

Invasive Species - Coming to America

Ecological and Economic Impacts.....



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Invasive Species in America

■ Creation of Invasive Species

- Free Living Exotic Species
- Native Species – Remove Top Predators



■ Uncontrolled Introductions

- 50,000 Introduced Species and Varieties
- 1,500+ Introduced Invasive Plants

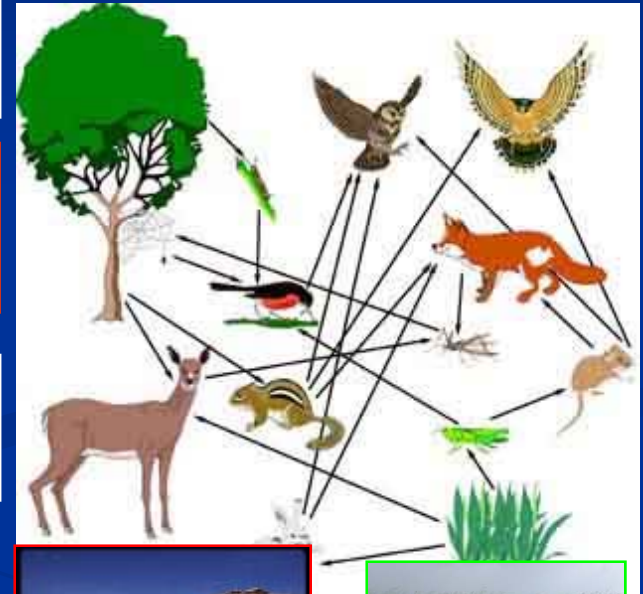


■ Impacts on Human Health

- Spread of Disease; Injury, Stings

■ Ecological Impacts

- Outcompete / Hybridize with Natives
- Destroy Habitat (Gypsy Moth)
- Alter Ecosystems (*Melaleuca* in FL)
- Alter Fire Cycles (Cheatgrass in the West)
- #2 Threat to Endangered Species (400/958 spp.)



■ Economic Impacts

- Food and Fiber Production
- Increased Losses and Control Costs (\$150 Billion)
- Increased Cost of Government Programs



Ecological Impacts of IVS.

- Threaten Endangered Species
- Crowd out Natives
- Compete with Natives for Resources, Space, Light
- Disrupt Trophic Level Relationships
- Increase Disturbance Regimes that Natives are not Adapted to (e.g., Wildfires)
- Hybridize with Natives
- Cause Habitat Loss



Mallard Duck

Economic Effects of IVS.

- USA: \$150 Billion
- India: US\$117 Billion
- South Africa: US\$17.5 Billion
- United Kingdom: US\$12 Billion
- Australia: AUS\$10 Billion
- New Zealand: US\$10 Billion
- Africa (Aquatic Weed Control): \$US60 Million

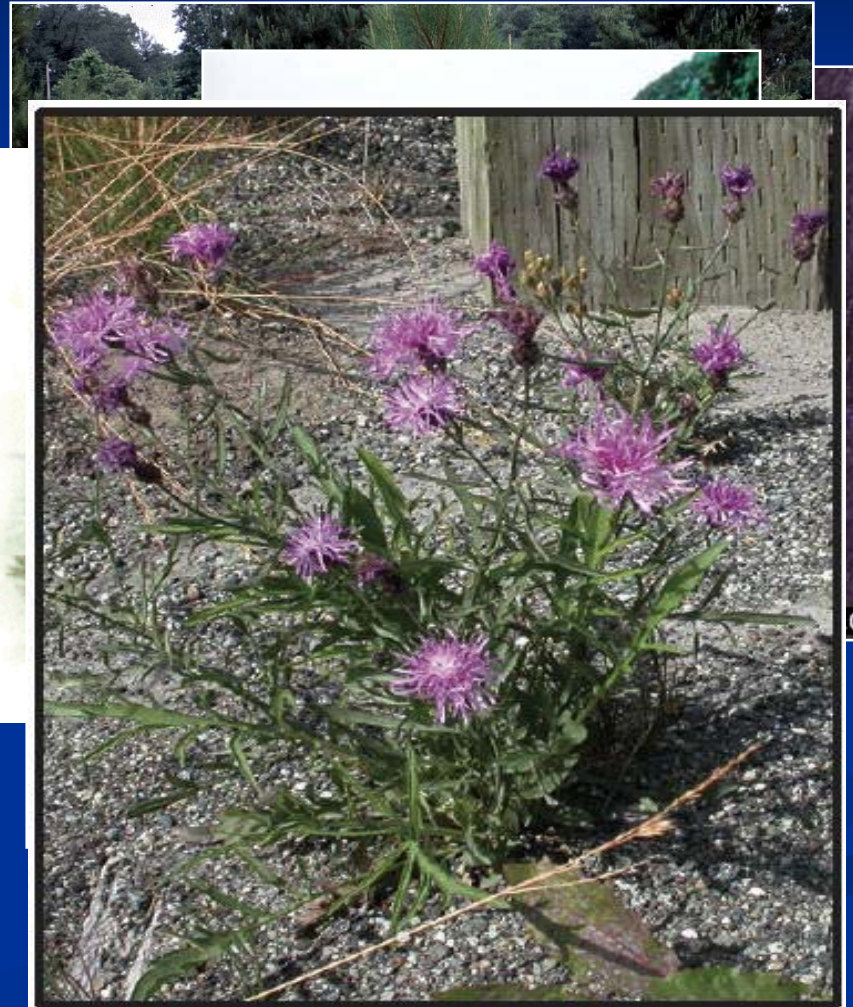
Economic Impacts of IVS.

■ Direct Losses

- Crop Losses (India – 20% Per Year)
- Loss of Exports
 - Karnal Bunt of Wheat
- Loss of Pasture Productivity
 - Cogongrass
- Loss of Fisheries
 - Nile Perch

■ Indirect Losses

- Flooding (Water Hyacinth)
- Landslides (Miconia)
- Damage to Dams (Nutria)
- Increased Wildfires (Cheatgrass)
- Loss of Tourism (Spotted Knapweed)



Public Health Impacts of IVS.

■ Diseases

- 1999 - West Nile Virus - USA
 - 9,862 People Infected
 - 264 People Died
- 2003 SARS in China
- \$17 Billion Tourism Losses

■ Stings - Allergic Reactions

- Imported Red Fire Ant
- Africanized Honey Bee

