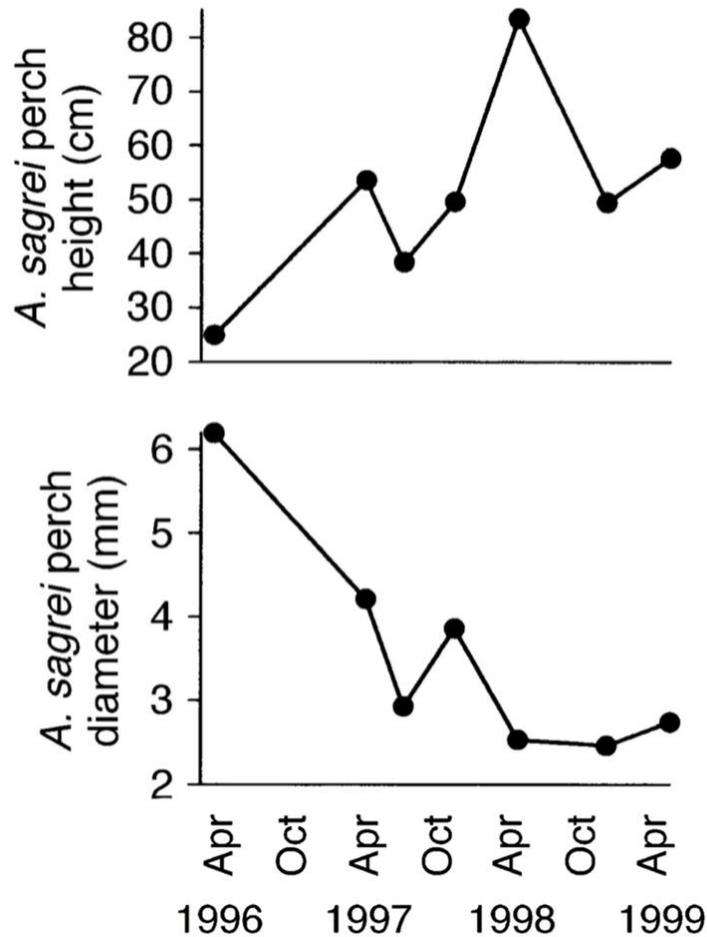




## Effects of Predation on the Niche of Lizards



**Caption:** The response of the lizard, *Anolis sagrei*, to the introduction of a larger lizard predator, *Leiocephalus carinatus*, which naturally colonized a small island in the Bahamas between April 1996 and April 1997. The graphs show the average perch height (cm) and perch diameter (mm) of *A. sagrei* before colonization by *L. carinatus* (April 1996) and following colonization from April 1997 to April 1999.

### BACKGROUND INFORMATION

A team of scientists studied the effects of introducing a predator on the food webs of a group of small islands in the Bahamas. They selected 12 small islands inhabited by a single species of anole lizard, *Anolis sagrei*. *A. sagrei* spends most of its time on the ground and perching on low parts of trees and shrubs. At the start of the study in April 1996, researchers performed a census of *A. sagrei*, recording the height and diameter of the perch on which each lizard was found. *Leiocephalus carinatus* is a larger lizard that hunts for prey, including anoles, on the ground. The researchers planned to artificially introduce *L. carinatus* to half of the 12 islands in the year following the initial census and study its effects on the anoles. However, when they returned in April 1997, they found that one of the islands (called Z3) had been naturally colonized by *L. carinatus*, so they introduced *L. carinatus* to just five islands. The other six islands in the study remained free of *L. carinatus*. The researchers collected data on the lizard community on each of the islands, including Z3, until 1999. The graphs above show the mean perch height (top graph) and perch diameter (bottom graph) where *A. sagrei* was found on island Z3

for each census conducted. The population size of *L. carinatus* on island Z3 gradually decreased from the time of its colonization to the end of the study in April 1999.