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## ***Hieracium hypochoeroides* subsp. *montis-scuderii* (Asteraceae), a new endemic subspecies from Sicily (Italy)**

### **Abstract**

Di Gristina, E., Gottschlich, G., Galesi, R., Raimondo, F. M. & Cristaudo, A.: *Hieracium hypochoeroides* subsp. *montis-scuderii* (Asteraceae), a new endemic subspecies from Sicily (Italy). — Fl. Medit. 23: 49-55. 2013. — ISSN: 1120-4052 printed, 2240-4538 online.

*Hieracium hypochoeroides* subsp. *montis-scuderii*, a new subspecies endemic to Sicily, is described and illustrated. It is only known from the carbonate cliffs of Monte Scuderi (Peloritani Mountains, NE-Sicily). Informations on its ecology and taxonomic relationships are provided.

*Key words*: Endemism, morphology, Peloritani Mts, taxonomy.

### **Introduction**

Sicily is one of the richest biodiversity hotspots in the Mediterranean, it has been the ideal subject for several recent studies concerning endemic plant genetic diversity (Bancheva & al. 2011), taxonomy (Di Gristina & al. 2013) and nomenclature (Di Gristina & al. 2012; Domina & al. 2012). In this island according to Greuter (2008) and Raimondo & al. (2010), *Hieracium* L. s. str. is represented by 8 taxa, 6 endemic to the island (*H. lucidum* Guss. subsp. *lucidum*, *H. lucidum* subsp. *cophanense* (Lojac.) Greuter, *H. murosorum* subsp. *atrovirens* (Guss.) Raimondo & Di Grist., *H. racemosum* subsp. *pignattianum* (Raimondo & Di Grist.) Greuter, *H. schmidtii* subsp. *madoniense* (Raimondo & Di Grist.) Greuter, *H. symphytifolium* Froel.), the remaining 2 with a wider range (*H. pallidum* Biv. and *H. racemosum* subsp. *crinitum* (Sm.) Rouy). Lately, Caldarella & al. (2013) and Gottschlich & al. (2013) described two additional taxa endemic to Sicily, both belonging to *H. sect. Grovesiana* (Gottschlich 2009): *H. busambarense* Caldarella & al. and *H. pallidum* subsp. *aetnense* Gottschl. & al. In June 2007, during floristic field work on Monte Scuderi, Peloritani Mountains, NE-Sicily (Fig. 1), a small population of a *Hieracium* clearly distinct from all other Sicilian taxa of that genus was found. A morphological study allowed us to define the plants as representing a new taxon, here described as a subspecies of *H. hypochoeroides* and named *H. hypochoeroides* subsp. *montis-scuderii*.

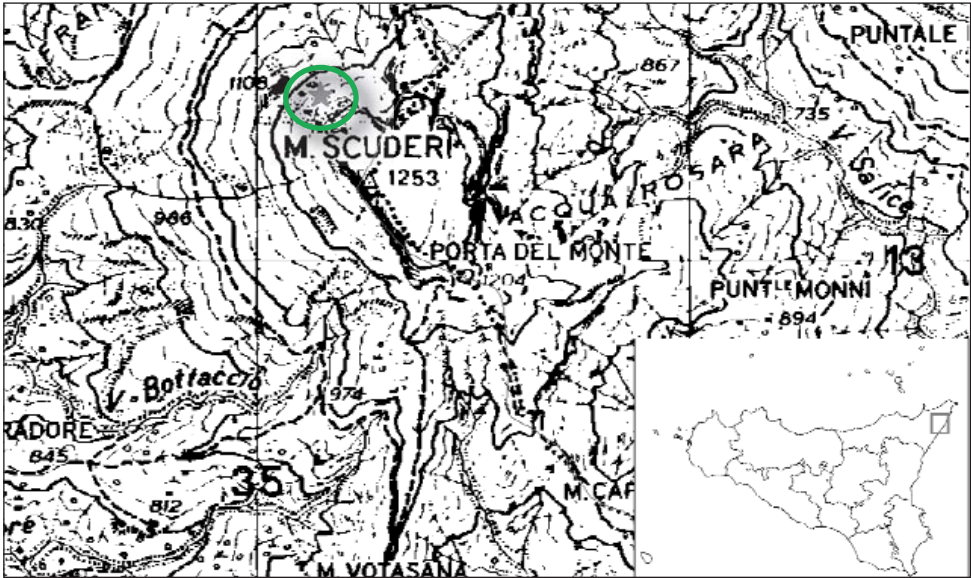


Fig. 1. The single known location of *Hieracium hypochoeroides* subsp. *montis-scuderii*.

