Seminar: Elizabeth Daut - SESYNC, 11am

Presenter:
Elizabeth Daut, SESYNC

Time of Event:
Tuesday, January 24, 2017 - 11:00

Location:
National Socio-Environmental Synthesis Center (SESYNC)
1 Park Place, Suite 300
Annapolis, MD 21401

Video:

Title: Infectious pathogen risk stemming from U.S. exotic animal imports and exporting countries

Abstract:

In 2015, over 122 million live wild and exotic animals were imported into the United States from 123 countries with minimal disease surveillance. Imported animals, either wild-sourced or captive-bred, can harbor infectious pathogens harmful to native U.S. wildlife if accidentally or deliberately released into the wild. It is reasonable to assume that risk of importing infectious pathogens varies depending on conditions in the exporting countries and the number of species and individuals exported per country. To better understand disease risk, we examined 17 years of USFWS import data and quantified abundance, composition, and source (i.e., exporting country) of live bird, mammal, reptile, amphibian, and fish imports. We created an exporting country infectious disease threat index by combining regression and simulation models that first evaluated each countries disease potential for terrestrial and aquatic agriculture animals and then predicted the disease potential for their exotic animal exports. Over 200 countries exported live animals to the U.S. during the study period with roughly 40% exporting every year. Southeast Asian countries dominated the export trade (in volume) particularly for fish and ranked high for infectious pathogen risk. On average, 750 genera, 1,120 species, and 185 million individuals were imported annually, with fish comprising almost 97% of imports. Sixty percent of annual imports were captive-bred individuals; reptiles were the most abundant wild-sourced taxa (70%). This study presents the first attempt to prioritize import disease risk for currently unregulated species for the United States based on exporting countries and could be used to design targeted health screening.

Seminar presented by Elizabeth Daut [1], postdoctoral fellow at the National Socio-Environmental Synthesis Center (SESYNC).

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Associated SESYNC Researcher(s):
edaut [4]

Event Attendance:
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