
NEWS AND NOTES

This section we will attempt to highlight some of the recent publications and books that are relevant to conservation and Indonesian natural history. In addition, we will bring write-ups from various relevant seminars, workshops and conferences that deal with biodiversity conservation and/or topics relevant to Indonesian natural history. For the latter, we welcome contributions from organizers and participants of respective events.

NEW PUBLICATIONS

Maekawa, M., Lanjouw, A., Rutagarama, E. and D. Sharp (2013). Mountain gorilla tourism generating wealth and peace in post-conflict Rwanda. *Natural Resources Forum* **37**(2): 127–137.

Mountain gorillas have been on the conservation radar for the past decades. They are a flagship species in Rwanda, but even with a declining population estimated at less than 900 individuals they seem begin to garner more conservation support, because they provide an important revenue to the local economy. This paper explores mountain gorilla conservation and nature-based tourism in Rwanda and discusses the challenges and key issues surrounding the conservation of this charismatic species.

Jorge, A., Vanak, A., Thaker, M., Begg, C. and R. Slotow (2013). Costs and benefits of the presence of leopards to the sport-hunting industry and local communities in Niassa National Reserve, Mozambique. *Conservation Biology* DOI: 10.1111/cobi.12082.

To hunt or not to hunt is a question that has been debated ferociously within the conservation community for the past three decades. This paper compares the relative economic gains from sport hunting and poaching of leopards (*Panthera*

pardus) in Niassa National Reserve, Mozambique. The authors sent questionnaires to hunting concessionaires and local villagers. The results suggest that sport hunting generates larger gross revenues than poaching with each leopard having an estimated value of US\$ 24,000 for a hunting concessionaire. However, illegal hunting provided higher economic benefits for the households involved in that activity. Unfortunately, most of the sport-hunting revenues were retained at national and international levels and, consequently, did not sufficiently compensate the local people for the economic losses they incur through loss of livestock. A poached leopard could be traded for as little as US\$ 83, whereas leopards depredated 11 goats over 2 years in two of four surveyed villages resulting in losses of \$440 to 6 households. Consequently, villagers in these areas had negative attitudes toward leopards. The authors suggest the economic benefits from leopard sport hunting should be used to provide community incentives e.g. contribution to improved livelihood in return for no poaching activities.

Ahlering, M. A., Maldonado, J.E., Eggert, L. S., Fleischer, R.C., Western, D. and J.L. Brown (2013). Conservation outside Protected Areas and the Effect of Human-Dominated Landscapes on Stress Hormones in Savannah Elephants. *Conservation Biology* **27** (3): 569–575.

Biodiversity is not confined to national parks and protected areas. Conservation strategies are increasingly focused on regions outside protected areas, where animals face numerous anthropogenic threats. The effects of animals living in human dominated areas can have profound implications for population viability. The authors used savannah elephants (*Loxodonta africana*) as a case study to assess the physiological stress associated with living in a human-livestock-dominated landscape. Fecal DNA was used to identify 96 individual elephants in a community conservation

area and fecal glucocorticoid metabolite (FGM) concentrations was measured as a proxy for stress. Comparing FGM concentrations from community conservation areas to FGM concentrations of 40 elephants in Amboseli National Park and 32 elephants in the Maasai Mara National Reserve revealed no significant individual differences in FGM concentrations among the elephants in 2007 or 2008 and no difference between years. The elephants in the community conservation areas had similar FGM concentrations to the Maasai Mara population, but Amboseli elephants had significantly lower FGM concentrations than those in either Maasai Mara or the community conservation area. There authors found no clear evidence of chronic stress in elephants living on community conservation area suggesting that the elephants are able to adapt to variety of habitat conditions. This is encouraging for conservation strategies promoting the protection of animals living outside protected areas.

Foden, W.B., Butchart, S.H.M., Stuart, S.N., Vié J-C, Akçakaya, H.R. et al. (2013) Identifying the World's most climate change vulnerable species: A systematic trait-based assessment of all birds, amphibians and corals. *PLoS ONE* **8(6)**: e65427. doi:10.1371/journal.pone.0065427.

It is already well-known that the Earth is undergoing a significant period of climate change. The question is how will it impact biodiversity, including increasing extinction rates. Although many studies have taken tried to quantify impacts, but focus on measuring exposure to climatic change often ignore the biological differences between species that may significantly increase or reduce their vulnerability. The authors make an attempt to address this by assessing three dimensions of climate change vulnerability, namely sensitivity, exposure and adaptive capacity. This was applied to each of the world's birds, amphibians and corals (16,857 species). The assessments identify the species with greatest relative vulnerability to

climate change and the geographic areas in which they are concentrated, including the Amazon basin for amphibians and birds, and the central Indo-west Pacific (Coral Triangle) for corals. The results revealed that 608–851 bird (6–9%), 670–933 amphibian (11–15%), and 47–73 coral species (6–9%) are both highly climate change vulnerable and already threatened with extinction on the IUCN Red List. Because fewer species appeared to be highly climate change vulnerable under lower IPCC SRES emissions scenarios, the authors suggest that reducing greenhouse emissions will reduce climate change driven extinctions too. The authors also suggest that by using independent assessment of the three dimensions of climate change vulnerability, their approach can be used to devise species and area-specific conservation interventions and indices.

