



## Lectotype designation of the name *Hieracium loscosianum* (Asteraceae)

P. PABLO FERRER-GALLEGO<sup>1,5\*</sup>, GONZALO MATEO<sup>2,6</sup>, LLORENÇ SÁEZ<sup>3,4,7</sup> & JOSEP A. ROSSELLÓ<sup>2,8</sup>

<sup>1</sup> Servicio de Vida Silvestre y Red Natura 2000, Centro para la Investigación y la Experimentación Forestal (CIEF), Generalitat Valenciana, Avda. Comarques del País Valencià 114, E-46930 Quart de Poblet, Valencia, Spain.

<sup>2</sup> Jardí Botànic de la Universitat de València, c/ Quart 80, E-46008 Valencia, Spain.

<sup>3</sup> Sistemàtica i Evolució de Plantes Vasculares, Unitat Associada al CSIC, Botànica, Facultat de Biociències, Universitat Autònoma de Barcelona, E-8193 Bellaterra, Barcelona, Spain.

<sup>4</sup> Societat d'Història Natural de les Illes Balears, c/ Margarida Xirgu 16, E-07003 Palma de Mallorca, Islas Baleares, Spain.

<sup>5</sup> ✉ [flora.cief@gva.es](mailto:flora.cief@gva.es); <https://orcid.org/0000-0001-7595-9302>

<sup>6</sup> ✉ [gonzalo.mateo@uv.es](mailto:gonzalo.mateo@uv.es); <https://orcid.org/0000-0001-7385-4697>

<sup>7</sup> ✉ [Gymnesicum@yahoo.es](mailto:Gymnesicum@yahoo.es); <https://orcid.org/0000-0003-4551-2432>

<sup>8</sup> ✉ [rossello@uv.es](mailto:rossello@uv.es); <https://orcid.org/0000-0002-0432-661X>

\*Author for correspondence

### Abstract

The name *Hieracium loscosianum* Scheele is lectotypified using a specimen preserved at COI herbarium.

**Keywords:** *Compositae*, lectotype, nomenclature, original material, taxonomy, Mediterranean Region

### Introduction

*Hieracium loscosianum* Scheele (1863: 668) (*Asteraceae* Bercht. & J.Presl) was described from E Spain. Most of the authors dealing with Spanish *Hieracium* have retained this name. However, it has been included within the *H. aragonense* Scheele (1863: 667) (Mateo & Egido 2017), *H. loscosianum* (Sell & West 1976, Mateo 2012) and *H. aragonense* - *H. loscosianum* groups (Mateo 2013). The taxonomic circumscription of each group has suffered drastic rearrangements and the reasons underling the changes are merely intuitive and have not been based on any robust evidence (Arvet-Touvet 1913; Mateo 2008, 2012, 2013, 2021; Mateo & Egido 2017, Mateo *et al.* 2017). The following names have been considered taxonomic synonyms of *H. loscosianum*, viz *H. androsaceum* Arvet-Touvet (1913: 152), *H. baeticum* Arvet-Touvet & É. Reverchon (in Hervier 1892: 154), *H. baeticum* subsp. *praecocifolioides* Zahn (1921: 199), *H. capillosum* Pau (1903: 286), *H. jabalambrense* Pau (1889: 154), *H. laniferum* subsp. *spathulatiforme* Zahn (1921: 145), *H. majoricanum* Arvet-Touvet (1913: 313), *H. mayoraliae* Mateo (2013: 54), *H. praecox* subsp. *brachypus* Freyn in Porta & Rigo (1886: in schedis [Pl. Balear. Exs. 1885] s.n.) (Mateo 2008, 2012, 2013, Mateo *et al.* 2017, Mateo & Egido 2017).

