Ecological niche modeling to investigate the distribution and habitat preferences of common bottlenose dolphins (*Tursiops truncatus*) in the Caribbean Sea

Greetings marine science community!

We at FINS (Fundación Internacional para la Naturaleza y la Sostenibilidad), The Graduate Center, City University of New York, and the Laboratório de Sistemática e Ecologia de Aves e Mamíferos Marinhos (LABSMAR), Universidade Federal do Rio Grande do Sul are working on a project using ecological niche modeling and species distribution modeling to examine the distribution and habitat preferences of bottlenose dolphins in the Caribbean Sea.

What are our goals?

We have three goals for this project. First, we will evaluate and compile what is known about the distribution of bottlenose dolphins in the Caribbean Sea through this call to all scientists, NGOs, governments, and other groups working in the marine environment who have sighing data on *Tursiops truncatus* from anywhere in the Caribbean Sea Basin. Thus far, in collaboration with a wide network of colleagues in the Caribbean, we have compiled a large database of *Tursiops* sightings (+2,000) from *Belize, Panama, Costa Rica, Honduras, Mexico, Colombia, the Dominican Republic,* and *the Gulf of Mexico* and adjacent regions. Second, we will use these data to test ecological niche models and species distribution models using occurrence data on dolphins and environmental data (e.g., depth, distance to shore, productivity) from the region to test hypotheses regarding their habitat preferences, phenotype and population differences (e.g., fin shape, behavior, group sizes), and how they vary regionally. Finally, we aim to produce a peer-reviewed publication illustrating sets of predictive maps for bottlenose dolphin occurrence and habitat use in the Caribbean Sea, and in particular, highlighting areas in need of further study for the species.

What do we need?

We are seeking more sighting data of bottlenose dolphins throughout the Caribbean Sea for use in these analyses. Specifically, we are looking for databases of bottlenose dolphin sightings with minimum of date of sighting, latitude and longitude, and group size for sightings. Other associated information including environmental data and photo-identification catalogs are welcome for integration into this database for future comparisons.

We are happy to collaborate and offer authorship to parties with suitable datasets and interest in contributing and participating in the publication process. If you are interested, please contact us directly by email at eric.angel.ramos@gmail.com.

Thank you for your time and we look forward to hearing from you!

Best regards,

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