



Observations on some rare or poorly known taxa of *Hieracium* subgenus *Pilosella*, including the very rare *H. ×fuscoatrum* new for Belgium

Anne RONSE^{1*} and Günter GOTTSCHLICH²

¹ Botanic Garden Meise, Nieuwelaan 38, B-1860 Meise (Belgium)

² Hermann-Kurz-Str. 35, D-72074 Tübingen (Germany)

* author for correspondence [anne.ronse@botanicgardenmeise.be]

Illustrations: G. Gottschlich (Fig. 1), L. Meierott (Fig. 2) and John Van de Voorde (Fig. 4).

Samenvatting. – Waarnemingen van enkele zeldzame of weinig bekende taxa van *Hieracium* subgenus *Pilosella*, met inbegrip van de zeer zeldzame *H. ×fuscoatrum*, nieuw voor België. Belgische waarnemingen en herbariumspecimens van adventieve taxa van *Hieracium* subgenus *Pilosella* uit de periode 2003-2016 worden opgesomd en besproken. De meest frequente soort is *H. aurantiacum*, een tuinvlieder die zich in België in toenemende mate verspreidt. Twee kruisingen van deze soort werden elk eenmaal aangetroffen, namelijk *H. ×stoloniflorum* en de zeer zeldzame *H. ×fuscoatrum*. *Hieracium flagellare* werd meermaals gevonden, steeds in de omgeving van Brussel. In dezelfde regio werd ook *H. caespitosum* ingezameld. Daarnaast werden ten noorden van Brussel twee hybriden van *H. caespitosum* en *H. pilosella* waargenomen, met name *H. ×macrostolonum* en *H. ×prussicum*, elk in één locatie. Ook bijgevoegd is een determinatiesleutel van alle in België aangetroffen taxa.

Résumé. – Observations de quelques taxons rares ou méconnus de *Hieracium* sous-genre *Pilosella*, y compris une première observation du très rare *H. ×fuscoatrum*. Ce texte traite des observations et des spécimens d'herbier de taxons adventifs de *Hieracium* sous-genre *Pilosella* récoltés entre 2003 et 2016. Le taxon le plus fréquent est *H. aurantiacum*, une espèce qui s'échappe des jardins et est en expansion en Belgique. Deux croisements de cette espèce ont été observés chacun dans une seule localité, notamment *H. ×stoloniflorum* et le très rare *H. ×fuscoatrum*. *Hieracium flagellare* a également été récolté à plusieurs reprises, toujours dans les environs de Bruxelles, ainsi que *H. caespitosum*. En outre, deux hybrides de *H. caespitosum* et *H. pilosella* ont été observés au nord de Bruxelles, à savoir *H. ×macrostolonum* et *H. ×prussicum*, chacun dans une seule localité. Le texte reprend aussi une clé de détermination comprenant tous les taxons connus en Belgique.

Introduction

Because of the co-occurrence of hybridization, polyploidy and facultative apomixis the taxonomy of the genus *Hieracium* is notoriously difficult (Krahulková *et al.* 2012, 2014, 2016, Krahulec *et al.* 2014). Within the subgenus *Pilosella*, only three species are considered as native in Belgium, namely the rare to very rare *H. lactucella* and *H. peleterianum* (the latter confined to parts of southern Belgium), and the (rather) common *H. pilosella* (see table 1).

There are several neophyte species, among which *H. bauhini* is the most common, though still rather rare, while both *H. caespitosum* and *H. piloselloides* are very rarely naturalized species. These three species are expanding, according to the latest edition of the Belgian flora (Lambinon & Verloove 2012). *Hieracium aurantiacum* is an escape from gardens which according to the same

authors occurs rarely to very rarely as a subsynchronous or naturalized species. Another species which was discovered more recently in Belgium, is *H. flagellare*. It has been recorded in two sites in the southern part of Belgium, in abandoned quarries in Herbeumont (prov. Luxembourg) and Onhaye (prov. Namur) (Remacle 2005). Lambinon and Verloove (2012) mention that it may well be overlooked elsewhere within the country. Moreover, nearly all of these species hybridize freely, and in Belgium several hybrids have already been reported.

