

New Floristic Records on *Dicotyledones* for the Square B10 (Özalp-Van) from Turkey

Fevzi ÖZGÖKÇE, Lütfi BEHÇET

Yüzüncü Yıl University, Faculty of Science and Arts, Department of Biology, 65180 Van-TURKEY

Received: 22.04.2000

Accepted: 04.01.2001

ANGIOSPERMAE

DICOTYLEDONES

RANUNCULACEAE

Delphinium szowitsianum Boiss.

B10 Van, Özalp, around A. Tulgali Village, steppe, 2100 m, 12.08.1997, F 1551.

D. carduchorum Chowdhuri & P.H.Davis.

B10 Van, Özalp, east of Y. Tulgali Village, stony areas, 2300 m, 21.08.1997, F 5279, END., Ir.-Tur. elm.

D. cyphoplectrum Boiss. var. *pallidiflorum* (Freyn) P.H.Davis

B10 Van, Özalp, above Kargalı District, serpentine area, 2000 m, 09.08.1998, F 8762.

Consolida cornuta (P.H.Davis & Hossain) P.H.Davis

B10 Van, Özalp, east of Tepedam Village, wheat field, 2100 m, 05.06.1996, F 818, END. Ir.-Tur. elm.

Adonis aestivalis L. subsp. *aestivalis*

B10 Van, Özalp, above Balçıklı Village, wheat field, 2200 m, 10.06.1997, F 1227.

A. aestivalis L. subsp. *parviflora* (Fisch. ex DC.) Busch

B10 Van, Özalp, below A. Dönerdere Village, Yeşilkum area, wheat field, 2200 m, 04.07.1997, F 3259.

Ranunculus repens L.

B10 Van, Özalp, around Y. Tulgali Village, damp places, 2300 m, 21.08.1997, F 5320.

R. kotschyi Boiss.

B10 Van, Özalp, A. Sağmalı Village, around Düztepe, meadows, 2360 m, 26.06.1997, F 3555.

R. polyrrhizos Steph. ex Willd.

B10 Van, Özalp, Aksorguç Village, north of Hangediği, stony pile, 2500 m, 19.05.1998, F 6104(det: L. Behçet), Euro-Sib. elm.

R. argyreus Boiss.

B10 Van, Özalp, A. Yorganlı Village, Değirmentası pass, stony areas, 2250 m, 26.06.1997, F 3586.

R. psilostachys Griseb.

B10 Van, Özalp, around Sarıköy Village, south of Tuzlutepe, steppe, 2096 m, 12.06.1996, F 661.

R. sceleratus L.

B10 Van, Özalp, west of A. Yorganlı Village, muddy area, 2400 m, 26.06.1997, F 3566.

R. strigillosus Boiss. & Huet

B10 Van, Özalp, around Centre around damp area, 2300 m, 09.08.1998, F 8764.

R. trichophyllus Chaix

B10 Van, Özalp, pool of Aşkın Village, in the water, 2000 m, 28.06.1998, F 7612.

Thalictrum flavum L.

B10 Van, Özalp, Y. Tulgali Village, Tilkitepe, slope, 2300 m, 26.06.1997, F 3627.

PAPAVERACEAE

Papaver orientale L. var. *orientale*

B10 Van, Özalp, east of Sarıköy Village, rocky slopes, 2154 m, 28.06.1998, F 7468.

P. rhoeas L.

B10 Van, Özalp, around Şehittepe Village, wheat field, 2115 m, 14.08.1997, F 1668.

P. postii Fedde

B10 Van, Özalp, south of Dorutay Village, steppe, 2072 m, 09.06.1996, F 968, E. Medit. elm.

P. clavatum Boiss. & Hausskn. ex Boiss.

B10 Van, Özalp, between Damlacık Village and Eğribelen Village, steppe, 2150 m, 05.07.1997, F 4807, END., Ir.-Tur. elem.

BRASSICACEAE (CRUCIFERAE)

Crambe orientalis L. var. *orientalis*

B10 Van, Özalp, Dorutay Village, Batanyer, cultivated field, 2100 m, 09.06.1997, F 1901, Ir.-Tur. elm.

Conringia persica Boiss.

B10 Van, Özalp, Y. Koçkıran Village, cultivated area, 2250 m, 04.07.1997, F 4655.

C. perfoliata (C.A.Mey.) Busch

B10 Van, Özalp, 15 km along the road from Özalp to Van, cultivated area, 2100 m, 05.06.1996, F 824 b, Ir.-Tur. elm.

Isatis cappadocica Desv. subsp. *alyssifolia* (Boiss.) P.H.Davis

B10 Van, Özalp, A. Koçkıran Village, Karatepe, rocky area, 2275 m, 05.07.1997, F 4767 (det: Ş. Yıldırım), END., Ir.-Tur. elm.

I. cappadocica Desv. subsp. *subradiata* (Rupr.) P.H.Davis var. *subradiata*

B10 Van, Özalp, A. Mollahasan Village, roadside, steppe, 2100 m, 29.07.1998, F 8605 (det: Ş. Yıldırım), Ir.-Tur. elm.

I. undulata Aucher ex Boiss.

B10 Van, Özalp, Savatlı Village, Kel mountain, steppe, 2318 m, 28.06.1997, F 4323 (det: Ş. Yıldırım), END., Ir.-Tur. elm.

I. tinctoria L. subsp. *tomentella* (Boiss.) P.H.Davis

B10 Van, Özalp, Y. Koçkiran Village Haçtaş, rocky slopes, 2250 m, 04.07.1997, F 4653, Ir.-Tur. elm.

Aethionema carneum (Banks & Sol.) Fedtsch.

B10 Van, Özalp, east of Mollatopuz Village, wheat field, 2267 m, 09.06.1996, F 837, Ir.-Tur. elm.

A. oppositifolium (Pers.) Hedge

B10 Van, Özalp, A. Tulgalı Village, stony slopes, 2165 m, 01.06.1997, F 3123.

A. membranaceum DC.

B10 Van, Özalp, Gündüzlü Village, rocky slopes, 2300 m, 23.06.1996, F 3332 b, Ir.-Tur. elm.

A. grandiflorum Boiss. & Hohen.

B10 Van, Özalp, east of Kırkçalı Village, steppe, 2400 m, 23.06.1996, F 2510, Ir.-Tur. elm.

Neslia paniculata (L.) Desv.

B10 Van, Özalp, Bakışık Village, roadside, steppe, 2200 m, 24.06.1996, F 815, Euro-Sib. elm.

N. apiculata (Fisch. & C.A.Mey.) Avè.Lall.

B10 Van, Özalp, east of Beyazkaya mountain, roadside, steppe, 2600 m, 21.06.1997, F 5330.

Peltariopsis planisiliqua (Boiss.) Busch

B10 Van, Özalp, around Y. Ayazca Village, steppe, 2005 m, 07.07.1997, F 5167, Ir.-Tur. elm.

Alyssum aureum (Fenzl) Boiss.

B10 Van, Özalp, north of Savatlı Village, steppe, 2100 m, 08.07.1997, F 5793, Ir.-Tur. elm. .

A. huetii Boiss.

B10 Van, Özalp, Bazı mountain, arid slopes, 2650 m, 21.06.1997, F 5332, END., Ir.-Tur. elm.

A. blepharocarpum Dudley & Hub.-Mor.

B10 Van, Özalp, south of Yavuzlar Village, steppe, 2231 m, 27.06.1996, F 2530, END., Ir.-Tur. elm.

A. desertorum Stapf. var. *prostratum* Dudley

B10 Van, Özalp, east of Damlacık Village, steppe, 2380 m, 22.05.1996, F 2497.

A. minus (L.) Rothm. var. *micranthum* (C.A.Mey.) Dudley

B10 Van, Özalp, Güzeldere Village, Göltepe, wheat field, 2105 m, 08.06.1997, F 1854.

