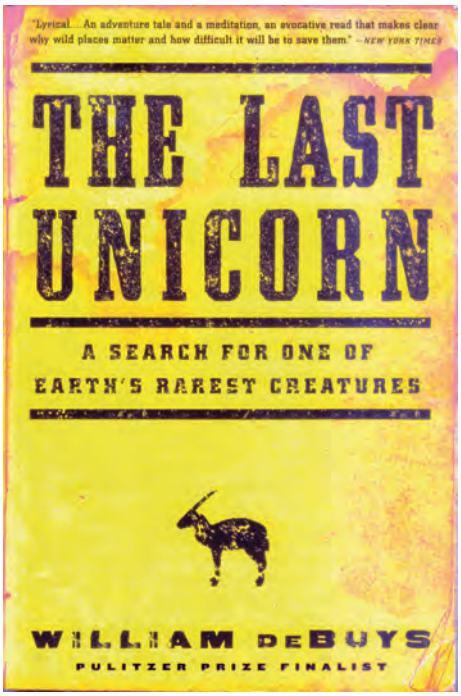
The Last Unicorn, by William deBuys. New York, USA: Back Bay Books/Little, Brown and Company, 2015. ISBN: 9780316232869 (hardcover). 925 Baht.



The Last Unicorn recounts a journey in February-March 2011 to locate and document the saola, one of Earth's rarest creatures. The expedition, led by Bill Robichaud, also aimed at surveying its potential habitat and evaluating pressure from poaching. Robichaud, a field biologist with considerable experience of Southeast Asia, was accompanied by William deBuys, a prize-winning author and active conservationist, and by some Lao university students and local support members.

The saola (*Pseudoryx nghetinhensis*) is the threatened sole species of a unique genus of bovids known to inhabit only nine provinces in the central chain of the Annamite Mountains that divide Vietnam and Laos. It is prized by researchers for its "phylogenetic distinctiveness" (p. 23) because, in evolutionary or genetic terms, it has no known close relatives. It is an ancient kind of ox that diverged from aurochs, bisons and buffaloes in Miocene times (as recently as 5.3 million years ago). Of a "singular and mysterious" (p. 19) disposition, the saola is so rare that it is now called the Asian unicorn. Its small population has given rise to loss of generic resources, which is preventing the numbers from increasing.

Originally known as the Vu Quang ox, after the Vu Quang National Park on the Lao-Vietnamese border where the discovery was made, its common name derives from '*sao*' (post) and '*la*' (spindles of a small spinning wheel), because its horns resemble the tapered posts of a spinning wheel used in the Annamites: a rather unpoetic moniker for such a graceful animal.

The saola's physical appearance is striking, with white markings on the face, very large scent glands on either side of the muzzle and bands of colour along its tail. An adult saola can weigh 80-100 kg and the height of one captive adult female is known to have reached 84 cm at the shoulder.[1] Both males and females grow long, almost straight horns that can measure up to 50 cm. Viewed in profile, the horns merge into a single-horned perspective, like the fabled unicorn.

1992 marks the year that the saola came to the notice of a group of scientists in a joint expedition, from Vietnam's Ministry of Agriculture and Rural Development and the World Wildlife Fund (WWF), surveying the forests of Vu Quang. John MacKinnon, who from 1984 steered conservation programmes in Vietnam for the WWF, led the survey

[1] *Rediscovering the saola*, 2004: 15.

that made the discovery just across the border from Laos, up from the Nakai Plateau of central Laos.[2] It is said that Le Van Cham, officer of Vietnam's Forest Inventory and Planning Institute (FIPI), and Do Tuoc, another expedition member, wandered off in search of rice wine, when Cham spotted an extraordinary set of horns on the wall of a villager's shack. It appears that the search for rice wine was an embellishment, however, since in 2011 Cham admitted to DeBuys that he had gone in search of fresh vegetables, an essential staple depleted after weeks on the field in a remote area (p. 58).

