

Additional Records of *Hieracium* L. and *Pilosella* Hill (Compositae: Lactuceae) for the Flora of Turkey

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Abstract: A further collection of *Hieracium* L. and *Pilosella* Hill (Compositae) from NE Anatolia is presented here. In addition to the 32 second records, 7 new records of the genus *Hieracium* (*H. pseudosvaneticum* Peter s.l., *H. biebersteinii* Litw. & Zahn, *H. callichlorum* Litw. & Zahn, *H. camkorjense* Zahn s.l.) and *Pilosella* (*P. brachiata* (Bertol. & DC.) F.W.Schultz & Sch. Bip, *P. fennica* (Norrl.) Norrl. em. Soják, *P. procera* (Fr.) F.W.Schultz & Sch. Bip.) are established for Anatolia in this study.

Key Words: Anatolia, New records, *Hieracium*, *Pilosella*, Asteraceae, Compositae, Lactuceae

Introduction

The genus *Hieracium* L., with up to 1000 species worldwide, and *Pilosella* Hill, with up to 100 species depending on species concepts in Eurasia and north-western Africa (Bremer & Anderberg, 1994), are represented by 113 and 34 species respectively in the Turkish flora (Coşkunçelebi et al., 2002), in addition to numerous natural hybrids. They are the least known genera in the Turkish flora. Difficulties in identifying the taxa of these genera and the consequent lack of detailed knowledge on their status have resulted in them being largely ignored by taxonomists in Turkey. During doctoral studies performed by the first author in the Black Sea region of Turkey, the main centre of diversity of *Hieracium* and *Pilosella* in Turkey, many new records and second collections for these 2 genera were made amongst the 300 collections. These collections will allow gaps in the knowledge of both genera in the Flora of Turkey to be filled. This is particularly important when considering records for the species in the Red Data Book of Turkish Plants (Ekim et al., 2000), where many species of *Hieracium* were classed as DD (Data Deficient) and no data was available for species of *Pilosella*, except for *P. hoppeana* (Schult.) Sch. Bip. & F.W. Schultz and *P. sandrasica* Hartwig & Strid.

Results

Material from all of the collections has been deposited in the Herbarium of the Department of Biology, Karadeniz Technical University. The list of species is arranged according to the Flora of Turkey. All these recent collections have been checked against the recent literature of Nydegger-Hügli (1989-2002), Özhatay et al. (1994, 1999), Güner (2000), Coşkunçelebi & Beyazoğlu (2001, 2002) and Gottschlich et al. (2000).

Abbreviations

nr: new record

nsr: new square record

nvr: new vilayet record

nvsr: new vilayet and square record

sr: second record

KTUB: Herbarium of Biology at Karadeniz Technical University

70. Compositae

115. *Hieracium* L.

1. *H. oblongum* Jordan: A7 Giresun: sr: Dereli, Kümbet yaylası, 1900-2000 m., 2 viii 1998, Coşkunçelebi 096, KTUB.

