



Supplemental Material

Modelling the distribution of the Ocellated Lizard in France: implications for conservation

^{1,*}Pierre Jorcin, ²Laurent Barthe, ³Matthieu Berroneau, ⁴Florian Doré, ⁵Philippe Geniez, ⁶Pierre Grillet, ⁷Benjamin Kabouche, ⁸Alexandre Movia, ⁹Babak Naimi, ¹⁰Gilles Pottier, ¹¹Jean-Marc Thirion, and ¹²Marc Cheylan

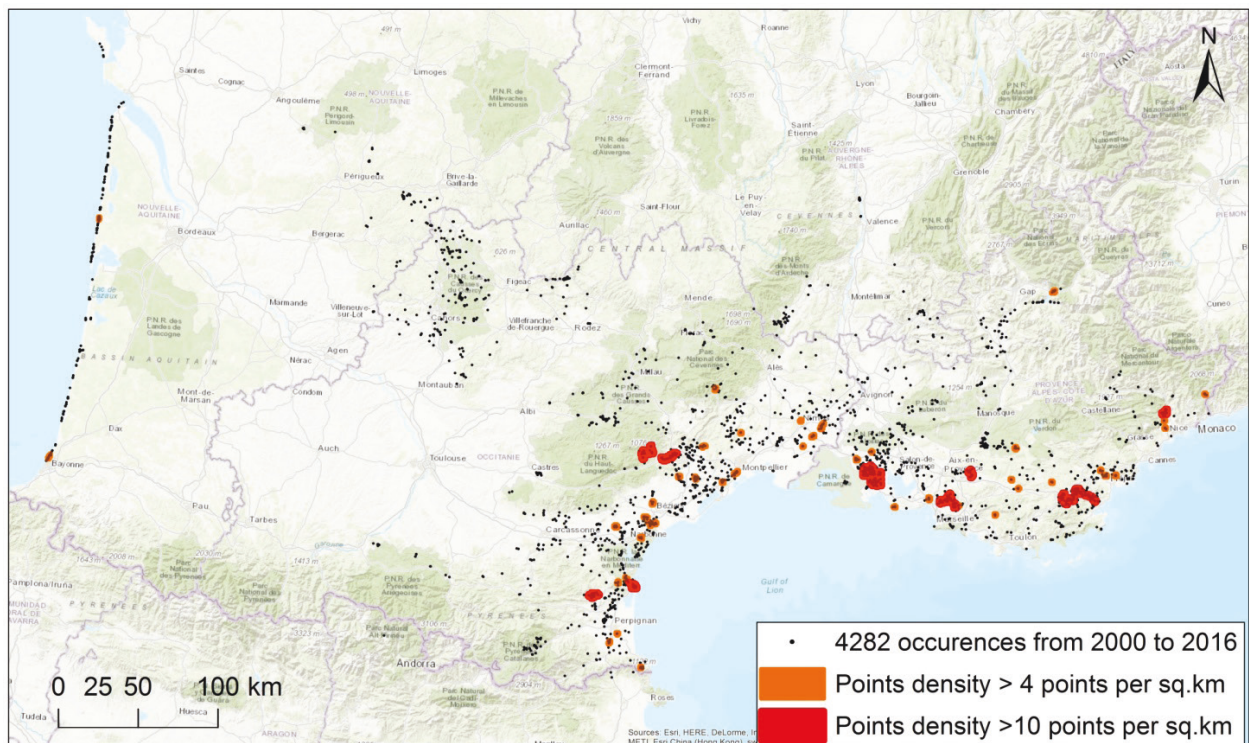
¹Naturalia-Environnement, Site Agroparc, rue Lawrence Durrell, 84911 Avignon, FRANCE ^{2,10}Nature En Occitanie, Maison régionale de l'Environnement, 14 rue de Tivoli, 31000 Toulouse, FRANCE ³Cistude-Nature, Chemin du Moulinat, 33185 Le Haillan, FRANCE ⁴Chemin de Saint-Jacques, Faugetit, 79120, Chev, FRANCE ^{5,12}Laboratoire Biogéographie et Ecologie des Vertébrés – CNRS, PSL Research University, EPHE, UM, SupAgro, IRD, INRA, UMR 5175 CEFE, 1919 route de Mende, Montpellier, FRANCE ⁶10 rue de la Sayette, 79340 Vasles, FRANCE ⁷Ligue pour la Protection des Oiseaux Provence-Alpes-Côte d'Azur (LPO PACA), 6 avenue Jean Jaurès, 83400 Hyères, FRANCE ⁸Ligue pour la Protection des Oiseaux Drôme (LPO Drôme), 18 place Génissieu, 26120 Chabreuil, FRANCE ⁹Department of Geosciences and Geography, University of Helsinki, 00014, PO Box 64, Helsinki, FINLAND ¹¹Objectifs Biodiversité, 22 rue du Dr. Gilbert, 17250 Pont-l'Abbé-d'Arnoult, FRANCE

Citation: Jorcin P, Barthe L, Berroneau M, Doré F, Geniez P, Grillet P, Kabouche B, Movia A, Naimi B, Pottier G, Thirion J-M, Cheylan M. 2019. Modelling the distribution of the Ocellated Lizard in France: implications for conservation. *Amphibian & Reptile Conservation* 13(2) [General Section]: 276–298; S1–S2 (e213).

