Table S1. Occurrences of *Petrocoptis montsicciana* and *P. pardoi* used in the niche analyses. The geographic location is provided as UTM (Universal Transverse Mercator) coordinate system and the traditional latitude/longitude system.

Species	**UTM 1 × 1 km**	**Lat/Long**	**Source**
P. montsicciana	31TBG9939	41.882 / 0.584	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0250	41.982 / 0.616	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0293	42.369 / 0.601	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0459	42.063 / 0.637	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0460	42.072 / 0.637	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0461	42.081 / 0.636	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0552	42.001 / 0.652	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0554	42.019 / 0.651	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0559	42.064 / 0.649	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0560	42.073 / 0.649	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0561	42.082 / 0.649	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0654	42.019 / 0.663	Previous study of allozymes [2]
P. montsicciana	31TCG0657	42.046 / 0.662	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0658	42.055 / 0.662	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0659	42.064 / 0.661	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0660	42.073 / 0.661	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0757	42.046 / 0.674	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0758	42.055 / 0.674	Previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0759	42.064 / 0.673	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0760	42.073 / 0.673	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]

P. montsicciana	31TCG0761	42.082 / 0.673	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0860	42.073 / 0.685	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0861	42.082 / 0.685	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]; LIFE RESECOM [3]
P. montsicciana	31TCG0862	42.091 / 0.684	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0863	42.100 / 0.684	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG0963	42.101 / 0.696	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; LIFE RESECOM [3]
P. montsicciana	31TCG1756	42.040 / 0.795	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG1960	42.076 / 0.818	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2038	41.878 / 0.837	Previous study of allozymes [2]
P. montsicciana	31TCG2054	42.022 / 0.832	Previous study of allozymes [2]
P. montsicciana	31TCG2059	42.067 / 0.830	Previous study of allozymes [2]
P. montsicciana	31TCG2138	41.878 / 0.849	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2440	41.897 / 0.884	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2441	41.906 / 0.884	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2455	42.032 / 0.880	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2456	42.041 / 0.880	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2540	41.897 / 0.896	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2541	41.906 / 0.896	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2556	42.041 / 0.892	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2557	42.050 / 0.891	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2558	42.059 / 0.891	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2642	41.916 / 0.908	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2741	41.907 / 0.920	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]

P. montsicciana	31TCG2742	41.916 / 0.920	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG2841	41.907 / 0.932	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG3341	41.908 / 0.992	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG3540	41.900 / 1.017	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG6364	42.121 / 1.349	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]
P. montsicciana	31TCG6465	42.130 / 1.361	*Atlas y Libro Rojo de la Flora Vascular Amenazada de España* [1]; previous study of allozymes [2]
P. montsicciana	31TCG0558	42.055 / 0.650	LIFE RESECOM [3]
P. montsicciana	31TCG0754	42.019 / 0.675	LIFE RESECOM [3]
P. montsicciana	31TCG0858	42.055 / 0.686	LIFE RESECOM [3]
P. montsicciana	31TCG0859	42.064 / 0.685	LIFE RESECOM [3]
P. montsicciana	31TCG0959	42.065 / 0.697	LIFE RESECOM [3]
P. montsicciana	31TCG0960	42.074 / 0.697	LIFE RESECOM [3]
P. montsicciana	31TCG0661	42.082 / 0.661	LIFE RESECOM [3]
P. montsicciana	31TCG0961	42.083 / 0.697	LIFE RESECOM [3]
P. montsicciana	31TCG0762	42.091 / 0.672	LIFE RESECOM [3]
P. montsicciana	31TCG0962	42.092 / 0.697	LIFE RESECOM [3]
P. montsicciana	31TCG0864	42.109 / 0.684	LIFE RESECOM [3]
P. pardoi	30TYL3614	40.748 / −0.199	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3615	40.757 / 0.198	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3616	40.766 / −0.198	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3714	40.747 / −0.187	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3715	40.756 / −0.187	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3716	40.765 / −0.186	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3717	40.774 / −0.186	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3811	40.720 / −0.176	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3814	40.747 / −0.175	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3815	40.756 / −0.175	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]