A. stapfii Vierh.

B10 Van, Özalp, Y. Tulgalı Village, Kırçaštepe, steppe, 2000 m, 01.06.1997, F 3033, Ir.-Tur. elm.

A. ochroleucum Boiss. & Huet

B10 Van, Özalp, east of Y. Dönerdere Village, calcareous stony pile, 2100 m, 10.07.1997, F 4919, END., Ir.-Tur. elm.

A. stribrnyi Vel.

B10 Van, Özalp, A. Koçkiran Village Karatepe, rocky slopes, 2275 m, 05.07.1997, F 4765.

A. argyrophyllum Schott

B10 Van, Özalp, north-east of Y. Tulgalı Village, steppe, 2080 m, 10.07.1997, F 4926, END.

A. lepidotum Boiss.

B10 Van, Özalp, south of Y. Koçkiran Village, calcareous stony pile, 2300 m, 04.07.1997, F 4648, END., E. Medit. elm.

A. niveum Dudley

B10 Van, Özalp, A. Tulgalı Village, limestone steppe, 2053 m, 10.07.1997, F 4916 (det: L. Behçet), END., Ir.-Tur. elm.

A. eriophyllum Boiss. & Hausskn.

B10 Van, Özalp, south of Y. Balçıklı Village, steppe, 2200 m, 04.07.1997, F 4674, END.

A. condensatum Boiss. & Hausskn. subsp. *flexibile* (Nyár) Dudley

B10 Van, Özalp, Y. Koçkiran Village, Y. Didaltepe, stony pile, 2230 m, 28.06.1996, F 2540.

A. filiforme Nyár

B10 Van, Özalp, Y. Dönerdere Village, wastel and, 2053 m, 10.07.1997, F 4921, END., Ir.-Tur. elm.

Clypeola jonthlaspi L.

B10 Van, Özalp, Yavuzlar Village, Bahar, stony areas, 2231 m, 27.06.1996, F 2528.

Erophila verna (L.) Chevall. subsp. *verna*

B10 Van, Özalp, Morçişek Village, slope, 2150 m, 13.04.1997, F 2014.

Arabis caucasica Willd. subsp. *caucasica*

B10 Van, Özalp, east of Y. Koçkiran Village, rocky area, 2315 m, 26.07.1997, F 5360.

A. caucasica Willd. subsp. *brevifolia* (DC.) Cullen

B10 Van, Özalp, north of Damlacık Village, rocky area, 2300 m, 14.06.1996, F 565, E. Med. elm.

A. montbretiana Boiss.

B10 Van, Özalp, A. Tulgalı Village, Aktoprak, stony areas, 2055 m, 10.07.1997, F 4918, Ir.-Tur. elm.

A. verna (L.) DC.

B10 Van, Özalp, A. Tulgalı Village, Çeşmederesi, shady area, 2058 m, 10.07.1997, F 4917, Medit. elm.

Nasturtium officinale R.Br.

B10 Van, Özalp, east of A. Sağmalı Village, next to Karasu Stream, 2100 m, 0.0.199, F 5849.

Barbarea minor K.Koch var. *minor*

B10 Van, Özalp, high plateau of Y. Balçıklı Village, next to stream, 2200 m, 23.04.1998, F 5929, Ir.-Tur. elm.

B. minor K.Koch var. *robusta* Cullen & Coode

B10 Van, Özalp, A. Sağmalı Village, Resultepe, next to marshes, 2400 m, 26.06.1997, F 3512, END.

Cardamine uliginosa M.Bieb.

B10 Van, Özalp, Gündüzlü Village, Çobantaşı, damp meadows, 2351 m, 26.06.1997, F 3349.

Erysimum passgalense Boiss.

B10 Van, Özalp, Y. Yorganlı Village, Gürtaštepe, steppe, 2412 m, 26.06.1997, F 3678.

- E. leucanthemum* (Steph.) Fedtsch.
B10 Van, Özalp, A. Koçkiran Village, Karatepe, slope, 2275 m, 05.07.1997, F 4764.
- E. deflexum* Cullen
B10 Van, Özalp, east of Damlacık Village, Ziyarettepe, 2380 m, 22.05.1996, F 2498.
- E. crassipes* Fisch. & C.A.Mey.
B10 Van, Özalp, Y. Balçıklı Village, Beyazkaya mountain, Dömbültepe, rocky slopes, 2425 m, 23.07.1997, F 5407.
- E. repandum* L.
B10 Van, Özalp, A. Koçkiran Village, Hacıbey mountain, Karatepe, arid area, 2275 m, 05.07.1997, F 4759.
- Sisymbrium elatum* K.Koch.
B10 Van, Özalp, Güzeldere Village, Bevrán mountain, Karataş, stony slopes, 2210 m, 24.06.1996, F 3294.
- S. septulatum* DC.
B10 Van, Özalp, Damlacık Village, Ziyarettepe, fallow field, 2410 m, 22.05.1996, F 2500.
- S. orientale* L.
B10 Van, Özalp, Damlacık Village, Hacıbey Mountain, roadside, 2300 m, 22.05.1996, F 2499.
- Arabidopsis pumila* (Steph.) Busch
B10 Van, Özalp, east of Y. Tulgalı Village, salty steppe, 2050 m, 10.07.1997, F 4898.
- Camelina laxa* C.A.Mey.
B10 Van, Özalp, valley of Mehmetalan Village, Şehittepe, stony slopes, 2060 m, 17.06.1996, F 1121.
- C. rumelica* Vel.
B10 Van, Özalp, entry of Y. Dönerdere Village, cultivated area, 2050 m, 10.07.1997, F 4897.
- CISTACEAE**
- Helianthemum salicifolium* (L.) Miller
B10 Van, Özalp, Y. Koçkiran Village, Keltepe, 2315 m, 16.06.1996, F 2458.
- CARYOPHYLLACEAE**
- Arenaria kotschyana* Fenzl. subsp. *kotschyana*
B10 Van, Özalp, Dorutay Village, Beyazkaya mountain, steppe, 2100 m, 09.07.1997, F 1896, END., Ir.-Tur. elm.
- A. macrosepala* Boiss.
B10 Van, Özalp, Damlacık Village, west of Hacıbey mountain, sandy area, 2260 m, 05.08.1996, F 543, END.
- Minuartia juniperiana* (L.) Maire & Petitm.
B10 Van, Özalp, north of Kaşıkara Village, Nacarabad mountain, rocky area, 1915 m, 12.07.1997, F 1616.
- M. hamata* (Hausskn.) Mattf.
B10 Van, Özalp, south of Aşkın Village, steppe, 2200 m, 28.06.1998, F 7410.
- M. anatolica* (Boiss.) Woron var. *arachnoidea* McNeill.
B10 Van, Özalp, Y. Tulgalı Village, Keleştepe, steppe, 2280 m, 10.07.1997, F 1419, END., Ir.-Tur. elm.
- M. hybrida* (Vill.) Schischk subsp. *hybrida*
B10 Van, Özalp, east of A. Sağmalı Village, cultivated area, 2070 m, 22.05.1996, F 2479.
- Stellaria media* (L.) Vill. subsp. *media*
B10 Van, Özalp, south of Dorutay Village, Karasu, wet area, 2040 m, 18.07.1996, F 2681.
- S. persica* Boiss.
B10 Van, Özalp, between Aşkın and Kaşıkara Villages, damp meadows, 2300 m, 18.06.1998, F 6700.
- Cerastium kotschyi* Boiss.
B10 Van, Özalp, east of Dorutay Village, steppe, 2558 m, 25.06.1996, F 2654.
- C. armeniacum* Gren.
B10 Van, Özalp, north of Y. Tulgalı Village, slope, 2300 m, 17.08.1996, F 5325, END.
- C. chlorifolium* Fisch. & C.A.Mey.
B10 Van, Özalp, Damlacık Village, Boncuk stream, wheat field, 2150 m, 09.07.1997, F 5730, Ir.-Tur. elm.
- C. longifolium* Willd.
B10 Van, Özalp, north of Günyüzlü Village, stony pile, 2180 m, 19.05.1998, F 6027, Ir.-Tur. elm.
- Holosteum umbellatum* L. var. *glutinosum* (M.Bieb.) Gay
B10 Van, Özalp, A. Koçkiran Village, Hacıbey mountain, Karatepe, steppe, 2278 m, 05.07.1997, F 4771.
- Dianthus masmenaeus* Boiss. var. *masmenaeus*
B10 Van, Özalp, A. Balçıklı Village, Aliibrahimtepe, stony slopes, 2266 m, 24.06.1997, F 1869.
- Gypsophila ruscifolia* Boiss.
B10 Van, Özalp, east of Damlacık Village, rocky slopes, 2435 m, 09.07.1997, F 5654, Ir.-Tur. elm.
- G. bitlisensis* Bark.
B10 Van, Özalp, east of Sarıköy, steppe, 2300 m, 28.06.1998, F 7355, END., Ir.-Tur. elm.
- Acanthophyllum acerosum* Sosn.
B10 Van, Özalp, Y. Koçkiran Village, Keltepe, sloping area, 2310 m, 16.06.1996, F 2455, Ir.-Tur. elm.
- A. microcephalum* Boiss.
B10 Van, Özalp, A. Koçkiran Village, sloping area, 2350 m, 23.06.1996, F 1835, Ir.-Tur. elm.
- Silene italica* (L.) Pers.
B10 Van, Özalp, east of Aşkın Village, open area, 2200 m, 18.06.1998, F 6722.
- S. peduncularis* Boiss.
B10 Van, Özalp, Şehittepe Village, Sarıtepe, sandy area, 2434 m, 29.06.1996, F 2715.
- S. armena* Boiss. var. *armena*
B10 Van, Özalp, Eğribelen Village, Göçertepe, steppe, 2146 m, 11.07.1996, F 2626.
- S. sclerophylla* Chowdh.
B10 Van, Özalp, Y. Balçıklı Village, Beştepe, stony slopes, 2311 m, 18.10.1997, F 5551, END. Ir.-Tur.
- S. cartilaginea* Hub.- Mor.
B10 Van, Özalp, south of Y. Tulgalı Village, steppe, 2200 m, 16.07.1997, F 1425, END. Ir.-Tur. elm.
- S. cappadocica* Boiss. & Heldr.
B10 Van, Özalp, west of Bakışık Village, steppe, 2190 m, 01.06.1997, F 3156, Ir.-Tur. elm.

