

Karst Tiankengs as refugia for indigenous tree flora amidst a degraded landscape in southwestern China

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Supplementary information

Supplementary Table S1: Checklist of tree species ≥ 10 cm diameter at breast height and their abundance by habitat from the study. Habitat code: CDTK = Chuandong Tiankeng; SMTK = Shenmu Tiankeng; FORE = Forest Remnants; FENG = Fengshui Woods.

Supplementary Figure S1: Species-level two-way cluster dendrogram. For species codes, see Supplementary Table S1.

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Family	SpID	SpCode	Species	Abundance by habitat			
				CDTK	SMTK	FORE	FENG
Aceraceae	1	ACECHI	<i>Acer chingii</i>	0	4	0	0
Aceraceae	2	ACECOR	<i>Acer cordatum</i> var. <i>microcodatum</i>	3	0	0	0
Aceraceae	3	ACETON	<i>Acer tonkinense</i> subsp. <i>kwangsiense</i>	0	18	0	2
Lauraceae	4	ACTKWE	<i>Actinodaphne kweichowensis</i>	5	3	1	0
Simarubaceae	5	AILALT	<i>Ailanthus altissima</i>	2	0	0	0
Ulmaceae	6	APHASP	<i>Aphananthe aspera</i>	0	1	0	0
Cornaceae	7	AUCHIM	<i>Aucuba himalaica</i> var. <i>himalaica</i>	0	0	3	0
Lauraceae	8	BEIINT	<i>Beilschmiedia intermedia</i>	0	0	0	1
Lauraceae	9	BEIKWE	<i>Beilschmiedia kweichowensis</i>	10	8	0	0
Betulaceae	10	BETALN	<i>Betula alnoides</i>	0	0	26	0
Betulaceae	11	BETAUS	<i>Betula austrosinensis</i>	0	3	0	0
Betulaceae	12	BETLUM	<i>Betula luminifera</i>	7	1	0	0
Moraceae	13	BROPAP	<i>Broussonetia papyrifera</i>	1	0	0	0
Corylaceae	14	CARPOL	<i>Carpinus polyneura</i>	3	3	0	0
Corylaceae	15	CARPUB	<i>Carpinus pubescens</i>	0	0	8	13
Fagaceae	16	CASCHI	<i>Castanopsis chinensis</i>	0	0	0	3
Ulmaceae	17	CELBIO	<i>Celtis biondii</i>	5	5	0	1
Ulmaceae	18	CELCER	<i>Celtis cerasifera</i> .	0	0	7	8
Ulmaceae	19	CELTET	<i>Celtis tetrandra</i> ssp. <i>Sinensis</i>	0	2	0	0
Rosaceae	20	CERCAM	<i>Cerasus campanulata</i>	1	3	0	5
Rosaceae	21	CERPSE	<i>Cerasus pseudocerasus</i>	0	0	4	14
Anacardiaceae	22	CHOAXI	<i>Choerospondias axillaris</i>	5	6	6	7
Lauraceae	23	CINBUR	<i>Cinnamomum burmanii</i>	0	4	0	0
Lauraceae	24	CINSAX	<i>Cinnamomum saxatile</i>	2	7	1	2
Rutaceae	25	CLAEMA	<i>Clausena emarginata</i>	4	1	0	0
Verbenaceae	26	CLECYR	<i>Clerodendrum cyrtophyllum</i> var. <i>cyrtophyllum</i>	0	0	6	0
Cornaceae	27	CORCON	<i>Cornus controversa</i>	0	0	12	2
Coriariaceae	28	CORNEP	<i>Coriaria nepalensis</i>	0	0	8	0
Lauraceae	29	CRYCON	<i>Cryptocarya concinna</i>	7	5	0	0
Fagaceae	30	CYCARG	<i>Cyclobalanopsis argyrotricha</i>	2	0	0	0
Fagaceae	31	CYCAUS	<i>Cyclobalanopsis austroglauca</i>	5	0	0	0
Fagaceae	32	CYCGLA	<i>Cyclobalanopsis glauca</i>	7	10	0	68
Fagaceae	33	CYCJEN	<i>Cyclobalanopsis jenseniana</i>	4	2	0	0
Araliaceae	34	DENDEN	<i>Dendropanax dentiger</i>	0	4	0	0
Ebenaceae	35	DIOMOR	<i>Diospyros morrisiana</i>	1	0	0	0
Elaeocarpaceae	36	ELAJAP	<i>Elaeocarpus japonicus</i>	2	4	0	0

