



Validation of the names of four *Entyloma* species (Entylomataceae)

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When publishing *Entyloma anceps* Cif., *E. boltoniae* Cif., *E. eupatorii* Cif., *E. helenii* Cif., and *E. lepachydis* Cif. (Ciferri 1928), Ciferri proposed these designations as provisional names, making their publication invalid as per Art. 36.1(a) of the Madrid Code. The trinomial combinations of Ciferri (1963), proposed for *Entyloma boltoniae*, *E. eupatorii*, *E. helenii*, and *E. lepachydis*, are without the citation of a rank-denoting term, making them not validly published (Art. 37.1, Madrid Code). Furthermore, these trinomials are based on invalidly published ‘basionyms’. Four designations of *Entyloma* species are validated here to stabilize the taxonomy and facilitate their further studies. *Entyloma lepachydis* on *Lepachys pinnata* (Vent.) Torr. & A. Gray (q.e. *Ratibida pinnata* (Vent.) Barnhart) is here reduced to a synonym of *E. ratibidae* T. Denchev *et al.*

Entyloma ageratinae-altissimae Denchev & T. Denchev, *sp. nov.*

Index Fungorum number: IF 905090

Type:—On *Ageratina altissima* (L.) R.M. King & H. Rob.; USA, Wisconsin, Dane, Madison, 12 July 1924, J.J. Davis, *s.n.* (**holotype** BPI 175018; isotypes in Fungi Wisconsinenses Exsiccati, no. 143, as ‘*Entyloma compositarum* Farl.’ on ‘*Eupatorium urticifolium*’).

[*Entyloma eupatorii* Cif., *Annales Mycologici* 26: 38, 1928 (nom. inval., Art. 36.1(a))]

[*Entyloma compositarum eupatorii* (Cif.) Cif., *Quaderno Ist. Bot. Univ. Pavia* 27: 91, 1963 (nom. inval., Art. 37.1)]

Description:—see Vánky, *Smut fungi of the world* (APS Press): 173, 2011 (as ‘*Entyloma eupatorii*’).

Known host and distribution:—On Asteraceae: *Ageratina altissima* (*Eupatorium urticifolium* Reichard, *E. ageratoides* L.f., *E. rugosum* Houtt.); North America (USA) (Vánky 2011, as ‘*Entyloma eupatorii*’).

Comments:—Differs from *Entyloma ageratinae* R.W. Barreto & H.C. Evans on *Ageratina riparia* (Regel) R.M. King & H. Rob. by having larger spores (10.5–14 µm long vs. 8.5–12 µm long for *E. ageratinae*, after Vánky 2011) and thicker spore walls (1–2.5(–3) µm thick vs. ca. 1 µm thick for *E. ageratinae*, after Vánky 2011).

Entyloma anceps Cif. ex Denchev & T. Denchev, *sp. nov.*

Index Fungorum number: IF 905091

Holotype:—On *Rudbeckia laciniata* L.; USA, Iowa, Clarion, June 1909, J.E. Melhus, *s.n.* (BPI 174299).

[*Entyloma anceps* Cif., *Annales Mycologici* 26: 44, 1928 (nom. inval., Art. 36.1(a))]

Description:—see Vánky, *Smut fungi of the world* (APS Press): 150, 2011.

Known host and distribution:—On Asteraceae: *Rudbeckia laciniata*; North America (USA) (Vánky 2011, Denchev *et al.* 2025).

Entyloma boltoniae Cif. ex Denchev & T. Denchev, *sp. nov.*

Index Fungorum number: IF 905092

Holotype:—On *Boltonia asteroides* L’Hér.; USA, Wisconsin, Grant County, Blue River, 14 September 1923, J.J. Davis, *s.n.* (BPI 174988).

[*Entyloma boltoniae* Cif., *Annales Mycologici* 26: 47, 1928 (nom. inval., Art. 36.1(a))]

[*Entyloma compositarum boltoniae* (Cif.) Cif., *Quaderno Ist. Bot. Univ. Pavia* 27: 90, 1963 (nom. inval., Art. 37.1)]

Description:—see Vánky, *Smut fungi of the world* (APS Press): 157, 2011.

Known host and distribution:—On Asteraceae: *Boltonia asteroides*; North America (USA) (Vánky 2011).

Entyloma helenii Cif. ex Denchev & T. Denchev, *sp. nov.*

Index Fungorum number: IF905093

Holotype:—On *Helenium autumnale* L.; USA, Wisconsin, Shiocton, 20 August 1917, J.J. Davis, *s.n.* (BPI 175482).

[*Entyloma helenii* Cif., *Annales Mycologici* 26: 40, 1928 (nom. inval., Art. 36.1(a))]

[*Entyloma compositarum helenii* (Cif.) Cif., *Quaderno Ist. Bot. Univ. Pavia* 27: 94, 1963 (nom. inval., Art. 37.1)]

Description:—Sori in leaves, forming irregularly rounded spots, 1.0–3.5 mm in length, amphigenous, brownish. Spores embedded in the leaf tissue, subglobose, 8.5–12(–14) µm in diam., subhyaline to yellowish; spore wall 1.0–1.2 µm thick.

Known host and distribution:—On Asteraceae: *Helenium autumnale* (*H. montanum* Nutt.); North America (USA) (Ciferri 1963, as '*Entyloma compositarum helenii*').

Comments:—Vánky (2011) treated *Entyloma* on *Helenium autumnale* as *E. polysporum* (Peck) Farl., however, the type host genus of *E. polysporum* is *Ambrosia* (Denchev *et al.* 2025).

Entyloma lepachydis Cif. on *Ratibida pinnata* (Vent.) Barnhart (syn. *Lepachys pinnata* (Vent.) Torr. & A. Gray) (Asteraceae) is here reduced to a synonym of *E. ratibidae* T. Denchev *et al.*

Entyloma ratibidae T. Denchev, Denchev & Kemler, *Phytotaxa* 726: 89, 2025.

[*Entyloma lepachydis* Cif., *Annales Mycologici* 26: 41, 1928 (nom. inval., Art. 36.1(a))]

[*Entyloma compositarum lepachydis* (Cif.) Cif., *Quaderno Ist. Bot. Univ. Pavia* 27: 96, 1963 (nom. inval., Art. 37.1)]

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