There has been much confusion about the taxonomy of the adventive *Hieracium* species and hybrids, and their identification often remained uncertain, especially as several taxa were not included in the identification keys of the Belgian floras. Recently, the knowledge of these taxa has significantly increased, resulting in a better and

more complete key in the latest edition of the Belgian flora (Lambinon & Verloove 2012). Meanwhile, however, the uncertain identity of the adventive *Hieracium* taxa in Belgium has led to insufficient distribution data of these taxa. As a result, the records of this group of *Hieracium* have been put together in a single map, without distinction of separate taxa, in recent plant atlases in Belgium (Van Landuyt *et al.* 2006; Allemeersch 2006). In both atlases there is only one map based on the combined data for *H. bauhini* + *H. caespitosum* + *H. piloselloides*. For *H. aurantiacum*, which is easier to recognize because of its always orange flowers, there is an additional map; however, hybrid taxa of *H. aurantiacum* can occur as well. Moreover, nearly no herbarium specimens are available for the records on which the maps of these atlases are based. Thus there is obviously a need for records based on well-identified specimens.

From 2003 to 2016, the first author (AR) has collected herbarium specimens of adventive *Hieracium* when making floristic inventories, mostly in the northwestern part of the province of Vlaams-Brabant, in the central part of Belgium. In order to have the identity of these findings checked, the specimens were sent to the second author (GG), who has been specializing in this group for many years. This has already resulted in first records for northern Belgium of two taxa, *Hieracium flagellare* and *Hieracium ×macrostolonum*, as recently described by Ronse (2017) in a publication on the flora of road sides at a traffic interchange north of Brussels. In the present article, a more extensive account is given of the Belgian specimens collected by the first author (AR) and of their identification. In addition, some casual records of *H. aurantiacum* are added for which no herbarium material was collected, and which have not been transmitted to Florabank. Finally, we also include an identification key of all the taxa of subgenus *Pilosella* known from Belgium, as it is of very high importance to be able to make the distinction between these taxa.

Observations

The herbarium specimens are listed by taxon in alphabetical order, and subsequently by IFBL location (the reference grid used in Belgium to locate plant records).

• *H. aurantiacum*

D4.32.11: Lebbeke, Poelstraat, in road side and in meadow, some ten plants, dispersed, 18.9.2016, A. Ronse 4179 (det AR, rev GG 2.2017).

D4.46.31: Humbeek, schraal gazon in voortuin, +/- sterk hellend, 10.6.2001, A. Ronse 156 (det AR, rev GG 2.2015); Humbeek, braakliggende grond, grazig, talrijk, 23.5.2008, A. Ronse 1714 (det AR, rev GG 2.2015).

D4.47.31: Epegem (Zemst), Rijkenhoek, in weideranden, 2.7.2005, A. Ronse 981 (det AR, rev GG 2.2015).

D4.55.11: Meise, Domain of botanic garden s25, 13.6.2016, A. Ronse 4054 (det AR, rev GG 2.2017).

D4.55.31: Meise, Nationale Plantentuin sector 38, langs de Ringweg, rand van de gazon, 4.11.2004, A. Ronse 868 (det AR, rev GG 1.2015); Meise, NPB s38, 2007, A. Ronse 1518 (det AR, rev GG 2.2015).

D4.56.41: Grimbergen, domein Ter Tommen, oostkant van hooiweide, ruig grasland, 28.6.2006, A. Ronse 1220 (det AR, rev GG 2.2015).

D5.26.33: Ramsel, wegkant, hoge plant met fijne lintbloemen, 20.9.2007, A. Ronse 1553 (det AR, rev GG 2.2015).

K6.58.44: Neufchateau, le long de la N 85, vers Florenville, après 1 km, grazige berm (aan weerszijden: steile Z-helling & beschaduwde vlakke berm met Arr.elatior), 10.6.2008, A. Ronse 1721 (det AR, rev GG 2.2015).