In addition, *H. loscosianum* has been postulated to be of hybrid origin between *H. elisaeum* Arvet-Touvet ex Willkomm (1893: 120) and *H. praecox* subsp. *brachypus* or *H. murorum* Linnaeus (1753: 802) (Zahn 1921), *H. elisaeum* and *H. glaucinum* Jordan (1848: 22) or *H. murorum* (Sell & West 1976), *H. bifidum* Kitaibel in Hornemann (1815: 761), *H. elisaeum* and *H. bourgaei* Boissier (1856: 102) (Mateo *et al.* 2017), *H. bifidum*, *H. elisaeum* and *H. glaucinum* (Mateo & Egido 2017), *H. bifidum* and *H. elisaeum* (Mateo *et al.* 2017), *H. bifidum* and *H. planchonianum* Timbal-Lagrave & Loret (1858: 508) or *H. elisaeum* (Mateo 2008), *H. hispanobifidum* and *H. aragonense* (Mateo 2013), *H. bifidum* and *H. aragonense* (Mateo 2013), *H. bifidum* and *H. spathulatum* Scheele (1863: 666) (Mateo 2013), *H. bifidum* and *H. planchonianum* or *H. elisaeum* (Mateo 2013).

*Hieracium loscosianum* has been considered a polyploid endemic species from S, E, and C-SE Spain (Luque & Díaz Lifante 1991, Castro *et al.* 2007), but it has been also reported from N Spain (Aizpuru *et al.* 1999, Mateo 2000). The name has been applied to triploid plants with stems with few simple eglandular hairs throughout and few stellate and glandular hairs above, leaves with long, dense simple eglandular hairs; basal leaves 25–50 × 5–20 mm,

oblong, elliptical, ovate or lanceolate; peduncles of capitula with stellate and a few simple eglandular hairs; involucre 8–10 × 6–9 mm; bracts with numerous glandular hairs, stellate hairs and a few simple eglandular hairs (Sell & West 1976, Bolòs & Vigo 1996, Mateo & Egido 2017, Mateo 2021). Some other well-known species are very similar in appearance to *H. loscosianum*: *H. jabalambrense* Pau (1889: 22), *H. granatense* Arvet-Touvet & Gautier (1900), and *H. capillosum* Pau (1903: 286).

This contribution aims to clarify the traditional concept and current use of the name *H. loscosianum* Scheele (1863: 668), since the name has not yet been typified. This contribution is one more step for our work on the nomenclature of this complex genus (see, e.g., Mateo 1997, Ferrer-Gallego & Mateo 2015, 2016, Ferrer-Gallego *et al.* 2015, 2019, Mateo & Egido 2017, Mateo *et al.* 2017, Ferrer-Gallego 2021). The identity of the designated type has been verified with the current use of the name. The acronyms are cited according to Thiers (2022).

### Typification of the name *Hieracium loscosianum*

The protologue of *H. loscosianum* includes a complete description in Latin of this species, followed by the provenance “In monte Tolocha [Tolosa] Arragoniae australis et in montibus dittonis el Maerstrazo [Maestrazgo] regni Valentini: Loscos no. 147!” [sic], and a diagnosis to differentiate this species from “*H. aragonense* [*aragonense*] et *H. saxatile* Vill. (*H. Lawsonii* mihi in Linn. l.c. p. 647 sq.)” (Scheele 1863: 668–669).

We have found a relevant original material in the Willkomm herbarium at COI. The specimen with barcode COI00041675 bears two complete and well-developed plants, with leaves and capitula. The sheet contains also several labels, one of them is a label original of the Loscos’s herbarium and was annotated by Willkomm as “Franc. Loscos, plantae Aragoniae australis. / Hieracium Loscosianum Scheele / ~~Prope Chiprana~~ In monte Tolocha ex ditone Maestrazgo / Leg. 186 / Det. Willkomm”. The sheet bears also a label handwritten by Scheele, annotated as: “Hieracium ~~Lawsonii~~ Loscosianum mihi!” followed by three synonyms “*H. Lawsonii* Vill. / *H. pulmonarium* Sm. / *H. Lawsonii* Gris.”. A third label is a revision label of Arvet–Touvet and is annotated as: “Sect. Cerinthoidea! Gr. Pogonata! / Hier. Loscosianum Scheele! / forma! / Arv.–T.”, and a handwritten label by Loscos “cabezo Tolocha / Hay [illegible] / Hieracium murorum? Finally, the plant mounted on the left of the sheet is labeled as “*H. pallido* simillimum / ad differs dicitur receptaculo / villosa / [illegible] E. Fries! (Fig. 1).

