



The newly discovered Andean cat geoglyph in the Atacama Desert, Chile.

most likely re-emerged as a result of the removal of sand by strong winds. A preliminary assessment dates the site to c. 500 B.C. The geoglyph has a total length of 62 m from the head to the termination of the tail. For comparison, the so-called Nazca cat geoglyph discovered in Peru in 2020 is 37 m long.

The characteristics of the geoglyph suggest that it represents the Endangered Andean cat *Leopardus jacobita* rather than either of the other sympatric felid species in northern Chile (the puma *Puma concolor* and Pampas cat *Leopardus colocolo*). The long, broad, wide-ringed and uniform tail that does not taper towards the end differentiates the Andean cat from the Pampas cat, and the body shape and proportions, especially the legs and width of the tail, and spots on the flank, differentiate it from the Puma.

In the Andean worldview, the Andean cat has a role related to fertility and water, typically rainfall. Various modern ceremonies performed with desiccated but otherwise whole Andean cats decorated with brightly dyed llama wool are still performed in all four range countries of the Andean cat (Argentina, Bolivia, Chile and Peru), to ensure favourable harvests. The lines emanating from the head and forelegs of the Andean cat geoglyph probably depict the mediator between heaven and earth through the water and rain.

Although the subject of numerous research projects and despite threat reduction actions throughout its range, the Andean cat remains threatened. Our discovery connects the species to ancient sacred beliefs that endure today, and reinforces the importance of the Andean cat for ancient but persistent Andean cultures and of conservation action to ensure it remains extant for future generations.

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## Trade in sperm whale curios in Bali

The Vulnerable sperm whale *Physeter macrocephalus* is the largest of the toothed whales and used to be a prime target of the whaling industry. It was added to Indonesia's protected species list in 1980, but fishermen in Lembata Island kill up to 40 sperm whales annually, with no legal basis for the killing.

Sperm whales are captured by men who jump from wooden boats and drive bamboo harpoons into the whale's back. This traditional hunting has made whaling in Lembata the focus of several high-profile articles and documentaries. This coverage, and the rise in tourism in Indonesia, has increased interest in the hunting of sperm whales and trade in sperm whale parts. Sperm whales are included on Appendix I of CITES and export and import permits are required for any cross-border trade. Indonesia has never reported the legal export of sperm whale parts to the CITES Secretariat, and the sale and export of sperm whale parts is illegal.

In May–June 2023 we surveyed curio, antique and traditional Indonesian art shops in Bali for sperm whale parts. Bali is one of Indonesia's premier tourist destinations and known for its trade in animal curios (Nijman & Nekaris, 2014, *TRAFFIC Bulletin*, 26, 31–36). Over the same period, we searched the internet for offers of sperm whale parts by Indonesian-based traders.

In six shops in Ubud and Sanur we found eight small containers made from sperm whale teeth, three single teeth, one necklace containing 12 teeth, and five combs made from bone; all were said to have been sourced from Lembata. The shops we visited target international tourists. None of the traders mentioned CITES or the protected status of sperm whales in Indonesia. One trader wrongly stated that Indonesia has no legislation in place for whales and others indicated that exporting these items would not be a problem as tourists do it all the time.

Online, traders in Bali offer rings made of sperm whale teeth, and cigarette pipes, bracelets, figurines and combs made from bone. These include offers on private sellers' websites and on e-commerce platforms Bukalapak.com and Tokopedia.com, which in their terms and conditions preclude the sale of protected wildlife.

At the Bale Nagi Festival on 11–15 April 2023, a local government-sponsored event in eastern Flores, a delegation from Lembata was selling sperm whale curios and promoting them as souvenirs. Media reports give

indications of other local government-supported initiatives to promote the sale of sperm whale curios to tourists. This violates Indonesia's domestic legislation as well as the rules and intentions of CITES. We urge the national government to provide clarity on the legality of subsistence hunting of sperm whales, and the national and local governments in Bali and other Lesser Sunda Islands to take swift action against the commercialization and internationalization of the sale of sperm whale parts.

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### ***Partula* tree snail conservation back on track**


Conservation of French Polynesian *Partula* tree snails has been running for over 40 years, since the introduction of the predatory snail *Euglandina rosea* led to the extinction in the wild of 52 species. Conservation breeding by the Partulid Global Species Management Programme has been successful for 10 species, and some are in substantial numbers. Following the decline of the predator, attempts to re-establish the snails started in 2016 and releases took place every year until the Covid-19 pandemic caused a halt to all reintroductions. In 2023 it became possible to recommence the field conservation programme.

The hiatus between 2020 and 2023 saw several major changes to the programme, with an almost complete break in monitoring because of movement restrictions. At the same time, the programme lost its field biologist to Covid-19. Trevor Coote had been monitoring wild populations and leading the reintroduction efforts since 1995 and his death was a great blow to everyone involved. There were also problems for the ex situ programme as thousands of snails scheduled for release in 2020 had to be accommodated. The lifting of pandemic restrictions meant that reintroductions could once again be planned, taking pressure off the ex situ institutions and reinvigorating the programme. With the loss of Trevor Coote, changes were inevitably required. The French Polynesian Direction de l'Environnement stepped up and have made 2023 a year of exceptionally detailed monitoring. In addition, new collaborations have been established with the ecomuseum Fare Natura.

During 8–15 April 2023, 5,694 snails of seven species were released on Tahiti and Moorea. The *Partula* conservation programme has always had to be dynamic, requiring constant modification and learning, and this release was our first opportunity to try marking the released snails with UV reflective paint. With UV torches this dramatically

improves the detectability of the snails. Previously, once they had dispersed into the canopy, they were effectively impossible to locate, hindering determination of release success or failure. We used a drone to gain access to the canopy, but this was ineffective at detecting small snails in low light; once the most recently released snails have had time to disperse into the canopy, adding a UV light to the drone may solve this problem.

The post-release monitoring has recorded continued presence of many released snails and has confirmed that previous releases have produced at least one self-sustaining population, with the sighting of wild-born adult *Partula taeniata* on Moorea island. A second release in 2023 will take advantage of the opportunity to establish more species, test out new ideas and give ex situ collections space to focus on the most threatened species. The collaboration between programme participants, and the new approaches to research and releases, is ushering in a new phase in *Partula* conservation that will also inform wider terrestrial mollusc conservation.

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### **Saving unique, rare and threatened species in the Ebo Forest, Cameroon, under the imminent threat of logging**

The Ebo Forest, north of the Sanaga River in the Littoral Region of Cameroon, is an old growth evergreen lowland and cloud forest of c. 2,000 km<sup>2</sup>. It has the highest plant diversity per degree square in tropical Africa, and is part of the Tropical Important Plant Areas network and a Key Biodiversity Area. Yet despite being a biodiversity hotspot, in April 2023 the government of Cameroon classified 684 km<sup>2</sup> of the area as a Forest Management Unit. In an attempt to understand the rationale for this decision, we had a discussion with a high-profile administrator in the government department in charge of wildlife and forestry. We were told that a Forest Management Unit will simultaneously allow timber exploitation and conservation of threatened biodiversity, in Conservation Enclaves (an area within a Forest Management Unit where logging activities cannot be undertaken because threatened species have been identified there). It will provide good farm-to-market roads, health centres, schools, and greater access to non-timber forest products.

However, we know from experience of other Forest Management Units that Conservation Enclaves do not