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Editorial

Global and local tropical conservation science

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The first issue of Tropical Conservation Science (TCS) for 2012 marks the start of the journal's fifth year of existence. TCS is becoming an important venue for publication of conservation-oriented research in the tropics, and the current issue is a clear testimonial to this. The issue contains one Opinion Article on global biodiversity monitoring, six research articles based on case studies from Guatemala and Belize, Costa Rica, Brazil, Nepal, India and Uganda, and two Short Communications based on studies in Uganda and Brazil. This geographic diversity is paralleled by the diversity of conservation issues tackled by these papers.

Global concerns about tropical biodiversity conservation in light of climate change and the need to mitigate its effects have led to the development of ways to reduce carbon emissions by conserving forests in tropical countries. Among these, REDD+ stands out for the important strides achieved in this direction. The authors of the current Opinion Article argue that because tropical forests are home to a high proportion of the World's biodiversity, REDD+ also offers high expectations for biodiversity conservation. But the authors stress that site-specific biodiversity monitoring agendas are needed.

Closely related to the above issue is the research paper using LiDAR to monitor canopy degradation caused by human activity along the Guatemala-Belize border. Here the authors report on the value of using an airborne laser system to map features of the vegetation in more detail than satellite systems can provide. Their study reports that the airborne laser system revealed 50% higher levels of human-induced canopy disturbance than recorded by the space-based sensors.

The common tink frog (*Diasporus diastema*), so-called because of the loud metallic "tink" sound that the male frog makes during the night (up to 40 times per minute), is an amphibian sensitive to habitat loss and climate change. In their study in Costa Rica, Hilje and Aide conducted visual and acoustic surveys using automated recorders that were placed in each of 14 second-growth sites. The study highlights two important results: 1) automated recorders can greatly facilitate our ability to monitor frog activity, and 2) secondary forests seem to provide suitable habitat for reproduction in the common tink frog.

Biological corridors are essential to provide connectivity between isolated natural protected areas. This fact, as reported by Aryal and colleagues, is crucial for wide-ranging species such as the tiger and rhinocerous in the low elevations of Nepal. The authors examined the conservation value of the northern Barandabhar forest corridor, which links two large protected areas and incorporates about 15 community forestry areas. The authors suggest that the Barandabhar corridor should be managed through a new sharing scheme, the Barandabhar Forest Management Council, to foster ecological integrity of the area while providing forest products to communities.

The relationships between people and animals represent one of the most ancient forms of interaction between humans and biodiversity. Globally, birds constitute one of the most important vertebrate groups to humans. In their paper Mariz and colleagues use an ethno-ornithological research approach to understand hunting pressures upon birds in a semiarid region of Brazil. They conclude that the manner in which birds are captured

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is often a strong indicator of the level of pressure focused on that species and argue for studies of different capture techniques in rural communities and the bird species most frequently hunted.

The smallest otter in the world, the Asian small-clawed otter, was the subject of investigation by Prakash and colleagues in Western Ghats mountain ranges in peninsular India. Living in streams and rivers that flow from forests, otters often venture far into human modified landscapes. The study, conducted in a system of streams and rivers in a landscape where tea and coffee are cultivated, showed that 75% of the stream segments sampled had evidence of otters' presence. The authors propose that the introduction of a wildlife-friendly certification scheme for coffee and tea, and the restoration of rainforest fragments with participation of private owners, will increase the persistence of the otter population in the human-modified landscape.

In their paper, McLennan and Plumptre point out that riverine forests in fragmented landscapes have 'corridor' potential because of their linear shape, but are under-studied in many regions of Uganda. The authors studied this feature in Bulindi, an agricultural landscape 25-km south of the Budongo Forest in western Uganda, to assess the conservation value of riverine forests for populations of endangered chimpanzees. Their study suggests that riverine fragments in the study area offer a relatively food-dense habitat for chimpanzees and other fruit-eating wildlife, but stress that riverine forests in Uganda are mostly unprotected and are being heavily logged and cleared for agriculture.

Crop-raiding by primates living in protected areas causes human-primate conflicts that deter conservation efforts. In order to design management plans to mitigate the conflict, Baranga and her research team document that red-tailed monkeys in Uganda (*Cercopithecus ascanius*) raid a variety of crops adjacent to protected forests. They investigated crop-raiding patterns of solitary males and social groups of red-tailed monkeys in a cocoa plantation and discovered that crop-raiding behavior by social groups took place close to the protected area, whereas raiding by solitary males occurred far from the forest edge and caused greater damage. They suggest that strategies designed to cope with raiding must address the patterns they observed.

Invasive species are one of the most pressing conservation problems in the tropics, and primates are no exception. Introduced primate species may harm the native ones by decreasing food availability, by displacing natives from suitable habitat, and by transmission of pathogens and diseases. In their paper, Oliveira and Viveiros call attention to these issues for populations of native primates in the Atlantic forests of Brazil in the state of Rio de Janeiro, where the remaining forests are the habitat of seven native primate species, while three introduced primate species (the White-tufted-ear Marmoset, the Black-tufted-ear Marmoset and the South American Squirrel Monkey) seem to be thriving in the region.

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