S. vulgaris (Moench.) Garcke var. *vulgaris*

B10 Van, Özalp, Bakışık Village, Karataş, sloping area, 2210 m, 24.06.1996, F 3303.

S. rigidula Sibth. & Sm.

B10 Van, Özalp, Y. Balçıklı Village, Dümbültepe, stony pile, 2426 m, 23.07.1997, F 5416, E. Med. elm.

S. dichotoma Ehrh. subsp. *sibthorpiana* (Rchb.) Rech.

B10 Van, Özalp, Dorutay Village, Batanyer, steppe, 2100 m, 09.06.1997, F 1915.

Agrostemma githago L.

B10 Van, Özalp, A. Koçkiran Village, Boncuklu Hill, cultivated field, 2363 m, 05.07.1997, F 4747, Med. elm.

ILLECEBRACEAE

Herniaria glabra L.

B10 Van, Özalp, east of Y. Balçıklı Village, Beştepe, stony areas, 2311 m, 18.10.1997, F 5553.

POLYGONACEAE

Atraphaxis billardieri Jaub. & Spach var. *tournefortii* (Jaub. & Spach) Cullen

B10 Van, Özalp, east of Y. Tulgalı Village, rocky slopes, 2300 m, 17.08.1996, F 5305, Ir.-Tur. elm.

Polygonum bistorta L. subsp. *carneum* (K.Koch) Coode & Cullen

B10 Van, Özalp, east of Sarıköy, damp area, 2100 m, 28.06.1998, F 7676, Euxine (mt.) elm.

P. amphibium L.

B10 Van, Özalp, south of Dorutay Village, wet area, 2080 m, 19.06.1998, F 8694.

P. arenarium Waldst. & Kit.

B10 Van, Özalp, north of Yavuzlar Village, Ziyaret, 2400 m, 09.08.1998, F 8871.

Rumex scutatus L.

B10 Van, Özalp, north of Yavuzlar Village, wheat field, 2300 m, 19.10.1997, F 1607.

R. tuberosus L. subsp. *horizontalis* (K.Koch) Rech.

B10 Van, Özalp, Y. Balçıklı Village, Karsıztepe, slope, 2400 m, 04.07.1997, F 4717.

R. crispus L.

B10 Van, Özalp, north of A. Dönerdere Village, marshy ground, 2100 m, 24.06.1997, F 3268.

R. chalepensis Miller.

B10 Van, Özalp, A. Balçıklı Village, in a garden, 2230 m, 02.08.1997, F 5626.

CHENOPODIACEAE

Chenopodium album L. subsp. *iranicum* Aellen

B10 Van, Özalp, north of Y. Koçkiran Village, cultivated area, 2300 m, 04.07.1997, F 4641.

Noaea mucronata (Forssl.) Aschers. & Schweinf. subsp. *tournefortii* (Spach) Aellen

B10 Van, Özalp, east of A. Koçkiran Village, steppe, 2300 m, 04.07.1997, F 4642, Ir.-Tur. elm.

AMARANTHACEAE

Amaranthus chlorostachys Willd.

B10 Van, Özalp, Y. Tulgalı Village, Keleştepe, steppe, 2150 m, 05.10.1997, F 1533.

HYPERICACEAE (GUTTIFERAE)

Hypericum lysimachioides Boiss. & Noë var. *lysimachioides*

B10 Van, Özalp, Y. Tulgalı Village, steppe, 2300 m, 10.06.1997, F 5892, Ir.-Tur. elm.

H. thymbrifolium Boiss. & Noë

B10 Van, Özalp, south of A. Koçkiran Village, calcareous steppe, 2300 m, 04.07.1997, F4610, END., Ir.-Tur. elm.

H. scabrum L.

B10 Van, Özalp, Yavuzlar Village, Uzuntepe, steppe, 2510 m, 10.10.1997, F 5540, Ir.-Tur. elm.

H. tetrapterum Fries.

B10 Van, Özalp, Y. Tulgalı Village, banks of Düz Stream, 2250 m, 17.07.1997, F 5894.

H. perforatum L.

B10 Van, Özalp, Y. Tulgalı Village, Düz Stream, steppe, 2200 m, 17.07.1997, F 5893.

MALVACEAE

Malva sylvestris L.

B10 Van, Özalp, north of Yavuzlar Village, wheat field, 2400 m, 09.08.1998, F 8866.

Lavatera punctata All.

B10 Van, Özalp, banks of wheat field, 2200 m, 09.08.1997, F 8870.

Alceae kurdica (Schlecht) Alef

B10 Van, Özalp, north of A. Yorganlı Village, Tipitepe, slope, 2130 m, 13.10.1997, F 5513, Ir.-Tur. elm.

A. calvertii (Boiss.) Boiss.

B10 Van, Özalp, between Aşkın and Kaşıkara Villages, slope, 2200 m, 18.06.1998, F 6586, END. Ir.-Tur. elm.

A. fasciculiflora Zohary

B10 Van, Özalp, north of Yavuzlar Village, steppe, 2280 m, 09.08.1998, F 8880, END., Ir.-Tur. elm.