3. *H. gentile* Jordan ex Bor.: **A7** Gümüşhane: sr: Tersundağı, 1800 m, 1 viii 1999, Coşkunçelebi 0232a, KTUB. 1998, Coşkunçelebi 009, KTUB; **A8** Rize: nsr: Ayder, Aşağı Kavrun Yaylası, 1700-1800 m, 3 viii 1999, Coşkunçelebi 273, 274, KTUB.
4. *H. tossianum* (Zahn) Sell & West: **A7** Gümüşhane: nsr: between İkisü and Şiran, Karamustafa Köyü, 1500 m, 1 viii 1999, Coşkunçelebi 237, KTUB.
5. *H. subsilvularum* (Zahn) Sell & West: **A7** Trabzon: nvr: Haçka Yaylası, 1450 m, 22 vii 1999, Coşkunçelebi 0189, KTUB.
9. *H. gentiliforme* (Zahn) Sell & West: **A7** Trabzon: sr: Zigana pass, 1650-1900 m, 04 vii 1998, Coşkunçelebi 02, 010, KTUB; **A7** Trabzon: sr: Çaykara, Karester Yaylası, 1900 m, 12 vii 1998, Coşkunçelebi 037, KTUB; **A7**: Trabzon: sr: Çaykara, Haros Komları, 1350 m, 12 vii 1998, Coşkunçelebi 050, KTUB; **A7** Trabzon: sr: Çaykara, Küçük Yayla, 2150 m, 12 vii 1998, Coşkunçelebi 054, KTUB; **A7** Giresun: nvr: Tamdere Kümpet yolu, 1600 m, 01 vii 1998, Coşkunçelebi 087, KTUB; **A8** Rize: nvr: İkizdere, Ovit pass, 2150 m, 28 vi 1998, Coşkunçelebi 095, KTUB; **A8** Rize: nvr: İkizdere, Cimil Başköy, 1600-1700 m, 15 viii 1998, Coşkunçelebi 131, KTUB.
10. *H. medianiforme* (Litw. & Zahn) Juxip: **A7** Gümüşhane: nsr: İkisü, between Tersundağı and Karanlık Dere, 1500 m, 1 viii 1999, Coşkunçelebi 228, KTUB.
11. *H. laxifurcans* (Bornm. & Zahn) Sell & West: **A8** Trabzon: nsr: Çaykara, Kuti Yaylası, 2200-2300 m, 11 vii 1998, Coşkunçelebi 031, 032, 034, KTUB.
13. *H. ovalifrons* (Woronow & Zahn) Juxip: **A7** Giresun: nvsr: between Tamdere and İkisü arası, 1600-1700 m, 1 viii 1998, Coşkunçelebi 079, KTUB; **A7** Giresun: nvsr: between Tamdere and Kümbet, 1600 m, 1 viii 1998, Coşkunçelebi 088, KTUB; **A7** Trabzon: nvsr: Araklı Dağbaşı, 1400 m, 13 viii 1999, Coşkunçelebi 174, KTUB.
16. *H. artabirensis* (Zahn) Juxip: **A8** Trabzon: sr: Çaykara, Karestel Yaylası, 2200 m, 12 vii 1998, Coşkunçelebi 043, 045, 046, KTUB.
19. *H. cryptonaevum* (Bornm. & Zahn) Sell & West: **A8** Trabzon: nsr: Çaykara, Kuti Yaylası, 2250 m, 11 vii 1998, Coşkunçelebi 030, 033, KTUB.
