

The Problem(s)

Colubrina Asiatica is a shrub that is an invasive plant species in Florida. It has been spreading in coastal regions of Florida for several years.

Is the spread of *Colubrina* affected by climate change?

Have changing climatic conditions affected the capacity of other plants to compete with *Colubrina*? The pattern of spread of *Colubrina* might be modeled as a spatial process. Can the process be linked to climate conditions?

Can regional climate models be used to aid in forecasting the spatial distribution of *Colubrina* in the future?

Approaches to problems

Gather observations on *Colubrina* made in past. These would include physical presence, but also other characteristics (growth, density, reproductive pattern, presence of other species).

It may be necessary to carry out planned survey to gather data for plant characteristics and climate together.

Combine weather data for the region for the period in which *colubrina* data was gathered. Use standard data analysis methods to model presence and spread of *Colubrina* as dependent on climate.

Use a regional climate model to predict climate of S. Florida for near future (say 20 years).

Question: Can regional model give predictions on the small scale that may be needed?