

## Discussion Questions for October 2

### *CH 3 - Invasive Animals in Marshes*

How is managing invasive animals similar to/different than managing invasive plants? Does the degree of similarity depend on whether or not the animal is an ecosystem engineer?

Invasions by the plants we talked about in chapters 1, 2, and 4 are all readily apparent even to the casual observer. Many of the animal invaders, however, are small and their effects are not as readily apparent. How do we get people to care about invaders that are barely noticed?

What about charismatic invasive animals - how do we get people to care about the negative effects of beautiful mute swans? How does animal welfare factor into the control of invasive animals? (i.e. should an animal's "right to life" or "right to a painless death" be a management consideration? Is the answer different, for example, for geese and bivalves?)

The authors suggest prioritizing management of ecosystem engineers over control of species with "only" trophic impacts. Is this a reasonable perspective? From the perspective of the marsh? From the perspective of ecosystem services?

The authors emphasize the importance of monitoring for both the presence and impact of invasive animals. Since long-term monitoring is both time consuming and expensive, could this take advantage of citizen scientists?

Similar to last week's question about plants... can these animal invaders be controlled and the tidal marsh systems be restored? Is it even worth worrying about current marsh invaders if sea level rise is soon going to dramatically reduce marshes anyway?

### *CH 5 – Shifts in Arctic Coastal Ecosystems*

"Increased winter survival" can sound so good to conservation biologists. How has this caused a problem for the Hudson Bay area? Can anything be done about the problem with migratory connectivity? Or is some type of population growth management our only option?

How are overpopulation of a native species and invasion by exotic species similar/different in terms of their impact on ecosystems? Should the fact that the lesser snow goose is a native species affect the actions we are willing to take to control their population growth?

How do you feel about these management techniques that were in discussion regarding the lesser snow goose in the Hudson Bay area: egg destruction, contraceptives, hiring professional hunters?

Population control is expensive & time consuming. The lesser snow goose population will crash eventually when they have no food in the breeding grounds, right? Should we just leave them alone? What are the pros & cons?

How do you think the problems that the geese are creating in the Hudson Bay area might be similar or different if they were occurring in a temperate region?