G8.37.32: Bütgenbach, à côté du camp militaire de Elsenborn, 18.9.2016, A. Ronse 4017 (det AR, rev GG 2.2017).

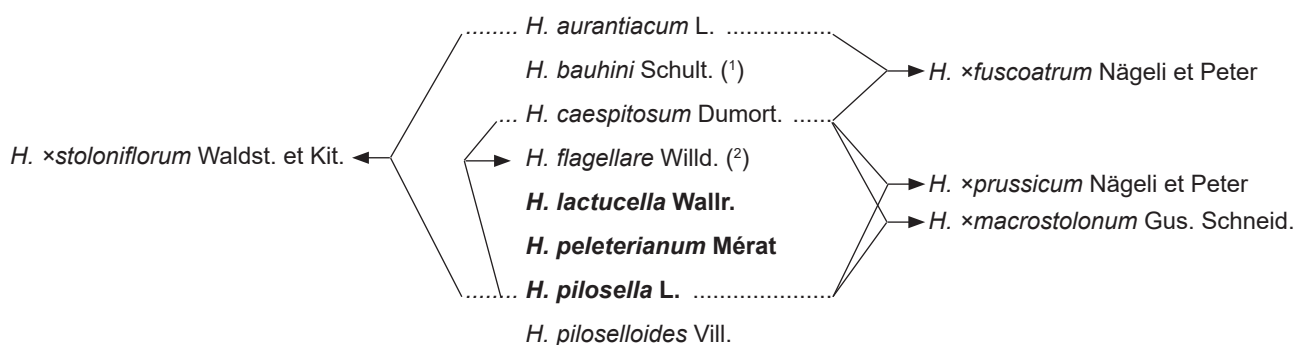
G8.47.21: Bullingen, Wirtzfeld, début de la route vers Rocherath, bord de route, dans une haie, à plusieurs endroits sur quelques centaines de m, sous plantes dans jardin, 4.7.2016, A. Ronse 4012 (det AR, rev GG 2.2017).

Additional casual records of *H. aurantiacum*:

E4.27.44: Wezembeek, afrit R0 oostkant, 10/6/2008.

K6-48-41: Verlaine (Neufchateau), Chaussée de Namur, juste au sud de l'agglomération, 10/6/2008; **I7-41-31:** Les Bulles (Chiny), route vers Termes, Rossignol, juste avant la fin de l'agglomération, 2 × 1-2 m², 10/6/2008.

Table 1. The taxa of *Hieracium* subgenus *Pilosella* known from Belgium, with indication of parentage of 4 hybrids and a probable autonomous species (*H. flagellare*). Species in bold are native to Belgium.



(¹) According to Euro/Med Plant Base it is *H. bauhini* Schult., from *Observ. Bot.* 164 (1809), instead of Schult. ex Besser as written in Lambinon & Verloove (2012).

(²) *H. flagellare* Willd.: all new taxa in Willd., *Enum. Pl. Suppl.* 54 (1814) are attributed to Willd., as author (... in Schlechtend., editor!), and thus not Willd. ex Schlecht. as is written in Lambinon & Verloove (2012).

• *H. caespitosum* subsp. *caespitosum*

D4.46.12: Humbeek Sas, op de oevermuur van het kanaal, 20.5.2002, A. Ronse 262 (det GG 2.2015).

E4.34.42: Anderlecht, hoek Industrielaan/Bollincksstraat, niet gemaaid gazon van leegstaand gebouw, 6.6.2006, A. Ronse 1188 (det GG 1.2015).

• *H. caespitosum* subsp. *colliniforme* (Peter) P.D. Sell

E4.24.34: Anderlecht, cemetery Vogelsang, stolons almost subterranean, 6.6.2015, A. Ronse 3643 (det GG 2.2017).