Years later, Robichaud recollected exactly where he was in 1992, when the *Bangkok Post* broke the news: relaxing in a coffee shop in Vientiane. He had come to Southeast Asia in 1990 with the International Crane Foundation to assist in the search for the rare sarus crane in Vietnam's Mekong River delta (p. 20). After returning to the USA at the end of the crane project, he obtained a small grant to revisit Laos.

In 1996, Robichaud spent two weeks watching a captive saola not far from the boundary of the protected area.[3] For him, the saola is strangely serene and "Buddha-like in its calm" (p. 19). It does not feed in the same way as the deer and wild goats that share its dank habitats, nor "does it respond to danger as they do" (p. 19).

The Nakai-Nam Theun (NNT) is an area of "notably high global biodiversity value in itself",[4] where the protected area is largely unprotected: "Much of it is heavily hunted – by local villagers, by Hmong entering from the north, and by the Vietnamese who cross the mountains from the east" (p. 18). The Watershed Management and Protection Authority (WMPA) was set up to protect the environment and improve the social and economic well-being of people living in the affected area. Enforcement, however, has proved largely ineffective, particularly since the Vietnamese are market hunters, "harvesting all manner of wildlife large and small, for sale in Vietnam and China" (p. 18). These countries' appetite for status restaurants and medicinal treatment from animal parts "places a price on the head of nearly every mammal and reptile in the forest" (p. 18). Illicit trade continues and is seen as a failure of the WMPA goals.

Economic growth in China and Vietnam results in more people being able to afford expensive remedies. Since traditional Chinese medicine (TCM) is fed with animal parts, increasingly larger amounts of money are chasing fewer animals. A Lao villager may use a turtle-sniffing dog to find a golden turtle and sell it for $10,000: "a life-changing lottery" (p. 47). Though fresh turtle blood drives the trade, all parts of the animal are used.

There is a clear link between poverty and saola conservation, and a group of experts recently warned that the single most important factor supporting hunting is "the existence of the urban and international market for wildlife".[5] To feed the lucrative trade in deer, civets and other wildlife, hunters set wire snares which catch unintended animals like the saola, and although big cats are able to bypass these traps, they die of starvation at a species level because their food chain (deer, sambar and wild pigs) has been hunted down (pp. 18-19). Small-size animals are easy to transport and smuggle.

[2] Vu Van Dung et al., 1993.
[3] Robichaud, 1998.
[4] *Rediscovering the saola*, 2004: VIII.
[5] *Rediscovering the saola*, 2004: 61.

Threats to the saola's existence stem from hunting – the biggest menace – and from the destruction of the necessary habitat caused by shifting cultivation and infrastructure development. The potential of the Nam Theun (River Theun) was known to the French colonial government long before 2005, when the World Bank agreed, after sixteen years of protracted negotiations, to provide financial guarantees and other support for the Nam Theun 2 Hydropower Project (NT2), the largest dam in Laos. Almost ninety years ago, Henri Cucherousset, editor of *L'Éveil Économique de l'Indochine*, argued against those who ridiculed the idea of providing electric power to the region's undeveloped areas, where it would not be needed "for another hundred years".[6]

DeBuys combines the consequences from the illicit trade in animals, with a stark analysis of hydroelectric power generation as a development path in Laos. The World Bank hailed the NT2 as a success. Activists and experts, however, have criticised the project for the disruption caused by the resettlement of 6,300 people, the loss of wildlife habitat in the reservoir zone, and the "management and conservation of the adjacent Nakai-Nam Theun National Protected Area [NNTNPA]".[7] Protection of the pristine and rich NNTNPA was to be ensured with funding from the sale of electricity, a failed promise. Close to ninety-three per cent of the NT2's total output of 1070 MW is exported to Thailand,[8] with the remaining seven percent for local consumption in Laos.

