

CNAS Public Lecture Series – Fall 2013

Temple Hall 002

September 10, 2013 7:30 PM – 8:30 PM

ETHICAL DILEMMAS OF GLOBAL DISEASE ERADICATION PROGRAMS

Speaker: Deborah Corcoran, Senior Instructor, Department of Geography, Geology, and Planning



Smallpox is the only infectious disease humans have successfully eradicated. Two diseases are currently tantalizingly close to eradication: Polio and Guinea Worm Disease. Other diseases such as AIDS, Malaria and Tuberculosis vie for scarce public health funds. Which diseases should have priority: those which affect the largest numbers of people, those with the highest mortality rates, or those with the greatest likelihood of successful eradication? Should military efforts be used to enforce immunization programs? Should religious and cultural beliefs take precedence over public health concerns? Should stocks of eradicated diseases be maintained? These and other issues will be addressed in this presentation.

October 8, 2013 7:30 PM – 8:30 PM

GEOPHYSICAL ADVENTURES IN ANTARCTICA

Speaker: Kevin Mickus, Professor, Department of Geography, Geology, and Planning

Geophysics is the use of the methods of physics to explore the subsurface of the Earth (and other planets). Techniques include measuring the Earth's gravity and magnetic fields, studying how seismic waves travel through the Earth, and analyzing how electric and magnetic fields interact with subsurface materials. These methods are useful in academic pursuits such as studying the crust and mantle of the Earth and how different tectonic features are formed. Of economic and societal importance, these methods can be used for petroleum, mineral, geothermal and groundwater exploration. One of the most hostile places on Earth, Antarctica, places extra challenges in collecting geophysical data because of the extreme cold, elevation, and thick ice layers. In this talk I will present my experience; first the training to be ready to go to the field and then the actual collection of gravity data on the 13,000 foot Mt. Erebus, which is an active volcano in western Antarctica. I will also discuss the geology and tectonics of the west Antarctica region.



November 5, 2013 7:30 PM – 8:30 PM

PEOPLE, PLAGUES AND PESTS: THE CHALLENGES OF CONTAINING AND CONTROLLING EXOTIC SPECIES

Speaker: John Havel, Professor, Department of Biology



Oceans and mountain ranges have historically isolated humans and other species, allowing the development of distinct plant and animal communities and human cultures. Global travel and commerce open up avenues for spreading species and human ideas, as well as harmful pests and epidemic diseases. Exotic species from other continents are now commonplace; some are intentionally introduced, some escape, and some hitchhike with shipped goods. While most exotics fail to establish or have little effect, some species are invasive and some create economic harm. The US alone spends about \$100 billion a year to control exotic pests, including those in agriculture, forests, and lakes. Preventing the introduction of exotic species is certainly cheaper than controlling them after establishment, but requires regulation of human behavior. Using examples of aquatic invasive species, I will describe some smart prevention methods, as well as new approaches for control of established pests.

PARKING WILL BE AVAILABLE IN LOT 4, SOUTH OF TEMPLE HALL