

PILOSELLA HILL GENUS IN THE BESSARABIA'S FLORA

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Abstract: As a result of floristic and taxonomic investigations of the *Pilosella* genus within the flora of the Bessarabia have been established 11 species: *P. officinarum* F. Schultz et Sch. Bip., *P. aurantiaca* F. Schultz et Sch. Bip., *P. praealta* (Vill ex Gochn.) F. Schultz et Sch. Bip., *P. piloselloides* (Vill.) Sojak, *P. glaucescens* (Bess.) Sojak, *P. echioides* (Lumn.) F. Schultz et Sch. Bip., *P. caespitosa* (Dumort.) P. D. Sell et C. West, *P. cymosa* (L.) F. Schultz et Sch. Bip., *P. lactucela* (Wallr.) P. D. Sell et C. West, *P. rojowskii* (Rehm.) Schljak. & *P. flagellare* (Willd.) Arv.-Touv., the last three are new taxa recently detected for the flora in the study. After chorological analysis, has been concluded that 6 species are rare. Ecological and biomorfological characteristics of taxa have been established, the determination key of the *Pilosella*'s species has been drawn.

Key words: genus *Pilosella* Hill, Bessarabia's flora, taxonomy, bioecology, chorology

Introduction

Hieracium L. s. l. being one of the most polymorphic, complicated and bulky genera of magnoliophyta from the Holarctic flora, is considered nowadays by a large number of the authors as two separated genera *Hieracium* L. s. str. and *Pilosella* Hill (*Asteraceae* Dumort. family, *Hieraciinae* Dumort. subtribe, *Cichorieae* Lam et DC. tribe). A number of common morphological features are characteristic for both genera, which determine the exceptional diversity of the forms and complicate the determination of the taxa, different modes of reproduction - apomixes (required and optional), amphimixis etc. are inherent for them. Auto incompatibility is not compulsory and it is possible to form offspring from cleistogamy [TUPICINA, 2004].

Pilosella genus described by HILL (1756) soon after publication of the *Hieracium* genus (Linnaeus, 1753), has not been accepted as an independent generic taxonomic unit for a long time, but considered as a taxonomic unit with a status of subgenus - *Pilosella* [GRAY, 1821] or section - *Piloselloidea* [KOCH, 1837] within the *Hieracium* genus [TUPICINA, 2004]. Among the botanists from the 18-19 century only SCHULTZ & SCHULTZ-BIPONTINUS (1862) and ARVET-TOUVET (1880) have acknowledged the existence of *Pilosella* genus, as separate taxonomic units. The final delimitation of the *Hieracium* s. str. and *Pilosella* Hill. genera was done barely in the second half of the 20th century as a result of researches and the appearance of works of a number of the botanists as: SOJÁK (1971), SELL & WEST (1976), DOSTÁL (1984), ŠLÁKOV (1989) and others [TIHOMIROV, 2001].

The delimitative criteria are related to the structural features of the generative organs, in this case of the morphology of the fruit components, which usually manifest conservative properties more advanced unlike the vegetative organs and is practiced safer in separating activities of the taxonomic categories [IONIȚA & NEGRU, 2010].

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The most important characters that separate the *Pilosella* from the *Hieracium* genus are related to the achen structure, are essentially distinctive, that determine us to accept the separation of species previously assigned to the *Hieracium* genus from Bessarabia's flora.

The *Hieracium* L. s. str. genus has achenes from 2.5 to 5 mm length; ring shaped, apical with bristles in two series, but the *Pilosella* Hill genus - 1-2 (2.5) mm length, costate; apical, crenated coronule with bristles in one row.

Material and methods

During floristic investigations as a study material has served both *Hieracium* L. collections from Botanical Garden herbarium of ASM and that of the Department of Botany of the State University of Moldova and our own collections, made during the last years. The critical analysis of *Pilosella* species was performed by the classical comparative-morphological method [KOROVINA, 1996]. The material collected in the field was herbarized then determined in office conditions, using contemporary floristic literature [NYARADY, 1965; SELL & WEST, 1976; NEGRU, 2007; GHEIDEMAN, 1986; ŠLĀKOV, 1989; DOBROCEAEVA & al. 1999] and some basic guidance on the nomenclature and bioecology of infragenerical taxa [SELL & WEST, 1976; CEREPANOV, 1995; POPESCU & SANDA, 1998; CIOCĀRLAN, 2009]. General Map of Bessarabia was taken from: *Derev'ja i kustarniki Moldavii* [ANDREEV, 1957].

