

How might Burmese pythons affect threatened species in Florida?

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ABSTRACT

Burmese pythons are an invasive species in Florida, USA, and represent a direct threat to native terrestrial vertebrates. We sought to determine whether their distribution overlaps with that of three endangered and threatened species: the Cape Sable seaside sparrow, wood stork, and American crocodile. Using ArcGIS, land cover maps, and openly-available data, we calculated the preferred python habitat using an Optimized Hot Spot Analysis. We then intersected it with sparrow critical habitat, crocodile critical habitat, and preferred wading bird rookeries (a proxy for wood stork location data) to determine where habitats overlapped. The most common land cover in all overlapping areas was emergent herbaceous wetland. Given that pythons are known to consume small passerines and that 91.7% of sparrow habitat lies within the python hot spot, we determined that the Cape Sable seaside sparrow population is in serious danger of declining due to direct python predation. Furthermore, we suspect that python predation may also greatly affect wood stork populations, but that direct predation may not have a large effect on American crocodile populations. We recommend that future studies employ more accurate, unbiased python location data, and that pythons be considered a serious threat in Cape Sable seaside sparrow recovery plans.