In 1864 Francisco Loscos initiated a Spanish Herbarium, destined to preserve specimens from Aragón flora. Its location was a Secondary School Education in Teruel (Spain), now named Vega del Turia, to which he allocated the first four hundred sheets (collected between 1865–1866). In later years he made new specimens (1868, 1871), and he delivered his *Series exiccata florae Aragonensis* (1876, 1877). Simultaneously, in the summer of 1864, he offered to the Royal Aragonese Economic Society of Friends of the Country (Zaragoza, Spain) the deposit of a herbarium of plants from Aragon. This collection, with 1,350 herbarium sheets, gave rise to the appointment of correspondent partner of the Economic on October 4, 1864. Today, a total of 3,378 sheets are kept in custody at the headquarters of this Society. In addition, some of the sheets of the Loscos’s herbarium were acquired after his death by Carlos Pau and are currently preserved in the Royal Botanical Garden of Madrid (MA).

We have not found any original material of *H. loscosianum* in the Loscos’s herbarium kept in the Royal Aragonese Economic Society of Friends of the Country (see González-Bueno & Muñoz-Garmendia 2001). However, in the Loscos’s herbarium kept at Secondary School Education Vega del Turia in Teruel, there are two sheets that bear the *Hieracium* material. A sheet with code 2-1268 bears a complete plant, with leaves and a capitula, and a printed label “1268 *H. murorum* L. Muchas variedades en las montañas del S. E. en todo el Maestrazgo y llega hasta los alrededores de Torrecilla, Tolocha, Loscos. Pard. En el monte Uruel, Wk. Jun. set. / *H. murorum* Asso. En Moncayo, monte de Herrera, sierra de Villarroja, Rodenas, etc. Asso Syn.”. The second sheet, with code 2-F, bears two poorly preserved plants, and a handwritten label “*H. rupicolum* Fr. / esp. nueva para la Fl. de Aragon”. Although this material is preserved in the Loscos’s personal herbarium and on the label of the first sheet is mentioned “Tolocha”, the geographical provenance mentioned by Scheele in the protologue of *H. loscosianum*, the collection date is missing on both sheets. On the other hand, this material can be identified in fact as belonging to *H. murorum* Linnaeus (1753: 802).

Finally, in the herbarium VAL there is a sheet that bears a plant and two label handwritten labels. A label is handwritten by Carlos Pau, and is annotated as “*H. loscosianum* / Torrecilla en los costados (allá arriba sobre las peñas) de la Val hacia montes de la longitud por la Val”. The second label is annotated “Plantae Hispanicae / Herbarium Facultatis Scientiarum Valentiae / Hieracium Loscosianum / Scheele / Torrecilla (Teruel) / Leg. Loscos / Det.”. The sheet bears also three revision labels. However, this material collected by Loscos and identified as belonging to *H. loscosianum* lacks the date of collection, and it cannot be treated as the original material of the name.

