

Notes on some taxa of *Hieracium* and *Pilosella* (Asteraceae), new for the Greek flora, II and a nomenclatural comment on *Hieracium* “*chalsinense*”

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Abstract. Floristic investigation of the flora of North and Central Greece was continued, with emphasis on the genera *Hieracium* and *Pilosella*. As a result, five species and one subspecies of the genus *Hieracium* and two species of the genus *Pilosella* were detected for the first time in Greece and reported here. According to the original description and classification, *Hieracium juranomorphum* and *Pilosella neosyllecta* are suggested to be treated in the species rank. One new combination has been offered (*Pilosella neosyllecta*). The wrong spelling of *Hieracium chalsinense* has been corrected to *H. chalasmenoense*.

Key words: Greece, *Hieracium*, nomenclature, new records, *Pilosella*, taxonomy

Introduction

In the period 2017–2019, investigation of the *Hieracium* and *Pilosella* flora of Greece was continued. The hypothesis that the flora of these genera has been only partly known in Northern Greece has been proved again, as well as the fact that it harbours some still undetected taxa. Recently, Szeląg & Vladimirov (2019) have reported *Hieracium pangaeum* from M. Pangeo in Northeast Greece. Gottschlich & Dunkel (2019) have described nine species, six subspecies, and one *Pilosella* taxon from North Greece. The recently described species from Bulgaria, *Hieracium crinitopanosum* Szeląg & Vladimirov and *H. petrovae* Vladimirov & Szeląg, were also detected in North Greece (Vladimirov & Szeląg 2006, Dunkel & Gottschlich 2018, Szeląg & Vladimirov 2013).

The contribution of this paper amounts to five species and one subspecies of *Hieracium* and two taxa of *Pilosella* reported for Greece for the first time.

Material and methods

The herbarium specimens were collected during the standard field studies in the mountains of North and Northeast Greece. All specimens were examined and determined by G. Gottschlich.

Abbreviations used in the data sets include NE, NC, NPI = phytogeographical regions according to Dimopoulos et al. (2013); Go- = specimen in herbarium of /by G. Gottschlich; Du- = specimen in herbarium of /by F. G. Dunkel; Hier. Eur. Sel. = specimens to be distributed in the exsiccata series Hieracia Europaea Selecta (B, FI, FR, H, IBF, LI, M, MSTR, PAL, UPA, W, Hb. Brandstätter, Hb. Dunkel, Hb. Gottschlich).

Results and discussion

***Hieracium breazense* Nyár.** (*sparsum* – *levicaule*) (Fig. 1)

First report for Greece. The species was recorded in the following localities:



Fig. 1. *Hieracium breazense* (Du-36369).

Greece, NPi – Central Macedonia, Nom. Pella (Edessa), Mt Vermio, Ano Grammatiko → Agia Fotini, 990 m (40°42'46"N 21°58'32"E), on edge of beech/pine forest, leg. F.G. Dunkel & G. Gottschlich, 17.06.2019, Du-36369, Go-72312; Mt Vermio, Ano Grammatiko → Agia Fotini, 1110 m (40°42'37"N 21°57'47"E), on edge of beech/pine forest, leg. G. Gottschlich & F. G. Dunkel, 17.06.2019, Go-72305, Hier. Eur. Sel. No. 901

Originally, *H. breazense* was described by Zahn (1933: 66) and interpreted morphologically as "*sparsum* – *lachenalii* – *bifidum*", later listed in Zahn 1922–1938 (vol. 12/3: 677) with a modified "formula" as "*sparsum* – *levicaule*". Depiction is by Nyárády (1965: 695, Pl. 95) (Fig. 1).

The name refers to the type locality above Breaza in the Făgăraș Mts In Nyárády (1965), a second locality was mentioned in the region of Cluj. The species is considered a Romanian endemic (Euro+Med 2006). The type specimen is deposited in Berlin (B) (<https://ww2.bgbm.org/Herbarium/specimen.cfm?Barcode=B100097024>).