P. pardoi	30TYL3816	40.765 / −0.174	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3817	40.774 / −0.174	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3818	40.783 / −0.174	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3819	40.792 / −0.173	Previous study of allozymes [2]
P. pardoi	30TYL3914	40.747 / −0.163	BDBV (http://www.bdb.gva.es/)
P. pardoi	30TYL3915	40.756 / −0.163	BDBV (http://www.bdb.gva.es/)
P. pardoi	30TYL3916	40.765 / −0.162	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3917	40.774 / −0.162	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL3918	40.783 / −0.162	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4015	40.755 / −0.151	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4016	40.764 / −0.151	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4017	40.773 / −0.150	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4018	40.782 / −0.150	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4019	40.791 / −0.150	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4115	40.755 / −0.139	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4116	40.764 / −0.139	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4117	40.773 / −0.138	BDBV (http://www.bdb.gva.es/); previous study of allozymes [2]
P. pardoi	30TYL4616	40.763 / −0.080	*Nuevos datos para la flora de Aragón* [4]
P. pardoi	30TYL3919	40.792 / −0.161	Previous study of allozymes [2]
P. pardoi	30TYL3820	40.801 / −0.173	Previous study of allozymes [2]
P. pardoi	30TYL3920	40.801 / −0.161	Previous study of allozymes [2]

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Table S2. Comparison of average (SD) of individual climatic values between *Petrocoptis montsicciana* (60 occurrences) and *P. pardoi* (31 occurrences). Results from Wilcoxon-Mann-Whitney test are also specified. Significant differences are marked in bold.

	bio3	**bio6**	**bio7**	**bio8**	**bio9**	**bio15**	**bio19**
P. montsicciana average (SD)	36.7 (0.6)	−0.4 (1.0)	29.0 (0.5)	13.3 (1.8)	5.5 (1.2)	23.4 (2.0)	135.8 (27.8)
P. pardoi average (SD)	42.2 (0.4)	−0.7 (0.6)	30.3 (0.35)	14.2 (0.6)	6.2 (0.5)	31.0 (0.5)	89.3 (2.5)
W (*p*-value)	0 **(< 0.00)**	1204 **(0.02)**	15 **(< 0.00)**	683 **(0.04)**	682 **(0.04)**	0 **(< 0.00)**	1860 **(< 0.00)**