22. *H. caloprasinum* (Zahn) Juxip: **A7** Trabzon: vsvr: between Zigana Dağı and Zigana, 1950 m, 4 viii 1998, Coşkunçelebi 009, KTUB; **A8** Rize: nsr: Ayder, Aşağı Kavrun Yaylası, 1700-1800 m, 3 viii 1999, Coşkunçelebi 273, 274, KTUB.
23. *H. karagoellense* (Zahn) Sell & West: **A8** Artvin: sr: Yusufeli, Kılıçkaya Beldesi, 1800-1900 m, 22 vi 1998, Coşkunçelebi 089, 090, 091, KTUB; **A7** Trabzon: sr: Maçka, Zigana pass, 1650 m, 4 vii 1998, Coşkunçelebi 003, KTUB; **A8** Trabzon: sr: Çaykara, Yaylaönü, 1950 m, 12 viii 1998, Coşkunçelebi 036, KTUB; **A7** Gümüşhane: sr: between Dağbaşı and Gümüşhane, 1600 m, 13 vii 1999, Coşkunçelebi 178, KTUB.
24. *H. erythrocarpum* Peter, s. l.: **A9** Artvin: nsr: Murgul, Şavval Tepe, 1700-2000 m, 26 vii 1998, Coşkunçelebi 072, KTUB; **A8** Artvin: nvr: Hatilla vadisi, 2350 m, 14 vii 1998, Coşkunçelebi 187, KTUB; **A8** Trabzon: nvr: Çaykara, Haldizen, Küçük yayla, 2150 m, 12 vii 1998, Coşkunçelebi 055, KTUB; **A7** Trabzon: nvr: Araklı Dağbaşı, 1400 m, 13 vii 1998, Coşkunçelebi 179, KTUB; **A7** Gümüşhane: sr: Tersundağı, 1800 m, 1 viii 1999, Coşkunçelebi 234, KTUB; **A8** Rize: sr: Ayder, 1250 m, 3 viii 1999, Coşkunçelebi 269, KTUB.
28. *H. argillaceoides* (Litw. & Zahn) Juxip: **A8** Trabzon: sr: Çaykara, Karaçam köyü, 1450 m, 11 vii 1998, Coşkunçelebi 017, KTUB; **A7** Trabzon: sr: Düzköy, Hıdırnebi Yaylası yolu, 1300 m, 1 vii 1999, Coşkunçelebi 165, KTUB; **A7** Gümüşhane: nvr: Tersundağı, 2000 m, 1 viii 1999, Coşkunçelebi 245, KTUB; **A9** Artvin: nvsr: between Şavşat and Ardahan, Sahara National Parkey, 1800 m, 24 vii 1998, Coşkunçelebi 157, KTUB.
32. *H. hypopityforme* Juxip: **A7** Trabzon: sr: Zigana pass, 1850 m, 4 vii 1998, Coşkunçelebi 004, KTUB; **A8** Trabzon: sr: Çaykara, Karaçam, Derebaşı, 1950 m, 11 vii 1998, Coşkunçelebi 028, KTUB; **A8** Trabzon: sr: Çaykara, Karestel Yaylası, 2200 m, 12 vii 1998, Coşkunçelebi 042, KTUB; **A8** Rize: nvr: Çamlıhemşin, Sıraköy, 1500 m, 5 viii 1998, Coşkunçelebi 104, KTUB; **A8** Artvin: sr: Yusufeli, Kılıçkaya Beldesi, 1900 m, 11 vii 1998, Coşkunçelebi 028, KTUB.
34. *H. sarykamyschense* Juxip: **A7** Gümüşhane: nsr: Tersundağı, 2000-2100 m, 1 viii 1999, Coşkunçelebi 222, KTUB.

