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Supplementary materials

Table S1. Correlation matrix (Pearson correlation coefficient) among Egyptian (coastal & inland samples), Japanese, and Turkish ecospecies of *Symphyotrichum squamatum*, based on the concentration of the identified chemical compounds of the essential oils.

	Inland	Coastal	Japanese	Turkish
Inland	1			
Coastal	0.376	1		
Japanese	0.786	0.016	1	
Turkish	0.045	0.189	-0.023	1

Table S2. Soil variables (Mean values \pm standard error) of the coastal and inland habitats of *Symphyotrichum squamatum*. WHC: water holding capacity, and EC: electrical conductivity.

Soil variables	Delta coast (n=15)	Inland (n=17)	P-value
Sand (%)	96.45 \pm 0.49	95.85 \pm 0.59	0.449 ^{ns}
Silt (%)	2.63 \pm 0.40	2.51 \pm 0.45	0.843 ^{ns}
Clay (%)	0.92 \pm 0.18	1.64 \pm 0.22	0.023 [*]
Porosity (%)	41.94 \pm 1.62	38.62 \pm 2.18	0.239 ^{ns}
WHC (%)	33.87 \pm 1.82	49.49 \pm 3.54	0.001 ^{**}
CaCO ₃ (%)	3.09 \pm 0.26	4.96 \pm 0.52	0.006 ^{**}
Organic carbon (%)	0.45 \pm 0.04	1.26 \pm 0.18	< 0.001 ^{**}
pH	8.12 \pm 0.17	7.85 \pm 0.08	0.172 ^{ns}
EC (mS cm ⁻¹)	0.83 \pm 0.04	0.41 \pm 0.05	< 0.001 ^{**}
Cl ⁻ (%)	1.64 \pm 0.21	0.55 \pm 0.09	< 0.001 ^{**}
SO ₄ ²⁻ (%)	1.25 \pm 0.09	0.90 \pm 0.09	0.016 [*]
HCO ₃ ⁻ (%)	0.04 \pm 0.00	0.38 \pm 0.08	0.001 ^{**}
Na ⁺ (mg g ⁻¹)	39.41 \pm 4.25	54.99 \pm 7.81	0.099 ^{ns}
K ⁺ (mg g ⁻¹)	5.30 \pm 0.84	6.83 \pm 0.73	0.188 ^{ns}
Ca ²⁺ (mg g ⁻¹)	9.27 \pm 1.08	17.09 \pm 1.79	0.002 ^{**}
Mg ²⁺ (mg g ⁻¹)	4.14 \pm 0.54	3.77 \pm 0.06	0.658 ^{ns}

ns: not significant, **P* < 0.05, ***P* < 0.01 (two-tailed t-test).

Table S3. Summary of the Generalized Linear Models (GLM) testing for main and interactive effects of experimental treatments on the results of allelopathic bioassays of the shoot and root growth.

Effect	Shoot growth					Root growth				
	SS	df	MS	<i>F</i>	<i>P</i>	SS	df	MS	<i>F</i>	<i>P</i>
Conc.	1876.305	5	375.261	78.930	<0.0001	5603.113	5	1120.623	278.819	<0.0001
Location	1458.603	1	1458.603	306.792	<0.00001	182.790	1	182.790	45.480	<0.0001
Conc.× Location	81.262	5	16.252	3.418	0.0179	36.231	5	7.246	1.803	0.150

Notes: Tested effects included concentration of essential oil and location of collection. For each tested effect, sum of squares (SS), degrees of freedom (df) mean squares (MS) and Duncan's test results (*F* and associated *P* value [significant values in boldface type]) are shown.