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## Neotypification of the Name *Hieracium bifidum* KIT. ex HORNEM. (*Asteraceae*).

By

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With 2 Figures

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### Summary

MRÁZ P. & MARHOLD K. 2002. Neotypification of the name *Hieracium bifidum* KIT. ex HORNEM. (*Asteraceae*). – *Phyton* (Horn, Austria) 42 (1): 117–124, 2 figures. – English with German summary.

A neotype is designated for *Hieracium bifidum* because HORNEMANN'S original material is missing. The neotype is a specimen collected by KITAIBEL in the Croatian mountains and kept in the KITAIBEL herbarium in the Hungarian Museum of Natural History (BP) in Budapest.

### Zusammenfassung

MRÁZ P. & MARHOLD K. 2002. Neotypisierung des Namens *Hieracium bifidum* KIT. ex HORNEM. (*Asteraceae*). – *Phyton* (Horn, Austria) 42 (1): 117–124, 2 Abbildungen. – Englisch mit deutscher Zusammenfassung.

Ein Neotypus wurde für *Hieracium bifidum* festgelegt, weil kein Originalmaterial von HORNEMANN auffindbar war. Der Neotypus ist ein von KITAIBEL gesammelter Beleg aus den Bergen Kroatiens, der im Herbarium KITAIBEL am ungarischen naturhistorischen Museum in Budapest (BP) aufbewahrt wird.

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## 1. Introduction

According to ZAHN 1935, *Hieracium bifidum* constitutes one of the so-called "species collectivae principales". ZAHN 1935 recognised altogether 177 subspecies within this broadly conceived taxon and grouped them into five "greges". SELL & WEST 1976 included 11 species in the *H. bifidum* group. They noted that although the name *H. bifidum* has always been used for this group, "it has never been typified and it is uncertain to which segregate the name applies". The *H. bifidum* group represents one of the most difficult and taxonomically poorly investigated groups of the genus *Hieracium* L. Its distribution is given by SELL & WEST 1976 as "throughout a large part of Europe, but absent from much of the southeast and southwest" (see also BRÄUTIGAM 1992). Therefore, the correct and exact interpretation of the name *H. bifidum* is essential for the further study of the group. In recent years the *Hieracium bifidum* group has been studied only in certain regions, e.g. Lower Saxony (GOTTSCHLICH 1999), Istria (GOTTSCHLICH & PERICIN 1999), and Tyrol and Vorarlberg (GOTTSCHLICH & al. 1999), and a broader study is still lacking. Chromosome numbers for *H. bifidum* indicated in the literature are at diploid, triploid and tetraploid levels (cf. SCHUHWERK 1996).

## 2. Results

In 1802 KITAIBEL (1757–1817) and WALDSTEIN (1759–1823) accompanied by illustrator J. SCHÜTZ visited mountainous parts of Croatia, including the Velebit Mts. and Plješivica Mts. (at that time part of the Hungarian Kingdom) (GOMBOCZ 1945, CHRTEK & SKOČDOPOLOVÁ 1995). During this visit they collected a lot of plants. GOMBOCZ 1945 listed 32 names of new species published by WALDSTEIN & KITAIBEL as a result of this journey in their "Descriptiones et icones ..." (WALDSTEIN & KITAIBEL 1799–1812). Most probably, one of the three specimens of *H. bifidum* deposited in the Herbarium Kitaibelianum in Budapest (JÁVORKA 1929) was collected during this journey. It is labelled "*Hieracium bifidum* mihi. E subalp. Croatiae in hortum illatum" (BP, Herb. Kit., fascicle XXVI, sheet number 171). WALDSTEIN and KITAIBEL apparently had intended to publish the name and description of *H. bifidum* in their "Descriptiones et icones". An original colour illustration (Fig. 1) of this species is deposited in the Archive of the Department of Botany of the National Museum in Prague, Průhonice, among the unpublished illustrations clearly planned for publication in "Descriptiones et icones" (CHRTEK & SKOČDOPOLOVÁ 1984). But this monumental work (WALDSTEIN & KITAIBEL 1799–1812) remained unfinished. Out of 300 planned taxa, figures of only 280 of them, together with accompanying texts, were actually published. Financial reasons probably prevented publication of the final fascicle, but the colour tables of the remaining taxa, including *H. bifidum*, were finished and prepared for pub-