***Hieracium juranomorphum* Zahn** (*sparsum* – *murorum* – *preanthoides*) (Fig. 2)

≡ *H. medschedsense* Zahn subsp. *juranomorphum* (Zahn) Zahn

First report for Greece. The species was collected in the following locality:

Greece, NPi – Epirus, Ioánnina, Mt Gramos, SE of Mt Petra Mouka, SE Aetomilitsa, near a brook, 1774 m (40°17'56"N 20°54'25"E), in beech forest, leg. F.G. Dunkel & G. Gottschlich, 17.07.2018, Du-35520, Du-35521, Go-70325, Hier. Eur. Sel. No. 902

Hieracium medschedsense was described by Zahn (1907) on the basis of a collection by Ruprecht from Mt Medschedse (North Caucasus, Dagestan, Russia). Zahn added the formula ("*preanthoides* – *sparsiflorum*) > *silvaticum*"). Five years later, a similar Bulgarian taxon from Mt Vitoshka was named *H. juranomorphum* ("*sparsiflorum*–*silvaticum*–*preanthoides*") (Zahn 1912). In his monograph, Zahn regraded *H. juranomorphum* as one of the three subspecies of *H. medschedsense* (Zahn 1921–23); Euro+Med (2006-) adopted this estimation.

For geographical and morphological reasons (*H. medschedsense* has only denticulate leaves), the authors assume as more adequate to treat *H. juranomorphum* as a species.

***Hieracium oroglaucum* O. Behr, E. Behr & Zahn** (*naegelianum* > *pseudobifidum*) (Fig. 3)

subsp. ***oroglaucum***

First report for Greece. The species was collected from the following localities:

Greece, NC – Central Macedonia, Nom. Pella (Edessa), below the road to Kajmakčalan, 1840 m (40°53'54"N 21°49'27"E), in meadow over silicate, leg. F.G. Dunkel & G. Gottschlich, 18.06.2019, Du-36452, Go-72363; ibidem, Kajmakčalan → Edessa, 1830 m (40°53'55"N 21°50'11"E), in fragments of subalpine meadows above finely broken rocks, leg. F.G. Dunkel & G. Gottschlich, 18.06.2019, Du-36458+36461, Go-72366.

Although *Hieracium naegelianum* Pančić is absent in North Greece, the influence of this species is obvious in *H. oroglaucum*: a small capitula on a thin stalk and glabrous narrow leaves. Hitherto, *H. oroglaucum* has been known only from Albania (Behr & al. 1937, Zahn 1922–1938, map in Barina 2017).

***Hieracium pseudobifidum* Schur** (Fig. 4)

First report for Greece. The species was recorded in the following locality:

Greece, NE – East Macedonia, Nom. Drama, Mikromilia → Birch Forest/Forest of Simida, on edge of spruce forest, 1280 m, 41°30'03"N 24°12'38"E, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Du-36653, Go-72570.

H. pseudobifidum and *H. rotundatum* Kit. ex Schult. belong to the section Transsilvanica (Zahn) Schljakov. All species manifest influence and/or introgression from *H. transylvanicum* Heuff.: leaf edges with short hairs, furry villous dorsal nerve and petiole. The species is widespread in almost all Balkan countries, including East Austria; the new finding extends its area further to the south.

***Hieracium rotundatum* Kit. ex Schult.** (Fig. 5)

≡ *H. praecurrens* Vuk.

First report for Greece. The species was collected from the following localities:

Greece, NE – East Macedonia, Nom. Drama, Mikromilia → Birch forest/Forest of Simida, 1320 m, (41°29'57"N 24°12'47"E), at road ditch under spruce forest canopy, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Du-36650, Go-72569; ibidem, Mikromilia → Birch forest/Forest of Simida, 1280 m (41°30'03"N 24°12'38"E), on edge of spruce forest, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Du-36655, Du-36656, Go-72572.

