

Tides of time



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The remote archipelago of Socotra, in Yemen, is one of the world's most significant island habitats, with many plants and animals found nowhere else on the planet

Detwah Lagoon, a protected area on the island of Socotra.

PEOPLE | International cooperation

A tale of two friends with a shared passion for natural heritage

The clear waters of the Indian Ocean off the Yemeni island of Socotra led to the meeting of paths of Fouad Naseeb Saeed, a native of the island who works for the local environmental management organization, and Kay Van Damme, a Belgian-born biologist and researcher.

Naseeb was born on Socotra 36 years ago and worked as a fisherman for five years after completing his formal schooling. Then he took a training course in Germany to prepare him for a career as an environmental monitor. "We learned about sustainable use and the protection of the environment," he recalls. "The idea is to use our resources in a good way and to fish carefully without unnecessary damage."

He began working for the Environment Protection Authority of Socotra in 1998, and is currently manager of the EPA's marine section on the archipelago. He works with the Yemeni government's fisheries ministry, the island's fishing communities and local organizations as part of his job.

Van Damme, who is the same age as Naseeb, first came to Socotra in 1999 to conduct biodiversity surveys in an expedition funded by the Global Environment Facility of the United Nations Development Program. He earned a Ph.D. from Ghent University in Belgium in 2010, and studies freshwater life, especially crustaceans.

Although his academic pursuits have taken him to Brazil, China, Uganda and Thailand, among other places, Socotra has a special claim on his affections.

In 2006, Kay edited a 600-page book, "Socotra: The Natural History of the Islands and Their People," with two marine biologists who have spent a long time on Socotra, Lyndon DeVantier and Catherine Cheung. The book, which highlighted the island's unique features, including the in-

digenous plants, reptiles and mollusks, formed the basis of Socotra's nomination for World Heritage status. The site was listed two years later.

Naseeb is the only certified scuba diver on the island. He dives for pleasure and leads diving groups that come to explore the unique coral, fish and other marine life in the area.

One of his favorite underwater spots is the Roosh Protected Area, off the island's northeast coast. "Roosh has a good and healthy reef," he says, "and a lot of different fish species, sponges, coral, sharks, butterfly and parrot fish. Plus, we have local people helping to protect it."

Attractions like this draw about 250 foreign divers annually, a small percentage of visitors; there were about 5,000 visitors in 2010. According to Naseeb, that is too many tourists for the

island's fragile infrastructure to support. He would prefer to see no more than 1,500 per year.

Van Damme agrees: "We are seeing all the attendant problems of waste, garbage and pollution, mostly concentrated in the high season between December and January." In the long term, this influx is unsustainable, he says.

Since 2008, Van Damme has been chairman of the Friends of Socotra, which was founded in 2001. The group's purpose, says Kay, is to facilitate communication among local and international groups that do research or undertake other projects in the archipelago. The group's emphasis, he explains, is on raising awareness of "how important its ongoing protection is."

"Many of its members, all volunteers, actively participate in writing papers and books on the subject," he continues. "They also show that they are not just interested in their own particular field of research or project; they aim to show the important link between culture and biodiversity. One cannot be seen as separate from the other on an island like Socotra." C.F.

Preserving marine heritage

The Unesco World Heritage Centre's Marine Program has recently launched its 10-year strategy to protect the "crown jewels of the ocean." The strategy includes building an international network of World Heritage marine sites reflecting all major unique and outstanding ocean features, and facilitating effective management of marine World Heritage sites to ensure they use the most contemporary management approaches to maintain the sites' exceptional value. In this way, the Marine World Heritage network will be able to serve as a driver for improving ocean conservation globally.

THE SITE | Socotra Archipelago

Exceptional island geology, flora and fauna abound

Rich in biodiversity and boasting a significant percentage of plants and animals found nowhere else on the planet, the Socotra Archipelago is often called the "Galápagos of the Indian Ocean." A remote location and relatively low human impact have kept the islands' ecosystems in a remarkably good state, one of the world's most significant and well-preserved island habitats.

Located along the southern edge of the Gulf of Aden, Socotra comprises an eponymous main island, which accounts for about 95 percent of the total land mass, and three smaller islands strung out like stepping stones between the big island and the Horn of Africa. Each of these islands exhibits a high degree of endemism.

The nomination for Socotra's inclusion as a natural site on the World Heritage List in 2008 called the archipelago a "Noah's Ark where ancient flora and fauna, as well as an associated unique culture and traditions, have survived until present day."

Most everyone who's been there agrees.

