

## Editorial

# Mongabay.com scientific journal, *Tropical Conservation Science*, reaches its second year of existence

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The current issue of TCS marks the second year of existence of the journal. During 2009, TCS published 31 papers plus four editorials, totaling 468 pages, across four issues. Notably, in 65% of the papers published in 2009, the main author was native to the tropics, 68% were written in English, 9 in Spanish, and 1 in French.

Through the first 11 months of 2009, TCS papers were downloaded more than 45,000 times, a 60 percent increase over the same period last year. The TCS site had more than 20,000 visitors, a rise of about a third over 2008.

As of November 2009, the editors of TCS had received 61 manuscript submissions, accounting for a total of 120 manuscripts received in the editorial office since the launching of the journal in March 2008. All papers submitted to TCS in both 2008 and 2009 were subjected to a peer-review process and scored into three categories: accept with minor revision, accept with major revision, and reject. Papers were reviewed by renowned scientists in their areas of expertise. In 2009, 101 referees (see Appendix 1) kindly assisted TCS in the peer review and we are grateful for their participation in this process.

We are particularly grateful to Mr. William Bridges, Director (Ret.), Pulliam School of Journalism at Franklin College, for copyediting each of the manuscripts written in English and accepted for publication in TCS in 2009.

Complementary to the publication of their papers, the authors also kindly prepared popular summaries of their work. These summaries were translated into Spanish, Portuguese, French, and Chinese, if the paper was published in English. Summaries of each paper in each of the five languages were published on the TCS website and used also for press releases and for dissemination through various channels to the global scientific community and to the public at large. Translation of these summaries into Portuguese, French, and Chinese was accomplished

with the assistance of colleagues and graduate students from Brazil, Belgium, and China, who kindly donated their time and effort to this task.

*Tropical Conservation Science* published in 2009 its first special issue (Vol 2, Number 2). The special issue focused on conservation issues of the ungulates in a megadiverse country in the Neotropics: Mexico. The guest editors for this issue were Dr. Sonia Gallina and Dr. Salvador Mandujano, research scientists at the Instituto de Ecología, A.C., in Mexico. We invite readers of TCS to propose other special issues in the future.

The current issue of *Tropical Conservation Science* (TCS) contains six papers. These cover such topics as reviewing information available on forest recovery following shifting cultivation, reporting on a rapid assessment methodology to measure seed dispersal effectiveness (RASDE) in tropical rainforests in French Guiana, a global analysis of ecological and life-history correlates of extinction and persistence of primates in habitat fragments, measuring tree responses to edge effects and canopy openness in a tropical montane forest fragment in Costa Rica, rapid ecological assessment of bats in a semi-urban environment in Colombia, and sustainable use of mangroves using improved fish smoking systems in Cameroon

The following paragraphs briefly sketch some of the major issues investigated by the authors of papers published in the current issue.

In their review paper on forest recovery following shifting cultivation, **Teegalapalli and co-authors** point out that shifting cultivation is considered as a major driver of deforestation globally, but the practice persists since it provides subsistence livelihoods to at least 300 to 500 million people worldwide and is intricately linked to cultural, ecological, and economic aspects of communities. The authors note that shifting cultivation fallows have been shown to recover vegetation faster in terms of basal area, regeneration, and accumulation of species than other human-modified and subsequently abandoned lands such as pastures, agroforestry sites, and plantations. They argue that the practice of shifting cultivation can be sustainable and support biodiversity in the overall landscape, if large tracts of relatively mature forests are preserved.

In their paper, **Gibbons and Harcourt** follow the premise that habitat loss and fragmentation are two of the main threats facing wildlife. They note that conservationists have long known that the species at risk in small fragments are often not a random subset of the original community and that understanding of the biology of extinction should help refine conservation efforts. Investigating the risk traits among primates, an unusually well-known taxon of tropical forest mammals, the authors found that no significant relationships existed between area of smallest fragment in which species or genera persisted and any of the biological parameters they examined. They suggest that the most likely explanation for this unexpected finding is that the smallest fragments in which primates are currently studied are usually so small that all primate species in them are doomed in the long term and, therefore, no biological traits distinguish taxa at risk. They also suggest that many studies of primates in fragments are being conducted in fragments too small for long-term persistence of any primate (global median of 1 km<sup>2</sup>) and, therefore, too small to produce a difference in probability of extinction between

species. The authors conclude that that conservation research and efforts should be directed at assessing the efficacy of forest fragments and small biological preserves in conserving primate species.