Results and discussions

After the deep consulting of the literature and thorough analysis of the herborized plants' collections of *Pilosella* the taxonomic composition, the biomorfological, ecological and corological features of the species, synonymy and detailed morphological description have been determined.

Genus *PILOSELLA* Hill

1756, Brit. Herb.: 441; P. D. Sell a. C. West, 1967, *Watsonia*, **6**, 5: 313. – *Hieracium* subgen. *Pilosella* Tausch, 1828, *Flora* (Regensb.), **11**, 1, Erg.-Bl.: 50. – *Hieracium* sect. *Piloselloidea* Koch, 1844, *Syn. Fl. Germ.*, ed. 2, 2: 509

L e c t o t y p e: *P. officinarum* F. Schultz et Sch. Bip.

There are thousands of species widespread in the extratropical regions of the Eurasia (excluding East Asia) and the North Africa [ŠLĀKOV, 1989].

The key to determining species

- 1a** Flowering stem, scapiform (basal rosette leaves only) with an anthodium. Leaves with dense stellate hairs on the underside *P. officinarum* F. Schultz et Sch. Bip.
- 1b** Flowering stem (without basal rosette leaves), with 1-4 cauline leaves and 1-3 bracts. Anthodiums - 2 or more. Leaves without or with few stellate hairs on the underside ... **2**
- 2a** Ligules deep-orange, turning purplish when dry ... *P. aurantiaca* F. Schultz et Sch. Bip.
- 2b** Ligules yellow **3**
- 3a** Anthodiums not more than 2-6 (8) **4**
- 3b** Anthodiums numerous, more than 10 **5**

- 4a Basal rosette glaucous, glabrous or with few eglandular hairs on the margin and median rib. Involucral bracts 5-9 mm *P. lactucella* (Wallr.) P. D. Sell et C. West
 4b Basal rosette with simple eglandular hairs on both surfaces and with stellate hairs on underside. Involucral bracts 9-12 mm *P. flagellare* (Willd.) Arv.-Touv.
 5a Stems and leaves glabrous or with rare simple eglandular hairs 6
 5b Stems and leaves with numerous simple eglandular hairs or glandular 9
 6a Stolons get out not only from basal rosette but also from the axils of the lower cauline leaves *P. rojowskii* (Rehm.) Schljak
 6b Stolons get out only from basal rosette 7
 7a Peduncles with dense stellate hairs *P. praealta* (Vill ex Gochn.) F. Schultz et Sch. Bip.
 7b Peduncles without or with few stellate hairs 8
 8a Involucral bracts and peduncles without or with few glandular hairs, simple hairs dispersed *P. piloselloides* (Vill.) Sojak
 8b Involucral bracts and peduncles with glandular hairs, from dispersed till dense, without or with occasional simple hairs *P. glaucescens* (Bess.) Sojak
 9a Plants with dense, simple rigid hairs, the cauline hairs appressed-ascending
 *P. echioides* (Lumn.) F. Schultz et Sch. Bip.
 9b Plants with rigid hairs, very rare, the cauline patent 10
 10a Stolons long *P. caespitosa* (Dumort.) P. D. Sell et C. West
 10b Stolons absent or short 11
 11a Cauline leaves or bracteant *P. cymosa* (L.) F. Schultz et Sch. Bip.
 11b Cauline leaves or bracteant 5-20 *P. echioides* (Lumn.) F. Schultz et Sch. Bip.

S e c t i o n 1. **Echinina** (Naeg. et Peter) Schljak. comb. nova. – *Hieracium* sect. *Piloselloidea* subsect. *Echinina* Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 117.

Stems and leaves hard-bristled, few or numerous cauline leaves. Basal leaves during flowering usually dry, rarely partially preserved. Ground stolons decumbent absent. Involucral bracts light green, abundant stellate hairy.

