

# Model to better understand dune plants

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Texas A&M University researchers have created a model to better understand the impacts of development and coastal erosion on plant communities.

Rusty Feagin, Douglas Sherman and William Grant simulated varying levels of sea-level rise to understand the effects of erosion and development on sand dune plants.

In most circumstances, as coastlines erode plant communities are displaced away from the ocean, unless blocked by a barrier, such as a cliff. In areas like Galveston Island, natural cliffs are not the issue, but development and non-native lawns block the plants' migration, according to Feagin.

Creating models to explore low, medium and high increases in sea levels for Galveston Island, Feagin and colleagues found the combination of human-created barriers and sea level rise trapped plants in a small zone -- altering the plant population as well as the dune structure.

The findings were published in *Frontiers in Ecology and the Environment*.

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