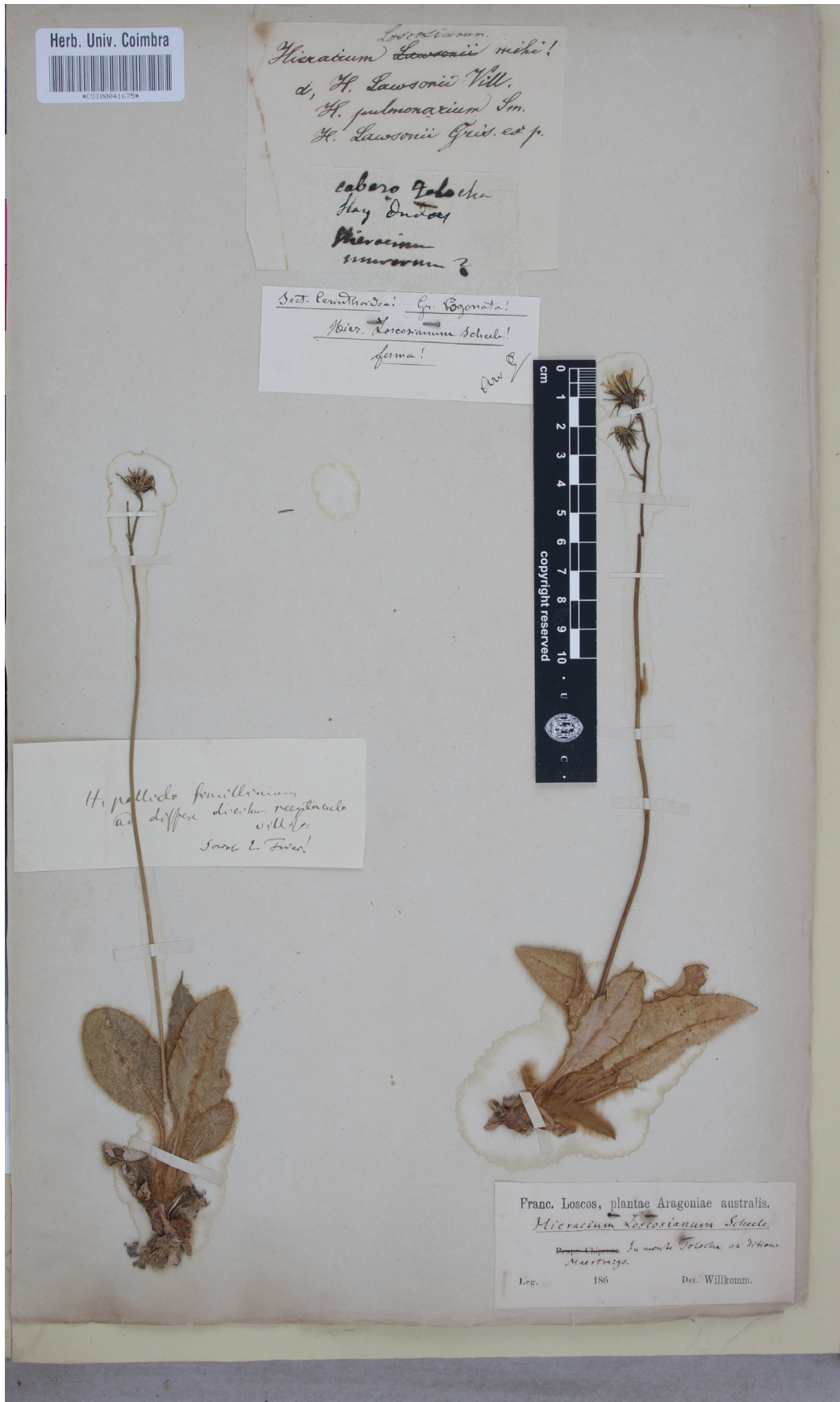


FIGURE 1. Lectotype of *Hieracium loscosianum* Scheele, COI (barcode COI00041675). – Image courtesy of the herbarium COI, reproduced with permission.

We have been unable to locate any further original material in the relevant consulted herbaria (e.g., B, BM, G, JE, K, LY, MA, MPU, P, W, etc.). Fortunately, the specimen COI00041675 is a complete and informative material and matches to the traditional concept and current use of the name. It shows diagnostic features as the stems with few simple eglandular hairs throughout and few stellate and glandular hairs above, leaves with long, dense simple eglandular hairs; basal leaves 25–50 × 5–20 mm, oblong, elliptical, ovate or lanceolate; peduncles of capitula with stellate and a few simple eglandular hairs; involucre 8–10 × 6–9 mm; bracts with numerous glandular hairs, stellate hairs and a few simple eglandular hairs (see Scheele 1863, Willkomm & Lange 1865, Arvet-Touvet 1913, Zahn 1921, 1930, Sell & West 1976, Bolòs & Vigo 1996, Mateo & Egido 2017, Mateo *et al.* 2017, Mateo 2012, 2021). Therefore, we designate this specimen as the lectotype of *H. loscosianum*. Although this herbarium sheet does not show the date of collection, we are confident by the labels that it is an original material (syntype) that was used by Scheele for the description of the species.

