations in listed synonymies.

dates for priority purposes from 1889, even though it has as its type the type specimen of the original author. Art. 58 makes it clear that the other combinations based on Peck's name should now be rendered as *Belonidium solenia* (Sacc.) Raitv., *Dasyscyphus solenia* (Sacc.) Dennis, and *Lachnella solenia* (Sacc.) Seaver, even though none of those combining authors ever used «(Sacc.)» as part of their original combinations. The proposed changes (proposal 272: Brummit, 2004, McNeill & Turland, 2005) in the wording of Art 58 that will appear in the forthcoming (Vienna) ICBN do not affect the situations described in this paper.

## A PROPOSED ALTERNATIVE SOLUTION TO CITING THE AUTHORS OF ART. 58 NEW NAMES

For many years I have been dismayed about what happens when one, as required, applies Art. 58 of the Code. One of the main functions of citing authorities is to be able to find where a taxon was published, and, having done so, find the type specimen somehow associated. In our case, citing «Sacc.» leads us to expect a type specimen to be in Saccardo's herbarium, and/or to be cited in a Saccardo publication. Obviously that does not occur under this provision of the Code. I suggested a solution to the problem to my satisfaction earlier in a footnote (Korf & Bujakiewicz, 1985, p. 306) by citing our newly created name<sup>5</sup> as «original author *ex* publishing author.» As most nomenclaturally alert scientists know, in citing a name such as *Fungus novus* Anyone *ex* Someone one can also correctly cite it by leaving out the *ex* and the previous author(s), to render the name also, and just as correctly, as *F. novus* Someone. There is nothing in the Code prohibiting citing the author of a not validly published name before an *ex*, followed by a validating authority, and indeed that is what the Code recommends and this often allows easy location of the type specimen. Not uncommonly when an author validates a previously *invalidly* published name (e.g., one proposed without a Latin diagnosis

after 1.i.1935), in order to maintain a tie to that original description (and type specimen, if one was proposed), the validating author will publish the new name as «original author *ex* validating author.» The use of *ex* in the present case is slightly different, since the name we are concerned with was *validly* published, but is illegitimate because it was a later homonym. What Saccardo did in attempting to transfer the epithet was not to validate Peck's epithet, but to legitimize it and to provide it with new life, starting from that date, and (unfortunately, I believe) to strip it of its obvious name-bearing tie to the type of the old taxon name. I propose to cite the five names as *Belonidium solenia* Peck *ex* Sacc.) Raitv., *Dasyscyphus solenia* (Peck *ex* Sacc.) Dennis, *Lachnella solenia* (Peck *ex* Sacc.) Seaver, *Peziza solenia* Peck [*nom. illegit.*], and *Solenopezia solenia* Peck *ex* Sacc. I believe that such citations show the tangled nomenclatural history far better. A formal proposal to change Art. 58 to allow and encourage such a means of citation for new names created under this article would seem helpful. I invite anyone interested in pursuing this concept to join me in making such a formal proposal for consideration at the next International Botanical Congress. If this new, special use of *ex* is deemed unwise, as has been suggested by some pre-submission readers, perhaps a new connective should be proposed.

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<sup>5</sup> We were unable to transfer *Peziza confluens* Schwein. to *Bisporrella*, since Schweinitz's name is a later homonym of *P. confluens* Pers. Saccardo (1889) unwittingly «created» a new name, *Helotium confluens* Sacc., when he intended merely to make a new combination for Schweinitz's species. To preserve a reference to the place where a type can be found, I suggested one could cite our new combination more informatively than the ICBN required *Bisporrella confluens* (Sacc.) Korf & Bujak., instead as *B. confluens* (Schwein. *ex* Sacc) Korf & Bujak.

Another example of the problems databases have with changing taxonomies, as noted in footnote 2 above, is the citation to be found for two *Helotium confluens* listings in CABI's *Index Fungorum*. Schweinitz's species is cited incorrectly as *H. confluens* Schwein., and is assigned to the Basidiomycetes (Tricholomataceae), even though its basionym, *Peziza confluens* Schwein. is correctly assigned to the Ascomycetes, but wrongly to the Pezizaceae. *Helotium* is another generic name long used for Discomycetes, but unfortunately adopted for Basidiomycetes (Marasmiaceae) some years ago (Redhead, 1982). The name is now on the official list of *nomina utique rejicienda*.

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