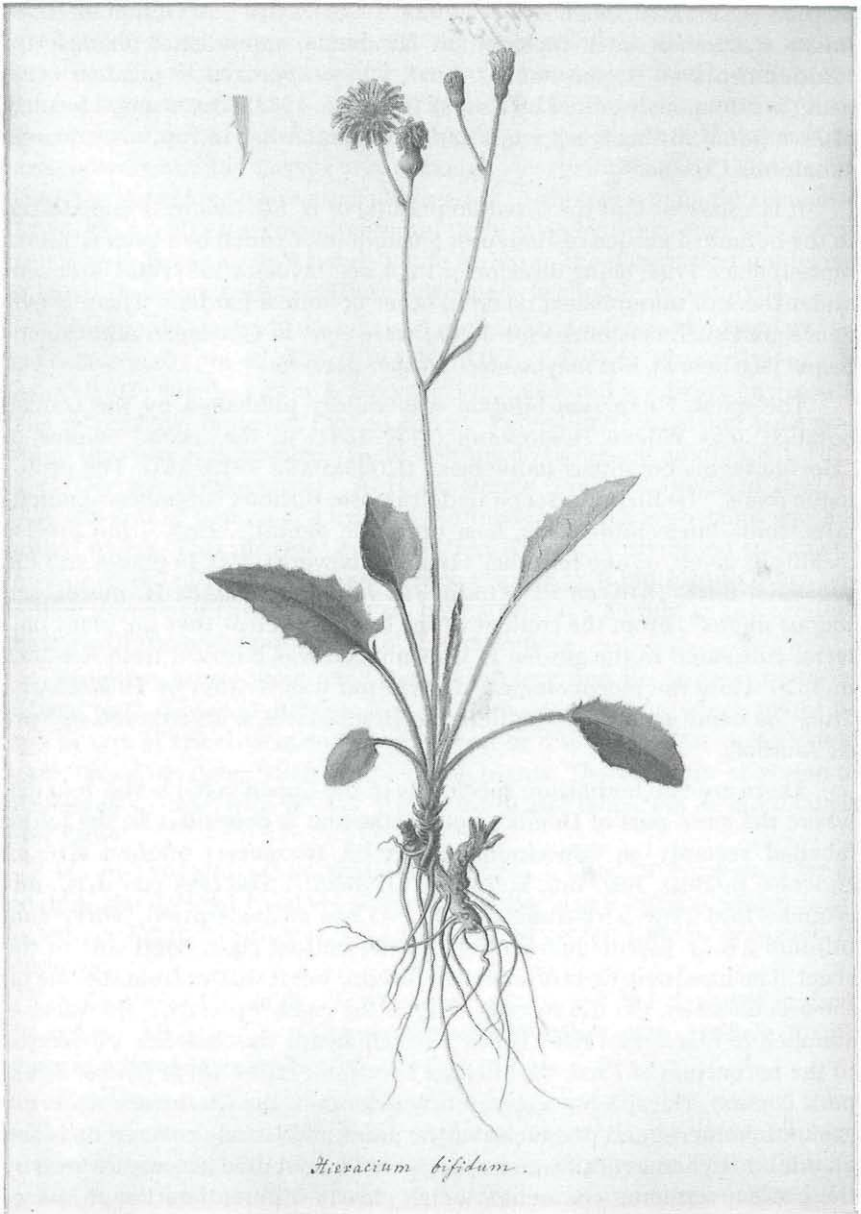


Fig. 1. Previously unpublished illustration (IC 443/36) of *Hieracium bifidum* originally prepared for the WALDSTEIN and KITAIBEL'S work "Descriptiones et icones plantarum rariorum Hungariae" and deposited in the Archive of the Department of Botany of the National Museum in Prague, Průhonice, Czech Republic (Courtesy of the Department of Botany, National Museum in Prague).

lication (CHRTEK & SKOČDOPOLOVÁ 1984, 1995). A full description of *H. bifidum* was much later included in KITAIBEL's unpublished manuscript "Additamenta ad floram hungaricam", which appeared in print in 1863, being posthumously edited by KANITZ (KITAIBEL 1863). The original locality of *H. bifidum* in this work reads as follows: "Habitat in rupibus calcareis subalpinis Croatiae".

It is apparent that the Croatian plant(s) of *H. bifidum* were transferred to the botanical garden in Budapest (custodian of which had been KITAIBEL himself since 1794, being director in 1810, see JÁVORKA 1957) and later sent under the still unpublished name to other botanical gardens. There is evidence that such specimens (or seeds) were sent to Göttingen and Copenhagen (see below), but maybe also to other gardens.