Sunderlin, W.D., Larson, A.M., Duchelle, A.E., Resosudarmo, I.A.P, Huynh, T.B., Awono, A and T. Dokken (2013). How are REDD+ Proponents Addressing Tenure Problems? Evidence from Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. *World Development*, <http://dx.doi.org/10.1016/j.worlddev.2013.01.013>

While REDD+ may offer a mechanism for many nations to transform their energy dependence from fossil fuel to “greener” alternatives the impact on communities are not well understood. The authors address tenure insecurity in light of actions required for effective and equitable implementation of REDD+. Field research was carried out at 19 REDD+ project sites and 71 villages in Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. Although results revealed proponents addressed tenure insecurity by demarcating village and forest boundaries as well as identifying legal right holders, there were obvious limitations when it came to resolving local tenure challenges that were national in origin and scope. The authors suggest that national tenure actions, integration of national and local tenure efforts, clarification

of international and national REDD+ policies, and conflict resolution mechanisms are needed to further the REDD+ concept in the project areas studied.

Trinajstić, K., Sanchez, S., Dupret, V. et al (2013). Fossil Musculature of the Most Primitive Jawed Vertebrates. *Science* DOI: 10.1126/science.1237275.

The transition from jaw less to jawed vertebrates (*Gnathostomas*) resulted in the reconfiguration of the muscles and skeleton of the head, including the creation of a separate shoulder girdle with distinct neck muscles. The authors describe the only known examples of preserved musculature from placoderms (extinct armored fishes), the phylogenetically most basal jawed vertebrates. The study suggests that neck musculature evolved together with a dermal joint between skull and shoulder girdle, not as part of a broadly flexible neck as in sharks, and that transverse abdominal muscles are an innovation of gnathostomes rather than of tetrapods.

Willemen, L., Drakou, E., Dunbar, M., Mayaux, P. and Egoh, B. (2013) Safeguarding ecosystem services and livelihoods: Understanding the impact of conservation strategies on benefit flows to society. *Ecosystem Services* 4: 95-103.

This paper explores how biodiversity conservation influences the flow of ecosystem services to various members of society. Particular focus is given to the members of society whose livelihoods are often more dependent on ecosystem services. Five ecosystem services were mapped in the Democratic Republic of Congo and their direct beneficiaries identified. The evidence collated was then used to feed a discussion on the impact of different conservation strategies on society at the 4th Ecosystem Service Partnership Conference in the Netherlands. The discussion highlighted

the need for an assessment of ecosystem service trade-offs, as well as the main challenges for conservation measures to contribute to both livelihood improvement and conservation gains. The paper argues that ecosystem services maps can play a crucial role in understanding and managing the trade-offs in ecosystem service flows resulting from conservation strategies.

Matsuda, I., Higashi, S., Otani, Y., Tuuga, A., Bernard, H. and R.T. Corlett (2013). A short note on seed dispersal by colobines: The case of the proboscis monkey. *Integrative Zoology*. DOI: 10.1111/1749-4877.12033 (*in press*)

Although primates in general are considered important seed dispersers colobines, a widely distributed primate subfamily in Asian and African tropical forests, are less studied. They consume leaves, seeds and fruits. This study focused on a group of proboscis monkeys (Colobinae, *Nasalis larvatus*) consisting of an alpha-male, six adult females, and several immatures that was observed for 13 months. In this period the authors collected 400 fecal samples that were later examined and recorded 3,500 hr of focal observation data on the group members in a forest along the Menanggul River, Sabah, Malaysia. Intact small seeds were found in 23 of 71 samples in November 2005, 15 of 38 in December 2005, and 5 of 21 in March 2006. Seed occurrence seemed to be seasonally determined and the findings are possibly the first records of seeds in the fecal samples of colobines. The authors suggest that even if colobines pass relatively few seeds intact, their high abundance and biomass could make them quantitatively significant in seed dispersal.

EVENTS

ATBC ASIA CHAPTER MEETING, ACEH

The Association for Tropical Biology and Conservation's "Asia Chapter" held its 6th annual

meeting in Banda Aceh, Sumatra, from the 18-22nd of March, 2013. More than 200 participants from 25 countries listened to a large number of presentations, key-note speakers and engaged in discussions and debates after each plenary. In the best of Indonesian tradition Hermes Palace Hotel provided excellent service and made sure nobody went to bed hungry.

A number of new people volunteered for the positions as Country Representatives for Asia Pacific Chapter, each of whom received nominations from other ATBC members.

