

that will provide online booking for visits to National Parks, including lodging, transport, guides, special sites, and elephant safaris.

Thailand's protected areas are generally effective at curbing deforestation within their boundaries, but continuing conversion of forests into plantations in areas surrounding some of the protected areas is isolating them as islands in a sea of agriculture. Such areas may be too small to support all species that occupied the larger landscape before it became fragmented, and the Congress gave significant attention to this issue. To promote landscape connectivity the Department of National Parks, Wildlife and Plant Conservation has adopted the concept of Forest Complexes, in which a collection of National Parks, Wildlife Sanctuaries and Non-hunting Areas can be linked to form a larger area that supports viable populations of wide-ranging species such as elephants, tigers, gaur and hornbills, and contributes to regional social and economic development through provision of ecosystem services. Conservation corridors can include buffer zones, lands managed by government agencies other than the Department, and private lands. Presentations showed how these corridors can expand the effective size of protected areas to enhance their ecological value. Discussions also highlighted management of potential negative ecological impacts of connectivity, such as the spread of disease, invasive alien species, forest fires and other natural hazards.

New legislation for Thailand's protected areas was approved in May 2019 and will have entered into force in November 2019, and was discussed in detail, to prepare site managers for its implementation. Highlights include encouraging research that supports more effective management of protected areas and building understanding of difficult issues such as collecting of voucher specimens, samples of genetic materials for laboratory studies, photographic documentation and intellectual property rights.

Climate change affects all parts of Thailand's national economy and is a major policy concern. The Congress heard that the role of National Parks is critical but needs to be given more attention. For example, National Parks may store more carbon than the rest of the country combined, judging from the biomass of the mature forests and coral reefs they protect; the coastal National Parks provide protection from extreme climatic events; and many of the National Parks support generation of hydroelectricity, a sustainable form of energy. Perhaps most importantly, the great diversity of the natural ecosystems in the protected areas provides nature's capacity for adapting to the changing environmental conditions that will surely come from global warming. The Department of National Parks, Wildlife and Plant Conservation was challenged to become a more important part of developing national policies for mitigating the impacts of climate change and adapting to the new conditions as they emerge. The Thailand Parks Congress was an

opportunity for introspection as the Department seeks to manage the protected areas to an international standard so they can play their proper role in global efforts to implement sustainable forms of development in balance with nature.

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Illegal trade in Indonesia's National Rare Animal has moved online

Despite all native diurnal birds of prey having been included on Indonesia's protected species list in 1970, raptors have continued to be offered openly for sale in the country's many bird markets. The buying and selling, and also the keeping, of protected wildlife in Indonesia is a crime, punishable by up to 5 years imprisonment and/or a fine of c. USD 7,000. In 1993 the Javan hawk-eagle *Nisaetus bartelsi* was declared Indonesia's National Rare Animal (*Satwa Langka Nasional*); it has an estimated population size of 600–900 and is categorized as Endangered on the IUCN Red List. The species is a clear K-strategist: females start breeding when c. 4 years old, lay only a single egg per clutch and only breed every 2 years. In 2009 we reported on the trade in Javan hawk-eagles, based on c. 250 surveys of bird markets during 1979–2007 (Nijman et al., *Oryx*, 43, 122–128) and recorded an increase in the number of individuals for sale following the rise of the species' profile in 1993.

During the last 5 years my colleagues and I have made c. 500 visits to bird markets in Indonesia, including to all bird markets where we observed Javan hawk-eagles previously. Compared to the 1990s and 2000s, we saw fewer birds of prey in these markets and did not record any Javan hawk-eagles. It is clear, however, that the trade in Javan hawk-eagles has not diminished, but has moved online (Iqbal, 2016, *BirdingAsia*, 25, 30–35; Gunawan et al., 2017, *Kukila*, 20, 1–10).

In August 2019 I checked nine Indonesian Facebook groups that specialize in trading raptors; the groups have unambiguous names such as Selling and Buying of Eagles and Falcons (*Jual Beli Elang dan Alap-alap*). All were based in Java and were public, with the posts visible even without Facebook membership. I recorded 514 diurnal birds of prey of 21 species for sale (all verified by posted photographs or short videos). This included 12 Javan hawk-eagles, one adult Blyth's hawk-eagle *Nisaetus alboniger* (advertized as a Javan hawk-eagle), two adult Sulawesi hawk-eagles *Nisaetus lanceolatus* and 69 changeable hawk-eagles *Nisaetus cirrhatus* (48 adults or subadults). All the Javan hawk-eagles were young (five chicks, five first-year birds, two immatures < 3 years old). There were no

photographs of adults, suggesting these young were taken from their nests or as fledglings, rather than being captive-bred.

