Discussion Questions for 9/23

Rout and Callaway:

1. Do you agree with the notion of biogeographic trends for microbes according to this paper? Do you think there is any global isolation for microbe species? Do you think there are cosmopolitan microorganisms? Is there enough data to assess this?

2. If geographical barriers did not limit species distribution, would that mean species are limited only by only local processes or is a more widespread effect limiting these species?

3. A once-isolated fungal species Phytophthora was introduced in European oak forests and credited with causing local oak tree deaths. What do microbial invasives causing disease indicate about cosmopolitan distributions of microbes?

4. Do 'strong' and 'weak' invaders really exist, since invasive plants can alter soil processes? Does the strength of invasion just depend on the region invasive plants wind up in?

5. Can microbes be invasive, since they are so widespread?

Wilson et al:

1. Does this article show that trade by humans is the largest driver of invasions?

2. In the case of the Texas puma helping to diversify Florida panther genetic compositions, Florida panther populations have increased since the 1990's. Could the intentional dispersal of species with a similar, foundational genetic makeup be the main method of restoring endangered species populations in a short amount of time?

3. Do human propagated plants count as invasive species, or do they escape this definition due to their usefulness to people as a food source?

4. Will international ecosystems be able to adapt to constant introductions of invasive species? How do you think the global natural environment will change in 100 years as a result of these invasives?

5. (page 141) Does the explanation of 'multiple populations of native species' help to explain why modern invasions are so much more prolific? Could there be other reasons?

6. Humans have raised plants and animals intentionally for food and recreation (pets and ornamental plants) but have accidentally/intentionally released them into the wild. Are we, in essence, domesticating the genetic diversity and biodiversity of local wildlife?

Capinha et al:

1. What does Figure 1 indicate about the impacts of human caused invasions? How is the relationship with distance changing?

2. Is there a sufficient amount of data in this report to suggest the effects of time on these invasions?

3. Is climate really as important as the report suggests?

4. The spread of organisms due to globalization has caused ecological damage to local ecosystems. Will we see species and the ecological roles become more generalized? Why?

5. Could the homogenization of similar species create successive generations that are more hardy to harsh conditions? Do you think this extends to humans as well?