The name *Hieracium bifidum* was validly published by the Danish botanist Jens Wilken HORNE MANN (1770–1841) in the second volume of "Hortus regius botanicus hafniensis" (HORNE MANN 1815: 761). The protologue reads: "H. BIFIDUM: scapo nudo ramoso, floribus corymboso-paniculatis, foliis lanceolato-ovatis, basi profunde dentatis. *Hab.* – [no precise locality is given, unlike for other taxa in this work] ♀ D. [= planta sub dio vegetans] *miss.* 1810. *ab ill.* Kitaib. *sub hoc nom.* *Similis* H. muror. *sed scapus nudus*". From the context of the book it is clear that the plant material cultivated in the garden in Copenhagen was received from KITAIBEL in 1810 while the morphological description was written by HORNE MANN. Thus the name should be attributed to HORNE MANN, with KITAIBEL as "pre ex" author.

There are two herbarium specimens in the Copenhagen herbarium (C), where the main part of HORNE MANN's collection is deposited, in the folder labelled recently as "Specimina originalia *Hieracium bifidum* KIT. ex HORNE M. in Hort. Reg. Bot. Hafn. 2: 761 (1815)". The first one (IDC. microfiche foto Type herbarium nr. 102<sup>1, 3</sup>) has an inscription "*Hieracium bifidum* / h. h. [hortus hafniensis]" on the bottom right-hand side of the sheet. The handwriting is of unknown origin, but it differs from the one on the second sheet. On the reverse side, at the right top corner, the sheet is stamped in black ink "HB LIEBM", which means that this sheet belonged to the herbarium of Frederik Michael LIEB MANN (1813–1856) (TAN & SUDA, pers. comm.). The specimen apparently belongs to the *Hieracium murorum* group. Involucres and peduncles of the plant are densely covered by black glandular trichomes (TAN & SUDA, pers. comm., detailed xerocopies seen by the present authors), characters which clearly differentiate the *H. murorum* group in the current sense from the *H. bifidum* group. The second specimen (IDC. microfiche photo Type Herbarium nr. 102<sup>1, 1-2</sup>) is clearly *H. bifidum* as understood in the current literature (SELL & WEST 1976: 377; ZAHN 1929: 1285–1289; see also GOTTSCHLICH 1987: 1448). The sheet has on the reverse side, at the top right-hand corner the blue stamp "HB

SCHUM" indicating this was acquired by Christian Friedrich SCHUMACHER (1757–1830) (TAN, pers. comm.). On the bottom left-hand there is an inscription, clearly in HORNE-MANN'S hand, "*Hieracium bifidum*", and on the bottom right-hand side "J. H. 1818" [Jens HORNE-MANN]. The first of these specimens is undated and there is no evidence that it was in HORNE-MANN'S possession, while the second one, although clearly labelled by HORNE-MANN bears the date three years after publication. Although one might speculate if "1818" is really the collection date, there is no evidence that this specimen was in HORNE-MANN'S hands while he wrote the description published in 1815. Therefore neither of these specimens is eligible as lectotype.

Searches in the herbaria where the specimens collected by HORNE-MANN are occasionally found (BM, HBG, K, KIEL, LE, P, S, W, see STAFLEU & COWAN 1979: 333; LANJOUW & STAFLEU 1957: 286) did not bring any result. It is interesting, however, that in the St. Petersburg herbarium (LE) was found the specimen labelled "Herb. Schrader. *Hieracium bifidum* Kit. 1812 H. G. [Hortus Göttingensis]". A. H. SCHRADER (1767–1836) was in 1802/3–1836 director of botanical garden in Göttingen and his herbarium was acquired by LE. This provides evidence that KITAIBEL distributed specimens (and/or seeds) of *H. bifidum* not only to Copenhagen but also to other botanical garden(s). However, this specimen has no standing as the original material of the name published by HORNE-MANN.

From the above-mentioned data it is clear that no original material related to the name *H. bifidum* KIT. ex HORNE-M. is extant, which might be due to loss of the corresponding specimen or due to the fact that HORNE-MANN based his description on the living plants. Therefore the selection of a neotype in the sense of Art. 9.6 of the ICBN (GREUTER & al. 2000) is inevitable.

In order to follow the original concept of the name *H. bifidum* as far as possible we decided to select as a neotype the above-cited specimen, collected by KITAIBEL in Croatia and cultivated in the botanical garden in Budapest.

*Hieracium bifidum* KIT. ex HORNE-M., neotypus (hoc loco designatus): "E subalp. Croatiae in hortum illatum" (BP, Herb. KIT., fascicle XXVI, sheet number 171) (Fig. 2).

