

Figure S1. Boxplots of key bioclimatic variables for the four *Ambystoma* species: BIO1 (annual mean temperature, °C), BIO12 (annual precipitation, mm), BIO4 (temperature seasonality), and BIO15 (precipitation seasonality). The boxplots show the median (central line), interquartile range (box), and full range (whiskers).

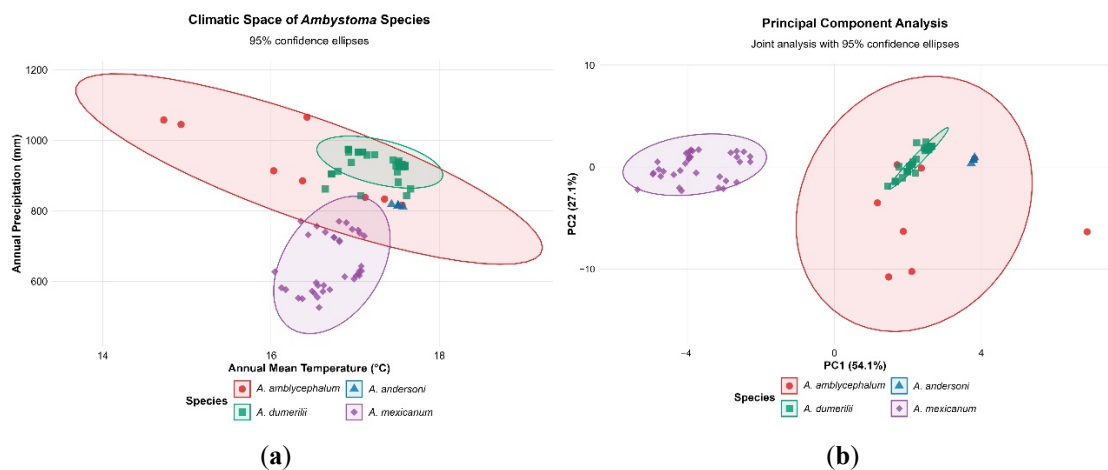


Figure S2. Exploratory comparison of climatic niches with 95% confidence ellipses. **(a)** Two-dimensional climatic space based on annual mean temperature (BIO1, °C) vs. annual precipitation (BIO12, mm), with points by species and 95% ellipses; **(b)** Joint principal component analysis (PCA) of the 19 bioclimatic variables with 95% ellipses.

Table S1. Comparison of confidence ellipse areas at 68% and 95% in the climatic space (BIO1, annual mean temperature vs. BIO12, annual precipitation), along with the centers (mean coordinates) for each species.

Species	Records	68% Ellipse Area (Units²)	95% Ellipse Area (Units²)	Ratio (95/68)	Center BIO1 (°C)	Center BIO12 (mm)
<i>Ambystoma amblycephalum</i>	9	459.29	1207.55	2.63	16.38	936.63
<i>Ambystoma andersoni</i>	8	0.14	0.37	2.63	17.51	814.94
<i>Ambystoma dumerilii</i>	36	83.21	218.78	2.63	17.25	930.8
<i>Ambystoma mexicanum</i>	36	156.98	412.72	2.63	16.7	649.41