Copyright: © 2019 Jorcin et al. This is an open access article distributed under the terms of the Creative Commons Attribution License [Attribution 4.0 International (CC BY 4.0): <https://creativecommons.org/licenses/by/4.0/>], which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. The official and authorized publication credit sources, which will be duly enforced, are as follows: official journal title *Amphibian & Reptile Conservation*; official journal website: amphibian-reptile-conservation.org.

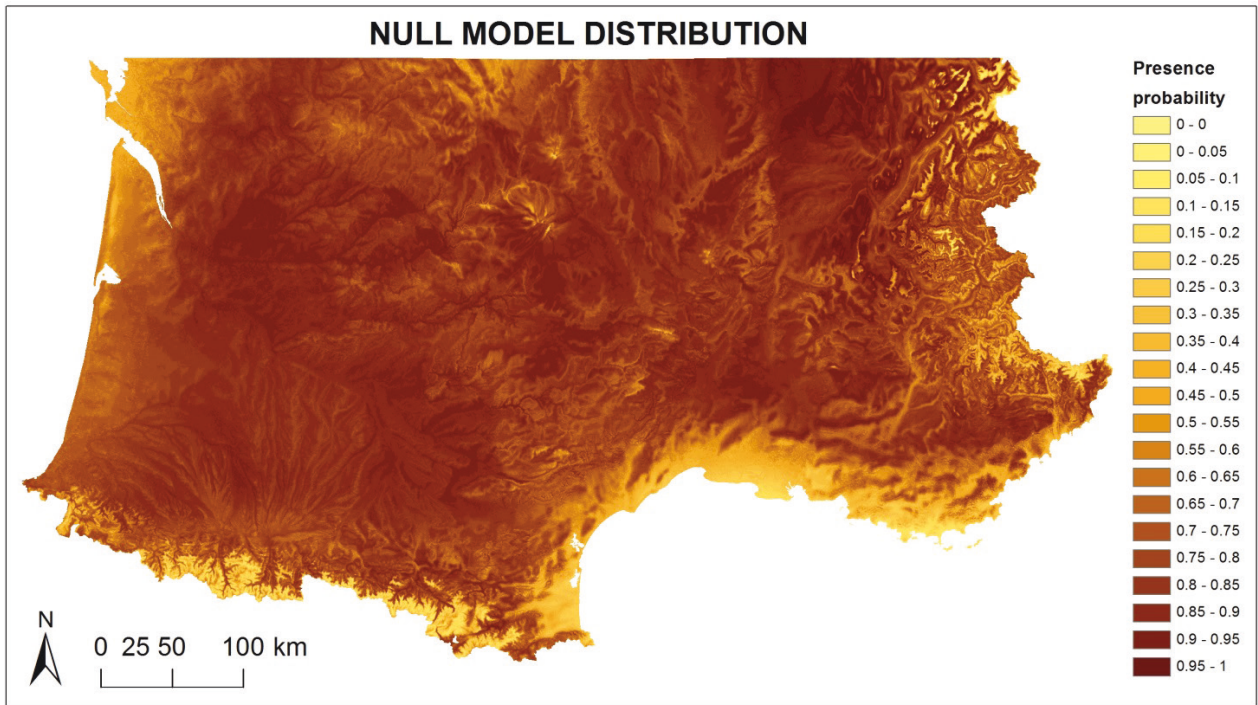
Received: 11 December 2018; **Accepted:** 23 August 2019; **Published:** 22 December 2019

Supplementary Figure 1. Localization of occurrence data clusters for removing spatial bias from the sampling dataset.



Correspondence. ^{1,*}p.jorcin@naturalia-environnement.fr; ²l.barthe@natureo.org; ³matthieu.berroneau@cistude.org; ⁴florian.dore@gmail.com; ⁵philippe.geniez@cefe.cnrs.fr; ⁶p.grillet@wanadoo.fr; ⁷benjamin.kabouche@lpo.fr; ⁸alexandre.movia@lpo.fr; ⁹naimi.b@gmail.com; ¹⁰gilles.pottier131@orange.fr; ¹¹thirion.jean-marc@sfr.fr; ¹²marc.cheylan@cefe.cnrs.fr

Supplementary Figure 2. Presence probability map generated by a Null model showing a significantly different distribution than our model.



Supplementary Table 1. Variance Inflation Factors (VIF) of the non-correlated variables for Model 2.

	Variables	VIF
1	Chelsea_bio3_R	4.188475
2	Chelsea_bio4_R	2.475293
3	Chelsea_bio5_R	2.368881
4	Chelsea_bio8_R	1.935220
5	Chelsea_bio9_R	1.737168
6	Chelsea_bio13_R	3.982459
7	Chelsea_bio17_R	4.310753
8	Chelsea_bio19_R	7.762311

A VIF was calculated for each explanatory variable and those with high values were removed. After excluding the collinear variables, the linear correlation coefficients ranged between:

min correlation (Chelsea_bio13_R ~ Chelsea_bio3_R): -0.01560682

max correlation (Chelsea_bio19_R ~ Chelsea_bio17_R): 0.7563227

Supplementary Table 2. Comparison of Akaike information criterion (AIC) values for the six models.

Models	M1	M2	M3	M4	M5	M6
GLM	1224	1359	1519	1287	1345	1093
GAM	929	1044	1177	930	961	777