LINACEAE

Linum austriacum L. subsp. *austriacum*

B10 Van, Özalp, A. Tulgalı Village, Geletepe, roadside, 2180 m, 05.10.1997, F 1548.

L. obtusatum (Boiss.) Stapf.

B10 Van, Özalp, Y. Balçıklı Village, Kıraçtepe, steppe, 2340 m, 23.05.1998, F 5946, END., Ir.-Tur. elm.

L. mucronatum Bertol subsp. *armenum* (Bordz.) P.H.Davis

B10 Van, Özalp, between Aşkın and Kaşıkara Villages, steppe, 2200 m, 18.06.1998, F 6611, Ir.-Tur. elm.

L. tenuifolium L.

B10 Van, Özalp, Y. Tulgalı Village, Beyazdere, steppe, 2160 m, 01.06.1997, F 3114.

GERANIACEAE

Biebersteinia multifida DC.

B10 Van, Özalp, Y. Balçıklı Village, Kıraçtepe, steppe, 2300 m, 23.05.1998, F 5968, Ir.-Tur. elm.

Erodium ciconum (L.) L'Hérit

B10 Van, Özalp, east of Y. Balçıklı Village, steppe, 2200 m, 23.04.1998, F 5941b.

E. absinthoides Willd. subsp. *absinthoides*

B10 Van, Özalp, A. Yorganlı Village, Dedeçayı, steppe, 2300 m, 10.06.1998, F 6371, END., Ir.-Tur. elm.

E. absinthoides Willd. subsp. *armenum* (Trautv.) P.H.Davis

B10 Van, Özalp, A. Tulgalı Village, Çeşme stream, stony area, 2053 m, 10.07.1997, F 4910, Ir.-Tur. elm.

RUTACEAE

Haplophyllum ptilostyllum Spach

B10 Van, Özalp, west of Y. Koçkiran Village, fallow land, 2250 m, 04.07.1997, F 4659, Ir.-Tur. elm.

RHAMNACEAE

Rhamnus kurdicus Boiss. & Hoh.

B10 Van, Özalp, Y. Koçkiran Village, A. Didal Hill, rocky slopes, 2150 m, 04.07.1997, F 4620, Ir.-Tur. elm.

FABACEAE (LEGUMINOSAE)

Astragalus camptoceras Bunge

B10 Van, Özalp, north of Y. Tulgalı Village, steppe, 2283 m, 17.06.1996, F 1101, Ir.-Tur. elm.

A. oxyglottis Stev.

B10 Van, Özalp, east of A. Koçkiran Village, steppe, 2200 m, 26.07.1997, F 5385.

A. suberosus Banks. & Sol. subsp. *anceleus* (Boiss.) Matthews

B10 Van, Özalp, A. Koçkiran Village, steppe, 2200 m, 26.07.1997, F 5396, END., Ir.-Tur. elm.

A. densifolius Lam.

B10 Van, Özalp, north of Yavuzlar Village, steppe, 2300 m, 09.08.1998, F 8882, END., Ir.-Tur. elm.

A. tauricolus Boiss.

B10 Van, Özalp, A. Tulgalı Village, Çeşme Stream, calcareous stony slopes, 2053 m, 10.07.1997, F 4912, END., Ir.-Tur. elm.

A. torrentum Bunge

B10 Van, Özalp, Y. Koçkiran Village, Keltepe, steppe, 2314 m, 16.06.1996, F 2462, Ir.-Tur. elm.

A. declinatus Willd.

B10 Van, Özalp, north of Bakışık Village, protected meadows, 2150 m, 01.06.1997, F 3169, Ir.-Tur. elm.

A. gummifer Lab.

B10 Van, Özalp, Y. Koçkiran Village, Keltepe, steppe, 2315 m, 16.06.1996, F 2466, Ir.-Tur. elm.

A. trifoliastrium Hub.-Mor. & Matthews

B10 Van, Özalp, Y. Yorganlı Village, Yusufagepe, steppe, 2415 m, 03.07.1997, F 4575, END., Ir.-Tur. elm.

A. cadmicus Boiss.

B10 Van, Özalp, A. Tulgalı Village, Keleştepe, steppe, 2150 m, 07.07.1997, F 4871, END., Ir.-Tur. elm.

A. campylosema Boiss. subsp. *campylosema*

B10 Van, Özalp, A. Tulgalı Village, Keleştepe, protected meadows, 2150 m, 07.07.1997, F 4868 (det : L. Behçet), END. Ir.-Tur. elm.

Oxytropis lupinoides Grossh.

B10 Van, Özalp, A. Tulgalı Village, Varyeztepe, steppe, 2180 m, 07.07.1997, F 4834, Ir.-Tur. elm.

Vicia hyrcanica Fisch & C.A.Mey.

B10 Van, Özalp, A. Koçkiran Village, Boncuklutepe, fallow land, 2363 m, 05.07.1997, F 4756, Ir.-Tur. elm.

V. anatolica Turriell

B10 Van, Özalp, A. Koçkiran Village, Mezarlık, steppe, 2200 m, 26.07.1997, F 5399, Ir.-Tur. elm.

V. sativa L. subsp. *incisa* (Bieb.) Arc. var. *cordata* (Wulfeny Hoppe) Arc.

B10 Van, Özalp, Damlacık Village, Halifedere, fallow land, 2200 m, 05.07.1997, F 5773.

Lens orientalis (Boiss.) Hand.-Mazz.

B10 Van, Özalp, south of Aşkın Village, steppe, 2193 m, 28.06.1998, F 7462b.

Lathyrus cicera L.

B10 Van, Özalp, A. Balçıklı Village, Aliibrahimtepe, fallow land, 2266 m, 24.06.1997, F 1886.

Trifolium spadiceum L.

B10 Van, Özalp, A. Yorganlı Village, Değirmentaş mountain pass, wet area, 2250 m, 26.06.1997, F 3587, Euro-Sib. elm.

Trigonella spruneriana Boiss. var. *spruneriana*

B10 Van, Özalp, A. Koçkiran Village, Mezarlık, steppe, 2200 m, 26.07.1997, F 5390, Ir.-Tur. elm.

T. monantha C.A.Mey. subsp. *monantha*

B10 Van, Özalp, A. Tulgalı Village, Çeşme Stream, steppe, 2050 m, 10.07.1997, F 4903, Ir.-Tur. elm.

Medicago radiata L.

B10 Van, Özalp, A. Koçkiran Village, Gölegentepe, steppe, 2248 m, 04.07.1997, F 4595, Ir.-Tur. elm.

M. lupulina L.

B10 Van, Özalp, Y. Tulgalı Village, meadows, 2282 m, 17.06.1997, F 1088.

M. sativa L. subsp. *sativa*

B10 Van, Özalp, between Eğribelen and A. Tulgalı Villages, Keleştepe, steppe, 2150 m, 07.07.1997, F 4847.

M. minima (L.) Bart. var. *minima*

B10 Van, Özalp, Yavuzlar Village, Sibraltepe, steppe, 2498 m, 12.08.1997, F 5591.

M. rigidula (L.) All. var. *rigidula*

B10 Van, Özalp, north of Dorutay Village, steppe, 2058 m, 19.06.1998, F 8685.

Lotus corniculatus L. var. *alpinus* Ser.

B10 Van, Özalp, Yavuzlar Village, Uzunutepe, rocky slopes, 2510 m, 09.10.1997, F 5530.

L. gebelia Vent. var. *gebelia*

B10 Van, Özalp, Damlacık Village, Karavelitepe, steppe, 2425 m, 09.07.1997, F 5641.

Hedysarum elegans Boiss. & Huet.

B10 Van, Özalp, Gözdeğmez Village, Taşlıktepe, stony slopes, 2520 m, 24.06.1997, F 3971, Ir.-Tur. elm.