1. *P. echioides* (Lumn.) F. Schultz et Sch. Bip. 1862, Flora (Regensb.), 45: 431; Шляков, 1989, Фл. евр. части СССР, 8: 329. – *Hieracium echioides* Lumn. 1791, Fl. Poson. 1: 348; Юксип, 1960, Фл. СССР, 30: 418; Гейдеман, 1986, Опред. высш. раст. МССР: 582; Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 380; Negru, 2007, Det. pl. fl. R. Mold.: 270; Ciocârlan, 2009, Fl. Ilus. Rom.: 870. – *H. echioides* subsp. *echioides*; Zahn, 1923, in Engl. Pflanzenreich, 82: 1368; P. D. Sell et C. West, 1976, Fl. Europ. 4: 375, s. restr.

Hemicryptophyte, grows on dry herbaceous places, sunny hills, rocky coasts, sands, steppes. Eurasian element; xeromesophyllous, mesothermal, low acid-neutrophilous. Sporadically in Chilia, South Bugeac, North Bugeac, Gârneț, Codrii, Rezina, Râșcani and Briceni geobotanical districts. The species areal includes the Central Europe (the East), the East Europe (excluding the North), the Caucasus, Mediterranean region, Asia, Mongolia, Iran.

S e c t i o n 2. **Praealtina** (Gremli) Schljak. comb. nova. – *Hieracium* subgen. *Pilosella* grex *Praealtina* Gremli, 1878, Excurs.-Fl. Schweiz, ed. 5: 330 (sine dignitate). – *Hieracium* subgen. *Piloselloidea* sect. *Praealtina* (Gremli) G. Schneid. 1891, in Sagor. u. G. Schneid. Fl. Centralkarp. 2: 295; Zahn, 1923, in Engl. Pflanzenreich, 82: 1391.

Compact stem, without cavities, with solitary or rare setaceous hairs, till dispersed, the upper part slightly stellate-tomentose. Leaves blue-green, rough, usually,

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glabrous, only few thorny thurst on the margins, sometimes with stellate hairs along the midrib. Inflorescence corymbose, rarely umbellate, consisting of small anthodium. Involucral bracts lax adherent. Ligules yellow, without red stripes on outer part. Stigmas yellow.

2. *P. praealta* (Vill. ex Gochn.) F. Schultz et Sch. Bip. 1862, Flora (Regensb.), 45: 429; Шляков, 1989, Фл. евр. части СССР, 8: 332. – *Hieracium praealtum* Vill. ex Gochn. 1808, Tent. Pl. Cichor.: 17; Юксии, 1960, Фл. СССР, 30: 441. – *H. florentinum* All. subsp. *praealtum* (Vill. ex Gochn.) Zahn, 1923, in Engl. Pflanzenreich, 82: 1402. – *H. praealtum* subsp. *praealtum*; P. D. Sell a C. West, 1976, Fl. Europ. 4: 371, s. restr.

Hemicryptophyte identified on sunny meadows, glades and forest edges, steppe slopes (dry), field margins. European element (Mediterranean); xeromesophyllous, mesothermal, low acid-neutrophilous. Sporadically in the North Bugeac, Gârnet, Codrii, Bălți, Rezina, Râșcani, Briceni and Hotin geobotanical districts. The species areal includes the East and Central Europe, the Mediterranean region.

3. *P. piloselloides* (Vill.) Sojak, 1971, Preslia (Praha), 43, 2: 185. – *P. aggr. piloselloides* (Vill.) Sojak, Шляков, 1989, Фл. евр. части СССР, 8: 334. – *H. piloselloides* Vill. 1779, Prosp. Hist. Pl. Dauph.: 34; Гейдеман, 1986, Опред. высш. раст. МССР: 584; Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 380; Negru, 2007, Det. pl. fl. R. Mold.: 271; Ciocârlan, 2009, Fl. Ilus. Rom.: 870. – *H. florentinum* All. grex *florentinum* Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 554, s. 1.; Zahn, 1923, in Engl. Pflanzenreich, 82: 1409. – *H. piloselloides* subsp. *piloselloides*; P. D. Sell a C. West, 1976, Fl. Europ. 4: 371.

