

First comprehensive assessment of the conservation status of the flora of the Çukurova Deltas, southern Turkey

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Appendix

The threatened flora of the Çukurova Deltas, with details of the habitats in which they occur, their known distribution, number of known localities in the Deltas and in Turkey, estimated population size in the Deltas (where determined) and their regional and global IUCN categories.

Taxon ¹	Common name	Family	Habitat	Distribution	Known localities (in this study/ Turkey ²)	Estimated population size in Çukurova Deltas	Regional IUCN category & criteria ^{3,4}	Global IUCN category ^{3,4}
<i>Alkanna pinardii</i> Boiss.*	Sand alkanet	Boraginaceae	Stabilized dunes	SW Turkey	0/4		DD	EN
<i>Allium bourgeaui</i> Rech. fil. ssp. <i>cycladicum</i> Bothmer	Sand garlic	Liliaceae	Sandy places	Aegean	1/3	5,000–10,000	VU A1ce+4ce; B2ab(i,ii,iii); C1	
<i>Alopecurus myosuroides</i> Hudson var. <i>latialatus</i> M.Doğan**	Slender foxtail	Poaceae	Stream banks	Çukurova Deltas	1/3	<1,000	CR A3c; B2b(i,ii,iii)	CR
<i>Althenia filiformis</i> Petit	Tiny-leaved pondweed	Zannichelliaceae	Shallow salt water	NW Africa, Europe, Iran	0/1		EX	
<i>Ambrosia maritima</i> L.	Sea ragweed	Asteraceae	Coastal plains	Mediterranean	2/6	>1,000	EN A2ce+3ce; B2a; C1	
<i>Ammochloa palaestina</i> Boiss.	Sandgrass	Poaceae	Beaches & dunes	Spain, N Africa, Iran, Caucasia	0/2		DD	
<i>Anthemis adonidifolia</i> Boiss.*	Turkish chamomile	Asteraceae	Stabilized dunes	S Turkey	1/4	<10,000	VU A1ac+4c; B2ab(i,ii,iii); C1	CR
<i>Anthemis arenicola</i> Boiss. var. <i>arenicola</i> *	Arenicola's chamomile	Asteraceae	Sandy coasts	S Turkey	3/4	5,000–10,000	NT	LR: nt
<i>Anthemis halophila</i> Boiss. & Bal.*	Salt chamomile	Asteraceae	Sandy beaches	S Turkey	2/5	<5,000	VU A1ace+4ce; B2ab(i,ii,iii); C1	EN
<i>Argyrobium uniflorum</i> (Dec.) Jaub. & Spach	Compound flowered pea	Fabaceae	Dunes	Palestine, Sinai, N Africa	0/1		EX	
<i>Astragalus epiglottis</i> L.	Tongue milkvetch	Fabaceae	Sandy shores	Mediterranean	0/1		EX	
<i>Astragalus suberosus</i> Banks & Sol. ssp. <i>mersinensis</i> (Sirj.) Matthews**	Cork milkvetch	Fabaceae	Stabilized dunes	Çukurova Deltas	3/3	<5,000	VU A1ace+3ce; B2ab(i,ii,iii); C1	VU
<i>Astragalus subuliferus</i> Boiss. ex Bunge**	Sand milkvetch	Fabaceae	Stabilized dunes	Çukurova Deltas	0/1		EX	EX