*Hieracium hypochoeroides* subsp. *montis-scuderii* Di Grist., Gottschl., Galesi, Raimondo & Cristaudo, **subsp. nov.**

*Holotype* (Fig. 2): Sicily, “Monti Peloritani, Monte Scuderi (Ali, Messina), 38°03’55” N, 15°24’00” E, rupi carbonatiche, 1150 m a.s.l.”, 16 Jun 2007, *Cristaudo & Galesi* (PAL).  
*Isotypes*: PAL-Gr, CAT, FI, Hb. Gottschlich 60482.

**DESCRIPTION.** – Plant perennial, rosulate. Rhizome stout or slender, oblique or horizontal. Stem erect, slender ( $\varnothing$  0.3–0.8 mm), (6.5–) 8–13 (–14.5) cm high, green, often brownish-purple at the base, beneath with moderate to rather dense 2–4 (–5) mm, whitish, crisp simple hairs, sparse to moderately dense minute (up to 0.1 mm long) glandular hairs and sparse or no stellate hairs, above with sparse to moderately dense simple (2–3 mm long) and glandular (0.1–0.3 mm long) hairs, and sparse stellate hairs. Basal leaves 3–6 (–8), petiolate; petiole (1–) 1.2–4 (–4.5) cm long, green or brownish-purple, widened at the base, with moderate to subdense, 3–5 mm long, whitish, crisp simple hairs and sparse, minute glandular hairs, stellate hairs absent; lamina elliptical, ovate, or oblong-elliptical, (2.6–) 3–5.5 (–6)  $\times$  (1.3–) 1.5–2.3 (–2.5) cm, glaucous-green or grey-glaucous above, often spotted, pink-purple on lower surface, cordate-ovate or truncate, margin entire or slightly denticulate only at the base, rounded-obtuse or acute, with whitish, crisp simple hairs 1–4 (–5) mm long that are sparse to moderately dense above, moderately dense on the margin, rather dense along the midrib, sparse, minute glandular hairs, and sparse or no stellate hairs. Cauline leaves 0–1, linear-lanceolate, 0.5–0.7  $\times$  0.1–0.15 cm, colour and indument similar to those of the basal leaves. Inflorescence furcate, seldom almost



Fig. 2. *Hieracium hypochoeroides* subsp. *montis-scuderii*: Holotype.

racemose; branches 0-2, straight, 2-3.5 cm long, each with a single capitulum; capitula 1-3; acladium 2-2.8 cm long. Peduncles with 1-3 (-4) linear, green or dark green bracts (1-4 (-5) mm long), with sparse to moderately dense, 0.7-1.5 mm long, crisp simple hairs, white distally and with a dark base, moderately dense blackish-yellow, 0.1-0.3 mm long, glandular hairs, and sparse to moderately dense stellate hairs. Involucre almost campanulate, 9-11 mm long. Involucral bracts in few series, dark green, lighter at the margin, linear-lanceolate, 0.4-0.8 mm wide, acute or subobtuse, with moderately to rather dense crisp to curved, 0.5-1.5 mm long simple hairs, upper half white distally and with a black base, sparse, 0.2-0.3 mm long glandular hairs, black or yellowish glands, black peduncle, and sparse stellate hairs that are moderately dense only at the margin. Corolla limb ligulate, yellow, glabrous. Styles yellow. Achenes 3-3.5 mm long, dark brown.

ETYMOLOGY. – The epithet *montis-scuderii* refers to Latin name of the mountain, Mons Scudarius, where the plant grows.

BIOLOGICAL FORM. – Rosulate hemicryptophyte, with oblique or horizontal rizhome.

PHENOLOGY. – Flowering time: June (Fig. 3). Fruiting time: June to first decade of July.



Fig. 3. *Hieracium hypochoeroides* subsp. *montis-scuderii*: blooming individuals in nature.