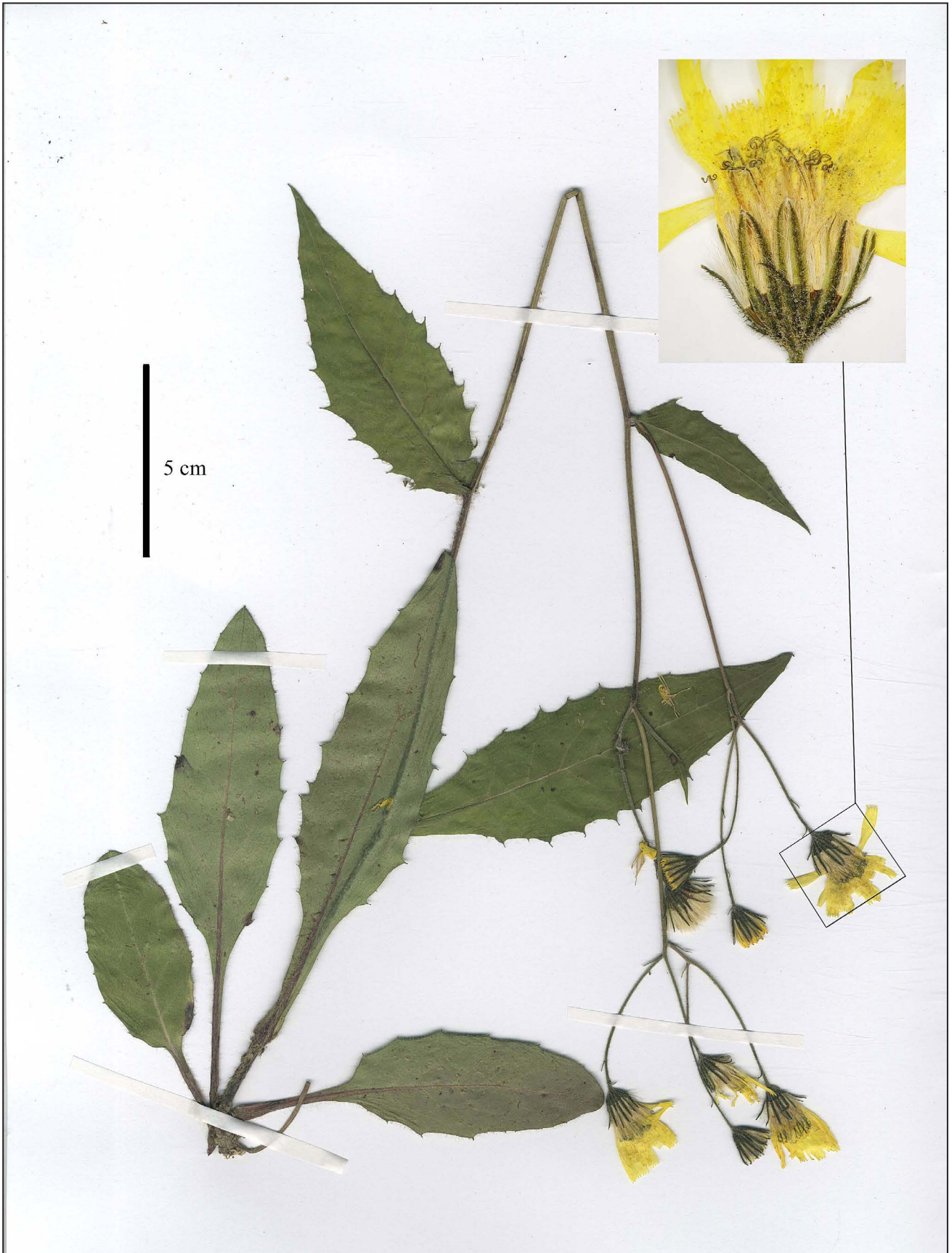


Fig. 2. *Hieracium juranomorphum* (Du-35521).



Fig. 3. *Hieracium oroglaucum* subsp. *oroglaucum* (Du-36458).

