EcoHealth 2, 1–2, 2005
DOI: 10.1007/s10393-005-3867-7

ECOHEALTH

In This Issue

Ecohealth In Kathmandu, Nepal

In their article on agro-urban ecosystem health, **Waltner-Toews et al**. provide an overview assessment of research dealing with cystic echinococcosis in Kathmandu, Nepal. They describe three phases of the work, starting with something akin to a standard epidemiological approach, followed by a more participatory phase that models the ecological and social components and interrelationships of the disease system. Building on stories that more completely encompass the socioeconomic and cultural aspects, a meta-narrative is constructed of the changes to the system. This commentary, told within a context of political and more global events, provides a narrative in its own right as well as a useful interpretative synthesis of a 10-year Ecohealth program.

Learning about Social-Ecological Systems from the Immune System

Social-ecological systems (SES) theory is emerging as a useful body of concepts and models with significant power to explain the dynamic behavior of a range of relatively large-scale systems above the level of the organism. For example, SES theory has been used to explain the reemergence of malaria. Key components of SES theory include the concepts of disturbance, adaptive capacity, resilience, and their interdependencies. In a unique perspective, using the immune system as a model, **Janssen and Osnas** describe how these SES components reinforce the growing evidence for the importance of understanding, identifying, and maintaining response diversity in institutions and ecosystems.

A Trophic-cascade Model of Plague in Prairie dogs

Plague was introduced into North America during the 19th century, where, like its human hosts, it settled and prospered. In the age of antibiotics, it still causes seasonal outbreaks from its prairie dog reservoirs in western areas of the United States of America. **Collinge et al**. examine whether observed correlations between human cases and weather patterns are supported by a mathematical model of plague in prairie dogs. They found a strong correlation at one study site (Montana) and their findings suggest that their trophic-cascade model for plague in prairie dogs is of use in understanding transmission to humans, in areas with a strong climate signal.

A Network Approach for Analyzing Equity in Participatory Ecohealth Research

The CARUSO project has undertaken four phases of participatory research since 1994, each examining the relationship between mercury exposure, fish consumption, and dietary habits in Brasília Legal, a small village in the Brazilian Amazon. Building on this previous research, the current study by **Mertens et al**. analyses individual and group involvement in discussion networks about mercury and health, with a view to improving equity in participation. By identifying key elements that affect community discussions about fish consumption, mercury, and health, the study highlights opportunities to address lack of involvement of some groups, and foster more equitable

participation and benefit sharing in future cycles of participatory research.

Linking Health of the Land and Health of the People: Berry Harvesting by Teetl'it Gwich'in Women

The relationship between the health and well-being of people and environment is not only central to the world view of many indigenous peoples but also provides informative examples of the links between social-ecological systems and health. Co-authors **Parlee, Berkes, and the Teetl'it Gwich'in Renewable Resources Council** examine the complex and diverse values that Teetl'it Gwich'in women in Canada associate with their lands and resources. Specific measures for a range of values associated with berry harvesting are identified including individual and family well-being, social connectivity, cultural continuity, stewardship, self-government, and spirituality. The finding that berries were not identified as important for their commercial value points to informative differences between social-ecological and socioeconomic approaches to health.

Environmental Stress and Antioxidant Systems in Urban Birds

While it is commonly proposed that anthropogenic environmental changes lead to increased stress in wildlife populations (and ultimately to reduced resistance to disease outbreaks), the technical challenge of measuring stress in wildlife impedes research. In this issue, **Isaksson et al**. use plasma glutathione markers as a new approach to measuring stress in a classic European model for population biology and ecology. For great tits (*Parus major*), their findings of raised stress biomarkers and paler plumage in anthropogenically modified habitats suggest that this may become a useful research tool for understanding the complexities of stress and health in wildlife.

Published online: