

Anticipating Pest Expansion Under Climate Change: Ecological Risks of *Scyphophorus acupunctatus* to *Agave* Species in Mexico.

Environmental Management

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Supplementary table 1. Models' performance. AUC =Area Under the Curve (measures model performance), AICc= Akaike Information Criterion corrected for small sample sizes, Delta AIC= Difference in AICc values across models (lower values indicate better models). Partial ROC evaluations: AUC ratio= Mean partial AUC ratio at 5% omission threshold, Mean Partial AUC= Mean AUC across models and p-value= Statistical significance of model evaluation metrics.

Species	Current conditions		Delta AIC	AUC ratio pROC	Mean partial AUC	p-value pROC
	AUC	AICc				
<i>Scyphophorus acupunctatus</i>	0.91	5685.44	0	1.4107	0.92	0***
<i>Agave americana</i>	0.81	1320.56	0	1.4181	0.87	0***
<i>Agave angustifolia</i>	0.87	4241.33	0	1.342	0.86	0***
<i>Agave cupreata</i>	0.96	1761.57	0	1.7391	0.97	0***
<i>Agave karwinskii</i>	0.97	2248.47	0	1.9447	0.99	0***
<i>Agave potatorum</i>	0.96	5389.51	0	1.8686	0.98	0***
<i>Agave salmiana</i>	0.94	6308.93	0	1.6662	0.95	0***
<i>Agave tequilana</i>	0.86	1940.96858	0	1.3166	0.89	0***
CNRM CM6 ssp 245						
<i>Scyphophorus acupunctatus</i>	0.9	5745.98	0	1.3869	0.91	0***
<i>Agave americana</i>	0.83	1308	0	1.388	0.87	0***
<i>Agave angustifolia</i>	0.84	4178.79	0	1.3439	0.87	0***
<i>Agave cupreata</i>	0.96	1826.71	0	1.7289	0.97	0***
<i>Agave karwinskii</i>	0.97	2288.42	0	1.9138	0.99	0***

<i>Agave potatorum</i>	0.97	5383.16	0	1.875	0.98	0***
<i>Agave salmiana</i>	0.94	6373.51	0	1.6729	0.95	0***
<i>Agave tequilana</i>	0.86	1964.4	0	1.3117	0.89	0***

CNRM CM6 ssp 585

<i>Scyphophorus acupunctatus</i>	0.9	5783.47	0	1.3842	0.91	0***
<i>Agave americana</i>	0.82	1314.43	0	1.389	0.87	0***
<i>Agave angustifolia</i>	0.84	4169.46	0	1.3408	0.86	0***
<i>Agave cupreata</i>	0.95	1833.05	0	1.7232	0.97	0***
<i>Agave karwinskii</i>	0.96	2297.52	0	1.9114	0.99	0***
<i>Agave potatorum</i>	0.95	5527.52	0	1.8509	0.98	0***
<i>Agave salmiana</i>	0.95	6356.51	0	1.6773	0.95	0***
<i>Agave tequilana</i>	0.85	1955.19	0	1.3773	0.89	0***

MPI-ESM ssp 245

<i>Scyphophorus acupunctatus</i>	0.91	5676.61	0	1.3865	0.91	0***
<i>Agave americana</i>	0.83	1306.77	0	1.3496	0.86	0***
<i>Agave angustifolia</i>	0.84	4154.82	0	1.3505	0.87	0***
<i>Agave cupreata</i>	0.96	1817.22	0	1.7266	0.97	0***
<i>Agave karwinskii</i>	0.97	2323.89	0	1.9258	0.99	0***
<i>Agave potatorum</i>	0.96	5427.25	0	1.8696	0.98	0***
<i>Agave salmiana</i>	0.94	6321.91	0	1.6772	0.95	0***
<i>Agave tequilana</i>	0.85	1960.94	0	1.3115	0.89	0***

MPI-ESM ssp 585

<i>Scyphophorus acupunctatus</i>	0.91	5683.65	0	1.374	0.91	0***
<i>Agave americana</i>	0.85	1299.99	0	1.3152	0.87	0***
<i>Agave angustifolia</i>	0.87	4163.02	0	1.3574	0.86	0***
<i>Agave cupreata</i>	0.96	1802.97	0	1.7393	0.97	0***
<i>Agave karwinskii</i>	0.97	2209.24	0	1.9141	0.99	0***
<i>Agave potatorum</i>	0.95	5493.03	0	1.8442	0.98	0***
<i>Agave salmiana</i>	0.94	6321.37	0	1.6747	0.95	0***
<i>Agave tequilana</i>	0.85	1947.22	0	1.3351	0.89	0***