ELECTRONIC SUPPLEMENTARY MATERIAL

FOLIA GEOBOTANICA

Heat shock-stimulated germination in Mediterranean Basin plants in relation to growth form, dormancy type, and distributional range

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Table S1. List of the locality name, geographic coordinates and altitude of places that the studied plant taxa were collected.

Taxa	Locality name	Geographic coordinates	Altitude (m)
Apiaceae			
Bupleurum sp.	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Daucus guttatus	Ildır	38° 23' 58.0" N; 26° 29' 32.9" E	52
Asteraceae			
Carthamus sp.	Marmaris	36° 49' 2.1" N; 28° 17' 41.2" E	73
Centaurea cariensis subsp. *microlepis*	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Crepis sancta	Demre	36° 14' 42.6" N; 29° 56' 46.0" E	139
Inula anatolica	Salihli	38° 28' 13.5" N; 28° 6' 53.1" E	411
Pallenis spinosa	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Tragopogon sp.	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Xeranthemum annuum	Salihli	38° 28' 13.5" N; 28° 6' 53.1" E	411
Asteraceae 1	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Asteraceae 2	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Boraginaceae			
Heliotropium hirsutissimum	Didim	37° 28' 19.8" N; 27° 14' 0.3" E	49
Brassicaceae			
Alyssum caricum	Marmaris	36° 53' 51.1" N; 28° 11' 53.9" E	22
Alyssum corsicum	Fethiye	36° 44' 33.5" N; 28° 52' 35.2" E	231
Iberis carica	Bördübet	36° 49' 47.5" N; 28° 3' 55.0" E	49
Campanulaceae			
Campanula lyrata subsp. *lyrata*	Karaburun	38° 36' 15.1" N; 26° 32' 23.2" E	127
Caryophyllaceae			
Dianthus sp.	Demre	36° 14' 42.6" N; 29° 56' 46.0" E	139
Silene behen	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Silene tunicoides	Marmaris	36° 53' 51.1" N; 28° 11' 53.9" E	22
Cistaceae			
Cistus creticus	Bayır	36° 43' 19.2" N; 28° 10' 39.7" E	242
Cistus laurifolius	Afyon	38° 41' 51.0" N; 30° 19' 17.9" E	1190
Cistus parviflorus	Datça	36° 43' 2.5" N; 7° 26' 28.0" E	273
Cistus salviifolius	Bayır	36° 43' 19.2" N; 28° 10' 39.7" E	242
Dipsacaceae			
Scabiosa reuteriana	Marmaris	36° 53' 51.1" N; 28° 11' 53.9" E	22
Fabaceae			
Anagyris foetida	Dilek Peninsula	37° 41' 57.3" N; 27° 11' 14.7" E	86
Calicotome villosa	Ildır	38° 23' 58.0" N; 26° 29' 32.9" E	52
Trifolium angustifolium var. *angustifolium*	Bodrum	37° 15' 32.1" N; 27° 37' 28.5" E	29
Trifolium arvense	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Trifolium campestre	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Trifolium mesogitanum	Datça	36° 43' 36.9" N; 27° 27' 39.2" E	405
Trifolium sp. 1	Datça	36° 43' 36.9" N; 27° 27' 39.2" E	405
Trifolium sp. 2	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Hypericaceae			
Hypericum empetrifolium	Marmaris	36° 52' 25.5" N; 28° 13' 22.2" E	140
Hypericum sp.	Karaburun	38° 36' 15.1" N; 26° 32' 23.2" E	127
Lamiaceae			
Coridothymus capitatus	Datça	36° 43' 2.5" N; 27° 26' 28.0" E	273
Lavandula stoechas subsp. *stoechas*	Bayır	36° 43' 19.2" N; 28° 10' 39.7" E	242
Origanum onites	Finike	36° 25' 48.1" N; 30° 8' 26.6" E	312
Phlomis bourgaei	Marmaris	37° 0' 42.1" N; 28° 21' 23.9" E	65
Phlomis grandiflora	Elmalı	36° 32' 24.4" N; 29° 59' 45.8" E	989
Prunella vulgaris	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Satureja thymbra	Didim	37° 28' 19.8" N; 27° 14' 0.3" E	49
Stachys sp.	Marmaris	37° 0' 42.1" N; 28° 21' 23.9" E	65

