

## *In This Issue*

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### GREETINGS FROM KUNMING

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At the 2012 Biennial Conference in Kunming, China, the Board of International Association for Ecology and Health (IAEH) conceived the idea of producing a Position Statement. A broadly-based Working Group of IAEH members prepared a document that was circulated to all attendees and opened to participation from all delegates. Meetings were held to gather ideas and distribute editing and rewriting assignments and it was decided to target the EcoHealth community rather than a specific policy. WEB-ADE, the online conference experience that was unveiled during the Kunming Biennial, hosted discussions on dissemination and impact of this statement along with discussions on the EcoHealth live website and blog. In total, 33 members and delegates made contributions to the Kunming Position Statement that was presented at the final Plenary of the Conference. The IAEH board has now adopted the statement and a final version may be found at [www.ecohealth.net](http://www.ecohealth.net).

### VICTORY GARDENS?

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In the Kibera slums of Nairobi, Kenya, households grow crops such as kale and Swiss chard in large sacks filled with soil (sack gardening). Because Kibera lacks basic sanitation services, farmers are potentially exposed to a variety of environmental contaminants. Gallagher et al. demonstrated that kale from their sack gardens had lower counts of fecal coliform bacteria than kale purchased from other sources, but did have heavy metal contamination above the recommended levels for human consumption. This raises questions about how to appropriately promote urban agriculture within urban areas as well as the trade-offs inherent with farming in densely populated urban areas.

### BD FOR BUSINESS

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*Batrachochytrium dendrobatidis* (Bd) causes amphibian chytridiomycosis, recognised as the driver behind recent amphibian declines and extinction. Most surveys for Bd had been undertaken in mesic areas, globally. This is potentially underestimating the threat of Bd in arid regions because predictions from models are likely to be highly biased. Ocock et al. detected Bd in an arid floodplain wetland, beyond the predicted area of Bd occurrence in Australia. These results, in conjunction with recent opportunistic records, indicate Bd may be widespread in arid regions and that the current geographic limits of Bd are still unknown, limiting the ability to predict its prevalence.

On the other side of the globe, the pathogenic chytrid fungus constitutes a significant threat to more than 790 amphibian species occurring in Colombia. Reports on the current conservation status of most species, the distribution and diversity of the fungal pathogen in the country are still scarce. This study by Flechas et al. provides a morphological and genetic characterization of the first Colombian isolate of Bd (EV001). It shows that EV001 is morphologically consistent with previously described strains and is genetically grouped with Panamanian strains. The data highlights the need to have more isolates to determine how many colonization events occurred and from what source populations Bd may have arrived in Colombia.

Further north, Chatfield et al. examined the fitness effects of infection by the amphibian chytrid fungus, *Batrachochytrium dendrobatidis*, on northern leopard frogs, *Lithobates pipiens*. Using two measures of fitness: jumping ability and testes morphology they found that peak velocity during jumping was significantly lower for infected animals after eight weeks. Also, it was found that testes width of

infected animals was significantly greater than in uninfected animals. This study is the first to show effects on whole-organism performance of Bd infection in post-metamorphic amphibians, and may have important long-term, evolutionary implications for amphibian populations co-existing with Bd infection.

## PLAYING POSSUM

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*Didelphis virginiana* is one of many species reported as reservoir of *Trypanosoma cruzi*, etiologic agent of Chagas disease. Julian et al. analyzed the relationship between *T. cruzi* infection and certain population parameters of *D. virginiana*, and define the association of rural housing characteristics to presence of opossums. Adult opossums appeared to be the most infected with the parasite, demonstrating a significant relationship between age structure and infection. The adjacency to yards with tall grass or vacant lots, and poultry were the most important variables for opossum presence in the study site.

## BUZZ OFF!

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In this paper Dowling et al. tested relationships between demographics, resident knowledge, attitudes, and practices (KAP), and mosquito infestation in Washington, DC. Respondents that practiced source reduction had lower numbers of mosquito-infested containers. Source reduction was related to respondent overall knowledge of mosquitoes and specific knowledge of mosquito development, which both varied with demographics. Source reduction likely involved container removal and container management without outright removal. Mosquito-related education will promote community-based container management, particularly in middle and low socioeconomic status neighborhoods which may have lower knowledge and high motivation.

## MARMOSET THERE'D BE DAYS LIKE THIS

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This paper by Bueno et al. describes the occurrence of *Plasmodium* spp. infection affecting free-ranging neotropical primates from Amazon Regions in Brazil, and briefly discuss the importance of this pathogen in natural areas that have suffered/or/ are planned to be impacted by major anthropogenic actions, as dams and highways constructions. The

prevalence of *Plasmodium* infection was 21.0% (4/19) and PCR positive samples were identified as *P. brasilianum*. Considering the social-economic changes that the Amazon is facing, the prevalence of *P. brasilianum* infection highlights the necessity to closely monitor the movement of both human and non-human primate populations.

## FIS(HG)RADES

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Individuals who fish and eat self-caught fish make decisions about where to fish, the type to eat, and the quantity to eat. Federal and state agencies often issue consumption advisories for some fish with high mercury (Hg) concentrations, but seldom provide either the actual metal levels to the general public, or identify the fish that have low contaminant levels. Community participatory research is of growing importance in defining, studying, and resolving complex exposure and risk issues, and this paper is at the intersection of traditional stakeholder approaches and community-based participatory research. Burger et al. aim to describe the process whereby stakeholders (fishers), were involved in directing and refining research questions to address their particular informational needs about mercury levels in fish, potential risks, and methods to maintain health, by balancing the risks and benefits of fish consumption. Community participants influenced many aspects of the design and implementation of the research, in the collection of the samples, and in the final analyses and synthesis, as well as the communication of results and implications of the research.

## THE TORTOISE AND THE PATHOGEN

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This is the first range-wide account of the prevalence of the pathogen *Mycoplasma agassizii* (an agent of upper respiratory tract disease), in the federally-threatened, Mojave desert tortoise. By measuring levels of disease among tortoise populations across the entire climatic gradient of the Mojave Desert, Sandmeier et al. were able to detect novel patterns. In particular, they found a positive association between colder thermal regimes and higher levels of disease. It is suggested that future research on this disease focus on the effect of temperature and climate both on the viability of pathogen populations and the immune-function of the host populations.