

What makes Invasive Species so Successful?

How do Life History Traits Help (or Hinder) Native & Invasive Species?

The primary goal of this lab is to help you develop a deeper understanding of how life-history patterns help some species to be especially successful – and in other species may limit their survival or success. Also, to consider how life history traits may affect the ability of an invasive species to thrive in a new region. Below are *pairs of similar species* – one member of each pair is *common and abundant* in Virginia, and the other is *rare and/or in decline* - often protected by conservation laws.

Birds

1. Red-cockaded woodpecker (*Picoides borealis*; rare) & starling (*Sturna vulgaris*; invasive and abundant)
2. Cerulean warbler (*Dendroica cerulea*; rare) & house sparrow (*Passer domesticus*; invasive and abundant)
3. Piping plover (*Charadrius melodus*; rare) & killdeer (*Charadrius vociferus*; native and abundant)
4. Bachman's sparrow (*Aimophila aestivalis*; rare) & brown-headed cowbird (*Molothrus ater*; native and abundant)

Reptiles and Amphibians

1. Bog turtle (*Clemmys muhlenbergii*; rare) and red-eared slider (*Trachemys scripta*; becoming invasive)
2. Ravine salamander (*Plethodon richmondi*; rare) and red-backed salamander (*Plethodon cinereus*; native & abundant)
3. Loggerhead sea turtle (*Caretta caretta*; rare) & common snapping turtle (*Chelydra serpentina*; native & abundant)

Mammals

1. Water shrew (*Sorex palustris*; rare) and northern short-tailed shrew (*Blarina brevicauda*; native & abundant)
2. Indiana bat (*Myotis sodalis*; rare) and little brown bat (*Myotis lucifugus*; native & abundant)
3. Red wolf (*Canis rufus*; rare) and wild boar (*Sus scrofa*; invasive)

Fish

1. American paddlefish (*Polyodon spathula*; rare) and common carp (*Cyprinus carpio*; invasive & abundant)
2. Brook trout (*Salvelinus fontinalis*; uncommon) and brown trout (*Salmo trutta*; invasive)

INSTRUCTIONS/HOMEWORK –

Open the Animal Diversity Web homepage: <http://animaldiversity.ummz.umich.edu>

Read pg. 408, 749, & 764 in your book about the problems caused by introduced (invasive) species.

ASSIGNMENT: Choose one pair from each animal group (1 bird pair + 1 reptile/amphibian pair + 1 mammal pair + 1 fish pair = 4 pairs total). For each pair, answer questions below. Answers should be in a **Word.doc**, in complete sentences, and written entirely in your own words. (Do *not* copy & paste text from the website!).

This is an individual assignment.

1. Based on the species info on the Animal Diversity Website, determine the primary reasons ***why the rare species in each species pair are not flourishing***. Describe these reasons in your answer.
2. ***Are each pair of species likely to interact?*** If you think they might, ***what kind of interactions would they have?*** Consider different aspects of each species - not just what they eat but how they behave, reproduce, and anything else they do that might cause them to interact.
3. ***Explain two features of the common or invasive species in each pair that you think are likely to give it “an edge” over the rare species.***

ATTENTION MAC USERS: YOU MUST SAVE THIS AS A WORD.DOC THAT I CAN OPEN ON A PC