38. *H. giresunense* Hub.-Mor.: **A7** Trabzon: nvr: Araklı Dağbaşı, 1700 m, 13 vii 1999, Coşkunçelebi 185, KTUB.
47. *H. paphlagonicum* Freyn & Sint.: **A8** Rize: nvr: Çamlıhemşin, Sıraköy, 1700 m, 5 viii 1998, Coşkunçelebi 101, KTUB.
48. *H. odontophyllum* Freyn & Sint.: **A7** Gümüşhane: nvr: Gülaçar Köyü, 1550 m., 1 viii 1999, Coşkunçelebi 231a, KTUB.
49. *H. bornmülleri* Freyn: **A7** Gümüşhane: sr: Gülaçar Köyü, 1550 m., 1 viii 1999, Coşkunçelebi 231, KTUB.
58. *H. lazistanum* Arv. – Touv.: **A7** Trabzon: nvr: Zigana Dağı, 1950 m, 4 vii 1998, Coşkunçelebi 008, KTUB.
62. *H. macrolepis* Boiss.: **A9** Artvin: vsr: Ardanuç, Çürüşpil Mezrası, 1500 m, 25 vii 1998, Coşkunçelebi 071, KTUB; **A8** Rize: sr: İkizdere, near Cimil Başköy, 1600-1700 m, 15 vii 1998, Coşkunçelebi 130, KTUB; **A7** Trabzon: nvr: Çaykara, 2300 m, 12 vii 1998, Coşkunçelebi 047, KTUB; **A7** Trabzon: nvr: Maçka, between Sümela and Camiboğazi, 2100 m, 25 vii 1999, Coşkunçelebi 201, KTUB; **A7** Gümüşhane: sr: Tersundağı, 2000 m, 1 viii 1999, Coşkunçelebi 249, KTUB.
64. *H. onosmopsis* (Zahn) Sell & West: **A7** Trabzon: nvr: Maçka, road between Sümela and Camiboğazi, 1800 m, 25 vii 1999, Coşkunçelebi 211, KTUB.
66. *H. mannagettae* Freyn: **A8** Rize: nvr: İkizdere, Anzer Yaylası, 2150 m, 9 viii 1998, Coşkunçelebi 106, 134, KTUB.
67. *H. amblylepis* Boiss.: **A8** Trabzon: nvr: Çaykara, Karastel Yaylası, 2200 m, 11 vii 1998, Coşkunçelebi 048,171, KTUB.
68. *H. sparsum* Friv.: **A8** Trabzon: nvr: Çaykara, Karastel Yaylası, 2250 m, 12 vii 1998, Coşkunçelebi 038, KTUB; **A7** Giresun: Tamdere, 1900 m, 1 viii 1998, Coşkunçelebi 081, KTUB; **A8** Rize: İkizdere, Cimil Başköy, 2400 m, 19 viii 1998, Coşkunçelebi 127, KTUB.
69. *H. tamderense* Hub.-Mor.: **A8** Trabzon: nvr: Çaykara, between Haldizen and Küçük Yayla, 2200 m, 12 vii 1998, Coşkunçelebi 053, KTUB; **A9** Artvin: sr: Şavşat, 1500 m, 24 vii 1998, Coşkunçelebi 063, KTUB; **A7** Trabzon: nvr: Maçka, road between Meryemana and Camiboğazi, 2100 m, 25 vii 1999, Coşkunçelebi 205, KTUB.
70. *H. microtum* Boiss.: **A9** Artvin: nvr: Şavşat Karagöl, 1550 m, 25 vii 1998, Coşkunçelebi 070; **A8** Artvin: Kafkasör, 1500 m, 6 viii 1999, Coşkunçelebi 286, KTUB; **A8** Rize: sr: İkizdere, Anzer Yaylası, 2200 m, 9 viii 1998, Coşkunçelebi 107, KTUB.
73. *H. lanceolatum* Vill.: **A8** Artvin: sr: 10 km along the Ardanuç road, 1550 m, 24 viii 2000, Coşkunçelebi 062, KTUB; **A9** Artvin: sr: Şavşat, Karagöl, 1500 m, 25 vii 1998, Coşkunçelebi 068, KTUB; **A7** Trabzon: nvr: Maçka, road between Sümela and Camiboğazi, 2000 m, 3 viii 1999, Coşkunçelebi 263, KTUB.
76. *H. syreistschikovii* (Zahn) Juxip: **A7** Giresun: nvr: Tamdere, 1900-2000 m, 1 viii 1998, Coşkunçelebi 082, KTUB; **A8** Rize: nvr: İkizdere, Anzer Yaylası, 2200 m, 22 viii 1998, Coşkunçelebi 112, KTUB.
78. *H. asterodermum* (Woronov & Zahn) Juxip: **A8** Rize: nvr: İkizdere, Ortaköy, 1900 m, 15 viii 1998, Coşkunçelebi 128, KTUB.
79. *H. teberdense* (Litw. & Zahn) Juxip: **A9** Artvin: nvr: Ardanuç, Soğuksu Mezrası, 1800 m, 27 vii 1998, Coşkunçelebi 077, KTUB; **A8** Artvin: nvr: Kafkasör, 1800 m, 6 viii 1999, Coşkunçelebi 282, KTUB; **A7** Giresun: nvr: Tamdere, 1900-2000 m, 1 viii 1998, Coşkunçelebi 084, KTUB; **A8** Rize: nvr: İkizdere, near Cimil Başköy, 1400 m, 15 viii 1998, Coşkunçelebi 124, KTUB; **A8** Rize: nvr: Çamlıhemşin, Sıraköy, 1700 m, 5 viii 1998, Coşkunçelebi 102, KTUB; **A7** Gümüşhane: sr: İkisu, Gülaçar Köyü, 1550 m, 1 viii 1999, Coşkunçelebi 230, KTUB.
80. *H. conicum* Arv. – Touv.: **A7** Giresun: nvr: between İkisu and Tamdere, 1600-1700 m, 1 viii 1998, Coşkunçelebi 080, KTUB; **A8** Rize: nvr: İkizdere, Çilekli, 1000-1100 m, 9 viii 1998, Coşkunçelebi 120,121,123, KTUB; **A8** Rize: nvr: İkizdere, Ortaköy, 1700 m, 15 viii 1998, Coşkunçelebi 129, KTUB; **A8** Artvin: nvr: Kafkasör, 1500 m, 6 viii 1999, Coşkunçelebi 288, KTUB.
88. *H. foliosissimum* (Woronov & Zahn) Juxip: **A7** Gümüşhane: nvr: Tersundağı pass, 2000 m, 1 viii 1999, Coşkunçelebi 248, KTUB.

