

Supplementary material

Supplementary text

Supplementary Text S1. Details on DNA extraction and sequencing for 80 unpublished sequences generated in this work

Total genomic DNA was extracted from ethanol-preserved tissues using BioSprint 15 DNA Blood Kit following the manufacturer's protocol (Qiagen, Hilden, Germany). The NADH dehydrogenase subunit 4 (ND4) was amplified for all samples by standard polymerase chain reaction (PCR), using the primer ND4-Leu [1]. In some cases, DNA amplification was not possible with this primer and thus, we used the primers ND4HvF-ND4HvR [2].

PCRs were performed in a total volume of 25µl and included 17.8µl of H₂O, 2.5µl of a reaction buffer x 10, 1µl of dNTP (10mM), 1.5µl of MgCl₂ (50mM), 0.5µl of each primer (10mM), 0.2µl of DNA polymerase and 1µl of template DNA. The thermocycling conditions consisted of an initial denaturation at 94°C for 5 min, 40 cycles at 94°C for 30 s, 50°C for 40 s and 72°C for 45 s followed by a final step at 72°C for 10 min. PCR products were checked on 1% agarose gels, and the products of expected length were directly sequenced at Macrogen Inc (Macrogen Europe).

References

1. Arévalo, E.; Davis, S.K.; Sites, J.W.Jr. Mitochondrial DNA sequence divergence and phylogenetic relationships among eight chromosome races of the *Sceloporus grammicus* complex (Phrynosomatidae) in Central Mexico. *Syst. Biol.* **1994**, *43*, 387–418.
2. Mezzasalma, M.; Dall'Asta, A.; Loy, A.; Cheylan, M.; Lymberakis, P.; Zuffi, M.A.L.; Tomovic, L.; Odierna, G.; Guarino, F.M. A sisters' story: Comparative phylogeography and taxonomy of *Hierophis viridiflavus* and *H. gemonensis* (Serpentes, Colubridae). *Zool. Scr.* **2015**, *44*, 495–508.

Supplementary tables

Table S1. List of the analyzed samples with codes, lineage/sublineage assignment, localities, coordinates (latitude and longitude), corresponding haplotype, GenBank accession number, publication, collection and number. Samples in bold correspond to the ones which are specific of this study. TBA means to be added after acceptance.

code	Lineage/Sublineage	Locality	latitude	longitude	Haplotype	Accession numbers	Publication	Collection	Coll. number
<i>RV01</i>	<i>East/South-east-north</i>	San Vito (Treviso, Italy)	45.898	11.953	H32	MW297621	1		/
<i>RV02</i>	<i>East/South-east-north</i>	Possagno (Treviso, Italy)	45.850	11.874	H32	MW297622	1		/
<i>RTR01</i>	<i>East/South-east-north</i>	Pergine Valsugana (Trento, Italy)	46.059	11.241	H32	MW297618	1		/
<i>RPT03</i>	<i>West</i>	Noasca (Torino, Italy)	45.454	7.317	H1	MW297556	1		/
<i>RPT02</i>	<i>West</i>	Pianchette (Torino, Italy)	45.452	7.293	H1	MW297555	1		/
<i>RPT01</i>	<i>West</i>	Villastellone (Torino, Italy)	44.923	7.742	H1	MW297553	1		/
<i>RPT04</i>	<i>West</i>	Fornolosa (Torino, Italy)	45.431	7.399	H1	MW297557	1		/
<i>RLO01</i>	<i>West</i>	Pavia (Italy)	45.209	9.167	H1	MW297558	1		/
<i>RLO02</i>	<i>East/South-east-north</i>	Le Bine. Calvatone (Cremona, Italy)	45.132	10.442	H32	MW297619	1		/
<i>RLO03</i>	<i>East/South-east-north</i>	Le Bine. Calvatone (Cremona, Italy)	45.132	10.442	H32	MW297620	1		R3 (2)

<i>RE11</i>	<i>East/South-east-north</i>	La Foscarina (Rovigo, Italy)	44.944	11.620	H32	MW297623	1	/
<i>RE12</i>	<i>West</i>	Casalecchio (Rimini, Italy)	43.836	12.268	H1	MW297561	1	R3 (2)
<i>RE13</i>	<i>West</i>	Villa di Sant'Alessio (Forlì-Cesena, Italy)	43.810	11.987	H1	MW297562	1	/
<i>RLI01</i>	<i>West</i>	Genova (Italy)	44.394	9.017	H1	MW297559	1	/
<i>RLI02</i>	<i>West</i>	Genova (Italy)	44.394	9.017	H1	MW297560	1	/
<i>RT14</i>	<i>West</i>	Frosini (Siena, Italy)	43.216	11.155	H1	MW297575	1	R3 (2)
<i>RT15</i>	<i>West</i>	Rosia (Siena, Italy)	43.250	11.224	H1	MW297576	1	R3 (2)
<i>RT17</i>	<i>West</i>	Baccinello (Grosseto, Italy)	42.796	11.375	H1	MW297578	1	/
<i>RT18</i>	<i>West</i>	Campagnatico (Grosseto, Italy)	42.887	11.242	H1	MW297579	1	R2 (2)
<i>RT19</i>	<i>West</i>	Petriccio (Grosseto, Italy)	43.079	10.997	H1	MW297580	1	R2 (2)
<i>RT12</i>	<i>West</i>	Boccheggiano (Grosseto, Italy)	43.082	11.025	H1	MW297573	1	/
<i>RT13</i>	<i>West</i>	Boccheggiano (Grosseto, Italy)	43.082	11.025	H1	MW297574	1	/
<i>RT10</i>	<i>West</i>	Prata (Grosseto, Italy)	43.081	10.984	H1	MW297571	1	/
<i>RT11</i>	<i>West</i>	Prata (Grosseto, Italy)	43.081	10.984	H1	MW297572	1	/
<i>RT16</i>	<i>West</i>	Prata (Grosseto, Italy)	43.081	10.984	H1	MW297577	1	/
<i>RT20</i>	<i>West</i>	Prata (Grosseto, Italy)	43.079	10.988	H1	MW297581	1	/
<i>RT21</i>	<i>West</i>	Tatti (Grosseto, Italy)	43.025	11.029	H1	MW297582	1	R2 (2)
<i>RT22</i>	<i>West</i>	Camaldoli (Arezzo, Italy)	43.794	11.820	H1	MW297583	1	R3 (2)

RT23	West	Sgrillozzo (Grosseto, Italy)	42.537	11.406	H1	MW297584	1	R2 (2)
RT24	West	Massa Marittima (Grosseto, Italy)	43.051	10.889	H1	MW297585	1	/
RT25	West	Portiglione (Grosseto, Italy)	42.881	10.781	H1	MW297586	1	R2 (1). R4 (1)
RT26	West	Follonica (Grosseto, Italy)	42.930	10.762	H1	MW297587	1	R2 (2)
RT27	West	Pian D'Alma (Grosseto, Italy)	42.856	10.775	H1	MW297588	1	R2 (1). R4 (1)
RT29	West	Cerboli (Livorno, Italy)	42.858	10.547	H1	MW297589	1	R2 (2)
RT30	West	Firenze (Italy)	43.785	11.218	H1	MW297590	1	R2 (1). R4 (1)
RT31	West	Siena (Italy)	43.314	11.330	H2	MW297591	1	R3 (2)
RT53	West	Podere Corso (Grosseto, Italy)	42.659	11.238	H1	MW297592	1	/
RMA01	West	Torrette (Pesaro e Urbino, Italy)	43.793	13.085	H1	MW297563	1	R2 (2)
RMA02	West	Abbadia di Fiastra (Macerata, Italy)	43.228	13.430	H1	MW297564	1	R2 (2)
RSA08	West	Limbara (Olbia-Tempio, Italy)	40.856	9.158	H1	MW297568	1	/
RSA03	West	Alghero (Italy)	40.587	8.370	H1	MW297565	1	R3 (2)
RSA07	West	Alghero (Italy)	40.587	8.370	H1	MW297566	1	R3 (2)
RSA09	West	Alghero (Italy)	40.587	8.370	H1	MW297567	1	/
RSA12	West	Monti (Olbia-Tempio, Italy)	40.805	9.321	H11	MW297569	1	/