Hemicryptophyte, in herbaceous and rocky places met. European element (Mediterranean); xeromesophyllous, mesothermal, low acid-neutrophilous. Sporadically in Gârnet, Codrii, Rezina, Bălți and Briceni geobotanical districts. The species areal includes the East, South and Central Europe, the Caucasus.

4. *P. rojowskii* (Rehm.) Schljak. comb. nova; Шляков, 1989, Фл. евр. части СССР, 8: 334. – *Hieracium magyricum* Naeg. et Peter subsp. *rojowskii* Rehm. 1897, Verh. Zool. Bot. Ges. Wien, 47: 288. – *H. bauhini* Bess. subsp. *rojowskii* (Rehm.) Zahn, 1923, in Engl. Pflanzenreich, 82:1417. – *H. praealtum* Vill. ex Gochnat subsp. *bauhini* (Bess.) Petunnikov, Sell & West, 1976, Fl. Europ. v. 4, p. 372. – *H. rojowskii* (Rehm.) Юксии, 1960, Фл. СССР, 30: 452, s. restr. (sine auct. comb.). – *H. rojowskii* Rehm. Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 381.

Hemicryptophyte, grows on dry and herbaceous slopes, in rural areas, on wayside. Continental Eurasian element; xerophyllous, mesothermal, acid-neutrophilous. Rare taxa, collected from Codrii and Gârnet geobotanical districts (Fig. 1). The species areal includes the Caucasus, the East and Central Europe, the Mediterranean region.

5. *P. glaucescens* (Bess.) Sojak, 1971, Preslia (Praha), 43, 2: 185, s. restr.; Шляков, 1989, Фл. евр. части СССР, 8: 341. – *Hieracium glaucescens* Bess. 1809, Prim. Fl. Galic. 2: 149; Юксии, 1960, Фл. СССР, 30: 462; Гейдеман, 1986, Опред. высш. раст. МССР : 584; Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 381; Negru, 2007, Det. pl. fl. R. Mold.: 271. – *H. magyricum* subsp. *magyricum*; Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 576. *H. bauhini* Bess. subsp. *magyricum* (Naeg. et Peter) Zahn, 1923, in Engl. Pflanzenreich, 82:1421. – *H. praealtum* Vill. ex Gochnat subsp. *thaumasium* (Peter) P. D. Sell, 1976, Fl. Europ. 4: 372.

Hemicryptophyte identified on meadows, dry slopes, forest edge, the edge of fields and roads. European (mediterranean) element; xerophyllous, mesothermal, acid-

neutrophilous. Rare spread in the Codrii district. Collected only from two localities of the Hâncești district: Sărata Galbenă and Bozieni villages (Fig. 1). The species areal includes the East and the Central Europe, the Mediterranean region (East), the Minor Asia.

S e c t i o n 3. *Cymosina* (Naeg. et Peter) Schljak. comb. nova. – *Hieracium* sect. *Piloselloidea* subsect. *Cymosina* Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 116, 398. – *Hieracium* subgen. *Piloselloidea* sect. *Cymosina* G. Schneid. 1891, in Sagor. u. G. Schneid. Fl. Centralkarp. 2: 292; Zahn, 1923, in Engl. Pflanzenreich, 82: 1149, 1305 (cum auct. Naeg. et Peter, 1885).

Stem with numerous bristles, on lower part often upward, abundantly stellate pubescent. Leaves with simple hairs on both surfaces, with stellate hairs on both parts or only beneath. Cauline leaves 2-4 (7), with glandular hairs often covered on the top. Inflorescences umbellate or corymbose. Anthodiums numerous; outer involucral bracts appressed, with simple hairs and often with glandular hairs. Yellow flowers. Stigmas yellow. Supraterranean stolons slender.

6. *P. cymosa* (L.) F. Schultz et Sch. Bip. 1862, Flora (Regensb.), 45: 429; Шляков, 1989, Фл. евр. части СССР, 8: 344. – *Hieracium cymosum* L. 1763, Sp. Pl., ed. 2: 1126, p. p.; Юксих, 1960, Фл. СССР, 30: 549, p. p.; Гейдеман, 1986, Определ. высш. раст. МССР: 584; Доброч., Котов, Прокуд., 1999, Определ. высш. раст. Укр.: 384; Negru, 2007, Det. pl. fl. R. Mold.: 270; Ciocârlan, 2009, Fl. Ilus. Rom.: 870. – *H. cymosum* subsp. *cymosum* Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 401; Zahn, 1923, in Engl. Pflanzenreich, 82: 1309; P. D. Sell a C. West, 1976, Fl. Europ. 4: 372, s. restr.