***Hieracium loscosianum* Scheele (1863: 668)**

**Type:**—[SPAIN. Teruel], Maestrazgo. In Monte Tolocha, 186[?], *Loscos s.n.* (COI barcode COI00041675, lectotype, **designated here**) (Fig. 1).

= *Hieracium jabalambrense* Pau (1889: 22).

**Type:**—[SPAIN] Teruel, Javalambre, s.d., *C. Pau s.n.* (MA barcode MA143127, lectotype designated by Mateo (1997: 9)) (image available at: <http://plants.jstor.org/stable/viewer/10.5555/al.ap.specimen.ma143127>).

= *Hieracium granatense* Arvet-Touvet & Gautier (1900: No. 154).

**Type:**—[SPAIN] Granada, Sierra del Pinar, près la Pobla de don Fadrique, les praires, sur le calcaire, alt. 1900 m. env., Jul 1900, *E. Reverchon* [Plantes d’Espagne 1900, province de Grenade], Exsiccatum “Hieraciotheca Hispanica” No. 154 (BC barcode BC924112, lectotype **designated here**: Fig. 2; islectotype: BM barcode BM001050693 (image available at <https://data.nhm.ac.uk/object/332bea2c-7049-4839-a11b-40fc74d38044/1638403200000>)).

= *Hieracium capillosum* Pau (1903: 286).

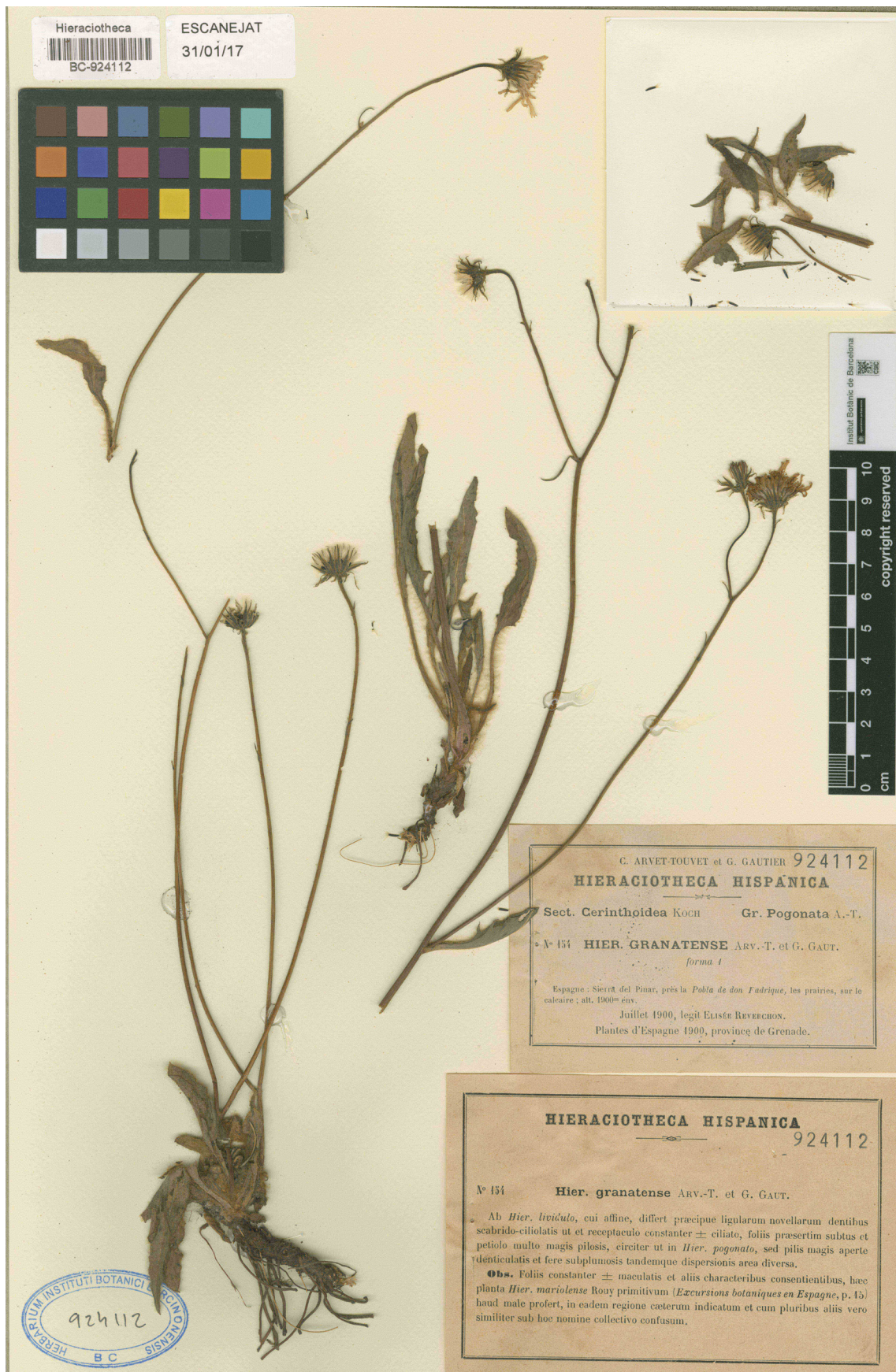
**Type:**—[SPAIN] Castellón, Sierra de El Toro, June 1903, *C. Pau s.n.* (MA barcode MA143094, lectotype designated by Ferrer-Gallego *et al.* (2019: 75), or perhaps holotype).