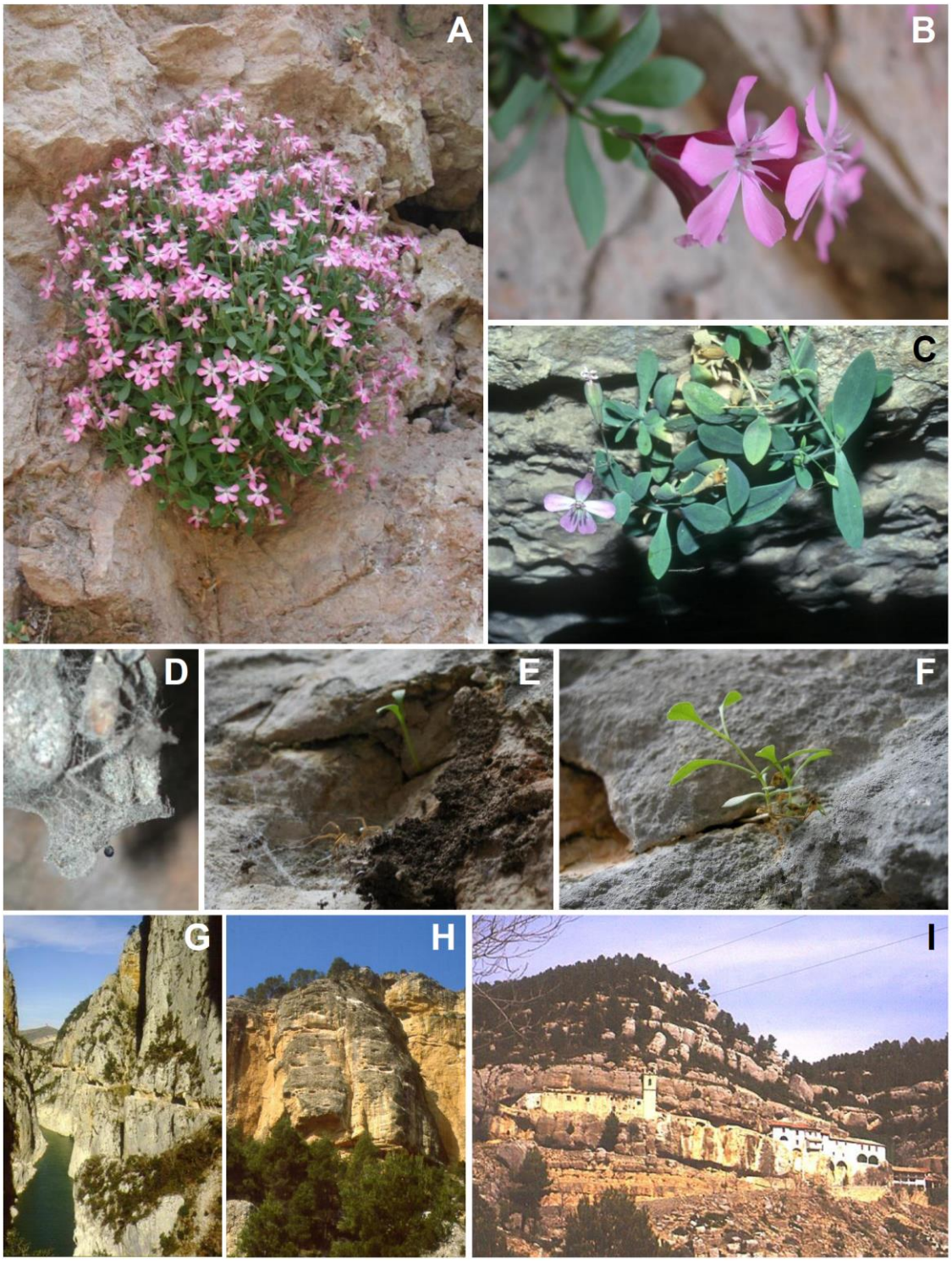

Figure S1. General aspect of *Petrocoptis montsicciana*, *P. pardoi* and their habitats. (**A**) and (**B**), flowering individual of *P. montsicciana* and details of the flower, respectively, from Santa Maria de Salgar sanctuary in Foradada (Catalonia); (**C**), flowering individual of *P. pardoi* from Zorita del Maestrazgo (Valencian Community); (**D**), spider web acting as a receptacle for *Petrocoptis* seeds, which may allow plant recruitment (**E**); (**F**), young individual growing in a rock fissure (pictures D, E and F are from Santa Maria de Salgar sanctuary); (**G**), Mont-rebei pass (Aragon/Catalonia), where several populations of *P. montsicciana* are located within or around; (**H**), Cantal Badat in Zorita del Maestrazgo, home of a population of a few hundred individuals of *P. pardoi*; and (**I**), Mare de Déu de la Balma sanctuary in Zorita del Maestrazgo, *locus classicus* of *P. pardoi*. All photographs were taken by Jordi López-Pujol except C (Emilio Laguna).

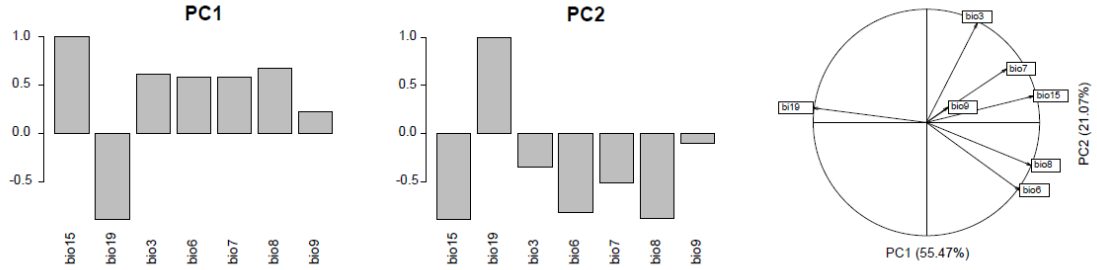

Figure S2. Contribution of each environmental variable to the spatial distribution of the PCA-env and direction of the seven climatic variables to the first to PCA-env axes.