"Socotra is unique in so many ways: in terms of its geological history, its terrestrial and marine botany and zoology, and its people, history and culture," says Lyndon DeVantier, a marine biologist and an expert on coral. "These factors are becoming increasingly special as the years roll by. In our increasingly homogenized world, Socotra has its own special character."

Although much closer to Africa, the



Socotran dragon's blood trees, an endemic species.

islands have a long cultural link with the Arabian Peninsula and are part of the Republic of Yemen.

Flanked by regions that are among the hottest and driest on the planet, one would expect Socotra to be equally desolate. But just the opposite is true. While the islands are mostly desert, other geographical factors encourage diverse landscapes. Scattered across the terrain are succulent scrubland, semi-evergreen woodland, patches of grassland, canyons with lush

oases and strange plants, like the umbrella-shaped dragon's blood tree and bulbous cucumber tree.

Separated from the Afro-Arabian plate around 18 million years ago by the same tectonic movements that created the Gulf of Aden, the islands have long been secluded from other terra firma. This remoteness fostered Socotra's remarkable endemism: 37 percent of the plant species, 90 percent of the reptile species and 95 percent of the land snail species do not exist anywhere else.

On one of the major flyways between Africa and Siberia, Socotra harbors nesting areas for scores of land and sea birds, including a number of threatened species. Biodiversity also thrives in the rich tropical waters around Socotra, home to more than 700 fish species and several hundred types of reef-building corals.

Islanders make a living from age-old pursuits like fishing, grazing and subsistence agriculture, as well as newer fields like commerce, infrastructure development and ecotourism.

While nature-based tourism will likely grow in future, geopolitical factors have kept it rather modest.

Philip Beale of Pioneer Expeditions, one of the few Western outfitters that organize regular trips to the archipelago, says: "Tourism is just a trickle at the moment — a few hundred visitors per year rather than the low thousands that usually visit — because of the security problems on mainland Yemen."

The integrity of Socotra's ecosystems is challenged by threats that affect insular ecosystems worldwide," says Kay Van Damme, an expert on Socotra's terrestrial biogeography and biodiversity issues.

Among these, says Van Damme, are climate change, the introduction of exotic and invasive species, habitat degradation and fragmentation (soil erosion, overgrazing, road building), unsustainable resource use (overfishing and wood cutting), uncontrolled tourism, chemical pollution and the loss of traditional knowledge.

DeVantier says an additional threat is the weakening of, or failure to abide by, planning and zoning legislation enacted to manage the islands in an ecologically and economically sustainable manner.

"Some developments have breached the plan, to the detriment of real sustainability," he says. "That having been said, on the whole the people charged with managing the islands are very dedicated and have done a remarkable job under sometimes very difficult circumstances beyond their control."

J.R.Y.

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Innovation in miniaturization, expertise in artistry

Small is beautiful, but it is also technically daunting, especially in terms of watch mechanisms. Miniaturization can be at odds with reliability when one is dealing with Lilliputian parts.

During the 1920s, as watch design migrated from pockets to wrists, watchmakers were asked to produce smaller, lighter movements. Women embraced the new opportunity to wear time on their hands, and this accelerated the demand for refined timepieces that could also be worn as fashionable jewelry.

Jaeger-LeCoultre responded to the challenge in 1925 with the Duoplan wristwatch. Its unique baguette design — with the components arranged on two levels — reconciled small size and high precision. It was also the first wristwatch to showcase diamonds set in steel.

The fundamentals of the Duoplan proved to be more lasting than the exuberance of the Roaring Twenties. At the end of the decade, in 1929, Jaeger-LeCoultre introduced the smaller, lighter Calibre 101. The 101 was the fourth

iteration of the Duoplan, and by far the smallest, explains a company historian: "The technical challenge was the miniaturization."

And so it remains today: 83 years later, the Calibre 101 continues to be one of the smallest mechanical watch movements in the world.

To illustrate the magnitude of this feat, as watch writer Meehna Goldsmith explains, all 98 parts of the Jaeger-LeCoultre Calibre 101's movement occupy a space smaller than the tip of a sharpened pencil. Making the components require so much technical skill (each part has to be hand-crafted) that only a few watches are produced every year. The petite, graceful result has been inspiring artisans of fine watchmaking since its inception.

Goldsmith describes the watch as "coquettish, complicated and yet completely reliable and extremely desirable. It wouldn't be hyperbole to say that the Calibre 101 is a watch fit for a queen."

In fact, Queen Elizabeth II of England wore a wristwatch equipped with Jaeger-LeCoultre's Calibre 101 on her coronation day in 1953. C.F.

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Jaeger-LeCoultre Calibre 967A

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