**Notes:**—The French hieraciologist Jean Maurice Casimir Arvet-Touvet (1841–1913) and Maurice Clément Gaston Gautier (1841–1911) distributed between 1897 and 1908, 20 set issued of an *exsiccata* series, under the name *Hieraciotheca gallica et hispanica*. These *exsiccata* bear a total of 2070 numbers, 10 sets issued with 1,643 numbers mainly from the Alps and Pyrenees (*Hieraciotheca gallica*), and 10 sets issued with 427 numbers from Spain and Andorra (*Hieraciotheca hispanica*).

This species was distributed in the *exsiccata* “*Hieraciotheca Hispanica*” with the number 154. In particular, this material is original of an *exsiccata* collected by Elisée Reverchon “Plantes d’Espagne 1900”, distributed under the number 1213. In the herbarium at BC, there is a specimen of this *exsiccata*. The sheet with barcode BC924112 bears two plants and two original printed labels of Arvet-Touvet and Gautier. The first label includes the phrase “*Hieraciotheca Hispanica*”, the name “*Hier. granatense* Arv.-T. et G. Gaut.”, the number 154, a complete description in Latin, and a diagnostic comment. The second label includes the title “*C. Arvet-Touvet et G. Gautier / Hieraciotheca Hispanica / Sect. Cerinthoidea Koch / Gr. Pogonata A.-T.*”, the number “154”, the name “*Hier. granatense* Arv.-T. et G. Gaut.”, marked as “*forma I*”, the geographical provenance as “*Espagne : Sierra del Pinar, près la Pobla de don Fadrique, les praires, sur le calcaire ; alt. 1900 m env.*”, and date and collector “*Juillet 1900, legit Elisée Reverchon / Plantes d’Espagne 1900, province de Grenade*” (Fig. 2).

On the other hand, there is another specimen of this gathering at BM, with barcode BM001050693. The sheet bears seven complete and well-developed plants, and an original printed label of the Reverchon’s *exsiccata*, annotated as “*Elisée Recherchon – Plantes d’Espagne – 1900 / Province de Granade / N° 1213 / Hieracium granatense Arv.-Touv. et Gaut. / Species nova in sched. 1900, teste Arv.Touv. / Sierra del Pinar, praires rocheuses, sur le calcaire, 1.900 mètres. Rare. / Juillet*”.