<i>RSA21</i>	<i>West</i>	Aglientu (Olbia-Tempio, Italy)	41.079	9.114	H1	MW297570	1	/
<i>RU03</i>	<i>West</i>	Città di Castello (Perugia, Italy)	43.496	12.249	H1	MW297593	1	R2 (2)
<i>RU04</i>	<i>West</i>	Città della Pieve (Perugia, Italy)	42.947	12.006	H3	MW297594	1	R3 (2)
<i>RL77</i>	<i>West</i>	Rieti (Italy)	42.367	12.898	H1	MW297601	1	/
<i>RL35</i>	<i>West</i>	Belmonte Castello (Frosinone, Italy)	41.574	13.800	H1	MW297595	1	R3 (1). R5(1)
<i>RL78</i>	<i>East/Central</i>	Puzzali (Frosinone, Italy)	41.311	13.766	H22	MW297616	1	/
<i>RL54</i>	<i>West</i>	Itri (Latina, Italy)	41.290	13.532	H1	MW297599	1	R2 (2)
<i>RL36</i>	<i>West</i>	Fogolino (Roma, Italy)	41.461	12.697	H1	MW297596	1	R2 (1). R4 (1)
<i>RL37</i>	<i>West</i>	Fogolino (Roma, Italy)	41.461	12.697	H1	MW297597	1	R3 (1). R5(1)
<i>RL76</i>	<i>West</i>	Morlupo (Roma, Italy)	42.149	12.503	H1	MW297600	1	R3 (2)
<i>RL45</i>	<i>West</i>	Capena (Roma, Italy)	42.141	12.539	H1	MW297598	1	R3 (2)
<i>RL81</i>	<i>West</i>	Monti Lepini (Latina, Italy)	41.602	13.094	H1	MW297602	1	R3 (2)
<i>RL209</i>	<i>West</i>	Sperlonga (Latina, Italy)	41.247	13.466	H1	MW297603	1	R1 (1). R2 (1)
<i>RL210</i>	<i>West</i>	Spadellata (Roma, Italy)	41.514	12.607	H1	MW297604	1	/
<i>RL211</i>	<i>West</i>	Spadellata (Roma, Italy)	41.514	12.607	H1	MW297605	1	R3 (2)
<i>RL216</i>	<i>West</i>	Monte Piano(Roma, Italy)	41.255	13.471	H1	MW297606	1	/

RL229	West	Monte Piano(Roma, Italy)	41.247	13.466	H1	MW297607	1	/
RL230	West	Roma (Italy)	41.896	12.577	H1	MW297608	1	R2 (2)
RL234	West	Roma (Italy)	41.896	12.577	H1	MW297611	1	R3 (2)
RL231	West	Monte Piano(Roma, Italy)	41.247	13.466	H1	MW297609	1	R3 (2)
RL232	West	Roma (Italy)	41.935	12.644	H1	MW297610	1	/
RL235	East/Central	San Giorgio a Liri (Frosinone, Italy)	41.416	13.764	H21	MW297617	1	R2 (2)
RL236	West	Castel Porziano (Roma, Italy)	41.744	12.399	H1	MW297612	1	/
RL237	West	Roma (Italy)	41.976	12.483	H5	MW297554	1	R2 (1). R4 (1)
RL238	West	Nettuno (Roma, Italy)	41.451	12.764	H1	MW297613	1	/
RL239	West	Fregene (Roma, Italy)	41.855	12.198	H1	MW297614	1	R2 (2)
RL240	West	Manziana (Roma, Italy)	42.131	12.126	H1	MW297615	1	R2 (2)
RC56	East/Central	Ailano (Caserta, Italy)	41.385	14.213	H21	MW297635	1	R1 (1). R2 (1)
RC46	East/Central	Piedimonte Matese (Caserta, Italy)	41.388	14.404	H21	MW297625	1	/
RC47	East/Central	Monte Orfano (Caserta, Italy)	41.388	14.404	H21	MW297626	1	/
RC50	East/South-east-north	Monte Orfano (Caserta, Italy)	41.388	14.404	H32	MW297629	1	R1 (1). R2 (1)
RC48	East/Central	San Gregorio Matese (Caserta, Italy)	41.388	14.409	H21	MW297627	1	R1 (1). R4 (1)

RC45	East/Central	Piedimonte Matese(Caserta, Italy)	41.348	14.375	H21	MW297624	1	R1 (1). R2 (1)
RC55	East/Central	Cusano Mutri (Benevento, Italy)	41.316	14.528	H21	MW297634	1	R3 (2)
RC52	East/South-east-north	Postiglione (Salerno, Italy)	40.554	15.216	H32	MW297631	1	/
RC54	East/South-east-north	Postiglione (Salerno, Italy)	40.554	15.216	H32	MW297633	1	/
RC51	East/South-east-north	Castelcivita (Salerno, Italy)	40.496	15.228	H31	MW297630	1	R1 (1). R2 (1)
RC53	East/South-east-north	Monti Alburni (Salerno, Italy)	40.474	15.276	H31	MW297632	1	R4 (2)
RC49	East/South-east-north	Monticello (Caserta, Italy)	41.119	14.350	H31	MW297628	1	R3 (2)
RM01	East/South-east-north	Longano (Isernia, Italy)	41.523	14.266	H32	MW297636	1	R1 (1). R2 (1)
RM02	East/South-east-north	Bojano(Campobasso, Italy)	41.492	14.464	H32	MW297637	1	R1 (1). R2 (1)
RM03	East/South-east-north	Colle San Leonardo (Chieti, Italy)	41.568	14.287	H32	MW297638	1	R3 (1). R6 (1)
RB07	East/South-east-north	Maratea (Potenza, Italy)	40.071	15.707	H28	MW297649	1	/

RB08	East/South-east-north	Lauria (Potenza, Italy)	40.044	15.845	H32	MW297650	1	/
RB09	East/South-east-north	Fiumicello Santa Venere (Potenza, Italy)	39.999	15.700	H32	MW297651	1	/
RP09	East/South-east-north	Peschici (Foggia, Italy)	41.947	16.013	H32	MW297652	1	R1 (1). R4 (1)
RP17	East/South-east-north	Ischitella(Foggia, Italy)	41.906	15.899	H32	MW297653	1	/
RP19	East/South-east-north	Torre Dell'Orso (Lecce, Italy)	40.164	18.245	H32	MW297654	1	R1 (2)
RP25	East/South-east-north	Uggiano la Chiesa (Lecce, Italy)	40.129	18.473	H30	MW297655	1	/
RP26	East/South-east-north	Masseria Cesine. Vernole (Lecce, Italy)	40.347	18.337	H32	MW297656	1	/
RP28	East/South-east-north	Ruvo di Puglia(Bari, Italy)	41.034	16.495	H25	MW297657	1	/
RP32	East/South-east-north	Masseria Pellicciari(Bari, Italy)	40.875	16.442	H25	MW297660	1	/
RP34	East/South-east-north	Castel del Monte (Barletta-Andria-Trani, Italy)	41.072	16.266	H25	MW297661	1	/
RP35	East/South-east-north	Zapponeta (Foggia, Italy)	41.435	15.998	H25	MW297662	1	/

