

Why does the Anthropocene matter?

Don't we know all of this already?

Declaring the age of the Anthropocene offers us an opportunity (requires us?) to reassess our fundamental view of the relationship between humanity and nature.

Balance of Nature

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

• Foundational principle for modern environmental law and philosophy – Wilderness Act, NEPA, etc.

The human role?

Daniel Botkin, interpreting the Balance of Nature

- 1. Nature, undisturbed by human influences, achieves a permanency of form and structure that persists indefinitely.
- 2. This permanent condition is the best condition for Nature: best for other creatures, best for the environment, and best for humans.
- 3. When disturbed from this perfect state, Nature is capable of returning to it.

Not much balance after all

- Climate change, changes in types and magnitude of biodiversity, additional nutritional inputs, etc.
- Faster (generally),
 wider spread, and
 more severe change
 than anything
 ecosystems
 are used to.



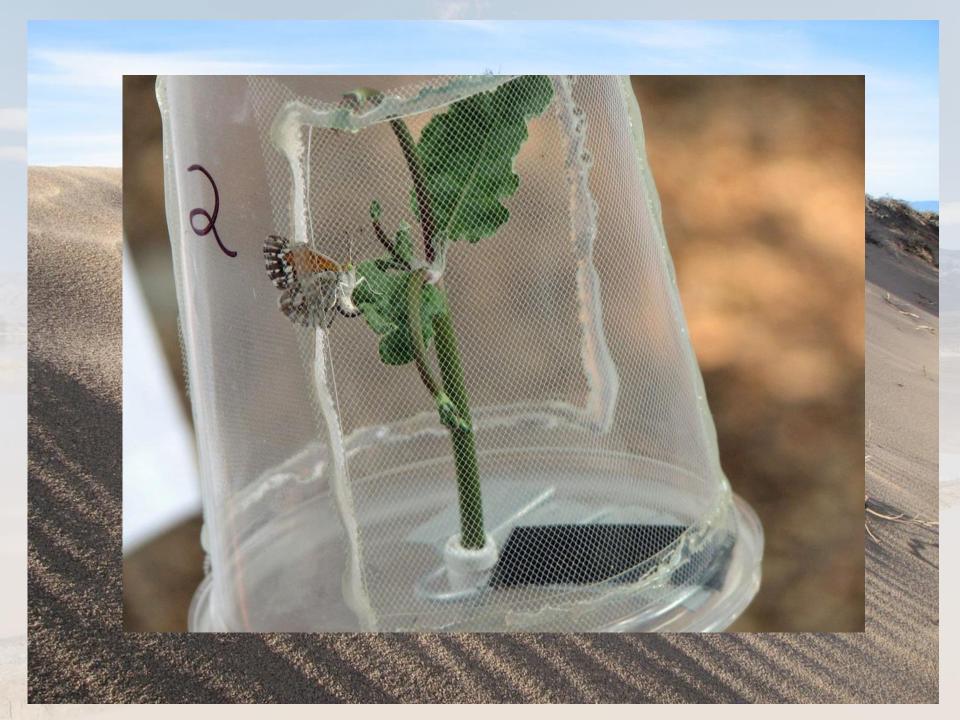
Again, so what?

- This view of the human role colors how we understand conservation.
- See, e.g., Ditching our Innocence: The Clean Water Act in the Age of the Anthropocene.
 - Ditches and other manmade landscape features place important role in some ecosystems.
 - These features are generally excluded from protection under the new EPA CWA jurisdiction rule, largely because they are anthropogenic.
 - http://bit.ly/ditchinginnocence