There are two individual plants on the sheet (Fig. 2), one of them without rosette leaves. The plant with five rosette leaves is 34 cm high (without rhizome). The leaf blade is oblongo-elliptical, slightly denticulate, 3–5 cm long and 2.5–3.5 cm wide, with scattered simple eglandular trichomes on the abaxial side, while the upper – adaxial one is  $\pm$  glabrous, attenuate to 4–5 cm long petiole. The stem in the upper part shows typical "bifidum" branching, with a lateral branch 9 cm long, and it is ended like the main stem by two heads. Peduncles are with numerous stellate trichomes; simple eglandular trichomes are scarce and glandular trichomes

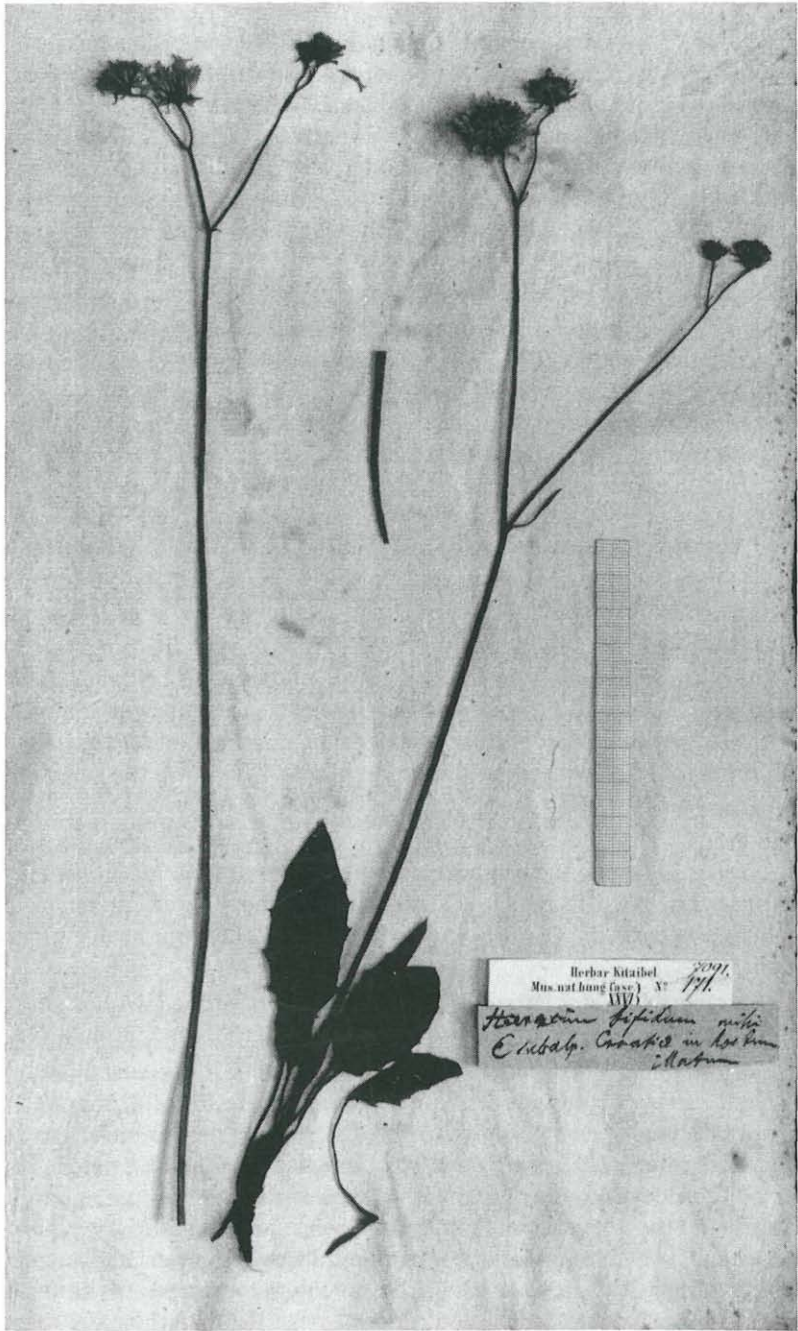


Fig. 2. *Hieracium bifidum* KUNT. ex HORNEM. (neotype, BP; bar = 10 cm).

very rare. The involucrem is covered by dense stellate trichomes with rarely occurring simple eglandular trichomes. The style is yellow-brown coloured.

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