Conservation news

The Tony Whitten Conservation Prize 2019

The panel judging applications for the first year of this prize in honour of Tony Whitten were astonished by the number they received, and also by their quality. They have awarded the prizes to six conservationists and field biologists from East and South-east Asia, all of whom are under 35 years old and doing groundbreaking work on the sort of often overlooked species and habitats that Tony was most passionate about:

Ayu Savitri Nurinsiyah, for her work on the land snails of Java Ayu explores the diversity of land snails, and has been involved in the discovery of a number of new species, including *Landouria tonywhitteni*, named in honour of Tony Whitten. This species is endemic to Sukolilo karst, an area where there are conflicts between the cement industry and local people.

Evan Quah Seng Huat, for his work on the conservation of karst habitats in Myanmar Evan has been studying reptiles and amphibians in these little explored karst regions before they are quarried to satisfy the insatiable appetite for cement. He has been involved in the discovery of several new species, including the gecko *Hemiphyllodactylus tonywhitteni*, named in honour of Tony Whitten.

Junn Kitt Foon, for his work on conserving and taxonomically reviewing land snails in Malaysia Junn was inspired to pursue a conservation career by Tony Whitten's books and his passion for limestone biodiversity. Working alongside Tony taught him about the need to engage with and understand stakeholders, including communities, government, conservationists and extractive companies, when undertaking conservation work.

Ming-Kai Tan, for his work on taxonomy and orthopteran biodiversity in South-east Asia Ming-Kai surveys orthopterans throughout South-east Asia. He seeks to resolve taxonomic problems, name previously unnamed species, and provide species lists and distribution and natural history data so that protection of these neglected species is well-informed.

Nattawadee Nantarat, for her work on land snails in Thailand and South-east Asia Nattawadee analyses the biodiversity and evolutionary relationships of land snails in Thailand and South-east Asia to help support programmes for karst conservation. She has a particular interest in terrestrial operculate snails of the genus *Cyclophorus*.

Weixin Liu, for her work on millipede diversity in subterranean habitats in China Weixin carries out research on millipede diversity in subterranean habitats in China, working on phylogenetic relationships using both morphological and molecular characters. She is also investigating the status and ecology of millipedes, to provide data for their conservation.

In addition, six applicants were highly commended: Daoyuan Yu, for his work on the species diversity and biogeography of springtails in East and South-east Asia; Liew Jia Huan, for his work on understanding and conserving land snail diversity in Malaysia; Mark Louie D. Lopez, for his work on microcrustacean species in the Philippines and elsewhere in South-east Asia; Odbayar Tumendemberel, for her work on Gobi brown bears; Sheherazade, for her work on flying foxes in Sulawesi, Indonesia; and Wildan Ghiffary Turmudi, for his work on fisheries in Indonesia.

Top row, left to right: Ayu Savitri Nurinsiyah, Evan Quah Seng Huat and Junn Kitt Foon. Bottom row, left to right: Ming-Kai Tan, Nattawadee Nantarat and Weixin Liu.

Beef cattle as grassland management tool and economic resource in Transylvania, Romania

Cattle are widely employed for conservation grazing to restore and maintain grassland that has deteriorated through poor husbandry, neglect or abandonment. In Târnava Mare Special Area of Conservation in the Saxon Villages region of southern Transylvania, which retains some of Europe's most extensive semi-natural lowland grassland, Anglo–Romanian NGO Fundația ADEPT has worked since 2004 to protect the ecological and cultural landscape. Farming families and communities are at the heart of a conservation strategy that combines economic development with the conservation of biodiversity outside conventional protected areas.

Agriculture in this region of rolling hills, oak–hornbeam forest, grassland and arable land relies largely on non-intensive mixed farming, facilitating survival of habitats and animal and plant species that have otherwise retreated or disappeared from much of Europe (Akeroyd, 2006, *The Historic Countryside of the Saxon Villages of Southern Transylvania*, Fundația ADEPT; Akeroyd & Page, 2011, *Contribuții Botanice*, 46, 57–71). Only dairy farming is at all commercially developed. Sheep-milk cheese is mostly consumed locally; dairy companies collect cow milk for processing elsewhere. Cattle numbers have fallen as a result of low milk prices and competition from imports, replaced by large flocks of sheep that overgraze and erode pastures. Beef cattle may offer a more profitable option and a benign grazing regime.