Onobrychis stenostachya Freyn. subsp. *sosnowskyi* (Grossh.) Hedge

B10 Van, Özalp, A. Koçkiran Village, Mezarlıktepe, steppe, 2250 m, 26.07.1997, F 5386, END., Ir.-Tur. elm.

O. vicifolia Scop.

B10 Van, Özalp, Y. Yorganlı Village, Hamitpınar, edge of cultivated field, 2380 m, 26.06.1997, F 3703.

O. oxydonta Boiss.

B10 Van, Özalp, south of Güzeldere Village, roadside, 2206 m, 24.06.1996, F 3316.

O. radiata (Desf.) M.Bieb.

B10 Van, Özalp, north of Yünkuşak Village, meadows, 2285 m, 15.06.1998, F 6535.

ROSACEAE

Cerasus brachypetala Boiss. var. **bornmuelleri** (Schneider) Browicz

B10 Van, Özalp, Yavuzlar Village, Sibraltetepe, sloping area, 2493 m, 12.09.1997, F 5576 b, Ir.-Tur. elm.

C. incana (Pallas) Spach var. **incana**

B10 Van, Özalp, Dorutay Village, Yumruketepe, rocky slopes, 2050 m, 18.07.1996, F 2675, Ir.-Tur. elm.

C. microcarpa (C.A.Mey.) Boiss. subsp. **tortuosa** (Boiss. & Hausskn.) Browicz

B10 Van, Özalp, Y. Koçkiran Village, Beyazdere, steppe, 2300 m, 04.07.1997, F 4631, Ir.-Tur. elm.

Potentilla recta L.

B10 Van, Özalp, Gözdeğmez Village, Hasandağı, rocky slopes, 2600 m, 24.06.1997, F 3955.

P. aucheriana Th.

B10 Van, Özalp, Yumruklu Village, Gölegentepe, meadow, 2250 m, 04.07.1997, F 4608, Ir.-Tur. elm.

Geum rivale L.

B10 Van, Özalp, A. Yorganlı Village, Dedeçayı, meadow, 2357 m, 10.06.1998, F 6366.

Agrimonia eupatoria L.

B10 Van, Özalp, A. Tulgalı Village, Aktoprak, damp meadows, 2300 m, 26.07.1997, F 1387 (det: L. Behçet).

Sanguisorba minor Scop. subsp. **lasiocarpa** (Boiss. & Hausskn.) Nordb.

B10 Van, Özalp, between Aşkın and Kaşıkara Villages, meadow, 2100 m, 18.06.1998, F 6713.

Alchemilla crinita Buser

B10 Van, Özalp, north of Sarıköy, steppe, 2200 m, 05.07.1998, F 7741.

A. persica Rothm.

B10 Van, Özalp, Yavuzlar Village, pass of Nabbasan, sloping meadows, 2300 m, 26.06.1997, F 3717.

Aphanes microcarpa (Boiss. & Reuter) Rothm.

B10 Van, Özalp, Yarımkaaya Village, cultivated area, 2170 m, 29.06.1997, F 4479.

Crataegus curvisepala Lindman

B10 Van, Özalp, Damlacık Village, Karavelitepe, next to stream, 2425 m, 09.07.1997, F 5677.

C. monogyna Jacq. subsp. **monogyna**

B10 Van, Özalp, A. Tulgalı Village, Düzçayderesi, next to stream, 2130 m, 14.08.1997, F 2417.

ONAGRACEAE

Epilobium hirsutum L.

B10 Van, Özalp, Damlacık Village, Karaveli, next to stream, 2425 m, 09.07.1997, F 5668.

E. montanum L.

B10 Van, Özalp, east of Aşkın Village, next to stream, 2150 m, 05.07.1998, F 8100, Euro-Sib. elm.

HALORAGIDACEAE

Myriophyllum verticillatum L.

B10 Van, Özalp, south of Dorutay Village, in Karasu Stream, 2100 m, 29.07.1998, F 8659.

SAXIFRAGACEAE

Saxifraga cymbalaria L. var. **cymbalaria**

B10 Van, Özalp, Y. Tulgalı Village, Halilderesi, stony areas, 2240 m, 10.07.1997, F 1405a.

APIACEAE (UMBELLIFERAE)

Grammosciadium daucoides DC.

B10 Van, Özalp, north of Sarıköy, steppe, 2100 m, 28.06.1998, F 7677, Ir.-Tur. elm.

G. macrodon Boiss.

B10 Van, Özalp, Y. Yorganlı Village, Gürtaştepe, rocky slopes, 2395 m, 26.06.1997, F 3673, Ir.-Tur. elm.

Anthriscus cerefolium (L.) Hoffm.

B10 Van, Özalp, A. Koçkiran Village, Beyzade Stream, calcareous area, 2287 m, 04.07.1997, F 4633.

Scandix stellata Banks & Sol.

B10 Van, Özalp, north of Sarıköy, steppe, 2100 m, 15.06.1998, F 6443.

S. pecten-veneris L.

B10 Van, Özalp, Dorutay Village, Batanyer, wheat field, 2100 m, 09.06.1997, F 1914.

Pimpinella peregrina L.

B10 Van, Özalp, between Y. Koçkiran and Y. Balçıklı Villages, rocky area, 2220 m, 04.07.1997, F 4710.

P. anthriscoides Boiss. var. **anthriscoides**

B10 Van, Özalp, north of Sarıköy, wet meadow, 2100 m, 05.07.1998, F 7839, Ir.-Tur. elm.

Seseli libanotis (L.) W.Koch

B10 Van, Özalp, west of Mollatopuz Village, wheat field, 2150 m, 09.06.1996, F 926b, Euro-Sib. elm.

Torilis arvensis (Huds.) Link. subsp. **neglecta** (Sprengel) Thellung

B10 Van, Özalp, A. Koçkiran Village, Boncuklutepe, wheat field, 2365 m, 05.07.1997, F 4749.

T. leptocarpa (Hochst.) Townsend

B10 Van, Özalp, Y. Balçıklı Village, Dömbüllü Hill, protected meadows, 2425 m, 23.07.1997, F 5410, Ir.-Tur. elm.

Astrodaucus orientalis (L.) Drude

B10 Van, Özalp, west Sarıköy, steppe, 2250 m, 15.06.1998, F 6411, Ir.-Tur. elm.

Lisaea papyracea Boiss.

B10 Van, Özalp, west of Damlacık Village, roadside, 2150 m, 09.07.1997, F 5767, Ir.-Tur. elm.

Daucus carota L.

B10 Van, Özalp, Damlacık Village, Karavelitepe, steppe, 2440 m, 09.07.1997, F 5645.

VALERIANACEAE

Valeriana alpestris Stev.

B10 Van, Özalp, A. Balçıklı Village, Rahattepe, meadows, 2237 m, 02.08.1997, F 5614, Euxine (mt) elm.

Centranthus longiflorus Stev. subsp. **longiflorus**

B10 Van, Özalp, Yavuzlar Village, Sibraltepe, 2490 m, 12.09.1997, F 5573, Ir.-Tur. elm.

DIPSACACEAE

Cephalaria setosa Boiss. & Hohen.

B10 Van, Özalp, Damlacık Village, Halifetepe, sloping area, 2200 m, 05.07.1997, F 5774, Ir.-Tur. elm.

C. syriaca (L.) Schrader

B10 Van, Özalp, east of A. Dönerdere Village, wheat field, 2150 m, 24.06.1996, F 3260b.

C. sparsipilosa Matthews

B10 Van, Özalp, north of Gündüzlü Village, sloping area, 2243 m, 05.07.1998, F 7735, END. Ir.-Tur. elm.