RP30	East/South-east-north	Invaso del Locone (Barletta-Andria-Trani, Italy)	41.064	16.009	H25	MW297658	1	/
RP36	East/South-east-north	Trullo di Sopra (Bari, Italy)	40.972	16.326	H24	MW297663	1	/
RP31	East/South-east-north	Mottola (Taranto, Italy)	40.621	17.062	H23	MW297659	1	/
RCL124	East/South-east-north	Cetraro (Taranto, Italy)	39.541	15.993	H32	MW297648	1	/
RCL10	East/Sicily	Lattarico (Cosenza, Italy)	39.464	16.138	H19	MW297641	1	/
RCL08	East/South-east-north	Montalto Uffugo (Cosenza, Italy)	39.407	16.157	H25	MW297640	1	/
RCL123	East/South-east-north	Falconara (Cosenza, Italy)	39.275	16.093	H32	MW297647	1	R1 (1). R4 (1)
RCL120	East/South-east-north	Fiumefreddo Bruzio (Cosenza, Italy)	39.232	16.073	H32	MW297644	1	/
RCL121	East/South-east-north	Fiumefreddo Bruzio (Cosenza, Italy)	39.232	16.073	H32	MW297645	1	/
RCL122	East/South-east-north	Fiumefreddo Bruzio (Cosenza, Italy)	39.232	16.073	H32	MW297646	1	/
RCL11	East/South-east-north	San Luca (Reggio Calabria, Italy)	38.167	16.000	H32	MW297642	1	/
RCL12	East/Sicily	Brancaleone (Reggio Calabria, Italy)	37.971	16.098	H19	MW297643	1	R1 (1). R4 (1)

RCL02	East/South-east-north	Palizzi(Reggio Calabria, Italy)	37.966	15.988	H32	MW297639	1	/
RS171	East/Sicily	Monti Peloritani (Messina, Italy)	38.050	15.333	H20	MW297674	1	R1 (2)
RS14	East/Sicily	Gole Alcantara (Catania, Italy)	37.877	15.177	H14	MW297664	1	R4 (2)
RS43	East/Sicily	Saline di Priolo (Siracusa, Italy)	37.146	15.220	H14	MW297667	1	R4 (2)
RS219	East/Sicily	Vittoria (Ragusa, Italy)	36.966	14.565	H14	MW297676	1	/
RS162	East/Sicily	Manfria (Caltanissetta, Italy)	37.113	14.154	H17	MW297673	1	/
RS27	East/Sicily	Scala dei Turchi (Agrigento, Italy)	37.294	13.469	H14	MW297665	1	/
RS28	East/Sicily	Scala dei Turchi (Agrigento, Italy)	37.294	13.469	H14	MW297666	1	/
RS156	East/Sicily	Siculiana (Agrigento, Italy)	37.339	13.391	H18	MW297672	1	/
RS70	East/Sicily	Favignana (Trapani, Italy)	37.945	12.296	H20	MW297671	1	/
RS55	East/Sicily	Monte Cofano (Trapani, Italy)	38.099	12.666	H20	MW297670	1	/
RS53	East/Sicily	San Vito lo Capo (Trapani, Italy)	38.119	12.734	H20	MW297669	1	R4 (2)
RS253	East/Sicily	Cerda (Palermo, Italy)	37.895	13.828	H15	MW297677	1	/
RS45	East/Sicily	Cefalù (Palermo, Italy)	38.024	14.055	H14	MW297668	1	R1 (1). R4 (1)

RS269	East/Sicily	Monti Nebrodi (Messina, Italy)	37.890	14.652	H14	MW297678	1	/
RS295	East/Sicily	Lipari (Messina, Italy)	38.483	14.946	H16	MW297679	1	/
RL79	West	Ventotene (Latina, Italy)	40.798	13.432	H1	KY923286	2	/
RL22	West	Ponza (Latina, Italy)	40.896	12.959	H1	KY923284	2	/
RL66	West	Ponza (Latina, Italy)	40.896	12.959	H1	KY923285	2	/
RL80	West	Palmarola (Latina, Italy)	40.936	12.859	H1	KY923287	2	/
RS276	East/Sicily	Vulcano (Messina, Italy)	38.420	14.958	H14	KY923282	2	/
RS85	East/Sicily	Favignana (Trapani, Italy)	37.945	12.296	H20	KY923281	2	/
RS296	East/Sicily	Ragusa (Italy)	36.926	14.725	H14	KY923283	2	/
Hv15	East/South-east-north	Padriciano (Italy)	45.641	13.827	H25	LN552059	3	/
Hv33	East/South-east-north	Talponedo (Italy)	45.722	12.469	H32	LN552077	3	/
Hv17	East/South-east-north	Pavia (Italy)	45.174	9.166	H32	LN552061	3	/
Hv22	East/South-east-north	Mantova (Italy)	45.168	10.807	H32	LN552066	3	/
Hv44	East/South-east-north	Aosta (Italy)	45.728	7.301	H31	LN552088	3	/
Hv5	East/South-east-north	Lentiai (Italy)	46.048	12.025	H32	LN552049	3	/
Hv34	West	Tombolo (Italy)	45.646	11.837	H1	LN552078	3	/

Hv27	East/South-east- north	Valle Strona (Italy)	45.608	8.811	H31	LN552071	3	/
Hv28	West	Asti (Italy)	44.894	8.235	H1	LN552072	3	/
Hv43	West	Alessa/ria (Italy)	44.912	8.593	H1	LN552087	3	/
Hv21	East/South-east- north	Montenovo (Italy)	44.073	12.301	H32	LN552065	3	/
Hv40	East/South-east- north	Monzuno (Italy)	44.278	11.274	H32	LN552084	3	/
Hv42	East/South-east- north	San Bartolomeo in Bosco (Italy)	44.735	11.637	H32	LN552086	3	/
Hv4	West	Pisa (Italy)	43.696	10.349	H1	LN552048	3	/
Hv19	West	Capraia (Italy)	43.029	9.827	H1	LN552063		/
Hv30	West	Campi Bisenzio (Italy)	43.829	11.138	H1	LN552074	3	/
Hv35	West	Calci (Italy)	43.714	10.5	H1	LN552079	3	/
Hv31	West	Lamone (Italy)	43.857	10.297	H1	LN552075	3	/
Hv45	West	Asinara (Italy)	41.081	8.293	H1	LN552089	3	/
Hv6	West	Sefro (Italy)	43.149	12.95	H1	LN552050	3	/
Hv10	East/South-east- north	Ancona (Italy)	43.605	13.543	H32	LN552054	3	/
Hv14	East/South-east- north	Ancona (Italy)	43.606	13.543	H32	LN552058	3	/
Hv8	West	Monterano (Italy)	42.138	12.099	H1	LN552052	3	/
Hv36	West	Roma (Italy)	41.913	12.482	H1	LN552080	3	/

Hv50	East/South-east-north	Pescara (Italy)	42.461	14.185	H32	LN552094	3	/
Hv2	East/Central	Pietraroja (Italy)	41.346	14.552	H21	LN552046	3	/
Hv7	East/Central	Avellino (Italy)	40.916	14.758	H21	LN552051	3	/
Hv11	East/South-east-north	Cava dei Tirreni (Italy)	40.695	14.717	H32	LN552055	3	/
Hv16	East/Central	Amalfi (Italy)	40.636	14.606	H21	LN552060	3	/
Hv18	East/South-east-north	Palinuro (Italy)	40.03	15.282	H32	LN552062	3	/
Hv51	East/Central	Soccavo (Italy)	40.852	14.206	H21	LN552095	3	/
Hv1	East/South-east-north	Lagonegro (Italy)	40.125	15.77	H29	LN552045	3	/
Hv9	East/South-east-north	Cetraro (Italy)	39.541	15.993	H32	LN552053	3	/
Hv12	East/South-east-north	Vallone Argentino (Italy)	39.428	16.126	H32	LN552056	3	/
Hv46	East/South-east-north	San Nicola Arcella (Italy)	39.843	15.797	H32	LN552090	3	/
Hv13	East/South-east-north	Bovino (Italy)	41.253	15.345	H32	LN552057	3	/
Hv24	East/South-east-north	Lecce (Italy)	40.356	18.147	H32	LN552068	3	/
Hv47	East/Sicily	Lago Spartà (Italy)	37.955	14.715	H14	LN552091	3	/