Teucrium chamaedrys	Karaburun	38° 36' 15.1" N; 26° 32' 23.2" E	127
Teucrium divaricatum subsp. *divaricatum*	Datça	36° 43' 36.9" N; 27° 27' 39.2" E	405
Teucrium lamiifolium subsp. *lamiifolium*	Marmaris	37° 0' 42.1" N; 28° 21' 23.9" E	65
Teucrium polium	Bördübet	36° 49' 47.5" N; 28° 3' 55.0" E	49
Vitex agnus-catus	Dilek Peninsula	37° 41' 57.3" N; 27° 11' 14.7" E	86
Liliaceae			
Allium paniculatum subsp. *paniculatum*	Bodrum	37° 15' 32.1" N; 27° 37' 28.5" E	29
Malvaceae			
Alcea apterocarpa	Datça	36° 43' 36.9" N; 27° 27' 39.2" E	405
Lavatera punctata	Demre	36° 14' 42.6" N; 29° 56' 46.0" E	139
Plantaginaceae			
Plantago lagopus	Ildır	38° 23' 58.0" N; 26° 29' 33.0" E	52
Poaceae			
Briza maxima	Yatağan	37° 18' 20.2" N; 27° 58' 9.2" E	714
Bromus sterilis	Datça	36° 43' 36.9" N; 27° 27' 39.2" E	405
Chrysopogon gryllus subsp. *gryllus*	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Cynosurus echinatus	Milas	37° 25' 36.7" N; 27° 33' 43.6" E	132
Cynosurus effusus	Milas	37° 25' 36.7" N; 27° 33' 43.6" E	132
Phleum exaratum subsp. *exaratum*	Marmaris	36° 49' 2.1" N; 28° 17' 41.2" E	73
Poaceae sp	Marmaris	36° 49' 2.1" N; 28° 17' 41.2" E	73
Polypogon monspeliensis	Kaş	36° 12' 12.7" N; 29° 35' 15.6" E	2
Polygonaceae			
Rumex crispus	Muğla	37° 12' 35.0" N; 28° 20' 15.7" E	629
Rumex scutatus	Marmaris	36° 49' 2.1" N; 28° 17' 41.2" E	73
Primulaceae			
Anagallis arvensis var. *caerulea*	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Rhamnaceae			
Paliurus spina-christi	Salihli	38° 28' 13.5" N; 28° 6' 53.1" E	411
Rosaceae			
Sarcopoterium spinosum	Ildır	38° 23' 58.0" N; 26° 29' 32.9" E	52
Rubiaceae			
Crucianella latifolia	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Galium sp.	Demre	36° 15' 45.3" N; 29° 58' 11.0" E	259
Scrophulariaceae			
Misopates orontium	Datça	36° 44' 35.2" N; 27° 38' 48.2" E	79
Scrophularia sp.	Marmaris	36° 50' 41.0" N; 28° 7' 37.7" E	127

Table S2. List of plant taxa (including authority names and families), and considered functional groups; growth form (GF; a: annual; p: perennial; w: woody), distribution range (DR; L: local; R: regional; W: wide), phytogeographical region (PR; Med: Mediterranean; None: none-Mediterranean) and the type of dormancy (TDorm; PY: physical dormancy; NPY: none-physical dormancy).