These two specimens are the original material of the name *H. granatense*, and they belong to the same species currently named as *H. loscosianum*. Accordingly, we designate as the lectotype of *Hieracium granatense* the specimen with barcode BC924112.



**FIGURE 2.** Lectotype of *Hieracium granatense* Arvet-Touvet & Gautier, BC (barcode BC924112). – Image courtesy of the herbarium BC, reproduced with permission.

## Acknowledgements

We thank Joaquim Santos (COI) and Antonio Pérez (IES Vega del Turia, Teruel) for their valuable help in the study of the herbarium sheets.

## References

- Arvet-Touvet, C. (1913) *Hieraciorum praesertim Galliae et Hispaniae catalogus systematicus*. Paris, Librairie des sciences naturelles Paul Klincksiek, Paris, 480 pp.
- Arvet-Touvet, C. & Gautier, G. (1900) *Hieracium granatense* Arv.-T. et G. Gaut. In: *Hieraciotheca Hispanica*: No. 154 (in schedis).
- Boissier, P.E. (1856) *Diagnoses Plantarum Orientalium novarum*, ser. 2, vol. 3. Herrmann, Lipsiae, 115 pp.
- Bolòs, O. de & Vigo, J. (1996) *Flora dels Països Catalans* 3 (Pirolàcies-Compostes). Barcino, Barcelona, 1230 pp.
- Castro, M., Mateo, G. & Rosselló, J.A. (2007) Chromosome numbers in *Hieracium* and *Pilosella* species (Asteraceae) from the Iberian Peninsula and the Balearic Islands. *Botanical Journal of the Linnean Society* 153: 311–320.  
<https://doi.org/10.1111/j.1095-8339.2007.00613.x>
- Ferrer-Gallego, P.P. (2021) Typification of fourteen Linnaean names in the genus *Hieracium* (Compositae). *Taxon* 70 (4): 880–896.  
<https://doi.org/10.1002/tax.12533>
- Ferrer-Gallego, P.P., Greuter, W., Del Egido, F. & Mateo, G. (2015) Typification of the Linnaean name *Hieracium cerinthoides* (Compositae). *Willdenowia* 45 (3): 385–389.  
<https://doi.org/10.3372/wi.45.45302>
- Ferrer-Gallego, P.P. & Mateo, G. (2015) Typification of *Hieracium pilosella* L. (Asteraceae). *Annales Botanici Fennici* 52 (3): 202–204.  
<https://doi.org/10.5735/085.052.0311>
- Ferrer-Gallego, P.P. & Mateo, G. (2016) Tipificación del nombre Cavanillesiano *Hieracium laniferum* (Compositae). *Flora Montiberica* 63: 13–17.
- Ferrer-Gallego, P.P., Mateo, G., Gavioli, L. & Ibáñez, N. (2019) Taxonomic and nomenclatural revision of Carlos Pau's names in *Hieracium* (Asteraceae). *Phytotaxa* 401 (2): 64–100.  
<https://doi.org/10.11646/phytotaxa.401.2.1>
- Frey, J.F. (1886) *Hieracium praecox* subsp. *brachypus* Freyn (sine no.). In: Porta, P. & Rigo, G. *Plantarum Balearicum Exsiccata 1885*. (in schedis).
- González-Bueno, A. & Muñoz-Garmendia, F. (eds.) (2001) *F. Loscos y Bernal (1823–1886) Un botánico aragonés*. Ibercaja, Real Sociedad Económica Aragonesa de Amigos del País, Real Jardín Botánico, CSIC, Madrid, 1054 pp.
- Hornemann, J.W. (1815) *Hortus Regius Botanicus Hafniensis*, vol. 2. E.A.H. Möller, Hauniae [København-Copenhagen], pp. 437–995
- Jordan, A. (1848) *Catalogue des Graines récoltées au Jardin botanique de la Ville de Dijon en 1848, offertes en échange*. Dijon (Divionensis), 22 pp.
- Linnaeus, C. (1753) *Species Plantarum*. Laurentius Salvius, Stockholm, 1200 pp.
- Luque, T. & Díaz Lifante, Z. (1991) Chromosome numbers of plants collected during Iter Mediterraneum I in the SE of Spain. *Bocconea* 1: 303–364.
- Mateo, G. (1997) Sobre los táxones del género *Hieracium* L. (Compositae) descritos como nuevos en España, IV. Letras H–M. *Flora Montiberica* 6: 5–21.
- Mateo, G. (2000) Comentarios sobre las especies de *Hieracium* y *Pilosella* recolectados en la campaña AHIM-1998. *Flora Montiberica* 14: 31–34.
- Mateo, G. (2008) Revisión sintética del género *Hieracium* en España, V. Sect. *Cerinthoidea*. *Flora Montiberica* 38: 25–71.
- Mateo, G. (2012) Aportaciones al conocimiento del género *Hieracium* L. en España. *Flora Montiberica* 51: 33–60.
- Mateo, G. (2013) Aportaciones al conocimiento del género *Hieracium* L. en España, XVI. *Flora Montiberica* 54: 84–105.
- Mateo, G. (2021) El género *Hieracium* L. en la Comunidad Valenciana. *Flora Montiberica* 79: 71–62.
- Mateo, G. & Egido, F. del (2017) *Estudio monográfico de los géneros Hieracium y Pilosella en España. Con referencias a Portugal y los Pirineos franceses*. Monografías de Botánica Ibérica, nº 20, Jolube, Jaca, 422 pp.
- Mateo, G., Talavera, S. & Egido, F. del (2017) *Hieracium* L. In: Talavera, S., Buirra, A., Quintanar, A., García, M.A., Talavera, M., Fernández Piedra, P. & Aedo, C. (Eds.) *Flora iberica*, vol. XVI (II). Real Jardín Botánico, CSIC, Madrid, pp. 963–1062.
- Scheele, A. (1863) Revisio *Hieraciorum hispanicorum et pyrenanicorum*. *Linnaea* 32: 643–688.
- Sell, P.D. & West, C. (1976) *Hieracium* L. In: Tutin, T.G., Heywood, V.H., Burges, N.A., Moore, D.M., Valentine, D.H., Walters, S.M. & Webb, D.A. (Eds.) *Flora Europaea*, vol. 4. Cambridge University Press, Cambridge, pp. 358–410.

