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A partnership for better knowledge and conservation of two endemic bats in New Caledonia

Of the 213 threatened bat species, 18% (38 species) are in Oceania, as were four of the five most recent bat extinctions. The threats to this bat fauna are directly related to increasing human populations.

Bats are the only native terrestrial mammals of New Caledonia in the South Pacific, with nine species, six of which are endemic and five categorized as Vulnerable, Endangered or Critically Endangered on the IUCN Red List. Two large *Pteropus* species are known to be overhunted for food and two further fruit and/or blossom species are not hunted, but little is known of the ecology of the five species of microchiroptera.

To address the poor knowledge of this bat fauna, the Institut Agronomique néo-Calédonien and the Lube Bat Conservancy, USA, with support from the Woodtiger Fund, launched a new partnership in 2021 to conserve two of New Caledonia's most threatened bats. The Endangered New Caledonia blossom bat *Notopteris neocaledonica* is one of only two species in its genus and has only two known roosts. The Critically Endangered New Caledonia long-eared bat *Nyctophilus nebulosus* was previously known from only one location and had not been detected since 2002 despite intensive acoustic monitoring during 2016–2017. Both species are at risk of extinction because they are poorly known, are not monitored, and no one is working on their conservation.

Our survey of one of the historic roosting sites of *N. neocaledonica* in June 2022 showed that 12 years after the previous scientific visit the colony was still occupying its cave, and the population is estimated to be larger than previously known, with several hundreds of bats (from 200 to up to 710 from a direct roost count and an evening dispersal count, respectively). Attempts to identify other roosts, to enhance our knowledge of the species' distribution and any threats, are in progress.

In intensive acoustic surveys for *N. nebulosus* we are attempting to locate roosts and determine any threats to the species. On 18 nights during September 2021–June 2022, we identified likely *Nyctophilus* calls, using automatic ultrasound detectors, in the species historical location. These surveys continue.

Improvement of our knowledge of these species, and assessment of their conservation status, will be used to develop species conservation action plans, a crucial action needed to convince local managers to implement conservation strategies to protect the bats of New Caledonia.

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The future of African rhinos

Rhinos provide ecosystem services and contribute to sustainable development goals. During March–April 2022, the African Rhino Specialist Group met over several virtual sessions to examine a number of issues. One of the key aims was to update the 19th Conference of the Parties to CITES on the status of rhinos (cites.org/sites/default/files/documents/E-CoP19-75.pdf). Range states reported 6,195 black rhinos *Diceros bicornis* as of the end of 2021, increasing at 3.0% per year. The 15,942 white rhinos *Ceratotherium simum* are declining at 3.1% per year despite poaching rates having declined from 5.1% in 2015 to 2.3% in 2021. Globally, 218 black and 1,077 white rhinos are kept ex situ.

Sessions on conducting Red List assessments, prioritizing populations, understanding dispersal, sharing management experiences and securing land identified ways to improve rhino status. Congested and declining habitat requires managing ecological units across borders. Although range states imported 162 and exported 369 rhinos, 60 beyond their historical ranges and 81 beyond Africa during 2018–2021, a metapopulation framework could enhance conservation outcomes for rhinos.

Sessions on law enforcement, crime networks, trade, rhino horn stockpiles and markets focused on poaching and trafficking risks. Rhinos in large areas are often most at risk from illegal killing as it is hard to maintain patrols cost-effectively, retain staff commitment and integrity, and collect detailed information on the rhinos. Rhinos fare best when government, private, non-government, and local people partner to manage them. Covid-19 travel restrictions, stricter laws and increased law enforcement most likely resulted in a reduced number of horns entering the illegal market in 2020 (1,531–1,729, down from 2,378 in 2017). There are currently 87.3 t of stockpiled horns.

Sessions on understanding socio-economic matters and the multiple values of rhinos helped to identify information

gaps. South Africa and Namibia allowed hunting of up to 0.2% of their black and white rhino populations per year, helping to generate revenue for conservation. It was noted that social changes favour inclusive human rights-based sustainability approaches to conservation over exclusive animal conservation needs, and self-determination by local people drives critical participatory decision-making in conservation, for their own future. It was also noted that perturbations, such as the Covid-19 pandemic, led African countries to diversify their economies, including expanding sustainable use of biodiversity values.

Reflective sessions on rhino conservation plans and trans-disciplinary theoretical frameworks guided discussions of future conservation outcomes for rhinos, identifying needs

for tactical and ideological shifts in policies and decision-making. Many current rhino protection approaches focus on eliminating poaching. However, poachers frequently change tactics, and criminal networks adapt, and thus measurement of progress is challenging. These conditions require continuous reflection and adaptation to ensure the persistence of rhinos and their values to people. The meeting concluded that the future of rhinos remains in the hands of people, requiring cooperation, co-development and sharing of lessons learnt.

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