Temperature, Precipitation, and Cuban Tree Frog Sightings

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Lately, invasive Cuban treefrogs have been hurting the native ecosystem of southeastern USA, as they have been outcompeting native treefrogs, especially in urban areas, and are predators of native frogs, lizards, and invertebrates. Naturally, one must consider how different climatic variables may affect them to better gauge their spread and harm, especially in light of the current anthropogenic climate change. It was hypothesized that temperature would be a greater limiting factor to the spread of Cuban tree frogs as compared to precipitation, because temperature varies a lot more across southeastern USA compared to precipitation. Using databases from NOAA and EDDMaps, the number of Cuban treefrog sightings and various climate variables were gathered and compared. The results indicated that the Cuban treefrog tended to not be sighted in areas with temperatures unsuited for their physiology. Less correlation was found between Cuban treefrog sightings and precipitation. This is important to note when considering how far and wide Cuban treefrogs would be able to spread, as climate change will likely lead to warmer temperatures on average in the USA. While further testing regarding the various limiting factors of Cuban treefrogs is needed, initiatives that prevent the spread of Cuban treefrogs into more areas and those that try to get rid of the existing Cuban treefrog populations in southeastern USA are greatly needed to reverse the harm done to native treefrog species.

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