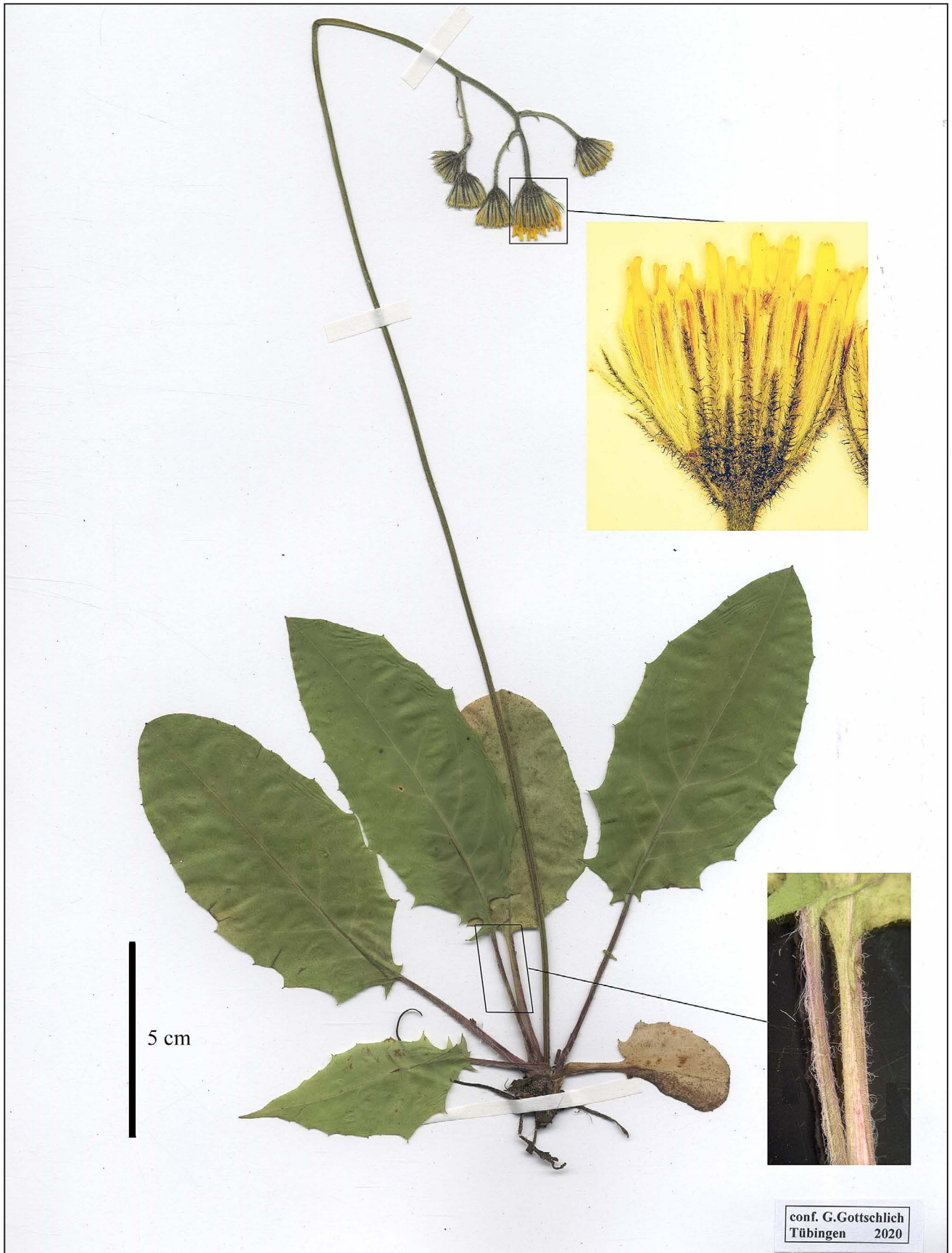


Fig. 4. *Hieracium pseudobifidum* (Du-36653).



Fig. 5. *Hieracium rotundatum* (Du-36656).

Hieracium rotundatum occurs mainly on the Balkan Peninsula, which includes Bulgaria. Only recently, its distribution area was extended further northwards and westwards by findings of G. Brandstätter. He has detected occurrences of *H. rotundatum* in southeastern parts of Germany and the Czech Republic, and the species was new for both countries (Brandstätter 2019). Close to the Bulgarian-Greek border, the authors detected *H. rotundatum* in good quantity on the edges of a humid spruce forest. *H. rotundatum* resembles strongly *H. transylvanicum*, but differs by its bigger capitula with fine dark glands (it also resembles *H. murorum*, but differs by its fine setae and furry villosous petioles).