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<i>Beta trojana</i> var. <i>trojana</i> Pamuk*	Wild beet	Chenopodiaceae	Salt flats	W & S Turkey	2/2	<5,000	VU A1c+4c; B2ab(i,ii,iii); C1	EN
<i>Biarum eximium</i> (Schott & Kotschy) Engler**	Elegant aroid	Araceae	Sandy lowlands	Çukurova Deltas	1/2	<200	CR A1c+3c; B2ab(ii); C1	CR
<i>Bromus psammophilus</i> P.M. Smith**	Sand bromegrass	Poaceae	Stabilized dunes	Çukurova Deltas	6/2	<1,000	CR A1acde+ 3acde; B1b(i,ii,iii,iv)	CR
<i>Bupleurum polyactis</i> Post ex Snogerup*	Multi-rayed thorow wax	Apiaceae	Sandy & dry places	S Turkey	0/4		DD	EN
<i>Bupleurum zoharii</i> Snogerup*	Zohary's thorow wax	Apiaceae	Stabilized dunes	S Turkey	0/5		DD	VU
<i>Callitriche truncata</i> ssp. <i>occidentalis</i>	Short-leaved water starwort	Callitrichaceae	Shallow pools	Mediterranean coastal areas	2/1	<5,000	CR A2c+3c; B2a	
<i>Centaurea calcitrapa</i> L. ssp. <i>cilicica</i> (Boiss. & Bal.) Wagenitz**	Long-headed star thistle	Asteraceae	Field borders	Çukurova Deltas	3/3	1,000–5,000	VU A1ce+3ce; B2ab (i,ii,iii,iv); C1	VU
<i>Centaurea solstitialis</i> L. ssp. <i>carneola</i> (Boiss.) Wagenitz**	Yellow star thistle	Asteraceae	Fields & roadsides	Çukurova Deltas	2/3	5,000–10,000	VU A1ce+3ce; B2ab(i,ii,iii,iv); C1	VU
<i>Citrullus colocynthis</i> (L.) Schrader	Wild watermelon	Cucurbitaceae	Dunes	Africa, Greece, Spain, W Asia	1/2	<5,000	VU A1ce+3ce; B2ab(i,ii,iii); C1; D1	
<i>Convolvulus lanatus</i> Vahl	Sand bindweed	Convolvulaceae	Stabilized dunes	N Africa, Sinai, Arabia	5/3	1,000–3,000	NT	
<i>Cutandia dichotoma</i> (Forssk.) Trabut	Dichotomy grass	Poaceae	Mobile dunes	N Africa, Syria, Sinai, Iran	1/3	<500	CR A2cde+ 2cde; B2ab(i,ii,iii)	
<i>Cyprinia gracilis</i> (Boiss.) Browicz	Tiny silkvine	Asclepiadaceae	Stabilized dunes	S Turkey, Cyprus	2/4	<1,000	EN A2ce+3ce; B2ab(i,ii,iii); C1	
<i>Dactyloctenium aegyptium</i> (L.) P. Beauv.	Durban crows foot grass	Poaceae	Field margins	Subtropics, N America	2/4	5,000–10,000	VU A2cd+4cd; B2ab(i,ii,iii); C1	
<i>Eclipta prostrata</i> (L.) L.	False daisy	Asteraceae	Marshes & ditches	N Iran, S Asia	2/5	<10,000	NT	
<i>Euphorbia arguta</i> Banks & Sol.	Prostrate spurge	Euphorbiaceae	Field margins	E Greece, W Syria, Egypt	1/3	<10,000	VU B2ab(i,ii,iii); C1; D1	
<i>Factorovskya aschersoniana</i> (Urban) Eig.	Sand fenugreek	Fabaceae	Mobile dunes	Palestine, Egypt, Cyrena	0/2		EX	
<i>Fuirena pubescens</i> (Poiret) Kunth	Umbrella sedge	Cyperaceae	River & stream banks	N & S Africa, S Europe	2/2	>10,000	VU A1cd+4cd; B2ab(iii); C1	
<i>Galium ghilanicum</i> Stapf.	Dwarf bedstraw	Rubiaceae	Salt flats	Syria, N Iran, W Asia	0/3		DD	
<i>Gladiolus antakiensis</i> A.P. Hamilton	Anatolian gladiolus	Iridaceae	Dune slack	W Syria, Lebanon	3/6	<10,000	VU A2cde+3cde; B2b(i,ii,iii); C1	

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<i>Glycyrrhiza flavescens</i> Boiss.*	Yellow liquorice	Fabaceae	Stabilized dunes	S Turkey	2/6	> 10,000	LC	LR: lc
<i>Heliotropium ovalifolium</i> Forssk.	Slender heliotrope	Boraginaceae	Dune slack	Egypt	2/1	< 1,000	CR A2c+3c; B2a	
<i>Heptaptera cilicica</i> (Boiss. & Bal.) Tutin*	False prangos	Apiaceae	Hills & roadsides	Çukurova Deltas	1/4	< 200	EN A2ace+3ce; B2ab(iii); C1; D	EN
<i>Hypericum polyphyllum</i> Boiss. & Bal. ssp. <i>polyphyllum</i> *	Woody St Johnsworth	Guttiferae	Sandy places	S Turkey	2/9	> 100,000	LC	LR: lc
<i>Ifloga spicata</i> (Forssk.) Schultz Bib.	Sea cudweed	Asteraceae	Dunes	N Africa, S Asia, Canary Islands	2/3	< 1,000	EN A1ce+4ce; B2ab(i,ii,iii); C1	
<i>Iris xanthospuria</i> B. Mathew & T. Baytop*	Yellowish gladwin	Iridaceae	Stream banks & marshes	E & S Turkey	2/3	< 500	EN A1cde+4cde; B2ab(i,ii,iii); C1	VU
<i>Lavatera trimestris</i> L.	Field mallow	Malvaceae	Stabilized dunes	Mediterranean	1/1	< 200	CR A2ce+3ce; B2ab(iii); C1	
<i>Limonium graecum</i> (Poirot) Rech. fil. var. <i>graecum</i>	Greek sea lavender	Plumbaginaceae	Salt flats & shores	Greece, Aegean islands	4/4	10,000–20,000	NT	
<i>Limonium ocyimifolium</i> (Poirot) O. Kuntze	Sea lavender	Plumbaginaceae	Salt flats	Greece, Aegean islands	1/1	< 200	CR A2ce+3ce; B2a; C1	
<i>Limonium sieberi</i> (Boiss.) O. Kuntze	Sand sea lavender	Plumbaginaceae	Salt flats	S Greece, Crete, W Syria	1/1	< 200	CR A2ce+3ce; B2ab(i,ii,iii); C1	
<i>Linum anisocalyx</i> Davis**	Blue flax	Linaceae	Sandy fields	Çukurova Deltas	0/3		DD	CR
<i>Oldenlandia capensis</i> L. fil. var. <i>capensis</i>	Small-flowered mille grains	Rubiaceae	Dune slack	Tropical Africa	2/1	< 1000	CR A2c+4c; B2a	
<i>Onopordum boissieri</i> Willk.*	Sea cotton-thistle	Asteraceae	Semi-stabilized dunes	S, N & central Turkey	3/11	< 10,000	LC	LR: lc
<i>Ophrys transhyrcana</i> Czernjak. ssp. <i>amanensis</i> (Nelson) Renz & Taub.*	Amanus orchid	Orchidaceae	Stabilized dunes	S Turkey	3/12	< 10,000	NT	LR: nt
<i>Pancreatium maritimum</i> L.	Sea daffodil	Amaryllidaceae	Mobile dunes	Mediterranean, Black Sea	5/20	< 100,000	VU A1cde+3cde; B1b(i,ii,iii); C1	
<i>Puccinellia koeieana</i> Melderis ssp. <i>anatolica</i> Kit Tan*	Anatolian alkali-grass	Poaceae	Salt flats	Central Turkey	4/14	100,000	LC	LR: lc

