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

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### 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.