

Invasion Ecology: week 4

Worksheet

Part I. Aquatic invasive species: definition, examples.

In the beginning of our course we discussed the following definition of invasive species:

“Invasive species is a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human, animal, or plant health” (National Invasive Species Management Plan, 2006)

- In the provided space below, please modify this definition to be applicable to aquatic invasive species (5 min)

- Please compare your definitions in pairs and create a 'combined' definition (2-3 min):

- Please compare your version with formal definition of invasive species (2-3 min) (use 'Yes/No cards')

Part II. Freshwater invasive species. Your assigned species is **zebra mussel**.

- Please read this brief species description (30 sec):

“Brought here from Europe in ships’ ballast water; zebra mussels were first discovered in the Great Lakes region in 1988. Zebra mussels have inflicted tremendous damage to native ecosystems and to facilities using water, like power plants and municipal water suppliers. Millions of dollars have been spent by water users, to control and eradicate zebra mussels. And, as zebra mussel populations in an area increase, native mussels decrease; a strong indication that zebra mussels are the cause.” (U.S. Fish & Wildlife Service, 2017)



- Why is it an invasive species? Please check ALL that applies (30 sec):
 - Introduced to the US from other countries
 - Causes damage to freshwater ecosystem
 - Has economic impact

Part III. Aquatic invasive species in the US.

National Environmental Education Foundation:

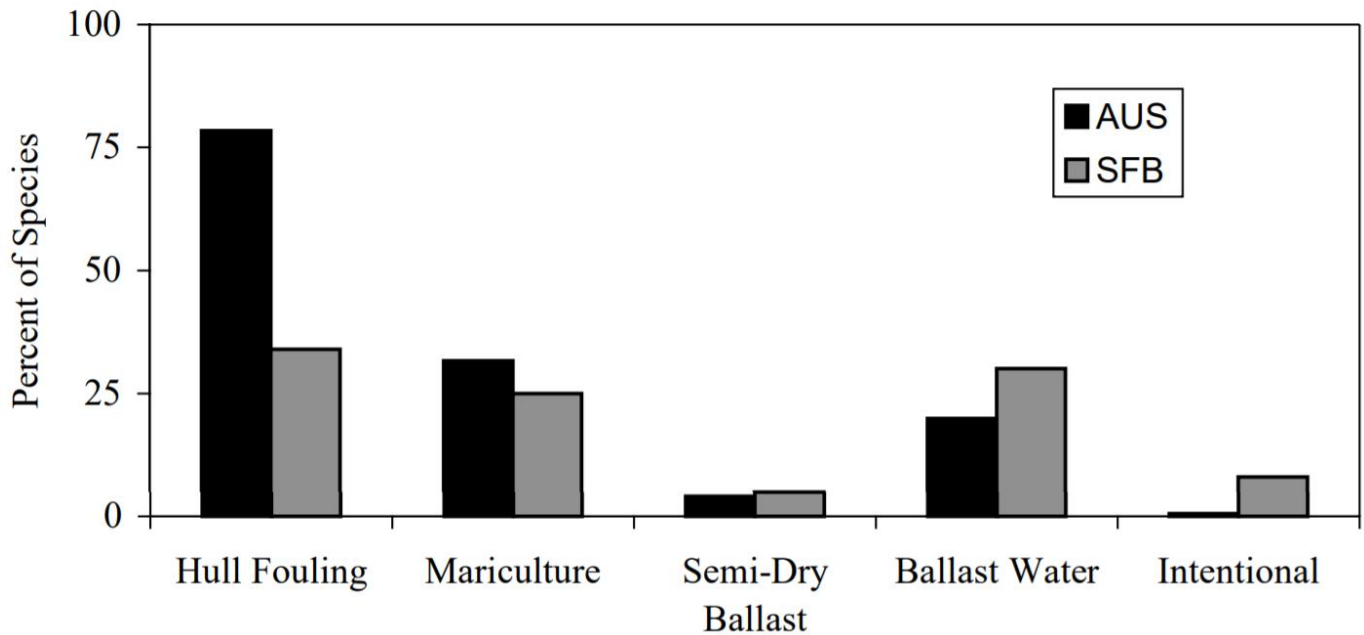
<https://www.neefusa.org/nature/water/invasive-aquatic-species-united-states>

Please check the link above, choose your home state, read about a representative invasive species, and answer the following questions:

- Why is this species invasive?
- Have you heard about this species before? If yes, did you know that this species is invasive?

Part IV. Marine species introductions.

Please discuss in pairs possible mechanisms of invasion for known aquatic introduced species in Australia and San Francisco Bay (Bax et al. 2003):



..and answer the following questions:

- Which mode of introduction is prevalent in each regions?
- What are possible reasons for these proportions?
- How geographical and climatic factors (if any) could potentially contribute to these proportions?