

New Floristic Records for the Grid Square A3 (Kocaeli/Turkey)

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Received: 05.10.1999

Accepted: 05.05.2000

ASPIDIACEAE

Dryopteris dilatata (Hoffm.) Gray

A3 Kocaeli-Keltepe, Kuzuyayla picnic area, woodlands, 1400 m, 19.08.1989, ŞA 1147, MARA 1782.

N. Temperate regions.

D. pallida (Bory) Fomin

A3 Kocaeli-Keltepe, around Yörük mountain rocky slopes, 1330 m, 27.08.1990 ŞA 1811, MARA 2602.

ASTERACEAE/COMPOSITAE

Achillea crithmifolia Waldst. et Kit.

A3 Kocaeli-Keltepe, Pazar çayırı (meadow), around İfrazıye, rocky slopes, 300 m, 07.07.1992 ŞA 2070, MARA 2942.

Euro-Sib. element.

Centaurea cariensis Boiss. subsp. *longipapposa* Wagenitz

A3 Kocaeli-Keltepe, Between Kuzuyayla picnic area road and Yörük mountain, rocky hills, 1400 m, 27.08.1990 ŞA 1805, MARA 2596.

Endemic. E. Medit. element.

C. pichleri Boiss. subsp. *pichleri*

A3 Kocaeli-Keltepe, Maşukiye-Kuzuyayla picnic area road, field edges, 1000 m, 26.07.1989 ŞA 1058, MARA 1700.

Chondrilla juncea L. var. *juncea*

A3 Kocaeli-Keltepe, between Sultaniye village-Kuzuyayla picnic area road, wet places, 970 m, 27.08.1990 ŞA 1835 MARA 2626.

Tragopogon aureus Boiss.

A3 Kocaeli-Keltepe, Maşukiye-Kuzuyayla picnic area road, slopes, 250 m, 29.05.1990 ŞA 1558, MARA 2205.

Endemic.

T. dubius Scop.

A3 Kocaeli-Keltepe, South of Keltepe, around Hanlar creek, wet slopes, 500 m, 07.07.1991 ŞA 2025, MARA 2897.

BRASSICACEAE/CRUCIFERAE

Cardamine raphanifolia Pourr. subsp. *acris* (Gris.) O. E. Schultz

A3 Kocaeli-Keltepe, around Kuzuyayla picnic area, woodlands, 1400 m, 29.05.1990 ŞA 1486, MARA 2139.

Euro-Sib. element.

Iberis sempervirens L.

A3 Kocaeli-Keltepe, around summit, rocky places, 1600 m, 04.06.1991 ŞA 1874, MARA 2689.

Medit. element.

CARYOPHYLLACEAE

Cerastium semidecandrum L.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, slopes, 250 m, 29.05.1990 ŞA 1440, MARA 2092.

Silene nocturna L.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, slopes, 250 m, 04.06.1991 ŞA 1373, MARA 2683.

Medit. element.

S. vulgaris (Moench) Garcke var. *macrocarpa* (Turri) Coode et Cullen

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, rocky slopes, 1400 m, 04.06.1991 ŞA 1936, MARA 2750.

Minuartia hybrida (Vill.) Schischk. subsp. *hybrida*

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, rocky slopes, 250 m, 29.05.1990 ŞA 1441, MARA 2093.

CRASSULACEAE

Sedum rubens L.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, rocky slopes, 280 m, 18.11.1989 ŞA 1302, MARA 1935.

Medit. element.

FAGACEAE

Quercus frainetto Ten. X *Q. petraea* (Mattuschka) Liebl. subsp. *iberica* (Steven ex Bieb.) Krassiln

A3 Kocaeli-Keltepe, between Sultaniye village-Kuzuyayla picnic area, woodlands, 1250 m, 27.08.1990 ŞA 1789, MARA 2580.

FABACEAE/LEGUMINOSAE

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

A3 Kocaeli-Keltepe, Maşukiye-Kuzuyayla picnic area road, 5.5 km, field edge, 500 m, 29.05.1990 ŞA 1588, MARA 2235.

Trifolium scabrum L.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, field edge, 5.5 km, 500 m, 10.06.1990 ŞA 1638, MARA 2294.

GERANIACEAE

Erodium acaule (L.) Becherer et Thell.

A3 Kocaeli-Keltepe, South of Keltepe, around Yörük mountain, slopes, 1380 m, 27.08.1990 ŞA 1806 MARA 2597.