Hemicryptophyte, vegetates on meadows, steppes slopes. Eurasian element; xeromesophyllous, mesothermal, low acid-neutrophilous. Found sporadically in the North Bugeac, Gârnet, Codrii, Bălți, Rezina, Râșcani, Briceni and Hotin districts. The species areal includes Scandinavia (South), the East and the Central Europe, the Mediterranean region (East).

S e c t i o n 4. *Pratensina* (Aschers. et Graebn.) Zahn, 1923, in Engl. Pflanzenreich, 82: 1148-1149, 1239 (cum auct. Aschers.). – *Hieracium* sect. *Piloselloidea* subsect. *Collinina* Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 116.

Fistulose stem, (1) 2-3 (4) leaves, with distanced simple hairs, horizontally or patent, disperse stellate-tomentose. Leaves soft, thin, green or yellowish green, sometimes glaucescent, upper surface with few or without stellate hairs on the ribs, with simple hairs on the both surfaces. Peduncles stellate-tomentose. Involucres disperse stellate-tomentose, (5) 7-9 mm length, outer involucral bracts lax adherent. Stigmas dark, sometimes the same color as the ligules. Ground and underground stolons present.

7. *P. caespitosa* (Dumort.) P. D. Sell et C. West, 1967, Watsonia, 6, 5: 314, s. restr.; Шляков, 1989, Фл. евр. части СССР, 8: 349. – *H. caespitosum* Dumort. 1827, Fl. Belg.: 27; P. D. Sell a C. West, 1976, Fl. Europ. 4: 373; Гейдеман, 1986, Определ. высш. раст. МССР: 584; Negru, 2007, Det. pl. fl. R. Mold.: 270; Ciocârlan, 2009, Fl. Ilus. Rom.: 870. – *H. pratense* Tausch, Юксих, 1960, Фл. СССР, 30: 596. – *H. pratense* Tausch subsp. *pratense*; Zahn, 1923, in Engl. Pflanzenreich, 82: 1269.

Hemicryptophyte identified on the meadows and forest edges. Eurasian element; mesophyllous, mesothermal, acid-neutrophilous. Rare species in the Codrii, Bălți, Briceni and Hotin geobotanical districts (Fig. 1). The species areal includes West Siberia, New Zealand, the Caucasus (revealed by V. Nicolaev (1989) after one specimen) [TUPICINA, 2004].

8. *P. aurantiaca* (L.) F. Schultz et Sch. Bip. 1862, Flora (Regensb.), 45: 426; Шляков, 1989, Фл. евр. части СССР, 8: 351. – *Hieracium aurantiacum* L. 1753, Sp. Pl.: 801; Юксип, 1960, Фл. СССР, 30: 653, р. max. p.; Гейдеман, 1986, Опред. высш. раст. МССР: 584; Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 385; Negru, 2007, Det. pl. fl. R. Mold.: 270; Ciocârlan, 2009, Fl. Ilus. Rom.: 869. – *H. aurantiacum* subsp. *aurantiacum*; Zahn, 1923, in Engl. Pflanzenreich, 82 :1242; P. D. Sell a C. West, 1976, Fl. Europ. 4: 374, s. restr.

Hemicryptophyte, vegetates in the stand glades of oak with birch and oak with cherry. Eurasian element; mesophyllous, microthermal, low acid-neutrophilous. Rare taxa, spread only in the Briceni district (Fig. 1). The species areal includes the North and Central Europe, Balkans; adventive in North America.

S e c t i o n 5. *Auriculina* (Fries) Schljak. comb. nova. – *Hieracium* subgen. *Pilosella* II. *Auriculina* Fries, 1862, Uppsala Univ. Årsskr. (Mat.-Nat. – Epicr. Gen. Hier.): 18. – *Hieracium* subgen. *Piloselloidea* sect. *Auriculina* (Fries) G. Schneid. 1891, in Sagor. u. G. Schneid. Fl. Centralkarp. 2: 284.