C. microcephala Boiss.

B10 Van, Özalp, Eğribelen Village, Göçertepe, steppe, 2199 m, 11.07.1996, F 2622, Ir.-Tur. elm.

Scabiosa bicolor Kotschy

B10 Van, Özalp, Damlacık Village, Karavelitepe, steppe, 2416 m, 07.07.1997, F 5676, Ir.-Tur. elm.

ASTERACEAE (COMPOSITAE)

Inula acaulis Schott & Kotschy ex Boiss. var. *caulescens* Náb.

B10 Van, Özalp, north of Y. Koçkiran Village, steppe, 2254 m, 04.07.1997, F 4698.

I. oculus - christi L.

B10 Van, Özalp, north-east of Y. Tulgalı Village, steppe, 2187 m, 05.07.1996, F 2608, Euro-Sib. elm.

I. montbretiana DC.

B10 Van, Özalp, A. Tulgalı Village, Çeşmederesi, 2065 m, 10.07.1997, F 4932, Ir.-Tur. elm.

Helichrysum graveolens (M.Bieb.) Sweet

B10 Van, Özalp, Yumruklu Village, Gölegen, damp area, 2255 m, 04.07.1997, F 4607.

H. armenium DC. subsp. *armenium*

B10 Van, Özalp, east of Y. Tulgalı Village, 2300 m, 09.08.1998, F 5308, Ir.-Tur. elm.

Bellis perennis L.

B10 Van, Özalp, east of Beyazkaya mountain, damp slopes, 2650 m, 21.06.1997, F 5348, Euro-Sib elm.

Senecio taraxacifolius (M.Bieb.) DC. var. *discoideus* Matthews

B10 Van, Özalp, Bakışık Village, Üçkardeş, stony slopes, 2520 m, 05.10.1997, F 1436, END.

S. racemosus (M.Bieb) DC.

B10 Van, Özalp, east of Yünkuşak Village, wet meadow, 2300 m, 24.06.1997, F 3867, Ir.-Tur. elm.

Achillea vermicularis Trin.

B10 Van, Özalp, Damlacık Village, Çadırtepe, meadow, 2320 m, 09.07.1997, F 5686, Ir.-Tur. elm.

A. millefolium L. subsp. *pannonica* (Scheele) Hayek

B10 Van, Özalp, Gözdeğmez Village, Hasandağı, steppe, 2600 m, 24.06.1997, F 3949, Euro-Sib. elm.

A. setacea Waldst. & Kit.

B10 Van, Özalp, Dönerdere Village, Beyaztaštepe, steppe, 2100 m, 03.06.1996, F 2762, Euro-Sib. elm.

A. filipendulina Lam.

B10 Van, Özalp, Damlacık Village, Çadırtepe, stony slopes, 2340 m, 09.07.1997, F 5682, Ir.-Tur. elm.

A. coarctata Poir.

B10 Van, Özalp, north of Baltepe Village, sandy area, 2100 m, 09.06.1996, F 772.

Tanacetum punctatum (Desr.) Grierson

B10 Van, Özalp, Gözdeğmez Village, Hasandağı, wet meadow, 2600 m, 24.06.1997, F 3945, Euxine elm.

T. zahlbruckneri (Náb.) Grierson

B10 Van, Özalp, east of Y. Dönerdere Village, stony slopes, 2280 m, 10.07.1997, F 4941, END. Ir.-Tur. elm.

Tripleurospermum oreades (Boiss.) Rech. fil. var. *tchihatchewii* (Boiss.) E. Hossain

B10 Van, Özalp, east of Bakışık Village, steppe, 2163 m, 01.06.1997, F 3164.

Tr. callosum (Boiss. & Heldr.) E. Hossain.

B10 Van, Özalp, Eğribelen Village, Keleştepe, steppe, 2164 m, 07.07.1997, F 4845, END., Ir.-Tur. elm.

Artemisia vulgaris L.

B10 Van, Özalp, A. Yorganlı Village, Çobantepe, roadside, 2580 m, 19.10.1997, F 5444.

A. santonicum L.

B10 Van, Özalp, A. Yorganlı Village, Çobantaşı, steppe, 2480 m, 19.10.1997, F 5443, Euro-Sib. elm.

Cousinia nabelekii Bornm.

B10 Van, Özalp, north of Gözdeğmez Village, steppe, 2205 m, 08.07.1997, F 5255, END. Ir.-Tur. elm.

C. eriocephala Boiss. & Hausskn.

B10 Van, Özalp, Mehmetalın Village, Salavattepe, slopy, 2280 m, 10.07.1997, F 4938, END., Ir.-Tur. elm.

Cirsium pseudobracteosum P.H.Davis. & Parris

B10 Van, Özalp, south of Y. Balçıklı Village, next to stream, 2266 m, 18.10.1997, F 5548, Ir.-Tur. elm.

Ci. simplex C.A.Mey. subsp. *armenium* (DC.) Petrak

B10 Van, Özalp, southeast Dorutay Village, next to stream, 2195 m, 19.06.1998, F 8692, Euxine (mt.) elm.

Ci. rhizocephalum C.A.Mey. subsp. *rhizocephalum*

B10 Van, Özalp, A. Balçıklı Village, Rahattepe, meadows, 2237 m, 02.08.1997, F 5610, Ir.-Tur. elm.

Ci. rhizocephalum C.A.Mey. subsp. *sinuatum* (Boiss.) P.H.Davis & Paris

B10 Van, Özalp, west of Y. Dönerdere Village, meadows, 2048 m, 24.06.1996, F 3290.

Centaurea aggregata Fisch. & C.A.Mey. ex DC. subsp. *aggregata*

B10 Van, Özalp, Damlacık Village, stony slopes, 2341 m, 09.07.1997, F 5684, Ka.

Ce. demirizii Wagenitz

B10 Van, Özalp, Aksorguç Village, Batanyer, steppe, 2112 m, 09.06.1997, F 1920, END., Ir.-Tur. elm.

Ce. albonitens Turrill

B10 Van, Özalp, west of Y. Dönerdere Village, steppe, 2282 m, 10.07.1997, F 4964.

