

BIOL/ENST/NORT 3313: ECOLOGICAL STRUCTURE IN NORTHERN ENVIRONMENTS

TOPIC 6: CONSERVATION AND MANAGEMENT

The desperate state of Earth's biodiversity

The Canadian context

Ecological traps

Invasive species and the tens rule

Management of exploited species

Who knows: Conservation biologists or resource managers?

How many species will survive?

Reconciliation ecology

Something to think about:

Populations can only yield resources for humans and other predators if they exist below their resource and density-limited carrying capacity. With this in mind, contrast the strategies used by farmers, ranchers and pastoralists with that of wildlife, fisheries and forest managers. Should they converge? If so, why? If not, why?

Required reading:

Morris, D. W. 2019. A human tragedy: The pace of negative global change exceeds human progress. *Anthropocene Review* 6:55-70.

<https://journals.sagepub.com/doi/full/10.1177/2053019619848216>

Related reading:

Barnosky, A. D. et al. 2011. Has the Earth's sixth mass extinction already arrived? *Nature* 471:51-57. <http://www.nature.com/nature/journal/v471/n7336/full/nature09678.html>

Robertson, B. A., R. S. Ostfeld and F. Keesing. 2017. Trojan females and Judas goats: evolutionary traps as tools in wildlife management. *Bioscience* 67:983-994. <https://academic.oup.com/bioscience/article/67/11/983/4564179>

WWF. 2018. Living planet report 2018. Aiming higher. WWR International, Gland, Switzerland. https://wwf.panda.org/knowledge_hub/all_publications/living_planet_report_2018/