

# INVASIVE SPECIES

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# INVASIVE SPECIES



## I. Definition:

- A. 1) **a non-native (or alien) species** to the ecosystem under consideration and
- 2) introduction causes or is likely to cause economic or environmental harm or harm to human health.



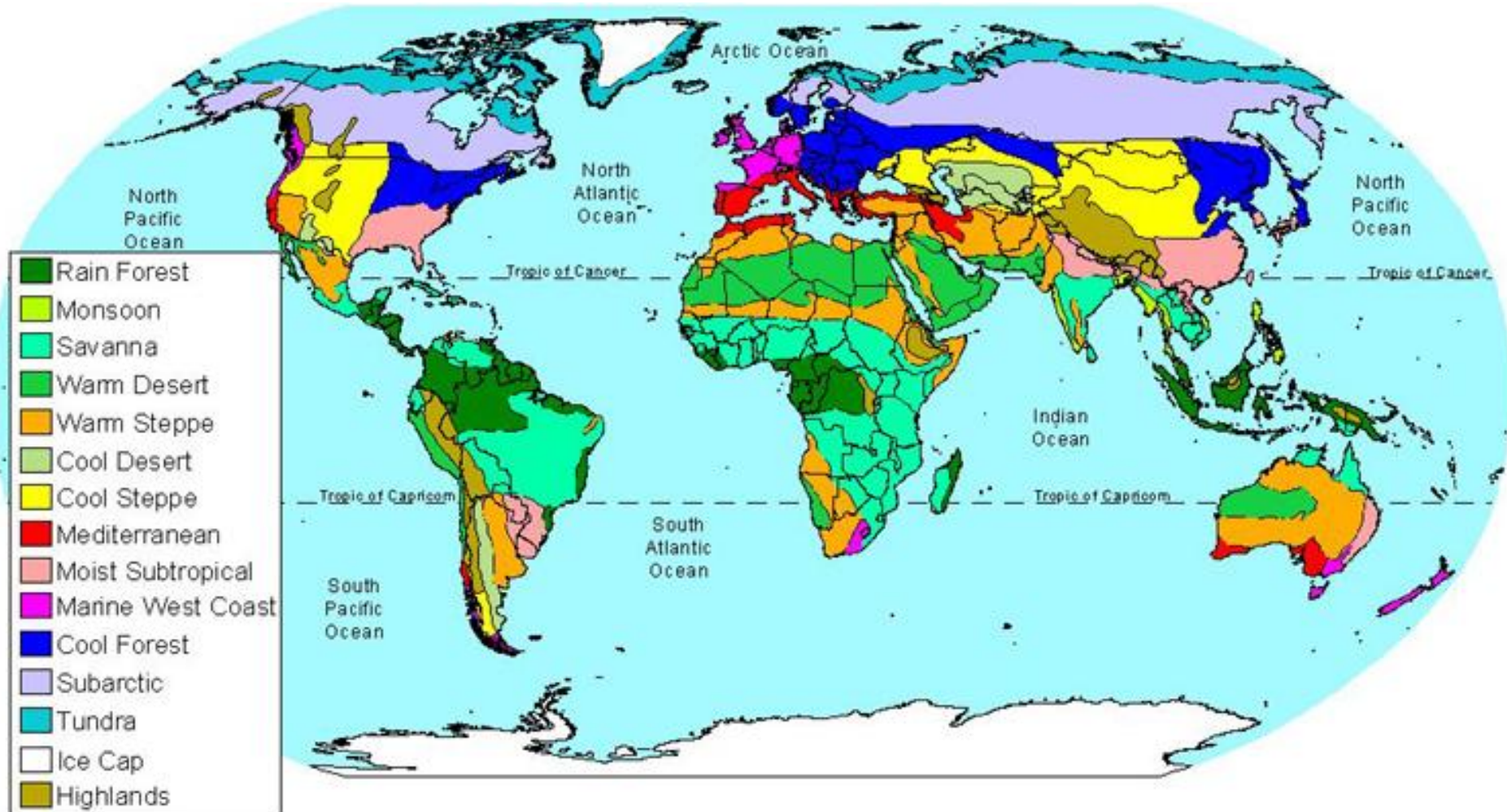
Invasive species can be plants, animals, and other organisms (e.g., microbes). Human actions are the primary means of invasive species introductions.