Taxa	GF	DR	PR	TDorm
Apiaceae				
Bupleurum sp.				NPY
Daucus guttatus SM.	a	R	None	NPY
Asteraceae				
Carthamus sp.				NPY
Centaurea cariensis Boiss. subsp. *microlepis* (Boiss.) Wagenitz	p	L	Med	NPY
Crepis sancta (L.) Babcock.	a	W	None	NPY
Inula anatolica Boiss.	p	L	None	NPY
Pallenis spinosa (L.) Cass.	a	R	Med	NPY
Tragopogon sp.				NPY
Xeranthemum annuum L.	a	R	None	NPY
Asteraceae 1				NPY
Asteraceae 2				NPY
Boraginaceae				
Heliotropium hirsutissimum Grauer.	a	R	Med	NPY
Alyssum caricum Dudley Et Hub.-Mor.	w	L	Med	NPY
Alyssum corsicum Duby.	p	R	None	NPY
Iberis carica Bornm.	a	L	Med	NPY
Campanulaceae				
Campanula lyrata Lam. subsp. *lyrata*	p	R	None	NPY
Caryophyllaceae				
Dianthus sp.				NPY
Silene behen L.	a	R	None	NPY
Silene tunicoides Boiss.	p	L	Med	NPY
Cistaceae				
Cistus creticus L.	w	R	Med	PY
Cistus laurifolius L.	w	R	Med	PY
Cistus parviflorus Lam.	w	R	Med	PY
Cistus salviifolius L.	w	R	Med	PY
Dipsacaceae				
Scabiosa reuteriana Boiss.	a	L	Med	NPY
Fabaceae				
Anagyris foetida L.	w	R	Med	PY
Calicotome villosa (Poiret) Link	w	R	Med	PY
Trifolium angustifolium L. var. *angustifolium*	a	W	None	PY
Trifolium arvense L.	a	W	None	PY
Trifolium campestre Schreb.	a	R	None	PY
Trifolium mesogitanum Boiss.	a	L	Med	PY
Trifolium sp. 1				PY
Trifolium sp. 2				PY
Hypericaceae				
Hypericum empetrifolium Willd.	p	R	Med	NPY
Hypericum sp.				NPY
Lamiaceae				
Coridothymus capitatus (L.) Reichb. Fil.	w	R	Med	NPY
Lavandula stoechas L. subsp. *stoechas*	w	R	Med	NPY
Origanum onites L.	w	R	Med	NPY

Phlomis bourgaei Boiss.	w	L	Med	NPY
Phlomis grandiflora H. S. Thompson	w	L	Med	NPY
Prunella vulgaris L.	p	W	None	NPY
Satureja thymbra L.	w	R	Med	NPY
Stachys sp.				NPY
Teucrium chamaedrys L.	p	R	None	NPY
Teucrium divaricatum Sieber subsp. *divaricatum*	w	R	Med	NPY
Teucrium lamiifolium Dâ´urv. subsp. *lamiifolium*	p	R	None	NPY
Teucrium polium L.	p	R	None	NPY
Vitex agnus-catus L.	w	R	Med	PY
Liliaceae				
Allium paniculatum L. subsp. *paniculatum*	p	R	Med	NPY
Malvaceae				
Alcea apterocarpa (Fenzl) Boiss.	p	L	None	PY
Lavatera punctata All.	a	W	None	PY
Plantaginaceae				
Plantago lagopus L.	a	R	Med	NPY
Poaceae				
Briza maxima L.	a	W	None	NPY
Bromus sterilis L.	a	W	None	NPY
Chrysopogon gryllus (L.) Trin. subsp. *gryllus* (L.)	p	W	None	NPY
Cynosurus echinatus L.	a	R	Med	NPY
Cynosurus effusus Link	a	R	Med	NPY
Phleum exaratum Hochst. ex Griseb. subsp. *exaratum*	a	R	None	NPY
Poaceae sp				NPY
Polypogon monspeliensis (L.) Desf.	a	W	None	NPY
Polygonaceae				
Rumex crispus L.	p	W	None	NPY
Rumex scutatus L.	p	W	None	NPY
Primulaceae				
Anagallis arvensis L. var. *caerulea* (L.) Gouan	a	W	None	NPY
Rhamnaceae				
Paliurus spina-christi Miller	w	R	None	PY
Rosaceae				
Sarcopoterium spinosum (L.) Spach	w	R	Med	NPY
Rubiaceae				
Crucianella latifolia L.	a	W	Med	NPY
Galium sp.				NPY
Scrophulariaceae				
Misopates orontium (L.) Rafin .	a	R	None	NPY
Scrophularia sp.				NPY

Table S3. Lack of association among functional groups used in the study. DistR is distributional range (local, regional or widespread), GF is growth form (annual herb, perennial herb or woody), and DormT is dormancy type (physical dormancy or not).