Most posts had short descriptions of what was offered for sale, written in a combination of Indonesian (*Bahasa Indonesia*), regional languages (*Bahasa Sunda*, *Bahasa Jawa*) and slang. Species were given easily deciphered English code names such as JHE for Javan hawk-eagle (rather than EJ for *Elang Jawa*), LM and DM for light and dark morph, and BOP for birds of prey. Few posts had the raptor's complete Indonesian name included, presumably to aid avoidance of detection by the authorities. Asking prices were rarely included for the larger raptors, and all further requests, including the location of the seller, had to be through WhatsApp, a free messaging service owned by Facebook.

Although, as expected, most posts were regarding birds of prey for sale, there were also numerous requests for specific species or for partners of raptors already owned. Other species offered for sale were mostly various species of owl, a group that is mostly not protected under Indonesian law and, to a lesser degree, other birds or small mammals, protected and unprotected. In addition, all the Facebook groups had posts offering falconry equipment, such as gloves and hoods, and live food (quails, munias and small rodents).

As not only the sale but also the keeping of native birds of prey is not permitted in Indonesia, many of the Facebook group members (with their details clearly visible) are in violation of the law. In recent years Indonesian authorities have begun to prevent the online sale of protected eagles, and a few traders have been apprehended and some eagles seized. This has not, however, deterred the open sale of raptors on Facebook, similar to the way that trade used to continue with impunity in the bird markets.

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One swallow does not make a summer, but could a Laysan albatross pair make a colony at Natividad Island, Mexico?

Amongst seabirds the albatrosses are the most threatened, with many species falling victim to longlines (Rolland et al., 2010, *Global Change Biology*, 167, 1910–1922), introduced species (Croxall et al., 2012, *Bird Conservation International*, 221, 1–34), competition with fisheries (Furness & Tasker, 2000, *Marine Ecology Progress Series*, 202, 253–264) and climate change (Wanless, 2006, *Journal of Ornithology*, 147, 5). The populations of several albatross species have declined

dramatically as a result of introduced mice (Wanless et al., 2007, *Biology Letters*, 33, 241–244) and hunting.

Many threats are, however, being addressed. Recruitment and survival have increased for several species and the number of vagrant individuals has also increased. In the northern hemisphere there are now new colonies as a result of translocations, in Hawaii (Young & VanderWerf, 2016, *Elepaio*, 761, 1–4) and Japan (Deguchi et al., 2014, *Oryx*, 482, 195–203), or through natural expansion, such as that of the Laysan albatross *Phoebastria immutabilis* to Guadalupe Island, Mexico (Pitman et al., 2004, *Marine Ornithology*, 32, 159–165).

During an expedition in April 2019 to Natividad Island, Mexico (27°86'25.59" N, 115°17'14.18" W), to study the black-vented shearwater *Puffinus opisthomelas*, we observed upon arrival two individuals of the Laysan albatross flying above the southern tip of the island and later, on land, observed one with both a metal and a plastic (darvic) ring. It was individual O497. We reported our observation to Pacific Rim Conservation and learnt that it is a male, who was banded as a chick at Kaena Point on Oahu, Hawaii, in 2010 and had not been seen since. It is a mature individual and may be looking for a suitable place for reproduction.

The following day we were surprised by the bill clapping of the albatross, close by. During our 2 weeks on the island we saw this albatross almost every day. Whilst on land it slept most of the time, as in established colonies, and from time to time it vocalized. People living on the island reported that the pair departed in early May, after almost 2 months on the island.

The Near Threatened Laysan albatross has a stable global population, and is the most numerous of the three North Pacific albatrosses, with an estimated 1,600,000 individuals in 2018. Nevertheless, the species faces threats both at sea and on land, including from longlines, introduced predators and competition with fisheries.

Natividad Island is home to 95% of the breeding population of the black-vented shearwater (Albores-Barajas et al., 2018, *PLOS ONE*, 139, e202094) and is protected as the core area of El Vizcaino Biosphere Reserve. Could this Laysan albatross pair start a colony on the island? It is a suitable site as there are no introduced predators. There is a small human settlement, but activities are concentrated on the sea. A Laysan albatross colony would benefit from the protection already in place and would increase the conservation value of the island.

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