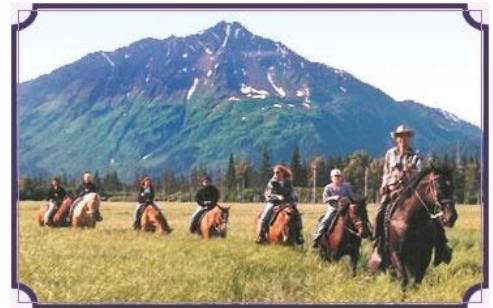
- Invasive species have increased dramatically in recent decades, due in part to an increasing human population, travel, globalization, demand for food/fiber, and land uses.
- Since the early days of European colonization, thousands of plants have been purposefully introduced into the United States. While most of these species benefit society (for example, corn, rice, wheat, and soybeans), several hundred of these nonnative plants have become invasive. Many introduced plants appear innocuous when first introduced, but then adapt and explode in numbers within their new environments due to lack of predation or competition.



# Why Do They Like It Here?



B. However, there are introduced species that are not considered harmful. Thus, the term “invasive species” is somewhat subjective as is the definition of a “weed.”



- Are these animals invasive?





## II. What are problems with invasive species?

- A. The U.S. spends \$120 billion annually on the control and impacts of more than 800 invasive species infestations. This does not account for the values of species extinctions and losses in biodiversity, ecosystems, services and aesthetics.



- B. Nine out of 21 of the most endangered ecosystems in the U.S. are significantly impacted by exotic invasions.
- C. 80 percent of the nation's fish communities are considered degraded because of decline or loss of native species and introduction of exotics.

D. Invasive species affect native biodiversity in a number of ways. They may 1. compete directly with native species for food or space, 2. compete indirectly by changing the food web or physical environment, or 3. prey on or hybridize with native species. Rare species with limited ranges and restricted habitat requirements are often particularly vulnerable to the influence of these alien invaders.



### III. Coastal NC invasive species:

#### A. Japanese stiltgrass



#### B. Phragmites



#### C. Japanese honeysuckle



# D. Chinese privet



# E. alligatorweed

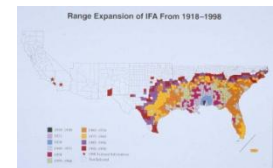


# F. fire ants



**ANT FACTS: DID YOU KNOW?**

- An ant's antennae enable it to find and taste food, detect air currents, feel surface textures, hear, and smell.
- Fire ant mounds can extend into the ground 20 feet deep or more, with lateral tunnels extending out over 8 feet in all directions.
- The workers of the fire ant species generally live 4 to 6 weeks; queens can live 7 years or more.
- Fire ant mounds can be 2 feet high.
- A single fire ant colony may have dozens of queens, each capable of laying up to 1,500 eggs per day.



# G. beach vitex

[http://www.dnr.sc.gov/news/Yr2006/july3/july3\\_vitex.html](http://www.dnr.sc.gov/news/Yr2006/july3/july3_vitex.html)

[http://www.northinlet.sc.edu/resource/archived\\_announcements.htm](http://www.northinlet.sc.edu/resource/archived_announcements.htm)



# H. lespedeza(s)



# I. mimosa



# J. bamboos (non-native)



# K. autumn olive/thorny olive



# L. red bay wilt (redbay ambrosia beetle-wilt fungus)



M. Nutria



N. Red Fox



O. Coyote



Solutions: the best is to prevent introduction, but when that is not possible, control or removal usually necessitates digging, cutting, burning and/or pesticides/herbicides that involve:

A. staff time

B. volunteers

C. hiring contractors



## IV. NC native species can be invasive elsewhere:

1. **smooth cordgrass** in Pacific Northwest marshes: Some of the traits that make *Spartina* valued in our salt marshes are the greatest cause for concern in Washington and California, especially sediment accumulation and competition with native species.

<http://www.spartina.org/invasion.htm>



2. **wild black cherry** in Europe: highly invasive in Dutch forests and other parts of the Western Europe; also naturalized in South America



V. Final Thought -- some native species are aggressive invaders of disturbed habitats, but beneficial for soil stabilization, succession, etc.:



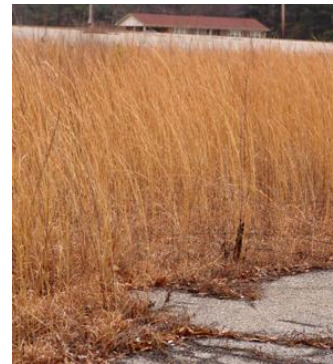
wax myrtle



silverling (Baccharis)



loblolly pine



broomsedge grass