- Crupina vulgaris** Cass.
B10 Van, Özalp, Y. Koçkiran Village, Haçtaş, very steep slopes, steppe, 2250 m, 04.07.1997, F 4662.
- Cnicus benedictus** L. var. *benedictus*
B10 Van, Özalp, A. Koçkiran Village, Mezarlık, steppe, 2200 m, 26.07.1997, F 5389.
- Siebera nana** (DC.) Bornm.
B10 Van, Özalp, Günyüzlü Village, Kelharabe, stony areas, 2290 m, 02.07.1997, F 4516, Ir.-Tur. elm.
- Echinops orientalis** Trautv.
B10 Van, Özalp, north-east Yavuzlar Village, steppe, 2600 m, 09.08.1998, F 8863a, Ir.-Tur. elm.
- Scorzonera tomentosa** L.
B10 Van, Özalp, A. Tulgalı Village, Aktoprak, 2331 m, 26.07.1997, F 1401, END. Ir.-Tur. elm.
- Tragopogon longirostris** Bisch. ex Schultz Bip. var. *longirostris*
B10 Van, Özalp, Dorutay Village, steppe, 2260 m, 09.06.1996, F 986.
- T. pterocarpus** DC.
B10 Van, Özalp, Y. Tulgalı Village, stony areas, 2270 m, 21.08.1997, F 5317, Ir.-Tur. elm.
- T. dubius** Scop.
B10 Van, Özalp, Gözdeğmez Village, Hasandağı, wheat field, 2658 m, 24.06.1997, F 3961.
- T. aureus** Boiss.
B10 Van, Özalp, Mehmetalan Village, Söylemez tepe., steppe, 2240 m, 08.06.1997, F 1844, END.
- Steptorhamphus tuberosus** (Jacq.) Gossh.
B10 Van, Özalp, between Y. Koçkiran and Y. Balçıklı Villages, sloping area, 2249 m, 04.07.1997, F 4665.
- Taraxacum syriacum** Boiss.
B10 Van, Özalp, north of Yavuzlar Village, roadside, 2589 m, 09.08.1998, F 8841, Ir.-Tur. elm.
- T. montanum** (C.A.Mey.) DC.
B10 Van, Özalp, east of A. Yorganlı Village, damp places, 2060 m, 15.10.1997, F 5518.
- T. crepidiforme** DC. subsp. *kurdicum* (Hand-Mazz. ex Náb.) van Soest
B10 Van, Özalp, east of Y. Tulgalı Village, by melting snow slopes, 2198 m, 23.05.1998, F 6166, Ir.-Tur. elm.
- T. scaturiginosum** G.Hagl.
B10 Van, Özalp, A. Yorganlı Village, Tipitepe, damp places, 2136 m, 13.10.1997, F 5520.
- T. butleri** van Soest
B10 Van, Özalp, Güzeldere Village, Göltepe, roadside, 2105 m, 08.06.1997, F 1860.
- Uechitritzia armena** Freyn. & Sint.
B10 Van, Özalp, Y. Tulgalı Village, steppe, 2305 m, 07.07.1996, F 1192 (det. N. Demirkuş), END., Ir. Tur. elm.
- CAMPANULACEAE**
- Campanula sclerotricha** Boiss.
B10 Van, Özalp, east of Y. Tulgalı Village, next to stream, 2284 m, 17.08.1996, F 5300, Ir.-Tur. elm.
- Asyneuma filipes** (Náb.) Damboldt
B10 Van, Özalp, south of Dorutay Village, protected meadows, 2558 m, 25.06.1996, F 2660, Ir.-Tur. elm.
- A. pulchellum** (Fisch. & C.A.Mey.) Bornm.
B10 Van, Özalp, north of Yünkuşak Village, stony slopes, 2250 m, 24.06.1997, F 3879, Ir.-Tur. elm.
- A. virgatum** (Labill.) Bornm. subsp. *virgatum*
B10 Van, Özalp, Gözdeğmez Village, Taşlıtepe, stony slopes, 2520 m, 24.06.1997, F 3966.
- PRIMULACEAE**
- Anagalis arvensis** L. var. *caerulea* (L.) Gouan
B10 Van, Özalp, Y. Balçıklı Village, Dübültepe, cultivated field, 2420 m, 23.07.1997, F 5409.
- BORAGINACEAE**
- Paracaryum cristatum** (Schreber) Boiss. subsp. *carduchorum* R.R.Mill
B10 Van, Özalp, high plateau of A. Tulgalı Village, roadside, 2250 m, 17.07.1997, F 5874, Ir.-Tur. elm.
- Rindera albida** (Wettst.) Kusn.
B10 Van, Özalp, Gözdeğmez Village, Hasan mountain, steppe, 2600 m, 24.06.1997, F 3944, Ir.-Tur. elm.
- Cynoglossum officinale** L.
B10 Van, Özalp, east of Y. Koçkiran Village, rocky slopes, 2230 m, 04.07.1997, F 4712, Euro- Sib. elm.
- C. montanum** L.
B10 Van, Özalp, Y. Dönerdere Village, Çeşmederesi, steppe, 2058 m, 10.07.1997, F 4909, Euro-Sib. elm.
- Neatostema apulum** (L.) Johnston
B10 Van, Özalp, Y. Tulgalı Village, steppe, 2250 m, 10.06.1997, F 5867, Medit. elm.
- Echium italicum** L.
B10 Van, Özalp, Yünkuşak Village, Radar vicinity, next to stream, 2320 m, 24.06.1997, F 3847, Medit elm.
- Moltkia coerulea** (Willd.) Lehm.
B10 Van, Özalp, Y. Tulgalı Village, Beyazdere, steppe, 2160 m, 01.06.1997, F 3099, Ir.-Tur. elm.
- Onosma subsericeum** Freyn
B10 Van, Özalp, A. Tulgalı Village, Aktoprak, steppe, 2310 m, 26.07.1997, F 1398, Ir.-Tur. elm.
- O. lanceolatum** Boiss. & Hausskn.
B10 Van, Özalp, Y. Tulgalı Village, steppe, 2250 m, 17.07.1997, F 5873, Ir.-Tur. elm.
- O. procerum** Boiss.
B10 Van, Özalp, Y. Yorganlı Village, Tilkitepe, steppe, 2289 m, 26.06.1997, F 3633, END., Ir.-Tur. elm.
- Anchusa azurea** Miller var. *macrocarpa* (Boiss. & Hohen.) Chamb.
B10 Van, Özalp, east of Beyazkaya mountain, steppe, 2670 m, 21.06.1997, F 5352.
- A. strigosa** Labill.
B10 Van, Özalp, north of Yavuzlar Village, Sibraltepe, wasteland, 2495 m, 12.07.1997, F 5590.
- Caccinia macranthera** (Banks. & Sol.) Brand. var. *crassifolia* (Vent.) Brand.

B10 Van, Özalp, east of Dorutay Village, steppe, 2238 m, 19.06.1998, F 8686, Ir.-Tur. elm.

SCROPHULARIACEAE

Verbascum nudicaule (Wydler) Takht.

B10 Van, Özalp, Damlacık Village, Ziyarettepe, steppe, 2300 m, 14.06.1996, F 567, Ir.-Tur. elm.

Scrophularia chrysantha Jaub. & Spach

B10 Van, Özalp, between Gözdeğmez and Yünkuşak Villages, very steep rocky slopes, 2180 m, 15.06.1998, F 6531, Euxine elm.

S. atropatana Grossh.

B10 Van, Özalp, between Aşkın and Kaşıkara Villages, steppe, 2280 m, 18.06.1998, F 6622, Ir.-Tur. elm.

S. pumilio Lall

B10 Van, Özalp, Bakışık Village, Dömbültepe, sloping area, 2426 m, 05.06.1997, F 3202, END., Ir.-Tur. elm.

S. rimarum Bornm.

B10 Van, Özalp, high plateau of Y. Balçıklı Village, steppe, 2200 m, 23.05.1998, F 5931.

Linaria genistifolia (L.) Miller subsp. *genistifolia*

B10 Van, Özalp, west of Dorutay Village, Yumruktepe, rocky slopes, 2050 m, 25.06.1996, F 2666, END., Ir.-Tur. elm.

L. grandiflora Desf.

B10 Van, Özalp, Damlacık Village, Ziyarettepe, steppe, 2289 m, 14.06.1996, F 567 (det: L. Behçet), Ir.-Tur. elm.

L. kurdica Boiss. & Hohen. subsp. *kurdica*

B10 Van, Özalp, south-east of Güzeldere Village, Bozkırtepe, steppe, 2190 m, 24.06.1996, F 3242, Ir.-Tur. elm.

L. kurdica Boiss. & Hohen subsp. *pyncophylla* (Boiss. & Bal.) P.H.Davis

B10 Van, Özalp, Eğribelen Village, Tapatepe, steppe, 2100 m, 25.06.1996, F 1796.

L. simplex (Willd.) DC.

B10 Van, Özalp, between Aşkın and Sarıköy Villages, stony meadows, 2000 m, 10.06.1996, F 7522, (det: L. Behçet).

Veronica orientalis Miller subsp. *carduchorum* P.H.Davis ex M. A. Fischer

B10 Van, Özalp, Y. Koçkiran Village, Karsıztepe, meadow, 2400 m, 04.07.1997, F 4720 (det: L. Behçet), END., Ir.-Tur. elm.

Pedicularis caucasica M.Bieb.

B10 Van, Özalp, east of Gözdeğmez Village, meadow, 2188 m, 15.06.1998, F 6519, Hyrcano -Euxine (mt). elm.