• *H. flagellare*

D4.34.32: Steenhuffel, Watermolenstraat, road side, one patch, 4.6.2012, A. Ronse 2522 (det GG 2.2015).

D4.37.44: Hofstade, tegenover Poelenbroek, 3.6.2006 A. Ronse 1120 (det GG 1.2015).

D4.55.34: Strombeek-Bever, A12-L3, rand van de autosnelweg, op meerdere plaatsen, 24.05.2003, A. Ronse 459.

D4.55.43: Strombeek-Bever, verkeerswisselaar RC2-5(4), rand van de weg, 29.05.2003, A. Ronse 470; Strombeek-Bever, verkeerswisselaar LC2-5(5), oostelijke berm, talrijk, 18.05.2006, A. Ronse 1098; Strombeek, verkeerswisselaar, rand van de afrit A12, 08.06.2010, A. Ronse 2078; Strombeek-Bever, verkeerswisselaar LC2-5(5), 11.6.2016, A. Ronse 3974 (det AR, rev GG 2.2017).

D4.57.11: Zemst, Dorent, in verlaten akker, vergrassend, 2.6.2007 A. Ronse 1457 (det GG 1.2015).

E4.15.12: Strombeek, Heizel parking C, 6.6.2004, A. Ronse 615 (det GG 2.2015).

E4.15.21: Strombeek, verkeerswisselaar RC2-5(1), 06.06.2004, A. Ronse 635; Strombeek-Bever, verkeerswisselaar RC2-5(1), near bridge, 11.6.2016, A. Ronse 3947 (det AR, rev GG 2.2017); Strombeek-Bever, verkeerswisselaar LC2(5)-3, 27.05.2003, A. Ronse 466.

E4.27.31: St Lambrechts Woluwe, Gemeenschappenlaan, gazon van bedrijf bij afrit E40, 6.6.2006, A. Ronse 1185 (det GG 1.2015).

• *H. ×fuscoatrum*

B6.42.32: Arendonk, tussen De Vloed en straatje met sloot, 22.9.2006, A. Ronse 1363 (det GG 1.2015).

• *H. lactucella*

K4.21.22: Macquenoise (Momignies), étang de la Lobiette, steil hellende weide, Z kant, onder draad, 2.9.2004, A. Ronse 812A (det AR, rev GG 1.2015).

• *H. ×macrostolonum*

D4.55.43: Strombeek-Bever, verkeerswisselaar A12/ Ring, 09.06.2003, A. Ronse 485 (det GG 1.2015).

• *H. ×prussicum*

D4.56.41: Grimbergen, Ter Tommen, open area in south eastern part, 18.6.2015, A. Ronse 3662 (det GG 2.2017).

Identification key

The following key includes all the taxa of *Hieracium* subgenus *Pilosella* known from Belgium.

- 1 Flowering stem leafless and with only 1 capitulum .. 2
Flowering stem with more than 1 capitulum (but see *H. lactucella* which rarely has only 1 capitulum) 3
- 2 Stolons very short, thick, bracts of involucre at base (1,5-)2-3 mm wide with long acute often reddish tip ..
..... *H. peleterianum*

