

Editorial

Varied viewpoints in challenging conservation issues

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The current issue of TCS includes eight contributions: one opinion article, a conservation letter, five research articles and one short communication. These papers tackle conservation topics of intense continuing debate due to their social and economic ramifications.

The opinion article argues that phylogeographic studies (the study of genetic variation within species throughout a region) can provide population-level information for conservation of biodiversity. It can provide baseline genetic data to monitor genetic diversity over time, and can allow the identification of 'evolutionary hotspots' (geographic areas where there is higher than average genetic diversity in a number of species) for conservation. The authors stress that the REDD+ initiative may provide the impetus for this much-needed biodiversity research in tropical countries.

The conservation letter discusses the risk of biodiversity leakage from prioritizing REDD+ in carbon-rich forests such as the peat-swamp forests in Kalimantan, Indonesia. The authors point out that (1) that all forests are not equally vulnerable to threat displacement; and (2) that many low-carbon, non-REDD+ forests are highly vulnerable to disturbance regardless of REDD+ activities in high-carbon forests. Strategies for reducing the risk of threat displacement include focusing non-REDD+ conservation efforts on the most vulnerable high-biodiversity forests not scheduled for protection under REDD+, encouraging community-based approaches for pursuing REDD+ in low-carbon, high-biodiversity forests, and developing fiscal and financial incentives for protecting vulnerable low-carbon forests.

The first research article evaluates the risks and benefits of illegal poaching, a widespread and ongoing activity around the Serengeti National Park, in Tanzania. The study suggests that community-based programs to reduce dependence on bushmeat by improving peoples' livelihoods may reduce poaching.

Our second research article assesses the social aspects of bushmeat consumption in Tanzania, noting that bushmeat consumption is more common in richer than in poorer households, challenging the idea that increasing the availability of alternative protein would necessarily reduce consumption of bushmeat.

A third investigation reports the loss of corridors for elephants and other large mammals in southern Tanzania due to human population pressures, specifically the closing over the last five years of vital connectivity between the Selous Game Reserve and the Udzungwa Mountains, two of Africa's most important ecosystems. The study highlights management options at the landscape level that can be instrumental in the protection and restoration of Tanzanian wildlife corridors, but their success depends on political will as well.

The fourth research paper tackles the problem of restoration of Atlantic rainforest altered by distinct land uses in northeastern Brazil. The study reports forest areas replaced by agriculture require action from government or private management for their recovery, such as planting common species of preserved forests that can't come back naturally. The authors indicate that forests damaged by low-impact logging tend to recover naturally when protected against future disturbances such as hunting, logging or fire.

A fifth research report investigated nutrient dynamics in coastal lagoons and marine waters of Vieques, Puerto Rico. Vieques was used as a bombing range and ordnance stockpile for 60 years by the US Navy. The study reports that surprisingly, there were no differences in nutrient concentrations between the inhabited and uninhabited parts of the island. The authors suggest that the nutrient levels in the lagoons appear to be controlled by their depth and how connected to the ocean they are, rather than by pollution coming from the land. The study is of relevance as the economy of Vieques shifts towards tourism, making preservation of the ecology of its coastal waters of paramount importance.

The short communication article in this issue reports on the value of using natural marks to estimate free-roaming dog *Canis familiaris* abundance in suburban Mumbai, India. Free-ranging dogs are a major ecological problem in the tropics, as they often interact with wildlife as predators, prey, or competitors, and are also reservoirs of disease, such as rabies, which can be transmitted to both wildlife and people. The authors report on a simple method utilizing natural marks on the dogs themselves, along with counts of unmarked individuals, to estimate the total number of dogs in an area. The pilot study reports the existence of a large number of dogs available as prey for leopards, raising the risk of leopard-human conflict in suburban Mumbai. The large number of dogs also suggests a high risk of rabies transmission to the human population.

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