Non-timber forest products (NTFPs) include fruits and nuts, vegetables, fish and game, medicinal plants, resins, essences, barks, fibres, bamboo, rattans, and a host of other palms and grasses. In their paper **Lermyte and Forget** note that many NTFPs are extracted from species largely dependent on animals for dispersal and recruitment and argue that these interactions are highly sensitive to anthropogenic activities. Working in French Guiana and focusing on a large-seeded scatter-hoarded tree species, *Carapa surinamensis*, the authors set out to develop and test a new rapid assessment protocol to sample and evaluate the impact of human activities such as logging and hunting on seed dispersal and seedling recruitment for *C. surinamensis*. **Lermyte and Forget** showed that while the new protocol is unable to capture all the complexity of seedling recruitment, one of the main advantages of this approach is that it can be rapidly and easily set up and repeated without sophisticated material and equipment for hard-tegument fruit species enclosing large seeds, especially in forests where there is an urgent need to evaluate the impact of human activities in order to implement natural resource protection and conservation measures.

Tropical montane forests are one of the least known types of tropical forests and have been subjected to the impact of human activities, resulting in their disappearance and fragmentation. Working under the premise that fragmentation can effectively reduce the tropical montane forest remnants' size through edge effects, **Cayuela and co-authors** analyzed forest structure and composition along the edge-interior gradient in a tropical montane fragment in Costa Rica to determine whether there is an interaction between gaps and edges. They showed that, through their effect on the composition of shade-tolerant species in the fragment's periphery, edges may be effectively reducing the habitat available for this particular plant group.

Considering the rapid expansion of urban areas at the expense of native vegetation in the tropics and the resulting loss of biodiversity, one major conservation planning problem is to determine the location of conservation-oriented projects in urban and semi-urban environments. **Elkin and coauthors** argue that rapid ecological assessments are important in this process, especially when they use indicator animal groups such as bats. They applied this approach in a semi-urban environment in Cordoba, Colombia. Their results indicate that the creation of ecological parks, coupled to the conservation of forest remnants in expanding urban areas, is an important mechanism for conservation of bats and of those organisms supported by bat presence and activities.

Mangrove forests are a source of livelihood for thousands of coastal communities in tropical countries worldwide, who traditionally harvest fish, shrimp, non-timber forest products, timber, and fuel wood from them. In their paper, **Feka et al** point out that fuel wood extraction for commercial fish smoking is one of the most important threats to the sustainability of mangrove ecosystems in Cameroon. These authors indicate that one approach to reducing

fuel-wood consumption and improving working conditions for people is by introducing improved fuel consumption systems. Using socio-economic and forest surveys in three villages in the Atlantic coast of Cameroon, where mangrove wood is harvested and used for fish smoking, the authors document that improved fuel-wood consumption systems compared to traditional fuel-wood consumption systems will reduce consumption of mangrove wood for fish smoking by about 60%. The authors argue that in addition to sustaining the mangroves and improving the health of local people, improved fuel-wood consumption systems may also aid in reducing greenhouse gas emissions by reducing extra wood biomass consumption.

In short, the six papers published in the current issue represent a diverse set of research areas in tropical conservation that bring to light summaries of trends in forest regeneration following shifting cultivation; a new global assessment of the relationship between extinction probability and habitat fragmentation for non-human primates, the development of new field methodologies to study seed dispersal, edge effects and persistence of montane forest fragments; the value of eco-parks in semi-urban environments for conservation of animal diversity; and sustainable use of mangroves to provide livelihoods for people.

Published: 7 December, 2009

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**Cite this paper as:** Estrada, A. and Butler, R. 2009. Editorial: Mongabay.com scientific journal, *Tropical Conservation Science*, reaches its second year of existence. *Tropical Conservation Science* Vol. 2(4):i-v. Available online: [www.tropicalconservationscience.org](http://www.tropicalconservationscience.org)

The list below shows the referees who reviewed manuscripts for *Tropical Conservation Science* in 2009. TCS is grateful to all of them for assisting in the editorial process and for their contribution to ensuring that manuscripts accepted for publication have the expected high levels of academic and scientific quality.

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