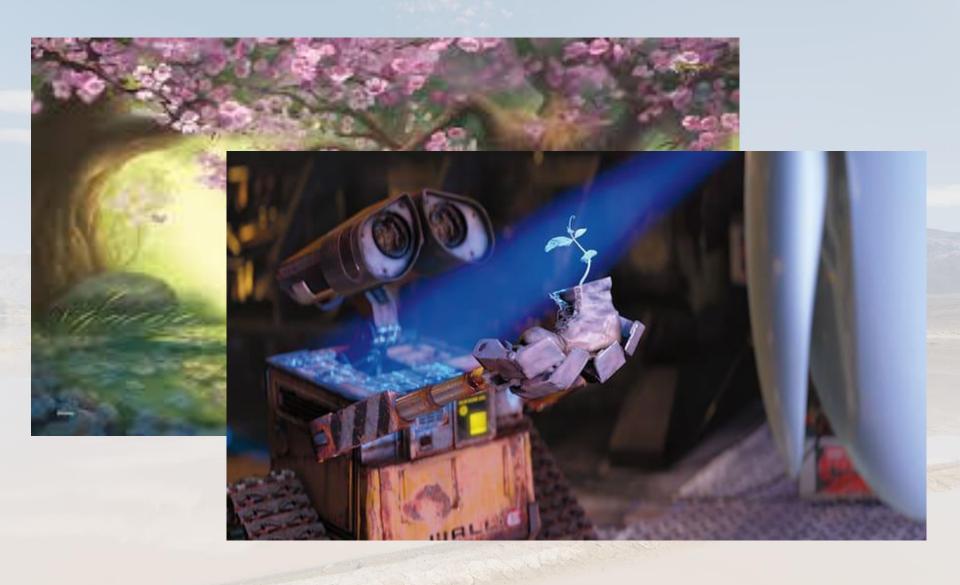
Humans have a central role...

- Because of the changes we've made in the environment, we must take a more active role in maintaining ecosystems.
 - Conservation Reliant Species: 84% of listed species
 - Conservation Reliant Ecosystems: Unk.%







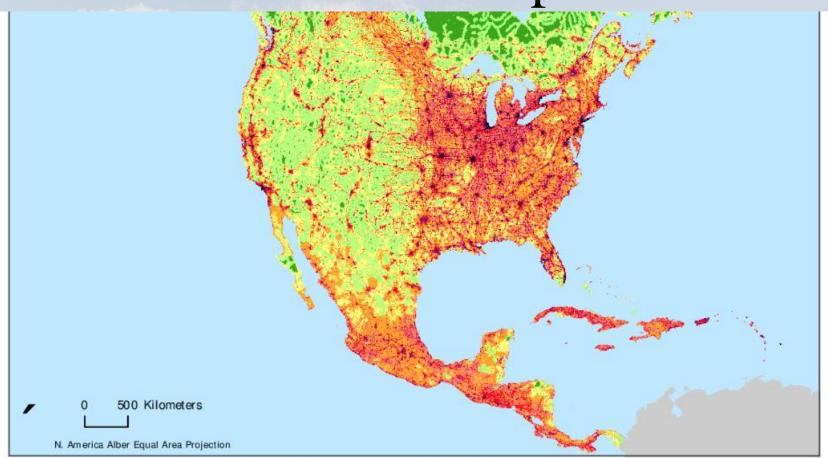


Courtesy of environmental historian Richard White

Time to reassess...

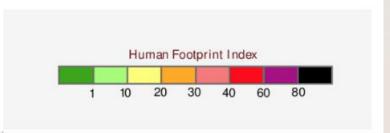
- Not arguing that wild is bad, or that we shouldn't aim for wild.
- Arguing instead that we shouldn't write off places/things with a human touch.

The human footprint



The Human Footprint Index

The Human Footprint Index (HF) expresses as a percentage the relative human influence in each terrestrial biome. HF values range from 0 to 100. A value of zero represents the least influenced - the "most wild" part of the biome with value of 100 representing the most influenced (least wild) part of the biome.



Putting humans back into nature

- Requires adjusting our expectations for key environmental legislation
 - CWA (Ditching our Innocence)
 - Wetland protection
 - Natural pollutants
 - Wilderness and National Parks
 - -ESA
 - Ecosystem management

Guest Species!

- Guest Species a neologism for species that we invite in and make comfortable.
- More technically:

naturalized nonnative species humans have introduced, intentionally or accidently, which we actively conserve because we benefit from having them in the wild.

Many, many examples...



Major Legal Issues

- Muddled thinking around management
 - ESA, NEPA, etc
- Unclear future role for guest species
 - Ethical, biological, and policy questions about the role we want guest species to play
- http://bit.ly/guestspecies

Solutions? Ecosystem Reconciliation

• "[S]cience of inventing, establishing, and maintaining new habitats to conserve species diversity in places where people live, work, and play." (Rosenzweig 2003)

Ecosystem Reconciliation

- Our first step? "[D]etermine what we want these integrated ecosystems to look like and what species we want them to contain."

 (Moyle 2013)
- In development: Disney Values in a Wall-E World: Nature in the Anthropocene

http://bit.ly/ditchinginnocence http://bit.ly/guestspecies