China - Bosco Chan

Lao PDR - Manichanh Satdichanh

Malaysia - Catherine Yule

Myanmar - Nay Myo Shwe

South Pacific - Pierre-Michel Forget

Vietnam - Truong Vuong Ba

Although the ATBC began publishing a conservation related declaration in 2005 the Asia Chapter has never done it in the past. Considering the serious threat to the Sumatran natural habitat, particularly the in Aceh province that contains the largest block of remaining intact forest on Sumatra, the committee decided to produce a declaration.

THE BANDA ACEH DECLARATION

The Crucial Importance of Aceh's Forests

WHEREAS, the Aceh people through their unique culture, such as the Mukim and Panglima Uteun customary bodies, have preserved the forests of Aceh, Sumatra, through the centuries for their welfare, well-being and future generations; and

WHEREAS, the Aceh forests are essential for food security, regulating water flows in both the monsoon and drought seasons to irrigate rice fields and other cash crops; and

WHEREAS, forest disruption in Aceh's upland

areas will increase the risk of destructive flooding for people living downstream in the coastal lowlands; and

WHEREAS, the special autonomy enjoyed by Aceh in Indonesia provides a unique opportunity for the province to develop innovative spatial planning to show that economic development and sound environmental management are fully compatible; and

WHEREAS, Aceh's forests, such as in the UNESCO World Heritage Site of Leuser, are internationally renowned for being the only place on Earth where elephants, tigers, rhinoceros and orangutans all co-occur; and

WHEREAS, further conversion of lowland forest will increase conflicts between people and surviving wild elephants, posing a significant threat to farming livelihoods; and

WHEREAS, components of the current Spatial Plan in Aceh, especially certain forest developments and new infrastructure projects, will elevate the risk of serious local environmental problems, a loss of key nature hydrological functions, and serious disruption of lowland river systems and fisheries, which could negatively affect human livelihoods and biodiversity.

THEREFORE, be it declared that the Asian Chapter of the Association for Tropical Biology and Conservation (ATBC), the world's largest scientific organization devoted to the study, protection, and wise use of tropical ecosystems:

RECOMMENDS that the Spatial Plan for Aceh be based on the extensive, high-quality spatial data that are available within the Government of Aceh agencies, especially maps on watershed forest areas, environmental risk, soil types, geological hazards, human population centres, rainfall and the distribution of Aceh's wildlife; and

RECOMMENDS that the Government of Aceh collaborate with national and international scientists to identify environmentally sound alternatives for road infrastructure that meet local development aspirations without irreparably damaging the integrity of Aceh's natural environment; and,

SUGGESTS that the most appropriate economic development model for Aceh is one that prioritizes clean development and payments for environmental services, while limiting unsustainable natural resource extraction; and

APPEALS TO the Government of Aceh to ensure that the rule of law is immediately upheld, to halt ongoing illegal logging, forest conversion and road building and to ensure that developments within its forest estate are based on sound forest-management principles.

SUMATRAN RHINO CRISIS SUMMIT

Widely recognized as one of the World's most imperiled mammal species the Sumatran rhino is on the brink of extinction. As a last ditch effort to save the species Singapore Zoo hosted the Sumatran Rhino Crisis Summit intended to once and for all lay out an effective conservation plan. On April 1-4th, 2013, many of the World's leading rhino experts, representing Government authorities, Universities, NGOs and private organizations convened at Singapore Zoo's Forest Lodge and participated in panel discussions, "Open Space Technology" and group discussions. The approximately 110 participants agreed that urgency is needed to prevent the species from going extinct. A major output of the event was the agreement between the Malaysian and Indonesian Government representatives to view Sumatran rhino populations as one meta-population, and to allow for transfers of specimens and/or samples between the two countries. Time will tell if the positive statements will transform into effective conservation action on the ground.

BALURAN INTERNATIONAL BIRDING COMPETITION

The 4th Annual Birding Competition was held in Baluran National Park from 26-30th of June, 2013. Baluran National Park is known for its diversity of almost 200 different bird species. Baluran - declared a national park on March 6th, 1980 - held its first birding competition in 2010.

The 4th installment of the event attracted 65 teams that competed in the categories of bird watching, article writing and photography for the largest prizes to date. The total prize money for this year's event exceeded 80 million Indonesian Rupiah (~ US\$ 7,700).

Category: Photography

1st price (bird) – Mona Amellia Pirih (Surabaya)
2nd price (bird) – Rendra Des Kurnia (Banyuwangi)
3rd price (bird) – Riky Cahyo Sutrisno (Banyuwangi)
Animal (non bird) – Irwan Yuniatmoko (Jogjakarta)
Flora – Agung Satriya Wibowo (Jogjakarta)
Landscape – Bayu Catur Pamungkas (Banyuwangi)

Category: Bird watching and article writing

1st price – "Bionic Uchira Konohabinangun Sembada" (Jogjakarta)
2nd price – "Bionic Better Right Hand" (Jogjakarta)
3rd price – "Bionic Bakpia Pathuk" (Jogjakarta)
Favorite story – "Kutu Air I" (Jakarta)