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<i>Rhamnus hirtellus</i> Boiss.*	Hairy buckthorn	Rhamnaceae	Stabilized dunes	S Turkey	2/6	<200	EN A1ace+3ce; B2b(i,ii,iii); C1; D	VU
<i>Rhamphicarpa medwedewii</i> Albov	False speedwell	Scrophulariaceae	Dune slack	Georgia	1/1	<500	CR A2c+4c; B2a	
<i>Rumex bithynicus</i> Rech. fil.*	Large dock	Polygonaceae	River banks	N Turkey	1/2	<200	CR B2ab(i,ii,iii); C1	
<i>Silene pompeiopolitana</i> Gay ex Boiss.**	Sand campion	Caryophyllaceae	Dunes	Çukurova Deltas	9/2	100–500	CR A1ace+4ce; B1b(i,ii,iii)	CR
<i>Suaeda prostrata</i> Pall. ssp. <i>anatolica</i> Aellen*	Anatolian seepweed	Chenopodiaceae	Salt flats	Central Turkey	2/3	500–1,000	EN A2c+3c; B2a	VU
<i>Tamarix duezenlii</i> Çakan & Zielinski**	Hairy salt cedar	Tamaricaceae	Salt flats	Çukurova Deltas	1/1	<200	CR A2acd+ 3acd; B2ab(iii,iv,v); C1	CR
<i>Tamarix tetragyna</i> Ehrenb.	Salt cedar	Tamaricaceae	Salt flats	N Africa, Pakistan	2/2	<200	CR A2cde+ 4cde; B2b(i,ii,iii); C1	
<i>Trigonella cephalotes</i> Boiss. & Bal.*	Headed trefail	Fabaceae	Stabilized dunes	W & S Turkey	3/2	<500	CR A1ace+3ce; B2b(i,ii,iii)	VU
<i>Trigonella cylindracea</i> Desv.	Sand trefail	Fabaceae	Sandy places	W Syria, Egypt	3/3	500–1,000	CR A2cde+ 4cde; B1b(i,ii,iii)	
<i>Trigonella halophila</i> Boiss.**	Salt trefail	Fabaceae	Dunes	Çukurova Deltas	5/2	<500	CR A2ce+3cde; B1b(i,ii,iii)	CR
<i>Trigonella kotschyi</i> Fenzl*	Kotshy's trefail	Fabaceae	Hills & roadsides	E & S Turkey	3/15	5,000–10,000	NT	LR: nt
<i>Trigonella raphanina</i> Boiss.**	Prostrate trefail	Fabaceae	Dunes	Çukurova Deltas	0/1		EX	EX
<i>Triplachne nitens</i> (Guss.) Link	Shiny sandgrass	Poaceae	Sandy soils	Mediterranean	0/2		DD	
<i>Zygophyllum album</i> L.	White beancaper	Zygophyllaceae	Mobile dunes	Aegean, Africa	2/2	<1,000	EN A2cde+ 3cde; B2ab(i,ii,iii); C1	

¹*, Endemic to Turkey; **, Endemic to the Çukurova Deltas and adjacent coastal areas

²Known localities in Turkey also include previous records from the Çukurova Deltas

³EX, Extinct; CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LR:nt, Lower Risk: near threatened; LR:lc, Lower Risk:least concern; DD, Data Deficient. LR:nt and LR:lc are categories in version 2.3 of the Red List categories and criteria (IUCN, 1994), and were replaced by NT and LC, respectively, in version 3.1 (IUCN, 2001). Criterion A pertains to reductions in population size, B to geographic range, C to population size estimated as <250 mature individuals, and D to population size estimated as <50 mature individuals. Sub-criteria are defined in IUCN (2001)

⁴Regional threat status was assessed based on the results of our surveys; a global assessment was made if a taxon is endemic to the Çukurova Deltas, and the status of other taxa follows Ekim *et al.* (2000)