DISTRIBUTION AND ECOLOGY. – *Hieracium hypochoeroides* subsp. *montis-scuderii* is confined to the carbonate cliffs of Monte Scuderi, locality Ali, Messina Province (Fig. 1 and 4), within the “Riserva Naturale Orientata Fiumedinisi e Monte Scuderi”. From a bioclimatic point of view, according to Rivas-Martinez (1981), the new taxon ranges within the mesomediterranean bioclimatic belt, with upper subhumid ombrotype. It is represented by a small calcicolous population consisting about 100 individuals occurring on NW-facing rocky slopes, between 1145 and 1180 m a.s.l. Within this narrow mountain belt, it grows together with *Edraianthus graminifolius* (L.) A. DC. subsp. *graminifolius*, *Lomelosia crenata* (Cirillo) Greuter & Burdet, *Cerastium tomentosum* L., *Pimpinella tragium* Vill., *Valantia muralis* L., *Sedum dasyphyllum* L., *Euphorbia rigida* M. Bieb., *Athamanta sicula* L., *Hypochoeris laevigata* (L.) Ces. & al., and *Hyoseris radiata* L.

CONSERVATION STATUS. – On the basis of the IUCN Red List criteria (Anonymous 2010), due to its restricted area and low number of plants – in the only known location 40–60 mature individuals were estimated – *Hieracium hypochoeroides* subsp. *montis-scuderii* should be classified as “Critically Endangered” (CR): B1a+2a; C2a(ii).

TAXONOMIC RELATIONSHIPS. – Because of the ramification of the synflorescence the new taxon clearly belongs to *Hieracium* sect. *Bifida*, which includes the two collective species *H. bifidum* and *H. hypochoeroides*, each with numerous apomictic subspecies or



Fig. 4. Carbonate cliffs of Monte Scuderi: the *locus classicus* of *Hieracium hypochoeroides* subsp. *montis-scuderii*.

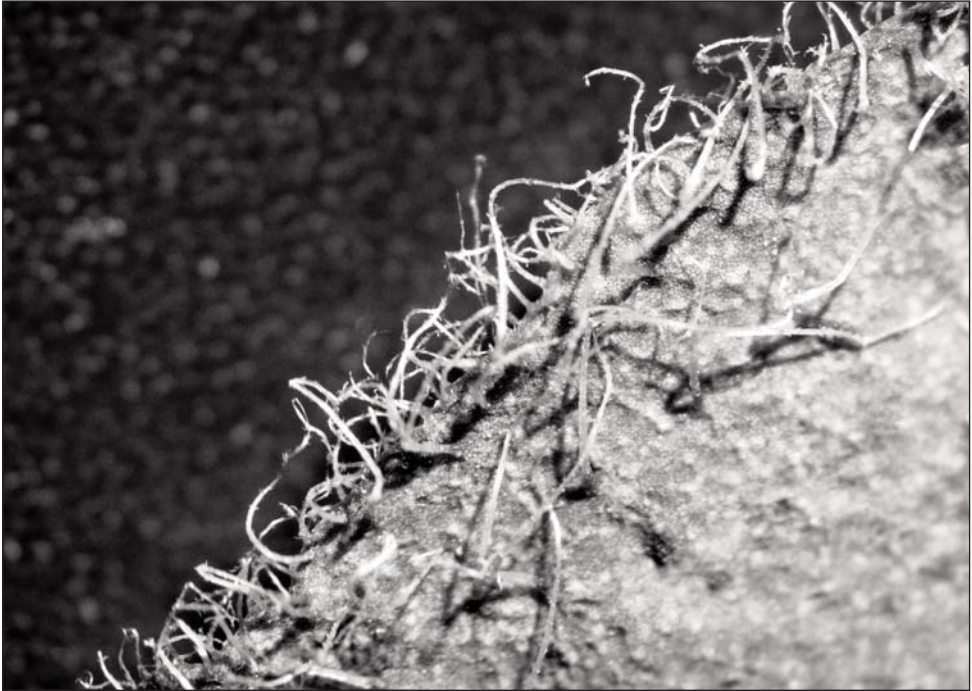


Fig. 5. *Hieracium hypochoeroides* subsp. *montis-scuderii*: detail of the leaf, with crisp simple hairs.

microtaxa, sometimes with a restricted distribution only. *H. bifidum* and *H. hypochoeroides* can be told apart by the indumentum of the basal leaves. In taxa of the *H. hypochoeroides* complex, the leaf margin and peripheral portion of the adaxial surface of basal leaves bear  $\pm$  crisp simple hairs (Fig. 5). Therefore, the new subspecies must be assigned to that collective species. It differs from all know taxa of *H. hypochoeroides* by the following combination of characters:

- basal leaves nearly entire, elliptical to ovate;
- phyllaries with many simple, curved to crisp hairs;
- phyllaries with moderately dense stellate hairs at the margin, but only few on the surface.

Together with the isolated distribution *H. hypochoeroides* susp. *montis-scuderii* can be regarded as a local endemit of NE Sicily.

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