Since March 2018 Fundația ADEPT has managed a 60-strong Aberdeen Angus beef herd in 240 ha of Angofa valley, 5 km south of the historic town of Sighișoara, to restore grassland degraded by 15 years of sheep grazing. The purchase of a farm, grant-aided by Fauna & Flora International's Halcyon Land & Sea Fund, supported by Arcadia, a fund of Lisbet Rausing and Peter Baldwin, and FFI's wider supporter network, has enabled ADEPT to establish and demonstrate conservation-friendly management on a landscape scale and to generate income. Donations from individual UK supporters funded the purchase of the beef herd.

By mid June 2018 the herd had achieved good condition. Even some animals in poor condition in early 2018 were, a few months later, more or less indistinguishable from the others. No supplementary feed was given; the cattle fattened on a diet of native grasses and wildflowers, contradicting conventional modern farming theory. In spring 2019, when they calved a second time, 56 of 60 animals gave birth successfully and the herd is now healthy and established. Fundația ADEPT estimates that agri-environment payments and beef sales will yield a profit of EUR 65,000 per year in 2019 and 2020, which will be partly reinvested in the farm, to fund new machinery and conservation activities. It is important that this farm demonstrates the economic viability of conservation-based landscape-scale grassland management. It offers a realistic model, as in many villages farmers already have common grazing and privately-owned hay meadows.

Cattle graze less closely than sheep, trample and open up coarse vegetation, and require more hay meadows for winter feed. They leave clumps of longer grasses favourable to invertebrates, whereas sheep produce a more homogeneous low sward. Cattle provide better support for family farms, and herds can be managed by associations in which members share profits. Sheep flocks are usually owned by individuals rather than by communities, and often by outsiders who retain all profits. The Aberdeen Angus breed fulfils dual roles of beef production and conservation grazing. Hardy and easy to manage and calve, the breed thrives on a herbage-only diet and tolerates temperatures from –30 °C in winter to + 40 °C in summer. It has an assured value in Romania and attracts EU headage payments for selected pedigree cattle breeds.

Beef is not traditional in the Romanian diet, but rising living standards have made it a prestigious, more widely eaten food. Pasture-fed beef is rich in healthy omega-3 polyunsaturated fatty acids, and the cattle themselves provide wide environmental, social and economic benefits. Concerns about greenhouse gas emissions from beef production rarely distinguish between beef raised on permanent pasture and that relying on inputs linked to intensive arable farming, imported feed or rainforest clearance. The soil of permanent pastures, especially when extensively grazed by domestic or wild herbivores, can reduce net carbon (CO_2, CH_4) emissions by $>$ 90% or even sequester more CO_2 than emitted.

Since 2017 removal of sheep in Angofa valley, combined with cattle grazing, has allowed restitution of pastures and other habitats. Regular mowing for winter feed should restore hay meadows that, after 2 years, already show a significant increase in floristic diversity, notably of legumes and orchids.

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Testing the IUCN Green List of Species

The IUCN Green List of Species (Akçakaya et al., 2018, *Conservation Biology*, 32, 1128–1138) is a new tool for measuring species recovery and conservation success. A stepwise process assesses a species' status across its indigenous range to produce a score (0–100%) against full recovery. This score is estimated for the past, present and future, with and without conservation, and produces four metrics: conservation legacy (impacts of past conservation efforts), conservation dependence (necessity of continued action), conservation gain (from actions in the next 10 years or three generations), and recovery potential (maximum plausible recovery in 100 years). The IUCN Species Conservation Success Task Force is testing the assessment methods before formal adoption planned for 2020.

We were interested to know how the proposed Green List of Species could be used to monitor the impacts of conservation agencies and donors. During June–August 2019 we worked with taxonomic experts to conduct preliminary assessments for 15 species that are, or will be, the focus of projects funded by the National Geographic Society. Test assessments of mammals (African manatee *Trichechus senegalensis*, northern sportive lemur *Lepilemur septentrionalis*, Sumatran rhino *Dicerorhinus sumatrensis*), birds (African penguin *Spheniscus demersus*,