***Hieracium bifidum* subsp. *sinuosifrons* (Dahlst.)**

Zahn (Fig. 6)

This species was reported from two locations for the first time for the Greek flora:

Greece, NPi – West Macedonia, Nom. Kastoria, Northern Pindos Mts, Grámos, on western slope of Mt Grámos, above Grámos village, 1900 m, (40°20'N 20°48'E), on calcareous rocks and rocky slopes, leg. F.G. Dunkel & G. Gottschlich, 11.07.2017, Du-34507, Go-68086, Hier. Eur. Sel. No. 903; NC – Central Macedonia, Nom. Pella (Edessa), Kajmakčalan → Edessa, 1790 m (40°53'34"N 21°50'49"E), on calcareous broken rocks at the edge of the road, leg. F.G. Dunkel & G. Gottschlich, 18.06.2019, Du-36463, Go-72367, Hier. Eur. Sel. No. 904

Hieracium bifidum subsp. *sinuosifrons* is characterized by deeply divided basal leaves with irregular teeth. The leaves are usually pinnatipartite to pinnatisect. The taxon is widespread on a huge area from France to Bulgaria, Montenegro, and Bosnia-Herzegovina.

***Pilosella neosyllecta* (K. Malý & Zahn) Gottschl. & Dunkel, comb. nov. (Fig. 7)**

≡ *Hieracium neosyllectum* K. Malý & Zahn, Repert. Spec. Nov. Regni Veg. 38: 291 (1935) (*pavichii* > *testimonialis*)

This is the first report of this species for the Greek flora. It was recorded in the following localities:

Greece, NPi – Epirus, Nom. Ioánnina, Northern Pindus Mts, Mt Smolikas, on dirt road from Pades to Mougrila-shepherd's hut, 1602 m (40°03'34"N 20°54'11"E), in pine forest talus, leg. F.G. Dunkel & G. Gottschlich, 18.07.2018, Du-35550, Go-70334;

NC – West Macedonia, Nom. Grevena, M. Smolikas, NW Samarina, 1653 m (40°08'01"N 20°57'52"E), in calcareous detritus below beech forest, leg. F. G. Dunkel & G. Gottschlich, 17.07.2018, Go-70315; NE – East Macedonia and Thrace, Nom. Xanthi, Stavropoli, along the street to Livaditis, S of Kato Karyofito, 520 m (41°15'18"N 24°40'42"E), in granitic grit, leg. F. G. Dunkel & G. Gottschlich, 14.07.2017, Go-68212; NE – East Macedonia and Thrace, Nom. Kavala, M. Pageo, 1520 m (40°54'08"N 24°07'03"E), in meadows, leg. F. G. Dunkel & G. Gottschlich, 10.07.2018, Go-70140; NE – Central Macedonia, Nom. Thessaloniki, M. Chortiatis, along street between Zagliveri and Petrokerasa, 822 m (40°30'27"N 23°14'39"E), in mixed forest with *Ostrya carpinifolia*, leg. G. Gottschlich, 11.07.2018, Go-70156.

P. neosyllecta resembles in shape *P. visianii*. However, its wide and ± obtuse phyllaries seem influenced slightly by *P. testimonialis*, which is common in the surroundings. Originally, it was collected in the karst near Hodbina and in Suho Polje near Buna in the region of Mostar, Bosnia-Herzegovina, by K. Malý in 1930 (Malý & Zahn 1935). In Euro+Med (2006-) the species is treated as a synonym of *P. biglana*. However, in *P. biglana* (*pavichii* < *testimonialis*) the influence of *P. pavichii* is more reduced. In liner with some other cases like *P. acutifolia* (*officinarum* > *piloselloides*) / *P. visianii* (*piloselloides* > *officinarum*), the authors suggest its treating in the original rank as species.

***Pilosella samokovensis* (T. Georgiev & Zahn) S.**

Bräut. & Greuter (*echioides* – *pavichii*) (Fig. 8)

First report for Greece. The species was recorded at the following localities:

Greece, NC – Central Macedonia, Nom. Serres, Serres, at ascent to Mt Leilias, 1500 m (41°14'54"N 23°34'40"E), in pine-beech forest, leg. F.G. Dunkel, 28.07.2016, Du-33746; ibidem, Serres, at the road to Leilias Ski Center, 1480 m (41°14'50"N 23°34'33"E), in bright pine forest, leg. F.G. Dunkel & G. Gottschlich, 17.07.2017, Du-34757, Go-68323; ibidem, Serres, M. Vrontous, Serres → Lailias Ski Center, 1480 m (41°14'47"N 23°35'05"E), on silicate rocky slopes, leg. F.G. Dunkel & G. Gottschlich, 20.06.2019, Du-36527; NC – West Macedonia, Nom. Kozani, Piéria, Velventós → Katafigi, 920 m (40°13'30"N 22°04'30"E), on road talus, in granitic grit, leg. F.G. Dunkel & G. Gottschlich, 13.07.2017, Du-34543, Go-68115; ibidem, Katafigi → on top of the mountain, 1620 m (40°16'10"N 22°09'21"E),



Fig. 6. *Hieracium bifidum* subsp. *sinuosifrons* (Du-36463).