Heat shock temperature	DistR vs. GF		DormT vs. GF		DormT vs. DistR	
	χ^2	P	χ^2	P	χ^2	P
60 °C	0.792	0.733	3.817	0.160	0.761	0.778
80 °C	1.079	0.615	3.068	0.194	0.051	1.000
100 °C	1.330	0.547	3.829	0.190	0.032	1.000
120 °C	1.079	0.605	4.136	0.102	0.147	1.000
140 °C	0.610	0.825	3.695	0.203	0.589	0.882

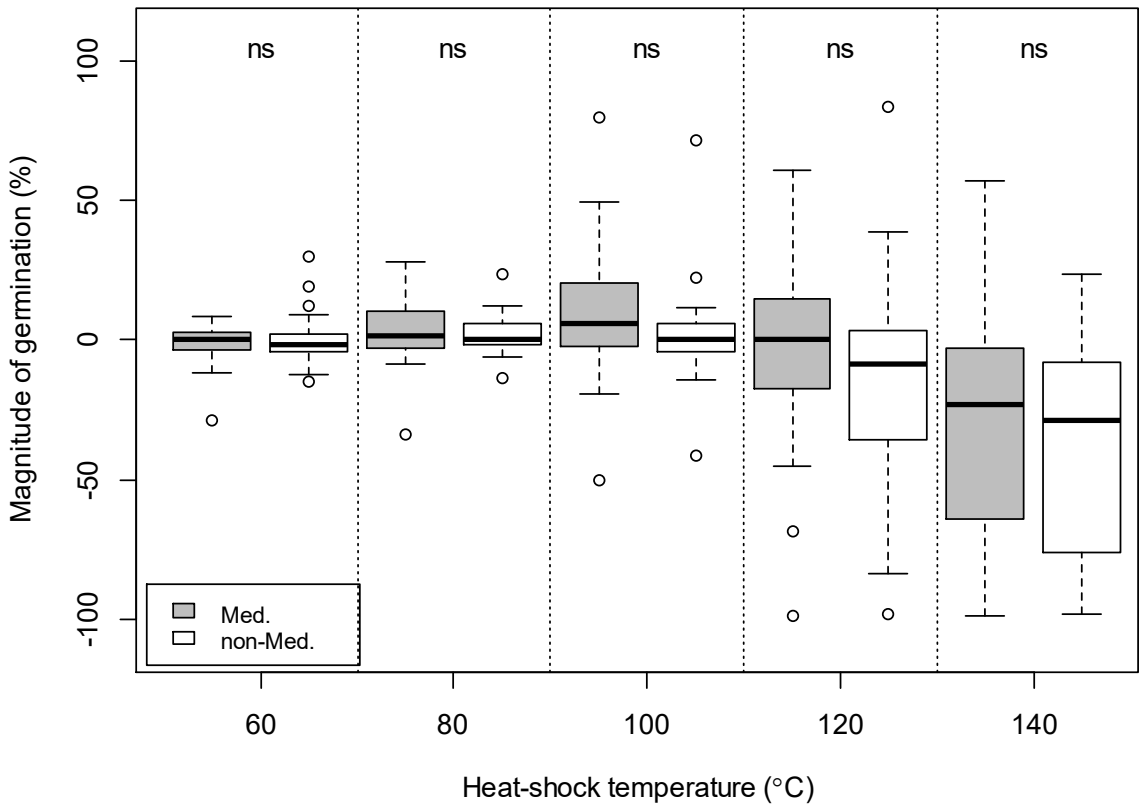

Figure S1. Magnitude of germination (%) in heat shock treatments for phytogeographic region groups.

