

Title (Note: 256 Character Limit)

The impact of climate change on the prospects for transcontinental two-way invasion of reptiles between Europe and America

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**Use a Comma or a semi-colon to separate them

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Keywords (up to 5--write in

climate change, reptiles, conservation, invasive species, management strategies

Abstract (Note: 1000 characters Limit)

Understanding the mechanisms driving reptile transcontinental movements from Europe to America and vice versa is crucial for mitigating future biological invasions. Reptiles have previously been shown capable of adapting to new biotopes, including human structures, on new continents. Here we show that native and exotic freshwater turtle species exhibit different responses and tolerance to temperature and solar radiation with major consequences in the context of climate change. As an example, America originated *Trachemys scripta* shows advantages over the European native *Emys orbicularis* in the context of global warming, specially in Western Europe. However, some areas of Eastern Europe are predicted to remain free of invasive species and represent promising places for future conservation actions. Recent sightings of alien reptile species in Ukraine and Latvia serve as empirical evidence, underlining the urgency of proactive management strategies. Conservation initiatives, including reintroduction projects, should prioritize these areas to protect local reptiles (EMYS-R BiodivRestore ERA-NET Cofund GA N°101003777, Nr.lzp-2021/1-0247).

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This abstract has been approved by all authors