Stem 25 (50) cm, slender, usually with 1 leaf, with slender decumbent, glabrous or glabrescent stolons at the base, with distanced leaflets. Leaves glaucous, spatulate to linear-lanceolate, with few or without stellate hairs beneath, on the midrib. Inflorescence (1) 2-6 (8) anthodiums. Involucre 6-8 (9) cm; involucre bracts green or blackish, usually whitish marginate. Ligules yellow, without red stripes. Stigmas yellow.

Pilosella lactucela (Wallr.) P. D. Sell et C. West

9. *P. lactucela* (Wallr.) P. D. Sell et C. West, 1967, Watsonia, 6, 5: 314; Шляков, 1989, Фл. евр. части СССР, 8: 355. – *Hieracium lactucella* Wallr. 1822, Sched. Crit. 1: 408; P. D. Sell a C. West, 1976, Fl. Europ. 4: 369, s. restr.; Ciocârlan, 2009, Fl. Ilus. Rom.: 869. – *H. auricula* auct. non L.: Lam. et DC. 1805, Fl. Fr., ed. 3, 4: 24; Юксип, 1960, Фл. СССР, 30: 670. – *H. auricula* subsp. *auricula* auct.: Naeg. et Peter, 1885, Hier. Mitt.-Eur. 1: 189; Zahn, 1923, in Engl. Pflanzenreich, 82: 1198.

Hemicryptophyte, grows on the meadows. European element; mesophyllous, amphotolerant, acid-neutrophilous. Rare species, registered in Briceni, Codrii and South Bugeac geobotanical districts (Fig. 1). The species areal includes Scandinavia (South), the East and South Europe, Atlantic Europe (East) and Mediterranean region (East).

Pilosella flagellare (Willd.) Arv.-Touv.

10. *P. flagellare* (Willd.) Arv.-Touv. 1873, Monogr. Pilos. Hier. Dauph.: 13. – *P. flagellaris* (Willd.) Arv.-Touv., Шляков, 1989, Фл. евр. части СССР, 8: 375. – *Hieracium flagellare* Willd., Zahn, 1923, in Engl. Pflanzenreich, 82: 1278, pro sp. coll. (= *H. pratense-pilosella*); Юксип, 1960, Фл. СССР, 30: 643; P. D. Sell a C. West, 1976, Fl. Europ. 4: 369, pro sp. coll. propr.; Ciocârlan, 2009, Fl. Ilus. Rom.: 869. – *H. flagellare* (Willd.) Naeg. et Peter, Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 385. – *H. flagellare* subsp. *petunnikovii* Peter, 1893, Nachr. Ges. Wiss. Götting. 2: 74. – *H. petunnikovii* (Zahn.) Юксип, 1960, Фл. СССР, 30: 638 (sine auct. comb.).

Hemicryptophyte, identified on meadows, forest edge and glades, dry slopes, sands. European element; xeromesophyllous, mesothermal, acid-neutrophilous. Rare spread in Briceni, Codrii and Râșcani districts (Fig. 1). The species areal includes Scandinavia (Finland), the East and the Central Europe.

S e c t i o n 6. *Pilosella*. *Hieracium* subgen. *Pilosella* I. *Pilosellina* Fries, 1862, Uppsala Univ. Årsskr. (Mat.-Nat. – Epicr. Gen. Hier.): 10.

Steam scapiform with an anthodium. All leaves basal, with densely stellate hairs on the underside, sometimes on the top. Involucres with densely stellate hairs. Ligules yellow, those marginal with red stripes on outer face.

11. *P. officinarum* F. Schultz et Sch. Bip. 1862, Flora (Regensb.), 45: 421.; Шляков, 1989, Фл. евр. части СССР, 8: 358. – *Hieracium pilosella* L. 1753, Sp. Pl.: 800, p. p.; Zahn, 1923, in Engl. Pflanzenreich, 82: 1158; Юксип, 1960, Фл. СССР, 30: 692; P. D. Sell a C. West, 1976, Fl. Europ. 4: 368; Гейдеман, 1986, Опред. высш. раст. МССР: 582; Доброч., Котов, Прокуд., 1999, Опред. высш. раст. Укр.: 379; Negru, 2007, Det. pl. fl. R. Mold.: 270; Ciocârlan, 2009, Fl. Ilus. Rom.: 867. – *Pilosella communis* Arv.-Touv. 1873, Monogr. Hier. Pilos.: 13.