Hv20	East/Sicily	Iria (Italy)	38.038	14.637	H14	LN552064	3	/
Hv25	West	Blegiers (France)	44.18	6.416	H1	LN552069	3	/
Hv26	West	Montagnac la Crempx (France)	44.98	0.544	H1	LN552070	3	/
Hv29	West	Brusques (France)	43.772	2.944	H1	LN552073	3	/
Hv37	West	Castelnau Chalosse (France)	43.667	-0.846	H1	LN552081	3	/
Hv38	West	Millau (France)	44.105	3.046	H1	LN552082	3	/
Hv39	West	Larzac (France)	43.876	3.306	H1	LN552083	3	/
Hv48	West	Greolieres (France)	43.797	6.943	H1	LN552092	3	/
Hv49	West	Clumanc (France)	44.022	6.377	H1	LN552093	3	/
Hv23	West	Calanca (France)	41.651	8.894	H1	LN552067	3	/
Hv41	West	Biguglia (France)	42.622	9.444	H1	LN552085	3	/
Hv32	East/South-east- north	Obzova (France)	45.003	14.706	H27	LN552076	3	/
Hv3	West	Arties (Spain)	42.701	0.869	H1	LN552047	3	/
V24	East/South-east- north	Avio (Italy)	45.727	10.945	H32	FJ430636	4	/
V19	East/South-east- north	Doberdò del Lago (Italy)	45.844	13.543	H25	FJ430655	4	/
V1	East/South-east- north	Cascina Settimo (Italy)	45.255	9.215	H32	FJ430644	4	/
V3	East/South-east- north	Ardenno (Italy)	46.167	9.651	H32	FJ430622	4	/

V18	<i>East/South-east-north</i>	Capiago Intimiano (Italy)	45.772	9.128	H32	FJ430651	4	/
V20	<i>East/South-east-north</i>	Travacò Siccomarino (Italy)	45.151	9.158	H32	FJ430633	4	/
V25	<i>East/South-east-north</i>	Limbiate (Italy)	45.597	9.114	H32	FJ430637	4	/
V26	<i>East/South-east-north</i>	Limbiate (Italy)	45.597	9.114	H32	FJ430638	4	/
V13	<i>East/South-east-north</i>	Lentiai (Italy)	46.048	12.025	H32	FJ430641	4	/
V14	<i>East/South-east-north</i>	Lentiai (Italy)	46.048	12.025	H32	FJ430643	4	/
V15	<i>East/South-east-north</i>	Lentiai (Italy)	46.049	12.025	H32	FJ430645	4	/
V16	<i>East/South-east-north</i>	Lentiai (Italy)	46.049	12.025	H32	FJ430646	4	/
V2	<i>West</i>	Voltaggio (Italy)	44.628	8.843	H1	FJ430648	4	/
V21	<i>East/South-east-north</i>	Briga Novarese (Italy)	45.739	8.447	H31	FJ430634	4	/
V42	<i>West</i>	Villavernia (Italy)	44.823	8.855	H12	FJ430660	4	/
V23	<i>East/South-east-north</i>	Comacchio (Italy)	44.69	12.176	H32	FJ430635	4	/

V27	<i>East/South-east-north</i>	Travo (Italy)	44.861	9.547	H32	FJ430639	4	/
V4	<i>West</i>	Isola di Montecristo (Italy)	42.341	10.318	H1	FJ430631	4	/
V6	<i>West</i>	Isola di Montecristo (Italy)	42.341	10.318	H1	FJ430630	4	/
V7	<i>West</i>	Isola di Montecristo (Italy)	42.341	10.318	H1	FJ430627	4	/
V8	<i>West</i>	Isola di Montecristo (Italy)	42.341	10.318	H1	FJ430632	4	/
V33	<i>West</i>	Pisa (Italy)	43.696	10.349	H1	FJ430652	4	/
V12	<i>West</i>	Asinara (Italy)	41.081	8.293	H1	FJ430642	4	/
V22	<i>West</i>	Asinara (Italy)	41.081	8.293	H1	FJ430640	4	/
V41	<i>West</i>	Teulada (Spain)	38.969	8.763	H9	FJ430659	4	/
V38	<i>West</i>	Roccamassima (Italy)	41.68	12.921	H4	FJ430658	4	/
V17	<i>East/Central</i>	Salerno (Italy)	40.687	14.759	H21	FJ430647	4	/
V35	<i>East/Central</i>	Avella (Italy)	40.961	14.61	H21	FJ430649	4	/
V36	<i>East/Central</i>	Amalfi (Italy)	40.636	14.606	H21	FJ430650	4	/
V39	<i>East/South-east-north</i>	Lago Laceno (Italy)	40.804	15.107	H26	FJ430656	4	/
V40	<i>East/South-east-north</i>	Lago di Lesina (Italy)	41.896	15.379	H32	FJ430657	4	/
V37	<i>East/Sicily</i>	Lago Spartà (Italy)	37.955	14.715	H14	FJ430653	4	/
V9	<i>West</i>	Chizé (France)	46.124	-0.356	H1	FJ430628	4	/
V10	<i>West</i>	Chizé (France)	46.124	-0.357	H1	FJ430629	4	/
V11	<i>West</i>	Chizé (France)	46.124	-0.357	H1	FJ430621	4	/
V28	<i>West</i>	/	42.057	9.029	H1	FJ430654	4	/

V29	West	Molinos (Spain)	41.603	0.685	H1	FJ430623	4		/
V30	West	Molinos (Spain)			H1	FJ430624	4		/
V31	West	Molinos (Spain)			H1	FJ430625	4		/
V32	West	Pobellà (Spain)	42.374	1.11	H1	FJ430626	4		/
A1	West	Montanuy (Catalonia. Spain)	42.46555	0.6941	H1	OR229541	this study	AR	HV02 1
A4	West	Latasa (Navarre. Spain)	42.95330	-1.8222	H1	OR229542	this study	AR	HV01 1
A6	West	Irun (Gipuzkoa. Spain)	43.32691	-1.8125	H1	OR229543	this study	AR	HV03 1
CP2	West	Tuixent (Catalonia. Spain)	42.22845	1.5699	H1	OR229544	this study	UB	CRBA- 43061
CP4	West	Arties (Catalonia. Spain)	42.70085	0.8674	H1	OR229545	this study	UB	CRBA- 43072
CP5	West	La Torre de Cabdella (Catalonia. Spain)	42.42647	0.9840	H1	OR229546	this study	UB	CRBA- 43392
CP6	West	Bagà (Catalonia. Spain)	42.25451	1.8549	H1	OR229547	this study	UB	CRBA- 52316
AR1	West	Escarrilla (Aragon. Spain)	42.73848	-0.3147	H1	OR229548	this study	fieldwork	/
AR2	West	Panticosa (Aragon. Spain)	42.72936	-0.2703	H1	OR229549	this study	fieldwork	/
AR3	West	Benasque (Aragon. Spain)	42.62993	-0.1076	H1	OR229550	this study	fieldwork	/
AR4	West	Torla (Aragon. Spain)	42.66256	0.5842	H1	OR229551	this study	fieldwork	/
C3	West	Salardú (Catalonia. Spain)	42.70715	0.8959	H1	OR229552	this study	MCB	MZB 2010-1425
C4	West	Torre de Cabdella (Catalonia. Spain)	42.42261	0.9819	H10	OR229553	this study	MCB	MZB 2014-1957

									MZB
C5	West	Berga (Catalonia. Spain)	42.10554	1.8431	H1		this study	MCB	2014-1964-B y -
						OR229554			T
C6	West	Gisclareny (Catalonia. Spain)	42.26934	1.8052	H1		this study	MCB	MZB
						OR229555			2017-0156
C7	West	Bagà (Catalonia. Spain)	42.25679	1.8479	H1		this study	MCB	MZB
						OR229556			2019-0703
G1	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.31868	-1.7678	H1		this study	fieldwork	/
						OR229557			
G2	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.31868	-1.7625	H1		this study	fieldwork	/
						OR229558			
G3	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33130	-1.7558	H1		this study	fieldwork	/
						OR229559			
G4	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33123	-1.7560	H1		this study	fieldwork	/
						OR229560			
G5	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33120	-1.7563	H1		this study	fieldwork	/
						OR229561			
G6	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33120	-1.7563	H1		this study	fieldwork	/
						OR229562			
G7	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33123	-1.7560	H1		this study	fieldwork	/
						OR229563			

