

Parapholis cylindrica – a nomenclatural correction

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Abstract: Röser, M. & Tkach, N., 2020: *Parapholis cylindrica* – a nomenclatural correction. *Schlechtendalia* 37: 27–29.

In a recent publication, the new combination *Parapholis cylindrica* has been proposed without direct reference to the basionym, so that this combination is invalid (Art. 41.5). This shortcoming is rectified and supplemented by a discussion of the nomenclature, synonymy and relationship of *Parapholis*, the previous genus *Hainardia* and other pooid grasses with spicate or raceme-like inflorescences.

Zusammenfassung: Röser, M. & Tkach, N., 2020: Eine nomenklatorische Korrektur zu *Parapholis cylindrica*. *Schlechtendalia* 37: 27–29.

Vor kurzem wurde die neue Kombination *Parapholis cylindrica* veröffentlicht, allerdings ohne direkten Verweis auf das Basionym (Art. 41.5), so dass die neue Kombination nicht gültig ist. Dieses Defizit wird hier behoben, ergänzt durch eine Diskussion der Nomenklatur, Synonymie und Verwandtschaftsverhältnisse von *Parapholis*, der bisherigen Gattung *Hainardia* und anderen pooiden Gräsern mit ährigen oder traubigen Infloreszenzen.

Key words: *Hainardia*, *Monerma*, nomenclature, *Parapholis*, *Parapholis cylindrica*, comb. nov., Poaceae.

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In a recent taxonomic treatment on some pooid grasses (*Poaceae* subf. *Pooideae*), we published the new combination *Parapholis cylindrica* but failed to give a direct reference to the basionym (Tkach et al. 2020), so that this combination was not validly published according to Art. 41.5 of the Code (Turland et al. 2017). The correct reference to the basionym and synonymy are as follows:

***Parapholis cylindrica* (Willd.) Röser & Tkach, comb. nov.**

≡ (basionym) *Rottboellia cylindrica* Willd., Sp. Pl. 1(1): 464, 1797.

≡ *Ophiuros cylindricus* (Willd.) P.Beauv., Ess. Agrostogr.: 116, 1812.

≡ *Lepturus cylindricus* (Willd.) Trin., Fund. Agrost.: 123, 1820.

≡ *Monerma cylindrica* (Willd.) Coss. & Durieu, Expl. Sci. Algérie 2: 214, 1855.

≡ *Lolium cylindricum* (Willd.) Asch. & Graebn., Syn. Mitteleur. Fl. 2: 761, 1902, nom. illeg., non K. Koch, *Linnaea* 21: 434, 1848.

≡ *Hainardia cylindrica* (Willd.) Greuter, Boissiera 13: 177, 1967.

= *Rottboellia ramosa* Cav., Anales Ci. Nat. 3: 11, 1801.

≡ *Monerma ramosa* (Cav.) Schult., Mant. 2: 441, 1824.

≡ *Lepturus ramosus* (Cav.) Kunth, Révis. Gramin. 1: 152, 1829.

= *Rottboellia adscendens* Brot., Fl. Lusit. 1: 84, 1804.

= *Rottboellia subulata* Savi, Due Cent. Piante: 35, 1804.

≡ *Monerma subulata* (Savi) P.Beauv. ex Roem. & Schult., Syst. Veg. 2: 799, 1817.

≡ *Lepturus subulatus* (Savi) Kunth, Révis. Gramin. 1: 151, 1829.

= *Rottboellia incurvata* Sm., Fl. Graec. (Sibthorp) 1: 72, 1808, nom. illeg., non L.f., Suppl. Pl. 114, 1782.

= *Monerma monandra* P.Beauv., Ess. Agrostogr. 117, 1812.

Parapholis cylindrica has been treated during the past decades as sole species of the genus *Hainardia* Greuter (Greuter & Rechinger 1967). Previously, it had mostly been included in *Monerma* P.Beauv., an illegitimate genus name when published (Gandhi 1996, but see Parkinson 1984: 487f., Scholz 1995 for other opinions). The molecular phylogenetic data from our plastid (3'*trnK* exon and *trnL-trnF*) and nuclear ribosomal (ITS, ETS) DNA analyses placed *P. cylindrica* amidst species traditionally ascribed to *Parapholis* C.E.Hubb., such as *P. filiformis* (Roth) C.E.Hubb., *P. incurva* (L.) C.E.Hubb. (nomenclatural type of *Parapholis*) and *P. marginata* Runemark (Tkach et al. 2020). This placement was similarly found already by Schneider et al. (2012) using a smaller set of taxa and molecular DNA markers.

The main morphological differences between *Hainardia* (*H. cylindrica*) and traditional *Parapholis* spp. are the spikelets, which have a single glume (only upper glume developed, whereas lower glume suppressed) in the former and two glumes in the latter genus. The uppermost spikelet of the inflorescence in *Hainardia*, however, also has two glumes. Inflorescences in both are a rat tail-like single cylindrical bilateral raceme with a thickened rachis and cavities, in which the spikelets are sunk. The rachis disarticulates transversely below each spikelet at fruit maturity into segments, each of which bears an entire spikelet. Spikelets are single-flowered with a hyaline lemma and a palea with

glabrous and only weakly developed keels (see Schneider et al. 2012 for illustrations of these characters; Tzvelev 1976, Conert 1979–1998, Tutin 1980, Clayton & Renvoize 1986). These overall morphological similarities were noted already by Hubbard (1946: 10) using the genus names *Monerma* and *Parapholis*, and motivated Runemark (1962: 5) to discuss uniting them as one genus.

Mediterranean to Middle Asian former *Hainardia* (*H. cylindrica* ≡ *Parapholis cylindrica*) and Mediterranean to Middle East and coastal European (Atlantic Ocean, Western Baltic Sea) *Parapholis* (six further species) have a preference for saline soils, which is found also in the habitually similar monotypic genus *Pholiurus* Trin. (Central Spain, eastern Central Europe to Western Siberia) and in some further genera with spike- or raceme-like inflorescence, for example, the Algerian *Agropyropsis* (Batt. & Trab.) A.Camus, the Mediterranean *Narduroides* Rouy, and the North American *Scribneria* Hack. Because of their overall similarity, they all had been treated under a common tribe *Hainardiaceae* (or previously *Monermeae*), which successively turned out to be highly polyphyletic as shown by molecular and detailed morphological analyses (Catalán et al. 2004, Schneider et al. 2012, Tkach et al. 2020). To the best of the currently available knowledge, the genera in question belong to tribes *Festuceae* (*Parapholis* and others in subtribe *Parapholiinae*; *Narduroides* in subtribe *Loliinae*) and *Poeae* (*Pholiurus* in subtribe *Beckmanniinae*). *Scribneria* (included in *Deschampsia* P.Beauv.; Saarela et al. 2017) belongs to subtribe *Aristaveninae*, a lineage with presumably reticulate origin between tribes *Aveneae* and *Festuceae* (Tkach et al. 2020). The phylogenetic position of *Agropyropsis* is yet unclear, however, some morphological features (Schneider et al. 2012) are in favour of its placement in tribe *Festuceae* (subtribe *Loliinae*).

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