

NOMENCLATURE ARTICLE

On the typification of the Linnaean name *Crepis foetida* (Asteraceae)

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Abstract The Linnaean name *Crepis foetida* is lectotypified with an illustration from the third volume of Morison's *Plantarum historiae universalis Oxoniensis*. While the designated lectotype can be identified with *C. foetida* s.l., it cannot be ascribed with certainty to any of the currently accepted subspecies of this taxon and is therefore considered demonstrably ambiguous.

Keywords Compositae; *Crepis*; lectotype; Linnaeus; nomenclature

■ INTRODUCTION

Crepis L. (Asteraceae Bercht. & J.Presl [= Compositae Giseke], Cichorioideae Chevall., Cichorieae Lam. & DC., Crepidinae Cass. ex Dumort.) is one of the largest genera of the tribe Cichorieae, comprising about 200 species distributed in temperate and subtropical regions of the Northern Hemisphere, as well as in montane tropical regions of Africa (see Enke & Gemeinholzer, 2008; POWO, 2023). The genus includes species characterized by high morphological plasticity, which has resulted in a profusion of published names (see, e.g., IPNI, 2023; Tropicos, 2023) as well as numerous instances of misapplications and misidentifications. Molecular studies by Enke & Gemeinholzer (2008) showed that the first comprehensive generic and infrageneric framework of *Crepis* published by Babcock (1947a,b) is not consistent with the results of molecular phylogenetic studies and several taxa are to be referred to other genera, such as *Askellia* W.A. Weber, *Lapsana* L., and *Rhagadiolus* L. Moreover, the sectional delimitation proposed by Babcock (1947a,b) is also not supported by molecular data (e.g., Enke & Gemeinholzer, 2008).

Linnaeus published 19 names under *Crepis* (see Jarvis, 2007) of which four are currently placed in other genera (i.e., *Leontodon* L., *Picris* L., and *Tolpis* Adans.; e.g., Jarvis, 2007). The name *C. foetida* L. is untypified (Jarvis, 2007) and it is here discussed as part of an ongoing series of typifications of Linnaean names in the Asteraceae (e.g., Iamónico, 2013, 2018; Iamónico & al., 2014, 2021; Del Guacchio & Iamónico, 2015; Iamónico & Hjertson, 2015; Iamónico & Peruzzi, 2016).

■ MATERIALS AND METHODS

This study is based on the analysis of relevant literature (i.e., the protologue of the name investigated and pre-Linnaean works therein cited, and primary Floras in which the studied name is listed) and examination of specimens preserved at RO and LINN. *ICN* articles cited in the text refer to the *Shenzhen Code* (Turland & al., 2018).

■ TYPIFICATION OF *CREPIS FOETIDA*

Linnaeus (1753: 807–808) provided a short diagnosis (“*CREPIS* foliis pinnatis angulatis, petiolis dentatis”) taken directly from Royen (1740: 126) and Dalibard (1749: 239); in addition, he cited polynomials from Morison (1699: 63, “*Hieracium luteum, cichorei sylvestris folio, amygdalas amarus olens*”), Bauhin (1623: 131, “*Senecio hirsutus*”), and Dodoëns (1616: 641, “*Erigeron tertium*”); the provenance (“*Habitat in Gallia*”) was also reported. Morison (1699: sect. 7, t. 4, fig. 4) and Dodoëns (1616: 641) provided illustrations that are part of the original material for the name.

Babcock (1947b: 688, 691) and Lamond (1975: 831) considered LINN 955.6 to be the type, whereas Jeffrey (1966: 462) considered the type to be LINN 955.9. However, neither of these specimens bears the *Species plantarum* number (“13”); consequently, they are post 1753-additions to the collection. Therefore, they cannot be original material of *Crepis foetida* and are not eligible to serve as lectotypes (see Art. 9.3 and 9.4 of the *ICN*). We traced a further specimen at LINN (No. 955.6), but it also lacks the *Species plantarum*

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number, only “*foetida*” is annotated in Linnaeus’s hand at the bottom-center of the sheet; thus, the specimen is also not original material. The previously published type designations could be interpreted as neotypes. However, since original material exists (Morison’s and Dodoëns’s illustrations), lectotypification is possible according to Art. 9.3 of the *ICN* (see below) and this supersedes the earlier (neo)typifications (Art. 9.19 of the *ICN*).