G8	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.32722	-1.7563	H1	OR229564	this study	fieldwork	/
G9	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.32971	-1.7634	H1	OR229565	this study	fieldwork	/
G10	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.3302	-1.7646	H1	OR229566	this study	fieldwork	/
G11	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33130	-1.7558	H1	OR229567	this study	fieldwork	/
G12	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.33066	-1.7647	H1	OR229568	this study	fieldwork	/
G13	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.30206	-1.7549	H1	OR229569	this study	fieldwork	/
G14	West	Aiako Harriak (Irun.Gipuzkoa. Spain)	43.31868	-1.7625	H1	OR229570	this study	fieldwork	/
IP3	West	Orx (France)	43.59037	-1.3866	H1	OR229571	this study	AR	/
IP5	West	Messanges (France)	43.80951	-1.3970	H1	OR229572	this study	AR	/
IP6	West	Messanges (France)	43.80573	-1.3945	H6	OR229573	this study	AR	/
IP8	West	Bayonne (France)	43.47307	-1.4811	H1	OR229574	this study	AR	/
IP9	West	Bayonne (France)	43.46740	-1.4801	H1	OR229575	this study	AR	/
N1	West	Cía (Navarre. Spain)	42.93523	-1.7567	H1	OR229576	this study	AR	/
N2	West	Arakil (Navarre. Spain)	42.91728	-1.8429	H1	OR229577	this study	AR	/
N3	West	Urritza (Navarre. Spain)	42.96165	-1.8292	H1	OR229578	this study	AR	/
N4	West	Udabe (Navarre. Spain)	42.97085	-1.8248	H1	OR229579	this study	AR	/

N5	West	Etxarren (Navarre. Spain)	42.91629	-1.8485	H1	OR229580	this study	AR	/
N7	West	Ostiz (Navarre. Spain)	42.92040	-1.6253	H1	OR229581	this study	AR	/
P1	East/Sicily	Parco Nazionale dell'Aspromonte (Italy)	38.2902	16.037	H14	OR229582	this study	CEFE	BEV.14548
P7	West	Calvi (Corse. France)	42.56765	8.7572	H1	OR229583	this study	CEFE	BEV.5
P10	West	Pirio (Tuarelli. Corse. France)	42.37545	8.7513	H8	OR229584	this study	CEFE	BEV.22
P14	West	Fango (Corse. France)	42.40176	8.6976	H1	OR229585	this study	CEFE	BEV.59
P15	West	Sagone (Corse. France)	42.11016	8.6865	H1	OR229586	this study	CEFE	BEV.857
P16	West	Aleria (Corse. France)	42.15085	9.5066	H1	OR229587	this study	CEFE	BEV.8264
P17	West	Route D81 (Corse. France)	42.46638	8.7566	H1	OR229588	this study	CEFE	BEV.8266
P18	West	Galéria (Corse. France)	42.41035	8.6486	H1	OR229589	this study	CEFE	BEV.8353
P20	West	Biguglia (Corse. France)	42.60742	9.4847	H1	OR229590	this study	CEFE	BEV.8562
P22	West	Palombaggia (Corse. France)	41.56552	9.2773	H8	OR229591	this study	CEFE	BEV.10933
P23	West	Losari (Corse. France)	42.63338	9.0058	H12	OR229592	this study	CEFE	BEV.11044
P24	West	Urtaca (Corse. France)	42.62197	9.1202	H1	OR229593	this study	CEFE	BEV.11051
P25	West	Golf de Sperone (Bonifacio. Corse. France)	41.37320	9.2102	H1	OR229594	this study	CEFE	BEV.11060
P27	West	Galéria (Corse. France)	42.41671	8.6584	H1	OR229595	this study	CEFE	BEV.11295
P28	West	Frassigna (Corse. France)	42.4495	8.8289	H1	OR229596	this study	CEFE	BEV.10149
P29	West	Galéria (Corse. France)	42.3518	8.6461	H1	OR229597	this study	CEFE	BEV.10892
P30	West	Aleria (Corse. France)	42.105	9.5236	H1	OR229598	this study	CEFE	BEV. T4452

P31	West	Travo (Corse. France)	41.90607	9.3919	H1	OR229599	this study	CEFE	BEV. T4453
P32	West	St Julien de Rodelle (France)	44.49945	2.6630	H1	OR229600	this study	CEFE	BEV.8
P37	West	Le Caylar (France)	43.85700	3.3176	H1	OR229601	this study	CEFE	BEV.13
P49	West	Clamensane (France)	44.3241	6.0692	H1	OR229602	this study	CEFE	BEV.280
P53	West	Florac (France)	44.31460	3.6183	H1	OR229603	this study	CEFE	BEV.6201
P64	West	Gréolières (France)	43.78712	6.9738	H1	OR229604	this study	CEFE	BEV.8143
P65	West	Andon (France)	43.78266	6.8475	H1	OR229605	this study	CEFE	BEV.8144
P66	West	St-Sauveur sur Tinée (France)	44.08873	7.0422	H1	OR229606	this study	CEFE	BEV.8145
P67	West	Rosignano Marittimo (Italy)	43.38033	10.481	H1	OR229607	this study	CEFE	BEV.8263
P68	West	Larzac (France)	44.09341	3.1171	H13	OR229608	this study	CEFE	BEV.8563
P69	West	Rochefort-en-Valdaine (France)	44.5164	4.8611	H1	OR229609	this study	CEFE	BEV.8873
P70	West	Brusques (France)	43.76797	2.9533	H1	OR229610	this study	CEFE	BEV.8897
P72	West	Commune de Montagnac la Crempx (Dordogne. France)	44.98050	0.5463	H1	OR229611	this study	CEFE	BEV.9093
P74	West	Millau (France)	44.09535	3.0466	H7	OR229612	this study	CEFE	BEV.10391
P75	West	Gatuzières (France)	44.17984	3.5104	H1	OR229613	this study	CEFE	BEV.11014
P76	West	Gatuzières (France)	44.17984	3.5104	H1	OR229614	this study	CEFE	BEV.11015
P77	West	Route D107 entre Blegiers et Prads-Haute-Bleone (France)	44.20317	6.4230	H1	OR229615	this study	CEFE	BEV.11025
P78	West	Castellane (France)	43.78525	6.7460	H1	OR229616	this study	CEFE	BEV.11026

P79	West	Orlu (France)	42.70100	1.8903	H1	OR229617	this study	CEFE	BEV.11059
P82	West	Larzac (France)	43.98176	3.1432	H1	OR229618	this study	CEFE	BEV.11525
P85	West	Massegros (France)	44.30779	3.1724	H1	OR229619	this study	CEFE	BEV.9251
P87	West	Bessières (France)	43.78675	1.5770	H1	OR229620	this study	CEFE	BEV.14443

Publications referred as numbers:

1. Senczuk, G.; Gramolini, L.; Avella, I.; Mori, E.; Menchetti, M.; Aloise, G.; Castiglia, R. No association between candidate genes for color determination and color phenotype in *Hierophis viridiflavus*, and characterization of a contact zone. *J. Zoolog. Syst. Evol.* **2021**, *59*(3), 748–759.
2. Avella, I.; Castiglia, R.; Senczuk, G. Who are you? The genetic identity of some insular populations of *Hierophis viridiflavus* s.l. from the Tyrrhenian Sea. *Acta Herpetol.* **2017**, *12*, 209–214.
3. Mezzasalma, M.; Dall'Asta, A.; Loy, A.; Cheylan, M.; Lymberakis, P.; Zuffi, M.A.L.; Tomovic, L.; Odierna, G.; Guarino, F.M. A sisters' story: Comparative phylogeography and taxonomy of *Hierophis viridiflavus* and *H. gemonensis* (Serpentes, Colubridae). *Zool. Scr.* **2015**, *44*, 495–508.
4. Rato, C.; Zuffi, M.A.L.; Corti, C.; Fornasiero, S.; Gentilli, A.; Razzetti, E.; Scali, S.; Carretero, M.A.; Harris, D.J. Phylogeography of the European Whip Snake, *Hierophis viridiflavus* (Colubridae), using mtDNA and nuclear DNA sequences. *Amphib-reptil.* **2009**, *30*, 283– 289.