Medit. element.

LAMIACEAE/LABIATAE

Calamintha sylvatica Bromf. subsp. *ascendes* (Jordan) P.W. Ball

A3 Kocaeli-Keltepe, around Kuzuyayla picnic area, Fagus forest, 1400 m, 17.09.1989 ŞA 1233, MARA 1867.

Lamium garganicum L. subsp. *reniforme* (Montbret et Aucher ex Benth) R. Mill

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, road sides, 1300 m, 04.06.1991 ŞA 1903, MARA 2717.

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

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, road sides, 550 m, 17.09.1989 ŞA 1181, MARA 1816.

Euxine element.

Thymus praecox Opiz subsp. *skorpilii* (Velen.) Jalas var. *skorpilii*

A3 Kocaeli-Keltepe, between Maşukiye and summit road, slopes, 1580 m, 26.07.1989 ŞA 1079, MARA 1717.

LINACEAE

Linum austriacum L. subsp. *austriacum*

A3 Kocaeli-Keltepe, Sultaniye village, around Kiliseyeri, wet places and slopes, 650 m, 07.07.1991 ŞA 2028, MARA 2900.

MALVACEAE

Althaea hirsuta L.

A3 Kocaeli-Keltepe, between Sultaniye village and Suadiye road, near Ortamahalle, slopes, 800 m, 07.07.1991 ŞA 2045, MARA 2917.

OROBANCHACEAE

Orobanche cilicica G. Beck

A3 Kocaeli-Keltepe, around summit, stony places, 1600 m, 21.07.1990 ŞA 1726, MARA 2517.

PAEONIACEAE

Paeonia mascula (L.) Miller subsp. *arietina* (Anders.) Cullen et Heywood

A3 Kocaeli-Keltepe, around summit, slopes, 1600 m, 27.04.1990 ŞA 1406, MARA 2053.

PLANTAGINACEAE

Plantago argentea Chaix

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla road, road sides, 550 m, 17.09.1989 ŞA 1189, MARA 1824.

Euro-Sib. element.

POLYGONACEAE

Rumex pulcher L.

A3 Kocaeli-Keltepe, between Kuzuyayla picnic area and summit road, slopes, 1460 m, 04.06.1991 ŞA 1937, MARA 2751.

RANUNCULACEAE

Ranunculus velutinus Ten.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla road, field edge, 250 m, 27.04.1990 ŞA 1372, MARA 2019.

Medit. element ?

RUBIACEAE

Galium spurium L. subsp. *spurium*

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, road sides, 500 m, 29.05.1990 ŞA 1616, MARA 2259.

Euro-Sib. element.

LILIACEAE

Allium paniculatum L. subsp. *fuscum* (Waldst. Et Kit.) Arc.

A3 Kocaeli-Keltepe, around Yörük mountain, banks, 1390 m, 27.08.1990 ŞA 1797, MARA 2588.

E. Medit. element.

POACEAE/GRAMINEAE

Avena fatua L. var. *fatua*

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, field edge, 500 m, 10.06.1990 ŞA 1630, MARA 2290.

Bromus fasciculatus C. Presl

A3 Kocaeli-Keltepe, between Maşukiye-Kuzuyayla picnic area road, road sides, 250 m, 04.06.1991 ŞA 1950, MARA 2764.

E. Medit. element.

Festuca arundinacea Schreber subsp. *arundinacea*

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, field edge, 500 m, 21.07.1990 ŞA 1755, MARA 2547.

F. decolorata Markgr.-Dannenb.

A3 Kocaeli-Keltepe, around summit, stony slopes, 1600 m, 29.05.1990 ŞA 1552b, MARA 2200.

Endemic. Euxine element.

Hainardia cylindrica (Willd.) Greuter

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, field edge, 500 m, 10.06.1990 ŞA 1629, MARA 2289.

Hordeum geniculatum All.

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, meadows, 500 m, 10.06.1990 ŞA 1622, MARA 2282.

Euro-Sib. element.

Poa infirma Kunth

A3 Kocaeli-Keltepe, around summit, stony slopes, 1600 m, 10.06.1990 ŞA 1663, MARA 2319.

Vulpia unilateralis (L.) Stace

A3 Kocaeli-Keltepe, between Maşukiye and Kuzuyayla picnic area road, field edges, 500 m, 10.06.1990 ŞA 1625, MARA 2285.