- Stolons elongated, usually thin, bracts of involucre 0,5-1,5 mm wide *H. pilosella*
- 3 Flowers reddish-purple to orange or deep yellow, and then at least the outer ligules red-striped 4
Flowers yellow, but sometimes the outer ligules red-striped 6
- 4 Stem 10-25 cm, deeply branched, branches only with one, rarely with 2 capitula, total number of capitula 2-4(-6) *H. ×stoloniflorum*
Stem (20-)30-40(-70) cm, synflorescence paniculate to paniculate-umbellate 5
- 5 The outer ligules deep reddish to purple, the inner too or becoming gradually orange (Fig. 1)
..... *H. aurantiacum*
The outer ligules deep yellow to light orange with red-dish stripes, the inner too or deep yellow (Fig. 2)
..... *H. ×fuscoatrum*
- 6 Stem deeply branched to furcate .. *H. ×macrostolonum*
Stem laxly to densely paniculate 7
- 7 Stem 10-25 cm 8
Stem (20-)30-40(-70) cm 9
- 8 Leaves bluish green, without stellate hairs on the lower side, leaves of stolons increasing towards the apex *H. lactucella*
Leaves grass green, with stellate hairs on the lower side, leaves of stolons decreasing towards the apex
..... *H. flagellare*
- 9 Leaves bluish green, without stellate hairs on the lower side 10
Leaves grass green, with stellate hairs on the lower side, at least along the midrib 11
- 10 Plant with stolons *H. bauhini*
Plant without stolons *H. piloselloides*
- 11 Lower surface of leaves moderately covered with stellate hairs, synflorescence laxly paniculate, capitula 3-10(-20), involucre 8-10 mm *H. ×prussicum*
Lower surface of leaves with sparse stellate hairs (often only along the midrib), synflorescence densely paniculate, capitula 15-40(-50), involucre (5-)7-8(-9) mm (*H. caespitosum*) 12
- 12 Upper side of leaves with sparse to moderate simple hairs, bracts of involucre blackish-green, with only narrow or no whitish-green margin
..... subsp. *caespitosum*
Upper side of leaves often glabrous, bracts of involucre with broad whitish-green margin
..... subsp. *colliniforme*

Discussion

The most frequently recorded and collected taxon is *H. aurantiacum*. This garden escape grows in road sides as well as in meadows and on wasteland. Lambinon and Verloove (2012) mention it as very rare to rare in Belgium. However, it is increasingly spreading in Flanders (northern Belgium) since its first observation there in 1972, as stated in the Flemish plant atlas (Verloove 2006). Our observations confirm this trend; most of our



Figure 1. Flowers of *Hieracium aurantiacum*.



Figure 2. *Hieracium x fuscoatrum*. Flowers from a plant in Germany.

records concern the area north of Brussels, which is the area most extensively visited by the first author. The species was also found several times in southern Belgium. In the first years after it appeared mostly isolated plants were found, which were not found again one or two years later. Subsequently, however, increasing numbers of plants have been recorded, and the populations seem to last for a longer time.

Rather surprisingly we also found a very rare hybrid of *H. aurantiacum*, namely *H. x fuscoatrum* (*H. caespitosum* × *H. aurantiacum*). This hybrid is easily distinguished by its intermediate color of the flowers (see further). In Europe as a whole only few records of this taxon are known, most of them historical data. There is one recent record from Germany (Meierott & Gottschlich 2015). In the USA this hybrid was also detected among the introduced parent species (Gottschlich, unpubl). In Belgium we found *H. x fuscoatrum* in 2006 in Arendonk (prov. Antwerpen), close to the Dutch border (Fig. 3). No *Hieracium* taxa of the *caespitosum* group have been reported previously in the wide area around this site, but reliable data about this group are lacking for Belgium in general.

The second most frequently found species is *Hieracium flagellare*. This taxon, which is believed to be a fertile, autonomous species because it occurs mostly without

the assumed parents (Lambinon & Verloove 2012), has intermediate features between *H. caespitosum* and *H. pilosella*. We encountered it in six locations, all of them in the province of Vlaams-Brabant or in the Brussels area. A rather large population grows in the traffic interchange of the A12/R0 at Strombeek-Bever, north of Brussels, spread over different sites (Ronse 2017). Our first observations in 2003 were restricted to this site at the traffic interchange, while the observations at other locations were only made from 2006 on. This could indicate an increasing distribution of the species. All observations were made in the central part of Belgium, where it appears to be already well spread in the area around Brussels. It mostly grows there in road sides, but has also been found once in an abandoned field in a nature reserve. In the latter locality, soil had been brought in the year before from works along a main road nearby, which could be the source for this station. Previous to our observations *H. flagellare* had been reported in Belgium from only two locations in the southern part of the country. It must be stressed, however, that so far little attention has been paid to these plants elsewhere in Belgium.