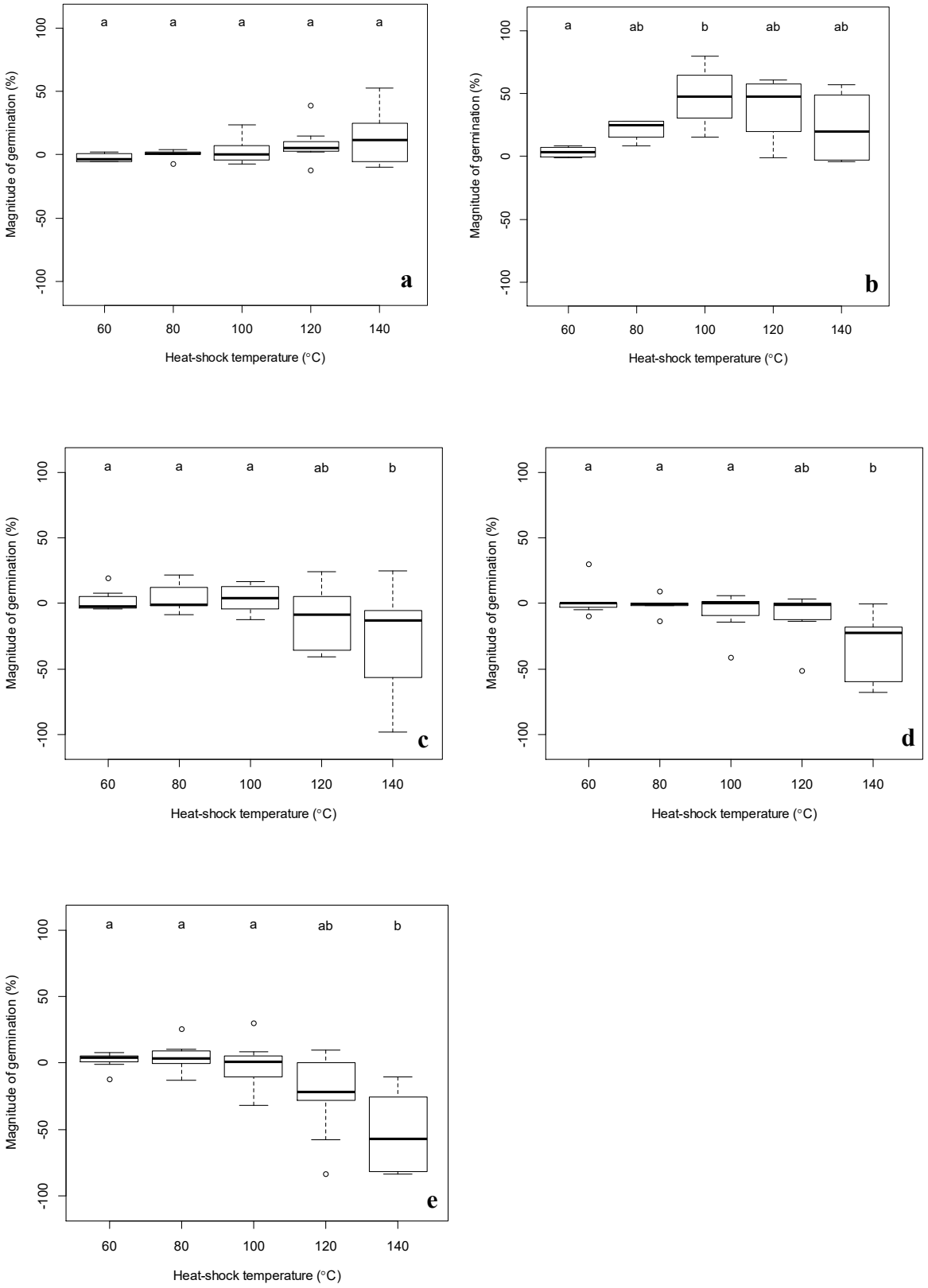

Figure S2. Magnitude of germination (%) in heat shock treatments for major families of the collected taxa in the study: (a) Fabaceae, (b) Cistaceae, (c) Lamiaceae, (d) Poaceae, and (e) Asteraceae. Different letters indicate statistically significant differences among groups (linear mixed model followed by Tukey contrasts, $P < 0.05$).