P. wilhelmsiana Fisch. ex M.Bieb.

B10 Van, Özalp, east of Bakışık Village, next to stream, 2160 m, 01.06.1997, F 3168, Eu. elm.

P. condensata M.Bieb.

B10 Van, Özalp, between A. Koçkiran Village, and Damlacık Village, stony slopes, 2278 m, 05.07.1997, F 4791, Euxine (mt.) elm.

OROBANCHACEAE

Orobanche nana Nöe ex G. Beck.

B10 Van, Özalp, east of Aşkın Village, sloping area, 2245 m, 05.07.1998, F 8137.

O. armena Tzvelev

B10 Van, Özalp, west of Dorutay Village, Seydiçayırı, loose soil vicinity, 2415 m, 25.06.1996, F 2664, END., Ir.-Tur. elm.

O. anatolica Boiss. & Reut.

B10 Van, Özalp, Beyazıt mountain, above Kaşıkara Village, epiphyte *Salvia* sp., 2780 m, 24.06.1997, F 3750.

GLOBULARIACEAE

Globularia trichosantha Fisch. & C.A.Mey.

B10 Van, Özalp, A. Yorganlı Village, Değirmentası mountain pass, damp places, 2250 m, 26.06.1997, F 3592.

LAMIACEAE (LABIATAE)

Scutellaria orientalis L. subsp. *bornmuelleri* (Hausskn. ex Bornm.) Edmon.

B10 Van, Özalp, Kaşıkara Village, Beyazıt mountain, steppe, 2750 m, 24.06.1997, F 3793, Ir.-Tur. elm.

Eremostachys moluccelloides Bunge

B10 Van, Özalp, between Y. Dönerdere and Mehmetalan Villages, steppe, 2280 m, 10.07.1997, F 4949, Ir.-Tur. elm.

Phlomis pungens Willd. var. *pungens*

B10 Van, Özalp, high plateau of Y. Tulgalı Village, steppe, 2300 m, 17.07.1997, F 5885.

Lamium macrodon Boiss. & Huet

B10 Van, Özalp, high plateau of Y. Balçıklı Village, rocky area, 2300 m, 23.05.1998, F 5945, Ir.-Tur. elm.

Stachys cretica L. subsp. *anatolica* Rech.f.

B10 Van, Özalp, high plateau of Y. Tulgalı Village, steppe, 2218 m, 18.07.1997, F 5879, END., Ir.-Tur. elm.

Nepeta italica L.

B10 Van, Özalp, north of Y. Dönerdere Village, Üçdere, rocky area, 2100 m, 02.06.1996, F 2752.

Prunella vulgaris L.

B10 Van, Özalp, Yünkuşak Village, Beyazıt mountain, steppe, 2347 m, 24.06.1997, F 3884, Euro-Sib. elm.

Origanum acutidens (Hand.-Mazz.) Ietswaart

B10 Van, Özalp, east of Damlacık Village, sloping area, 2425 m, 09.07.1997, F 5678, END., Ir.-Tur. elm.

O. vulgare L. subsp. *gracile* (K. Koch) Ietswaart

B10 Van, Özalp, high plateau of Y. Tulgalı Village, arid area, 2200 m, 24.06.1996, F 3224.

Thymus fallax Fisch & C.A.Mey

B10 Van, Özalp, north of Y. Tulgalı Village, rocky area, 2200 m, 18.07.1997, F 5889, Ir.-Tur. elm.

T. kotschyanus Boiss. & Hohen subsp. *kotschyanus*

B10 Van, Özalp, Y. Yorganlı Village, Tilkitepe, steppe, 2320 m, 26.06.1997, F 3639.

Mentha longifolia (L.) Hudson subsp. *longifolia*

B10 Van, Özalp, A. Tulgalı Village, Aktoprak, next to stream, 2322 m, 26.06.1997, F 1390, Euro-Sib. elm.

Ziziphora persica Bunge

B10 Van, Özalp, east of Y. Tulgalı Village, steppe, 2250 m, 18.07.1997, F 5884, Ir.-Tur. elm.

Salvia multicaulis Vahl.

B10 Van, Özalp, east of Y. Balçıklı Village, damp meadows, 2185 m, 04.07.1997, F 4685, Ir.-Tur. elm.

S. odontochlamys Hedge

B10 Van, Özalp, north of Bakışık Village, steppe, 2150 m, 01.06.1997, F 3141, END., Ir.-Tur. elm.

S. virgata Jacq.

B10 Van, Özalp, high plateau of Y. Tulgalı Village, protected pasture, 2250 m, 18.07.1997, F 5895, Ir.-Tur. elm.

PLUMBAGINACEAE

Acantholimon armenum Boiss. & Huet var. *armenum*

B10 Van, Özalp, south of Y. Tulgalı Village, steppe, 2300 m, 21.08.1997, F 5301, Ir.-Tur. elm.

A. spirizianum Mobayn var. *spirizianum*

B10 Van, Özalp, south of Y. Tulgalı Village, Aktoprak, steppe, 2282 m, 26.07.1997, F 1362, END., Ir.-Tur. elm.

THYMELAEACEAE

Thymelaea passerina (L.) Cosson & Germ.

B10 Van, Özalp, between A. Tulgalı and A. Dönerdere Villages, fallow land, 2080 m, 05.10.1997, F 1510.

SANTALACEAE

Thesium impressum Steudel ex A. DC.

B10 Van, Özalp, above Gözdeğmez Village, Hasan mountain, rocky slopes, 2335 m, 24.06.1997, F 3931, Ir.-Tur.

ARISTOLOCHIACEAE

Aristolochia bottae Jaub. & Spach

B10 Van, Özalp, east of Damlacık Village, cultivated field, 2425 m, 09.07.1997, F 5637, Ir.-Tur. elm.

EUPHORBIAEAE

Euphorbia eriophora Boiss.

B10 Van, Özalp, north of Y. Dönerdere Village, steppe, 2053 m, 10.07.1997, F 4915, Ir.-Tur. elm.

E. szovitsii Fisch. & C.A.Mey. var. *kharpulentensis* Aznav. ex M. S. Khan.

B10 Van, Özalp, east of A. Balçıklı Village, Rahattepe, stony areas, 2234 m, 02.08.1997, F 5632, Ir.-Tur. elm.

RUBIACEAE

Asperula laxiflora Boiss.

B10 Van, Özalp, A. Dönerdere Village, Beyaztaş Hill, steppe, 2100 m, 03.06.1996, F 2760, Euxine (mt.) elm.

Galium verum L. subsp. *glabrescens* Ehrend.

B10 Van, Özalp, south of Y. Tulgalı Village, rocky slopes, 2300 m, 23.05.1998, F 6182, Ir.-Tur. elm.

G. incanum Sm. subsp. *elatus* (Boiss.) Ehrend.

B10 Van, Özalp, A. Balçıklı Village, Rahattepe, steppe, 2200 m, 02.07.1997, F 5629, Ir.-Tur. elm.

G. spurium L. subsp. *spurium*

B10 Van, Özalp, west of Gözdeğmez Village, bushy area, 2206 m, 08.07.1997, F 5260, Euro-Sub. elm.

G. nigricans Boiss.

B10 Van, Özalp, Aşkın Village, in a garden, 2180 m, 28.06.1998, F 7620, Ir.-Tur. elm.

Callipeltis cucullaria (L.) Steven

B10 Van, Özalp, A. Tulgalı Village, Düzçay, steppe, 2180 m, 14.08.1997, F 2423, Ir.-Tur. elm.

Cruciata pedemontana (Bellardi) Ehrend.

B10 Van, Özalp, Y. Tulgalı Village, above Beyazdere, steppe, 2160 m, 01.06.1997, F 3101.