Collections referred with acronyms: UB - Universitat de Barcelona (Barcelona, Spain); MCB - Museu de Ciències Naturals de Barcelona (Barcelona, Spain); CEFE - Collection of the Biogeography and Ecology of the Vertebrates team in Montpellier (Montpellier, France); AR - Aranzadi Science Collection (Donostia, Spain).

Table S2 – Model ranking obtained from R package ENMeval in order to address Maxent model parameterization. FC= Feature class, RM= Regularization multiplier, AUC= Area under the curve, OR10= omission rate of testing localities at the 10% training threshold, AICc = Akaike’s Information Criterion.

	fc	rm	auc.train	cibi.train	auc.diff	avgauc.diff	sdauc.val	avgauc.val	sdcbi.val	avgcibi.val	sdor.10p	avgor.10p	sdor.mtp	avgor.mtp	sd	AICc	delta.AICc	w.AIC	ncoef
6	LQHPT	0.5	0.792	1.000	0.007	0.008	0.789	0.008	0.998	0.001	0.108	0.013	0.000	0.000		811.981	0	1	89
37	L	3.5	0.665	0.872	0.006	0.005	0.665	0.006	0.854	0.055	0.098	0.013	0.000	0.000		843.009	3.102	0	3
40	LQH	3.5	0.753	1.000	0.008	0.006	0.752	0.008	0.997	0.001	0.100	0.018	0.000	0.000		823.131	11.150	0	19
27	LQ	2.5	0.689	0.897	0.006	0.005	0.690	0.006	0.883	0.060	0.099	0.011	0.000	0.001		839.233	27.252	0	5
39	LQ	3.5	0.669	0.861	0.006	0.005	0.672	0.009	0.849	0.075	0.101	0.011	0.000	0.000		842.382	30.400	0	4
44	Q	4	0.645	0.680	0.006	0.005	0.645	0.006	0.663	0.097	0.101	0.010	0.000	0.000		846.467	34.486	0	3
36	LQHPT	3	0.767	1.000	0.008	0.007	0.764	0.009	0.993	0.006	0.100	0.014	0.000	0.000		819.579	75.981	0	32
28	LQH	2.5	0.756	1.000	0.008	0.006	0.755	0.008	0.997	0.002	0.101	0.015	0.000	0.000		822.002	100.209	0	23
35	LQHP	3	0.756	1.000	0.008	0.006	0.754	0.008	0.997	0.001	0.100	0.016	0.000	0.000		822.107	101.261	0	15
34	LQH	3	0.755	1.000	0.008	0.006	0.753	0.008	0.997	0.002	0.099	0.014	0.000	0.000		822.420	104.393	0	17
41	LQHP	3.5	0.754	1.000	0.008	0.006	0.752	0.008	0.996	0.002	0.100	0.017	0.000	0.000		822.833	108.518	0	18
47	LQHP	4	0.752	1.000	0.008	0.006	0.751	0.008	0.996	0.002	0.101	0.018	0.000	0.000		823.349	113.680	0	15
46	LQH	4	0.752	1.000	0.008	0.006	0.751	0.008	0.996	0.003	0.101	0.019	0.000	0.000		823.672	116.906	0	17
3	LQ	0.5	0.718	0.988	0.006	0.005	0.717	0.006	0.975	0.020	0.101	0.017	0.000	0.000		831.916	199.348	0	7
9	LQ	1	0.711	0.898	0.006	0.005	0.711	0.005	0.865	0.097	0.099	0.013	0.000	0.000		834.618	226.375	0	7
15	LQ	1.5	0.705	0.811	0.006	0.005	0.705	0.005	0.812	0.124	0.098	0.014	0.000	0.000		836.08	241.013	0	5
21	LQ	2	0.698	0.822	0.006	0.005	0.698	0.006	0.822	0.087	0.100	0.012	0.000	0.001		837.623	256.418	0	5
12	LQHPT	1	0.784	1.000	0.007	0.008	0.781	0.008	0.994	0.002	0.104	0.018	0.000	0.000		814.597	261.611	0	69
33	LQ	3	0.680	0.868	0.006	0.005	0.681	0.008	0.860	0.070	0.099	0.012	0.000	0.000		840.794	288.128	0	4
1	L	0.5	0.667	0.906	0.005	0.005	0.667	0.006	0.880	0.068	0.100	0.011	0.000	0.000		842.380	303.993	0	4
7	L	1	0.667	0.884	0.005	0.005	0.667	0.006	0.872	0.064	0.099	0.010	0.000	0.000		842.464	304.827	0	4
13	L	1.5	0.667	0.872	0.005	0.005	0.667	0.006	0.863	0.064	0.099	0.010	0.000	0.000		842.534	305.582	0	3
19	L	2	0.667	0.868	0.005	0.005	0.666	0.006	0.863	0.055	0.099	0.011	0.000	0.000		842.646	306.651	0	3
25	L	2.5	0.666	0.872	0.006	0.005	0.666	0.006	0.856	0.056	0.099	0.013	0.000	0.000		842.769	307.786	0	3
31	L	3	0.666	0.871	0.006	0.005	0.665	0.006	0.854	0.054	0.099	0.013	0.000	0.000		842.881	308.996	0	3
43	L	4	0.664	0.871	0.006	0.005	0.664	0.006	0.850	0.056	0.098	0.014	0.000	0.000		843.144	311.628	0	3
45	LQ	4	0.664	0.871	0.006	0.005	0.666	0.008	0.852	0.059	0.099	0.012	0.000	0.000		843.144	311.628	0	3
2	Q	0.5	0.657	0.818	0.005	0.005	0.657	0.005	0.783	0.036	0.100	0.011	0.000	0.000		845.618	336.371	0	4
8	Q	1	0.658	0.802	0.005	0.005	0.657	0.006	0.782	0.039	0.099	0.011	0.000	0.000		845.709	337.276	0	4
14	Q	1.5	0.657	0.792	0.005	0.005	0.656	0.006	0.768	0.038	0.099	0.011	0.000	0.000		845.790	338.094	0	3
20	Q	2	0.655	0.771	0.005	0.005	0.655	0.006	0.749	0.048	0.100	0.011	0.000	0.000		845.906	339.246	0	3
26	Q	2.5	0.653	0.751	0.005	0.005	0.653	0.006	0.731	0.060	0.100	0.011	0.000	0.000		846.031	340.500	0	3
32	Q	3	0.651	0.734	0.005	0.005	0.651	0.006	0.711	0.076	0.100	0.011	0.000	0.000		846.166	341.854	0	3
38	Q	3.5	0.648	0.708	0.005	0.005	0.648	0.006	0.685	0.088	0.101	0.010	0.000	0.000		846.312	343.308	0	3
11	LQHP	1	0.777	1.000	0.007	0.006	0.775	0.007	0.998	0.001	0.103	0.012	0.000	0.000		816.189	420.839	0	35
18	LQHPT	1.5	0.776	1.000	0.007	0.008	0.774	0.008	0.992	0.005	0.103	0.021	0.000	0.000		816.642	466.146	0	50