90. *H. olympicum* Boiss.: A7 Trabzon: nvr: Maçka, Sümela Camiboğazi Yaylası, 1700-2000 m, 25 vii 1999, Coşkunçelebi 220.
95. *H. vagum* Jordan: A8 Trabzon: nvsr: Çaykara, Taşkiran köyü, 5 vii 1998, Coşkunçelebi 156, KTUB.
96. *H. sabaudum* L.: A7 Trabzon: nsr: 10 km along the Düzköy road, 400-500 m, 22 vii 1999, Coşkunçelebi 195, KTUB.
98. *H. umbellatum* L.: A8 Trabzon: nvr: Çaykara, Taşkiran köyü, 700-800 m, 5 ix 1998, Coşkunçelebi 154-155, KTUB; A8 Rize: sr: İkizdere, near Anzer, 1000 m, 9 viii 1998, Coşkunçelebi 122, KTUB.
99. *H. laevigatum* Willd.: A9 Artvin: nsr: Şavşat, Karagöl, 1550 m, 25 vii 1998, Coşkunçelebi 069, KTUB; A8 Rize: nsr: Çamlıhemşin, Sıraköy, 1700 m, 5 viii 1998, Coşkunçelebi 103, KTUB; A8 Trabzon: nsr: Çaykara, Karastel, 2200 m, 12 vii 1998, Coşkunçelebi 040, KTUB.
- *H. pseudosvaneticum* Peter, s.l.: A7 Trabzon: nr: Maçka, between Sümela and Camiboğazi, 1800-2100 m, 25 vii 1999, Coşkunçelebi 203, 209, KTUB.
 - *H. biebersteinii* Litw. et Zahn: A8 Trabzon: nr: Araklı, road between Dağbaşı and Bayburt, 1700 m, 13 vii 1999, Coşkunçelebi 183, KTUB.
 - *H. callichlorum* Litw. & Zahn: A8 Artvin: nr: Borçka, Camili yolu, 1800 m, 6 viii 1999, Coşkunçelebi 287, KTUB.
 - *H. camkorijense* Zahn, s.l.: A7 Trabzon: nr: between Sumela and Camiboğazi, open pasture, 1800 m, 25 vii 1999, Coşkunçelebi 212, KTUB.
116. *Pilosella* Hill
1. *P. hoppeana* (Schult.) Sch. Bip. & F.W.Schultz subsp. *troica* (Zahn) Sell & West: A8 Rize: nsr: Ayder, Aşağı Kavrun Yolu, roadside and open pasture, 1900 m, 3 viii 1999, Coşkunçelebi 267, KTUB; A7 Gümüşhane: nvr: Tersundağı, open pasture 2100 m, 1 viii 1999, Coşkunçelebi 224, KTUB.
2. *P. 'x' ruprechtii* (Boiss.) Sell & West: A9 Artvin: nsr: Ardanuc, between Ardanuc and Çürüşpil Yaylası, pine forest, 1800 m, 24 vi 1998, Coşkunçelebi 152, KTUB.
3. *P. officinarum* F.W. Schultz & Sch. Bip.: A7 Trabzon: sr: Düzköy, Haçka Yaylası, roadside, 1650 m, 22 vii 1999, Coşkunçelebi 191, KTUB; A8 Rize: nvr: Ayder, Aşağı Kavrun Yaylası, alpine pasture, 2000 m, 3 viii 1999, Coşkunçelebi 253, 254, 255, 256, 258, 259, KTUB;
5. *P. piloselloides* (Vill.) Soják: A7 Trabzon: nvr: Zigana pass, meadows and roadsides, 1900 m, 4 vi 1998, Coşkunçelebi 143, KTUB; A8 Artvin: nsr: Murgul, roadside, 500 m, 22 vi 1998, Coşkunçelebi 135, KTUB; A8 Artvin: nsr: Kafkasör, pine forest and roadside; 1900 m, 6 viii 1999, Coşkunçelebi 289, KTUB; A8 Rize: nsr: Ayder, Aşağı Kavrun Yolu, open pasture, 1800 m, 3 viii 1999, Coşkunçelebi 266, KTUB; A7 Gümüşhane: nvr: Şiran, Karamustafa Köyü, roadside, 1500 m, 1 viii 1999, Coşkunçelebi 239, KTUB; A7 Gümüşhane: nvr: Tersundağı, *Picea* forest and roadside, 1800 m, 1 viii 1999, Coşkunçelebi 235, KTUB; A7 Gümüşhane: nvr: Tersundağı, open pasture, 2100 m, 1 viii 1999, Coşkunçelebi 225, KTUB.
7. *P. cymosa* (L.) F.W.Schultz & Sch. Bip.: A8 Trabzon: nvr: Çaykara, Kutı Yaylası, meadows and roadsides, 2250 m, 7 vi 1998, Coşkunçelebi 160, KTUB.
11. *P. 'x' macrotricha* (Boiss.) Sch. Bip. & F.W.Schultz: A8 Bayburt: nvr: between Bayburt and Erzurum, roadside, 1600 m, 3 vii 1999, Coşkunçelebi 166, KTUB.
12. *P. 'x' auriculoides* (A.F.Láng) Sell & West: A9 Artvin: sr: between Şavşat and Ardahan, meadows, 2100-2150 m, 24 vi 1998, Coşkunçelebi 153, KTUB.
- *P. bauhini* (Besser) Arv.-Touv.: A8 Artvin: nsr: between Murgul and Damar, roadsides and meadows, 1250 m, 22 vi 1998, Coşkunçelebi 136, KTUB; A8 Artvin: nsr: Yusufeli, between Yusufeli and Kiliçkaya, meadows and pastures, 1850 m, 22 vi 1998, Coşkunçelebi 139, KTUB; A7 Trabzon: nsr: Maçka, Zigana Dağı, roadsides, 1650 m, 4 vi 1998, Coşkunçelebi 142, KTUB; A7 Gümüşhane: nsr: between Zigana pass and Torul, roadsides, 1850 m, 22 vi 1998, Coşkunçelebi 144, KTUB; A8 Trabzon: nsr: Çaykara, Yaylaönu, meadow and forest, 1950 m, 7 vi 1998, Coşkunçelebi 148a, KTUB; A8 Trabzon: nsr: Çaykara, Arpaözü, banks and meadows, 1700 m,