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Juglandaceae	37	ENGROX	<i>Engelhardia roxburghiana</i>	5	4	0	0
Celastraceae	38	EUODIE	<i>Euonymus dielsianus</i>	0	1	0	0
Celastraceae	39	EUOECH	<i>Euonymus echinatus</i>	0	2	0	0
Celastraceae	40	EUOMYR	<i>Euonymus myrianthus</i>	0	0	0	1
Staphyleaceae	41	EUSJAP	<i>Euscaphis japonica</i>	0	2	0	0
Moraceae	42	FICFIS	<i>Ficus fistulosa</i>	4	0	0	0
Moraceae	43	FICHEN	<i>Ficus henryi</i>	3	0	0	0
Sapindaceae	44	HANBOD	<i>Handeliodendron bodinieri</i>	8	15	11	13
Cornaceae	45	HELJAP	<i>Helwingia japonica</i>	0	2	0	0
Rhamnaceae	46	HOVACE	<i>Hovenia acerba</i>	0	0	0	2
Aquifoliaceae	47	ILEMAC	<i>Ilex macrocarpa</i> var. <i>longipedunculata</i>	0	5	0	0
Escalloniaceae	48	ITEYUN	<i>Itea yunnanensis</i>	0	0	0	4
Juglandaceae	49	JUGREG	<i>Juglans regia</i>	0	0	0	6
Rosaceae	50	LAUFOR	<i>Laurocerasus fordiana</i>	0	0	1	0
Oleaceae	51	LIGLUC	<i>Ligustrum lucidum</i>	0	2	0	0
Lauraceae	52	LINGLA	<i>Lindera glauca</i>	9	6	0	0
Lauraceae	53	LINMEG	<i>Lindera megaphylla</i>	0	0	6	0
Lauraceae	54	LINPUL	<i>Lindera pulcherrima</i> var. <i>hemsleyana</i>	0	1	5	5
Lauraceae	55	LITCUB	<i>Litsea cubeba</i>	0	0	7	0
Lauraceae	56	LITELO	<i>Litsea elongata</i>	8	5	0	0
Fagaceae	57	LITMEG	<i>Lithocarpus megalophyllus</i>	0	1	0	0
Fagaceae	58	LITSIL	<i>Lithocarpus silvicularum</i>	5	4	0	0
Lauraceae	59	MACCAL	<i>Machilus calcicola</i>	12	11	0	0
Lauraceae	60	MACCHI	<i>Machilus chinensis</i>	1	2	0	0
Lauraceae	61	MACGLA	<i>Machilus glaucifolia</i>	5	15	0	0
Lauraceae	62	MACMUL	<i>Machilus multinervia</i>	0	0	63	18
Lauraceae	63	MACORE	<i>Machilus oreophila</i>	2	1	0	0
Olacaceae	64	MALOLE	<i>Malania oleifera</i>	0	2	0	0
Euphorbiaceae	65	MALPHI	<i>Mallotus philippinensis</i>	0	0	0	1
Magnoliaceae	66	MANARO	<i>Manglietia aromatica</i>	3	5	0	0
Araliaceae	67	METDAV	<i>Metapanax davidii</i>	0	3	0	3
Magnoliaceae	68	MICMAR	<i>Michelia martinii</i>	0	3	0	0
Lauraceae	69	NEOCON	<i>Neolitsea confertifolia</i>	5	5	0	0
Rhamnaceae	70	PALHEM	<i>Paliurus hemsleyanus</i>	0	5	0	0
Rosaceae	71	PHOBEA	<i>Photinia beauverdiana</i>	2	4	0	0
Lauraceae	72	PHOBOU	<i>Phoebe bournei</i>	0	0	1	0
Lauraceae	73	PHONAN	<i>Phoebe nanmu</i>	2	3	0	0
Pinaceae	74	PINMAS	<i>Pinus massoniana</i>	2	0	0	0
Pittosporaceae	75	PITPUL	<i>Pittosporum pulchrum</i>	0	0	0	1
Juglandaceae	76	PLALON	<i>Platycarya longipes</i>	16	20	28	12

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Pinaceae	77	PSEBRE	<i>Pseudotsuga brevifolia</i>	21	4	0	2
Fagaceae	78	QUEPHI	<i>Quercus phillyraeoides</i>	9	2	0	0
Anacardiaceae	79	RHUCHI	<i>Rhus chinensis</i> var. <i>chinensis</i>	0	0	19	0
Euphorbiaceae	80	SAPROT	<i>Sapium rotundifolium</i>	2	0	0	0
Araliaceae	81	SCHBRE	<i>Schefflera brevipedicellata</i>	15	14	0	0
Olacaceae	82	SCHJAS	<i>Schoepfia jasminodora</i>	0	2	0	0
Araliaceae	83	SCHMIN	<i>Schefflera minutistellata</i>	0	0	1	0
Sapotaceae	84	SINPED	<i>Sinosideroxylon pedunculatum</i>	3	2	0	0
Sterculiaceae	85	STELAN	<i>Sterculia lanceolata</i>	0	0	0	2
Symplocaceae	86	SYMSUM	<i>Symplocos sumuntia</i>	3	0	0	0
Myrtaceae	87	SYZBUX	<i>Syzygium buxifolium</i> var. <i>buxifolium</i>	4	0	0	0
Linaceae	88	TIROVO	<i>Tirpitzia ovoidea</i>	0	0	0	1
Meliaceae	89	TOOSIN	<i>Toona sinensis</i>	0	2	6	5
Anacardiaceae	90	TOXSUC	<i>Toxicodendron succedaneum</i> var. <i>succedaneum</i>	2	0	0	0
Staphyleaceae	91	TURMON	<i>Turpinia montana</i>	0	0	0	7
Ulmaceae	92	ULMPAR	<i>Ulmus parvifolia</i>	1	4	0	0
Caprifoliaceae	93	VIBCYL	<i>Viburnum cylindricum</i>	0	0	1	1
Caprifoliaceae	94	VIBPRO	<i>Viburnum propinquum</i>	6	0	0	0
Caprifoliaceae	95	VIBTER	<i>Viburnum ternatum</i>	0	1	0	0
Rubiaceae	96	WENUVA	<i>Wendlandia uvariifolia</i>	0	4	0	0
Total				234	258	231	210

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