Figure 3. *Hieracium x fuscoatrum*. Scan of a herbarium specimen from Arendonk (prov. Antwerpen). (A. Ronse 1363).

Two taxa that are hybrids between *H. caespitosum* and *H. pilosella* have also been found, each of them at one site. Both sites are located in the area north of Brussels. *H. ×macrostolonum* grew at the traffic interchange of Strombeek-Bever in 2003, while *H. ×prussicum* was found in 2015 at a distance of approximately 5 km, in a grassland of a domain managed as a nature reserve. At both locations *H. pilosella* has been found, but plants of the other parent, *H. caespitosum*, were not present. However, a stable population of the latter species was located at that time in Humbeek, at a distance of approximately 7 km of each of the former locations (see below). Both hybrids have the same parentage, but plants that are nearer to *H. caespitosum* are referred to as *H. ×prussicum*. Both hybrids have been reported previously only once from Belgium, *H. ×macrostolonum* from Ampsin (prov. Liège), and *H. ×prussicum* from Martelange (prov. Luxembourg), both in southern Belgium (Verloove & Lambinon 2014).

H. caespitosum has been found on three locations in or close to Brussels as well. A stable population existed for some years on old walls near the bridge over the canal at Humbeek. It was first recorded in 2002, but probably had existed there already for a longer time. It was destroyed around 2010 when the walls were cleaned and all the vegetation was removed. Two other sites are located in the southwestern part of Brussels, one in a lawn of an uninhabited house and the other on grass pavers in a cemetery. The plant at the latter location belongs to subspecies *colliniforme*.

Finally, we mention here a new location of *H. lactucella* in the Ardennes phytogeographical district, close to the French border. According to the Belgian plant atlas (Van Rompaey & Delvosalle 1979, map 1118) and according to more recent sources it has not been recorded there before, though it has been found in a neighboring 4 × 4 km IFBL square. The species is rare to rather rare in the Ardennes district, but it is even rarer in other districts and is considered a declining species in Belgium (Lambinon & Verloove 2012).

The above observations contribute to the knowledge about the occurrence of some poorly known taxa of *Hieracium* subgenus *Pilosella* in Belgium. It appears that several of them occur more frequently than previously thought. *H. aurantiacum* has been found on multiple occasions during our prospections in central Belgium, but also in the southern part of the country. This probably means that it is expanding not only in Flanders, but probably also in southern Belgium. This is in agreement with the map of this species on <https://waarnemingen.be/soort/info/6860>. However, caution is needed when recording *H. aurantiacum*, since there are also hybrids of the species that can be mistaken for it due to their orange flowers. This is the case for *H. ×fuscoatrum*, a very rare hybrid that we report here for the first time from Belgium, and also for *H. ×stoloniflorum* (*H. aurantiacum* × *H. pilosella*), a hybrid that has also been reported re-



Figure 4. *Hieracium ×stoloniflorum* in Antwerp (Schoonselhof).

cently from one location near Antwerp in 2016 (<https://waarnemingen.be/waarneming/view/119500557#>). This identification is here confirmed by the second author. *H. ×stoloniflorum* can be distinguished by its rather low and deeply branched stem, each branch with only one or rarely 2 capitula (Fig. 4), while *H. ×fuscoatrum* can be distinguished by the intermediate coloration of its flowers, namely deep yellow to light orange with reddish stripes (Fig. 2).

Other neophyte taxa of *Hieracium* encountered in central Belgium are *H. caespitosum*, *H. flagellare*, *H. ×macrostolonum* and *H. ×prussicum*. We have found the two last mentioned hybrids in only one location each, which for both taxa is the second record from Belgium. *H. flagellare* had previously only been found in two locations in southern Belgium, but our observations appear to indicate it is spreading in the region around Brussels, mainly along roads and highways. Of *H. caespitosum* three sites were found to the north and in the southwestern part of Brussels. On one of these locations the plants belong to subspecies *colliniforme*. In the Flemish plant atlas (Van Landuyt *et al.* 2006) there is only one map for species of this group, labeled '*H. bauhini* + *H. caespitosum* + *H. piloselloides*'. It shows three distribution centers, the main center situated in the easternmost part of Flanders (close to Germany and The Netherlands), the second one mainly south of Brussels, and additionally some locations in the northeastern part of the province of Antwerp. Our observations largely match the locations of the area close

to Brussels, but reveal additional locations north of Brussels, especially of *H. flagellare*. Moreover, none of our records from this area turned out to be *H. bauhini* or *H. piloselloides*.