Fig. 7. *Pilosella neosyllecta* (Du-35550).



Fig. 8. *Pilosella samokoviensis* (Du-33746).

in pine forest, leg. G. Gottschlich & F. G. Dunkel, 13.07.2017, Go-68137; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Kato Vrontou, W Kato Vrontou, 884 m (41°16'23"N 23°44'02"E), in mixed forest, leg. F.G. Dunkel & G. Gottschlich, 12.07.2018, Du-35296, Go-70166; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Ano Vrontou, N Ano Vrontou, 1357 m (41°19'02"N 23°39'29"E), in granitic grit under beeches, leg. F.G. Dunkel & G. Gottschlich, 12.07.2018, Du-35323; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Serres, on road NW Ano Vrontou → barrier lake, 990 m (41°20'30"N 23°39'15"E), on the road talus, leg. F.G. Dunkel & G. Gottschlich, 21.06.2019, Du-36572; *ibidem*, Serres, road NW Ano Vrontou → barrier lake, 980 m (41°20'30"N 23°39'18"E), on the road talus, under oak shrubbery, leg. F.G. Dunkel & G. Gottschlich, 21.06.2019, Du-36573, Go-72470; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Mt Falakro, at the road to Falakro Ski Center, at the branch-off to Volakas, 1000 m (41°18'16"N 23°59'44"E), on shadowed lime rocks, leg. F.G. Dunkel & G. Gottschlich, 21.06.2019, Du-36584; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Mikromilia → Birch forest/Forest of Simida, 740 m (41°26'14"N 24°08'48"E), in granitic grit, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Go-72541; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Mikromilia → Birch forest/Forest of Simida, 600 m (41°25'28"N 24°08'08"E), in granitic grit, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Go-72532; **NE** – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Mikromilia → Birch forest/Forest of Simida, in granitic grit, 930 m, 41°27'18"N 24°09'02"E, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Go-72548;

NE – East Macedonia and Thrace, Nom. Drama, Western Rhodopes, Mikromilia → Birch forest/Forest of Simida, 1260 m (41°29'05"N 24°10'13"E), in pine shrubbery on granitic grit, leg. F.G. Dunkel & G. Gottschlich, 22.06.2019, Du-36644; **NE** – East Macedonia and Thrace, Nom. Xanthi, Western Rhodopes, Livaditis → Kallithea, O Livaditis, 1160–1245 m (41°18'37'–55"N 24°40'08"–41'56"E), on granitic rocks, on forest talus, in beech forest, leg. F.G. Dunkel, 13.08.2012, Du-29536; **NE** – East Macedonia and Thrace, Nom. Rodopi, Western Rhodopes, Chloi, NE above Chloi, close to the wind turbines, 1070 m (41°17'46"N 25°52'37"E), in beech forest and on dirt road, leg. F.G. Dunkel & G. Gottschlich, 16.07.2017, Du-34726, Go-68296.

The occurrence of *Pilosella samokovensis* is not surprising, as *P. pavichii* is widespread in Greece and *P. echiooides*, and its derivatives are scattered across North and Central Greece.

Nomenclatural comment to *Hieracium* “*chalsinense*”:

Based on a collection of T. Orphanides, Zahn had described a new species named *Hieracium chalsinense* (Zahn 1921-23: 1073). In the protologue, he gave as type locality: “Chalsineno Vouno am Tagentos”. This indication represents a typical reading mistake by the typesetter, “in” instead of “m”, which was not corrected in the page proof. The mountain (in Greek βουνό “vunó” = mountain) is called “Chalsmeno”; accordingly, the name should be corrected to *H. chalasmenoense*.

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