Hemicryptophyte, grows on herbaceous and sunny places. European element (Mediterranean); xeromesophyllous, amphotolerant, euryonic. Commune in Chilia, sporadically in the North Bugeac, Gârnet, Codrii, Bălți, Rezina, Râșcani, Briceni and Hotin districts. The species areal includes Scandinavia, the central and Atlantic Europe (except the North), the Mediterranean region, Minor Asia, Caucasus, adventive in the North America, New Zealand.

Conclusions

- The spontaneous flora of the Bessarabia includes 11 species of the *Pilosella*: *P. officinarum* F. Schultz et Sch. Bip., *P. aurantiaca* F. Schultz et Sch. Bip., *P. praealta* (Vill ex Gochn.) F. Schultz et Sch. Bip., *P. piloselloides* (Vill.) Sojak, *P. glaucescens* (Bess.) Sojak, *P. echioides* (Lumn.) F. Schultz et Sch. Bip., *P. caespitosa* (Dumort.) P. D. Sell et C. West, *P. cymosa* (L.) F. Schultz et Sch. Bip., *P. lactucela* (Wallr.) P. D. Sell et C. West, *P. rojowskii* (Rehm.) Schljak. and *P. flagellare* (Willd.) Arv.-Touv.
- Three new species for the flora in the study have been identified: *P. lactucela* (Wallr.) P. D. Sell et C. West, *P. rojowskii* (Rehm.) Schljak. and *P. flagellare* (Willd.) Arv. Touv.
- Of all highlighted taxa, 6 are rare: *P. aurantiaca* F. Schultz et Sch. Bip., *P. glaucescens* (Bess.) Sojak, *P. caespitosa* (Dumort.) P. D. Sell et C. West, *P. lactucela* (Wallr.) P. D. Sell et C. West, *P. rojowskii* (Rehm.) Schljak. and *P. flagellare* (Willd.) Arv. Touv. Numerous investigations and inventory in field are necessary further to make possible the indication of rare degree and endangered status of the mentioned taxa and to elaborate special measures for their conservation.

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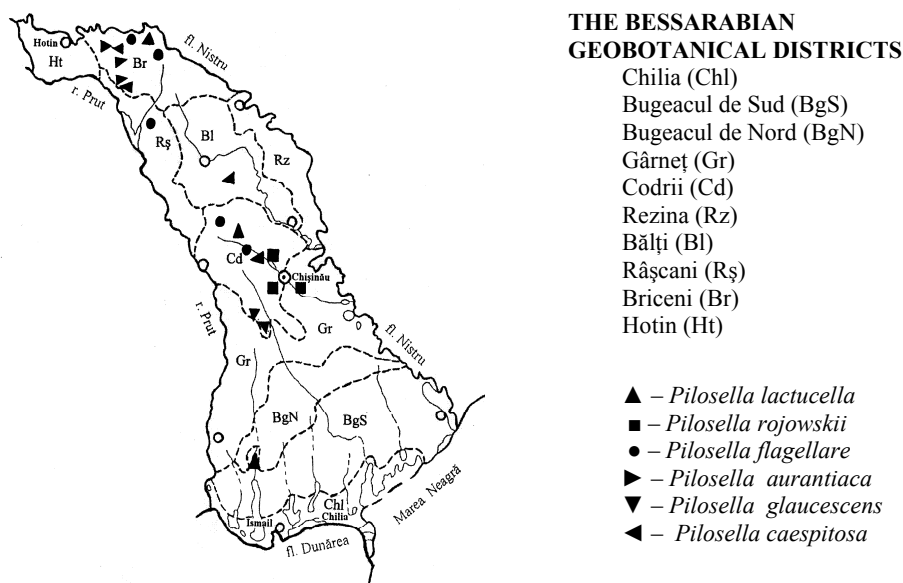


Fig. 1. The spread of rare species of *Pilosella* Hill on the Bessarabia's territory