4	LQH	0.5	0.773	1.000	0.006	0.006	0.771	0.007	0.996	0.002	0.103	0.013	0.000	0.000	816.737	475.618	0	40
24	LQHPT	2	0.773	1.000	0.007	0.008	0.769	0.008	0.992	0.006	0.101	0.019	0.000	0.000	817.754	577.335	0	42
30	LQHPT	2.5	0.770	1.000	0.008	0.007	0.766	0.008	0.992	0.007	0.102	0.016	0.000	0.000	818.752	677.060	0	39
10	LQH	1	0.766	1.000	0.007	0.007	0.765	0.008	0.995	0.003	0.100	0.018	0.000	0.000	818.835	685.419	0	31
17	LQHP	1.5	0.767	1.000	0.007	0.006	0.763	0.008	0.997	0.002	0.099	0.012	0.000	0.000	818.889	690.789	0	27
16	LQH	1.5	0.761	1.000	0.007	0.006	0.759	0.007	0.996	0.002	0.100	0.016	0.000	0.000	820.240	825.881	0	24
42	LQHPT	3.5	0.765	0.999	0.008	0.007	0.762	0.008	0.990	0.007	0.100	0.015	0.000	0.000	820.340	835.909	0	29
5	LQHP	0.5	0.789	1.000	0.007	0.005	0.787	0.007	0.998	0.001	0.103	0.009	0.000	0.000	812.823	842.299	0	51
23	LQHP	2	0.758	1.000	0.007	0.006	0.757	0.007	0.997	0.001	0.101	0.015	0.000	0.000	820.924	894.335	0	22
48	LQHPT	4	0.763	0.999	0.008	0.007	0.761	0.008	0.988	0.006	0.101	0.016	0.000	0.000	820.946	896.481	0	23
22	LQH	2	0.757	1.000	0.008	0.006	0.756	0.007	0.996	0.001	0.101	0.016	0.000	0.000	821.261	928.036	0	21
29	LQHP	2.5	0.757	1.000	0.008	0.006	0.756	0.008	0.997	0.001	0.103	0.015	0.000	0.000	821.774	979.303	0	26

Supplementary figures

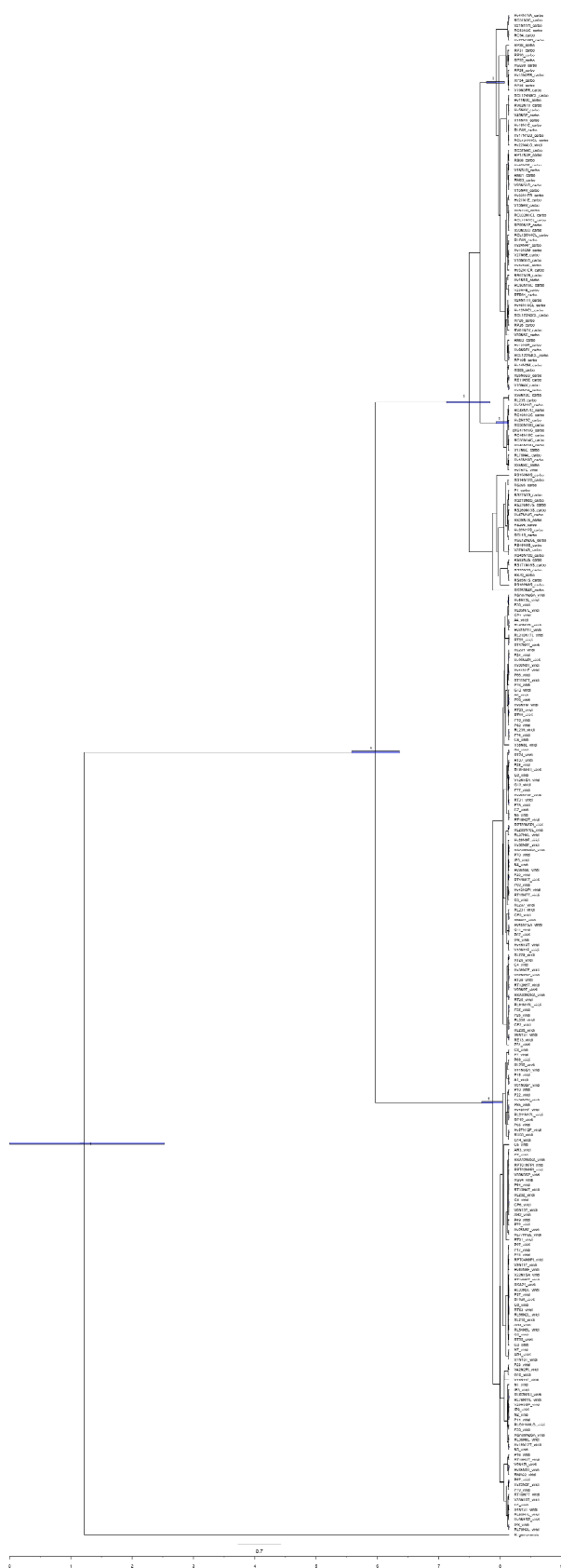


Figure S1. Calibrated BEAST phylogenetic tree with the codes of all sequences that were considered in the analysis, the values of node support and the node bars that indicate the divergence date 95% highest posterior density.

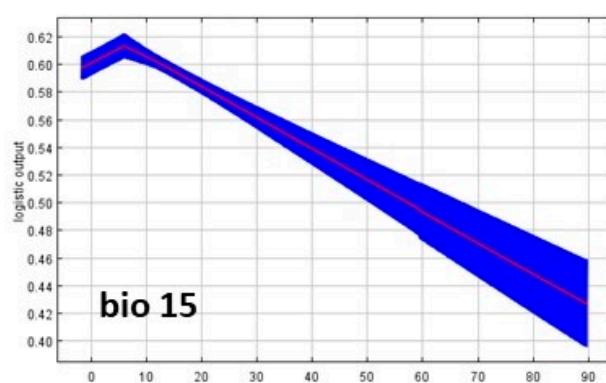
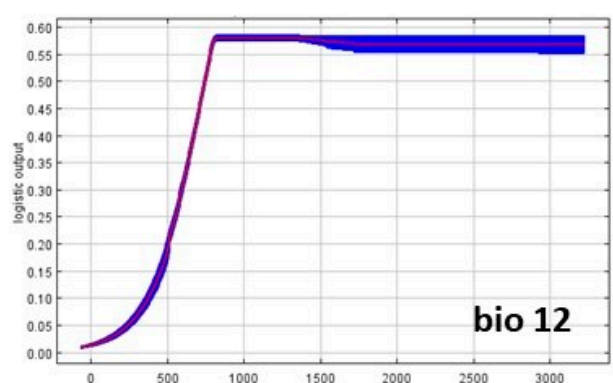
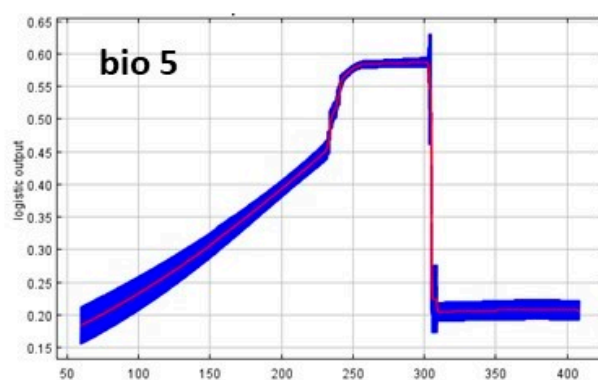
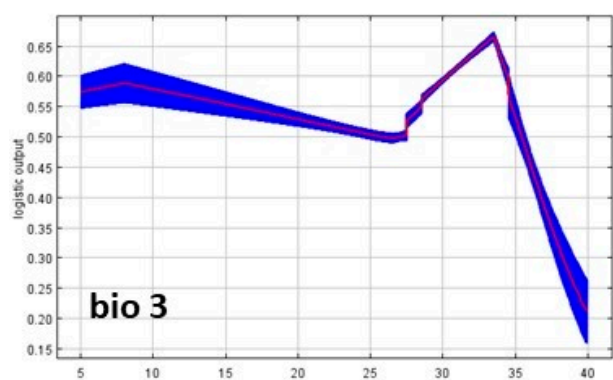


Figure S2. Average response curve profiles for the used variables. See table 2 for variables names.