Since no extant specimens that are original material were found in Linnaean and Linnaean-linked herbaria, the illustrations published by Morison (1699) and Dodoëns (1616) are the only material available for the purpose of lectotypification (see Art. 8.1, 9.3, 9.4, and 9.12 Ex. 12 of the *ICN*). We chose Morison’s illustration as lectotype since it includes the achenes (not shown in Dodoëns’s illustration), the morphology of which is important for species identification in *Crepis*.

As currently delimited (e.g., Sell, 1976; Pignatti, 2018), *Crepis foetida* s.l. is characterized by having stems that are erect or ascending and branched from the base, leaves that are lanceolate and usually pinnate, outer involucre bracts half to two-thirds as long as the inner ones, yellow ligulate florets, and achenes of two kinds (the inner ones being slender and beaked). According to Sell (1976) and Pignatti (2018), the most similar species is *C. sancta* L. s.l., which differs by shorter outer involucre bracts (one-eighth to one-third as long as the inner ones). The lectotype designated here displays all the aforementioned features of *C. foetida* s.l., including the outer involucre bracts, which are at least one-third as long as the inner ones. Morison’s description also states that the ligulate florets were yellow (“*Flores lutei*”).

According to POWO (2023), two subspecies are currently recognized: *Crepis foetida* subsp. *foetida* and *C. foetida* subsp. *rhoedifolia* (M.Bieb.) Čelak. Following Sell (1976) and Pignatti (2018) the differences between these two taxa are in the involucre (glandular in subsp. *foetida*, non-glandular in subsp. *rhoedifolia*), and the width of the outer involucre bracts (<1 mm in subsp. *foetida*, and 1–1.5 mm in subsp. *rhoedifolia*).

Unfortunately, it is not possible to unambiguously assign the lectotype to one of the two subspecies of *Crepis foetida*. The presence of glandular hairs on the involucre cannot be verified in either the lectotype or in Dodoëns’s illustration, and no information on this character was given in the accompanying descriptions. As the illustrations do not have scales, it is also not possible to measure the width of the involucre bracts.

It should be noted that additional infraspecific taxa within *Crepis foetida* are recognized by some authors. These include *C. foetida* subsp. *glandulosa* (Guss.) Fiori by Pignatti (2018) (taxonomically doubtful by Greuter, 2006–, and synonymized with *C. foetida* subsp. *rhoedifolia* by Bartolucci & al. 2018), as well as *C. foetida* subsp. *sitiaca* Rech.f., which is doubtfully recognized by Greuter (2006–). There are also other taxa that are morphologically similar to *C. foetida* and sometimes treated as subspecies, for instance *C. commutata* (Spreng.) Greuter, which has been treated as *C. foetida* subsp. *commutata*

(Spreng.) Babc., and *C. insularis* Moris & De Not. These latter two taxa were preliminarily accepted by Greuter (2006–), the second being considered endemic to Sardinia by Pignatti (2018). Given the lack of consensus on taxonomic treatment it is clear that further studies on *C. foetida* are needed.

Nonetheless, while the lectotype is clearly identifiable as *Crepis foetida* s.l., it cannot be ascribed with certainty to any of the currently accepted subspecies and is demonstrably ambiguous. However, given the unresolved infraspecific taxonomy of *Crepis foetida*, we prefer to refrain from epitypification and await a future large-scale and detailed revision of the infraspecific variation within this taxon.

***Crepis foetida* L., Sp. Pl.: 807–808. 1753 [s.l.] – Lectotype (designated here):** [illustration] “*Hierac. flo. externe croceo Amygdalas amaras olens [...]*” in Morison, Pl. Hist. Univ. 3: sect. 7, t. 4, fig. 4. 1699.

■ AUTHOR CONTRIBUTIONS

DI searched all the necessary material and prepared the first draft of the paper. MI checked the draft prepared by DI and provided suggestions to improve the manuscript. — DI, <http://orcid.org/0000-0001-5491-7568>; MI, <https://orcid.org/0000-0002-2771-2935>

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