

# Using global and regional Species Distribution Models (SDM) to infer the invasive stage of *Latrodectus geometricus* (Araneae: Theridiidae) in the Americas

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© The Authors 2016. The brown widow spider, *Latrodectus geometricus* C. L. Koch, 1841, is a large spider of the family Theridiidae that belongs to a genus of medical interest owing to its potent neurotoxic venom, which causes severe pain in humans. In America, this alien spider has been found in virtually all countries in the region, mainly associated with human dwellings, but also in agricultural sectors. However, the invasive process and potential distribution of this invasive species across the American continent are completely unknown. In this context, using a combination of both global and regional niche models, it is possible to hypothesize the invasive phase of the species as well as the geographic space where these different phases occur. By comparing the global and regional niches of *L. geometricus*, we examined its invasive process and potential distribution across the American continent. This work is an innovative approach to understanding the invasion of the brown widow spide