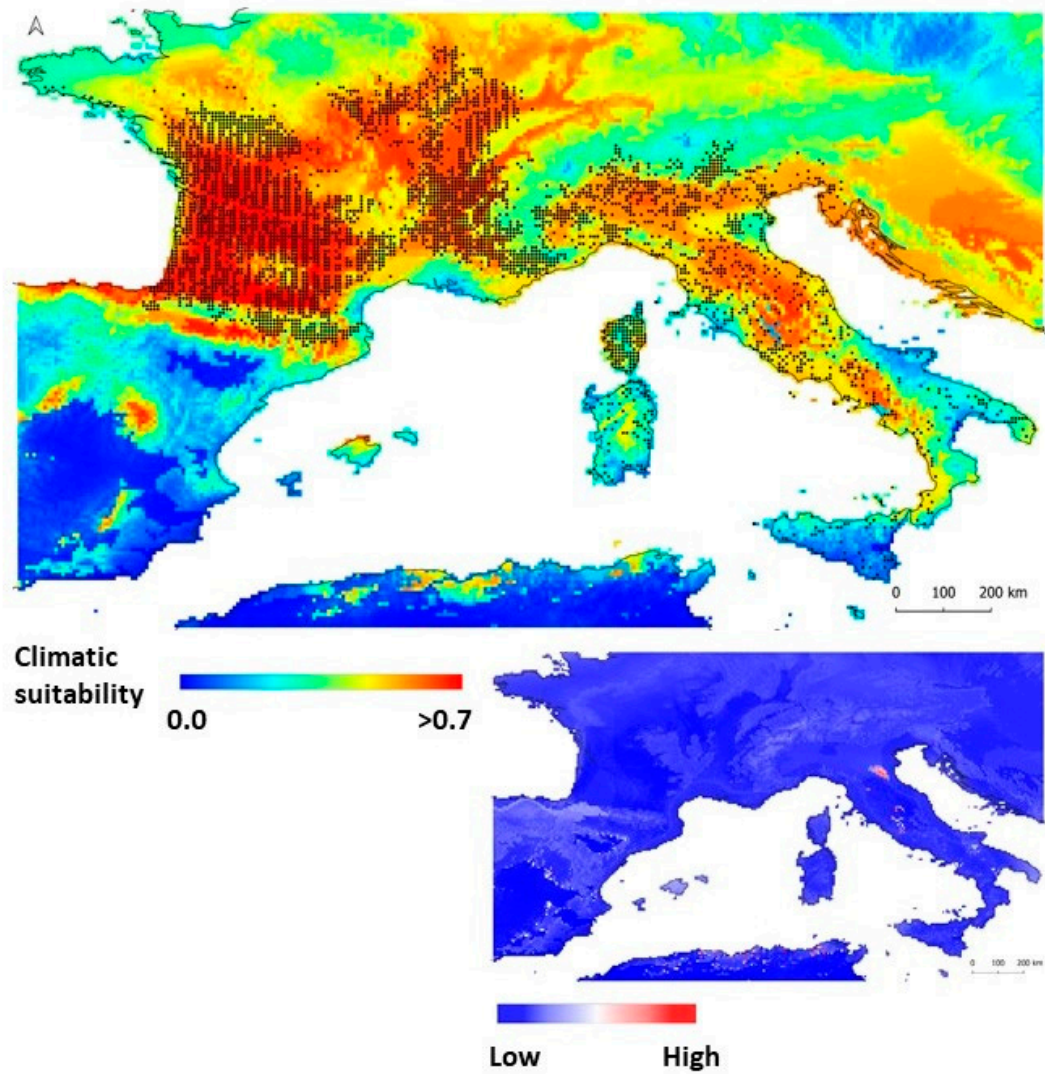


Figure S3. Average suitability (top) and SD model (bottom) for current conditions for *Hierophis viridiflavus*. Dots in the suitability map correspond to all samples used for modeling.

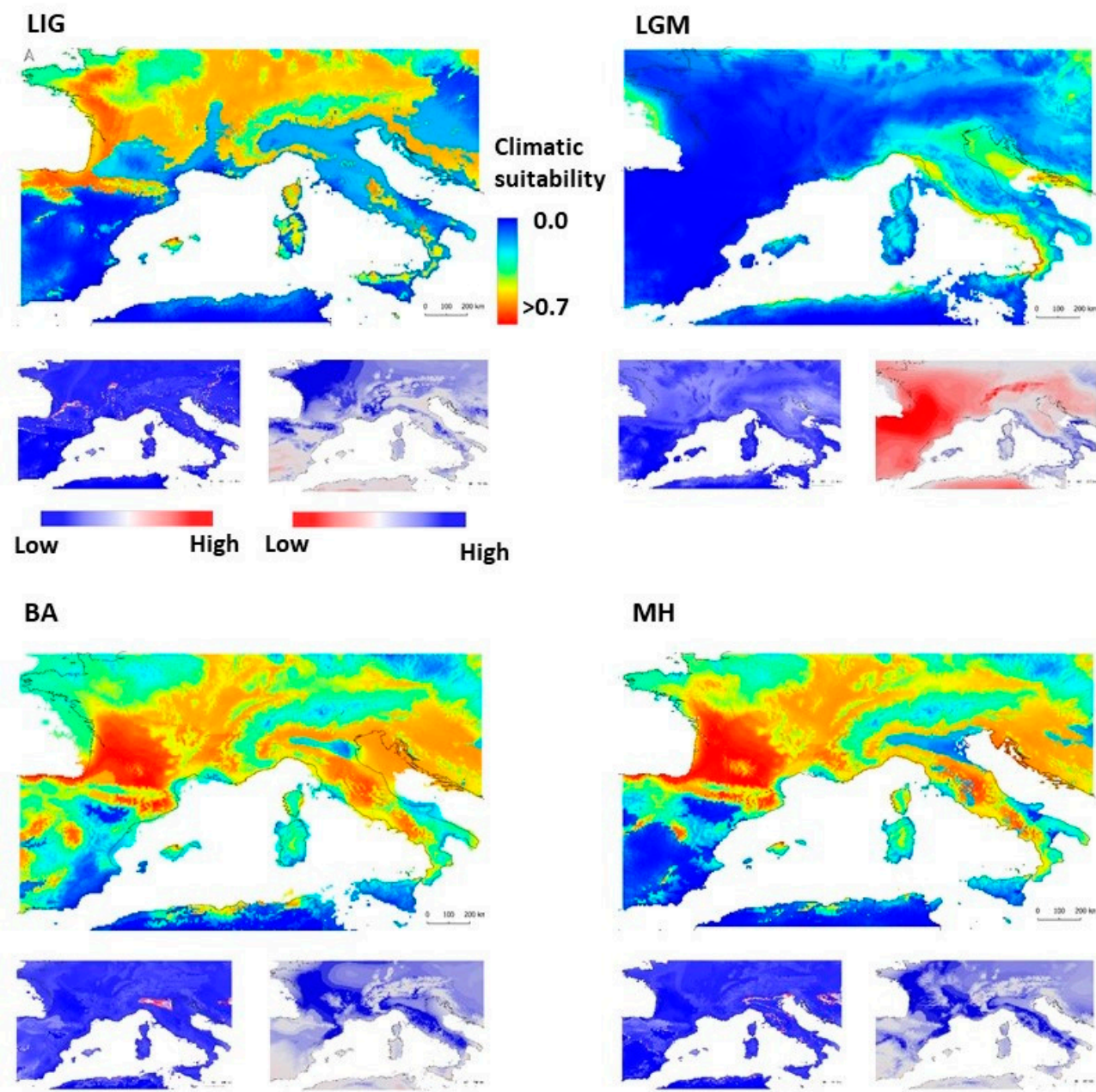


Figure S4. Average suitability projections (top), and SD (bottom left) and MESS (bottom right) plots, for four different past periods (LIG – Last Interglacial; LGM - Last Glacial Maximum; BA - Bølling-Allerød; MH - mid Holocene) for *Hierophis viridiflavus*.