- Thiers, B. (2022 [continuously updated]) *Index Herbariorum: a global directory of public herbaria and associated staff*, New York Botanical Garden's Virtual Herbarium. Available from: <http://sweetgum.nybg.org/science/ih> (accessed 14 January 2022)
- Timbal-Lagrave, É. & Loret, H. (1858) Note sur deux espèces nouvelles du genre *Hieracium* des environs de Montpellier. *Bulletin de la Société de France* 5: 507–509.  
<https://doi.org/10.1080/00378941.1858.10833122>
- Willkomm, H.M. (1893) *Supplementum Prodromi Florae Hispanicae*. E. Schweizerbart, Stuttgart, 360 pp.  
<https://doi.org/10.5962/bhl.title.10940>
- Willkomm, H.M. & Lange, J. (1865) *Prodromus florum hispanicae*, vol. 2. E. Schweizerbart (E. Koch), Stuttgart, 680 pp.
- Zahn, K.H. (1921–1923) *Hieracium*. In: Engler, A. (Ed.) *Das Pflanzenreich. Regni vegetabilis conspectus*, vol. 75–82 (IV, 280) [pars Compositae–*Hieracium*]. Wilhelm Engelmann, Leipzig, pp. 1–1146.
- Zahn, K.H. (1930) *Hieracium*. In: Ascherson, P. & Graebner, P. (Eds.) *Synopsis der mitteleuropäischen Flora*, vol. 12 (1). Gebrüder Borntraeger, Leipzig, pp. 1–492.