- 7 vi 1998, Coşkunçelebi 161, KTUB; **A7** Trabzon: nsr: Düzköy; Haçka Yaylası, roadside, 1650 m, 22 vii 1999, Coşkunçelebi 193, KTUB; **A7** Gümüşhane: nsr: between Dağbaşı and Gümüşhane, roadside, 1600 m 13 vii 1999, Coşkunçelebi 172, KTUB; **A7** Gümüşhane: nsr: between Dağbaşı and Gümüşhane, roadside and stony places, 1700 m, 13 vii 1999, Coşkunçelebi 170, KTUB; **A7** Gümüşhane: nsr: Vavuk Dağı, open pasture, 1800 m, 3 vii 1999, Coşkunçelebi 168, KTUB.
- *P. bauhini* (Besser) Arv.-Touv. subsp. *europureoides* (Bornm. & Zahn) Arv.-Touv.: **A7** Trabzon: nsr: between Maçka and Camiboğazi, alpine pasture, 2200 m, 25 vii 1999, Coşkunçelebi 219, KTUB.
 - *P. rubrobauhini* (Schelk & Zahn) Sennik: **A8** Artvin: nsr: Cankurtaran pass, roadsides, 700 m, 22 vi 1998, Coşkunçelebi 137, KTUB.
 - *P. brachiata* (Bertol. ex DC.) F.W.Schultz & Sch. Bip.: **A8** Rize: nr: Ayder, Aşağı Kavrun, alpine pasture, 2000 m, 3 viii 1999, Coşkunçelebi 257, KTUB.
 - *P. densiflora* (Tausch) Soják: **A7** Gümüşhane: nsr: Araklı Dağbaşı Yolu, roadside and stony places, 1700 m, 13 vii 1999, Coşkunçelebi 169, KTUB; **A7** Gümüşhane: nsr: Tersundağı, open pasture, 2100

m, 1 viii 1999, Coşkunçelebi 227 KTUB; **A7** Trabzon: nsr: Düzköy, Hidirnebi Yaylası, open pasture and *Picea* forest, 1400-1500 m, 1 vii 1999, Coşkunçelebi 164, KTUB.

- *P. fennica* (Norrl.) Norrl. em. Soják : **A8** Trabzon: nr: Çaykara, Soğanlı pass, meadows, 2100 m, 7 vi 1998, Coşkunçelebi 145, KTUB;.
- *P. caespitosa* 'x' *hoppeana* (= *H. longiscapum* Boiss. & Kotschy subsp. *longiscapum*): **A8** Trabzon: sr: Çaykara, Kutı Yaylası, meadows, 2250 m, 6 vii 1998, Coşkunçelebi 159, KTUB; **A7** Trabzon: sr: Maçka, between Sümela and Camiboğazi, open pasture, 2100 m, 25 vii 1999, Coşkunçelebi 202, KTUB.
- *P. procera* (Fr.) F.W.Schultz & Sch. Bip.: **A8** Artvin: nr: between İspir and Erzurum, roadsides and meadows, 1200 m, 22 vi 1998, Coşkunçelebi 138a, KTUB.

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