Acknowledgements. – The authors thank Prof. Dr. L. Meierott (Gerbrunn, Germany) for permission to publish the photo of *H. ×fuscoatrum*, and J. Van de Voorde for the photo of *H. ×stoloniflorum*.

References

- Allemeersch L. (2006) – Opmaak van een volledige floristische inventaris van het Brussels Hoofdstedelijk Gewest en een florakartering. Meise, Nationale Plantentuin van België. [Studie in opdracht van het Brussels Instituut voor Milieubeheer, Afdeling Groene Ruimten; <http://www.floraofbrussels.be>]
- Krahulcová A., Raabe U. & Krahulec F. (2012) – Prozesse innerhalb hybridisierender *Pilosella*-Populationen: *P. aurantiaca* und *P. officinarum* in Hagen (Nordrhein-Westfalen). *Kochia* 6: 123-141.
- Krahulcová A., Rotreklová O. & Krahulec F. (2014) – The Detection, Rate and Manifestation of Residual Sexuality in Apomictic Populations of *Pilosella* (Asteraceae, Lactuceae). *Folia Geobot.* 49: 239-258.
- Krahulcová A., Vladimirov V., Krahulec F. & Bräutigam S. (2016) – The agamic complex of *Pilosella* (Asteraceae) in Bulgaria and SW Romania: variation in ploidy levels and breeding systems. Part 2. *Phytologia Balcanica* 22: 39-62.
- Krahulec F., Krahulcová A. & Hlaváček R. (2014) – Rare hybrid swarm of *Pilosella polymastix* x *P. officinarum*: cytotype structure and modes of reproduction. *Preslia* 86: 179-192.
- Lambinon J. & Verloove F. (2012) – Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions voisines (Ptéridophytes et Spermatophytes), sixième édition. Meise, Jardin botanique national de Belgique.
- Meierott L. & Gottschlich G. (2015) – *Pilosella fuscoatra* (Nägeli & Peter) Soják (*aurantiaca* – *caespitosa*), neu für Deutschland. *Ber. Bayer. Bot. Ges.* 85: 133-135.
- Remacle A. (2005) – *Hieracium flagellare* Willd. ex Schlecht.: une nouvelle épervière naturalisée en Belgique. *Natura Mosana* 57 (4): 81-110.
- Ronse A. (2017) – De verkeerswisselaar van Strombeek-Bever, een vluchtheuvel voor zeldzame planten. *Dumortiera* 110: 9-18.
- Van Landuyt W., Hoste I., Vanhecke L., Van den Brecht P., Verduyck W. & De Beer D. (red.) (2006) – Atlas van de Flora van Vlaanderen en het Brussels gewest. Brussel & Meise, Nationale Plantentuin van België, INBO & Flo.Wer
- Van Rompaey E. & Delvosalle L. (1979) – Atlas van de Belgische en Luxemburgse flora, Pteridofyten en Spermatofyten. 2de en verbeterde editie. Meise, Nationale Plantentuin van België.
- Verloove F. (2006) – *Hieracium aurantiacum*. In: Van Landuyt W. et al. (red.), Atlas van de Flora van Vlaanderen en het Brussels gewest: 463. Brussel & Meise, Nationale Plantentuin van België, INBO & Flo.Wer.
- Verloove F. & Lambinon J. (2014) – The sixth edition of the Nouvelle Flore de la Belgique: nomenclatural and taxonomic remarks. *Dumortiera* 104: 7-40.