In the early 1970s, the UN recorded Lao PDR as a Least Developed Country (LDC), along with Afghanistan, Chad, Ethiopia, Mali, Yemen and a few others.[9] Laos aims at graduating from LDC status by 2020,[10] a goal that numerous passages in this book will dispel as an overambitious target, particularly where access to healthcare is concerned. The book provides details of human suffering caused by inadequate medical facilities, like the villager whose thigh was sliced open when some roofing sheets fell on him. His unbearable pain and infection were lessened only three months after the accident, when Robichaud administered some salve and sterile gauze from his sparse medical kit. Similar cases are narrated in this book and I have witnessed numerous instances in my fifteen years of travelling or conducting fieldwork in Laos, like the young girl in a remote district of Luang Prabang province, whose parents' subsistence income would not allow them to travel to the nearest clinic to seek medical treatment for a deep knife wound.

But it is not merely lack of financial resources that prevents access to medical care. There are cultural considerations, which DeBuys acknowledges without sentimentality. In keeping with ancient mortuary customs, a badly injured villager dying en route to the hospital may not be buried within the village domain, thus preventing his relatives from "feeding" his spirit at the family altar and saying prayers in his name. The threat of "eternal oblivion" (p. 88) is a powerful deterrent for those seeking treatment outside of their village, even where funds are available.

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[6] Cucherousset, 1927: 2.

[7] Baird et al., 2015: 1083.

[8] The construction of the NT2 cost $1.3 billion and involved as many as 8,000 people. Sale of electricity to Thailand began in 2010, with annual revenues of $240 million for the government of Laos.

[9] United Nations, 2016.

[10] UNDP, 2012.

In the survey area visited by the expedition, new motorbikes, satellite dishes and other luxuries are acquired with money from trade in animals and stolen rare woods. Illegal logging is an ever-present threat to the saola's habitat in Laos. Armies of Lao and Vietnamese criminals harvest rosewood and smuggle it to Vietnam and on to China. In Laos, most of the logging operations are linked to forest clearance for infrastructure projects, especially hydropower dams and roads, mining and agricultural plantations. Container trucks of rosewood, a precious timber, are routinely impounded by the Lao authorities en route to Vietnam or China.[11] It is impossible to overestimate the scale of the problem. In September 2016, the Convention on the Trade in Endangered Species (CITES) placed all 300 species of rosewood under trade restrictions. According to trade data from a credible report obtained by the London-based Environmental Investigation Agency (EIA), "in 2014 China overtook Vietnam to become the biggest recipient of timber from Laos by value, with an increase from $44.7 million in 2008 to a staggering $1 billion in 2014".[12]

The prime minister of Laos, Thongloun Sisoulith, has made the fight against illegal logging one of the top priorities in his government.[13] It is a formidable fight, where the logistical challenges of monitoring criminal activities in remote parts of the country, are compounded by the realisation that even a small consignment of rosewood logs can release several families from a life of subsistence economy for at least a year. DeBuys writes that prior to the 2008 Beijing Olympics, rosewood fetched $8,500 per cubic metre on the open market but once in China, it sold for up to $12,000 per cubic metre, as a much sought-after rare wood to furnish the accommodation of élite visitors to the Games. Although prices post-Olympics have decreased, the fact that the illicit trade continues is seen as a failure of WMPA goals.

Several of the irritants illustrated in *The Last Unicorn* will be familiar to practitioners, independent travellers and fieldworkers. In a country where thousands of office workers and teachers receive salaries of little more than $100 a month, it is difficult to reconcile the asking price of $75 to transport a few backpacks and some provisions over a few kilometres between two villages. The perpetrators of such extortions are unable or unwilling to differentiate between affluent travellers on a visit to an exotic land, and *bona fide* researchers and volunteers operating on a small grant from a US foundation, as was the case with Robichaud's expedition.

This book is not without a few light moments, with which anyone who has conducted fieldwork in remote areas will identify. DeBuys describes the unfamiliar dishes whose unappetising appearance is often made worse by dim lighting and the din of enthusiastic

[11] *Vientiane Times*: 13 June 2016 ('Provinces instructed to inspect log movements to address illegal trade'); 14 June 2016 ('Province, district authorities have no right to approve logging rights'); 20 June 2016 ('Saravan seizes huge quantities of illegal timber'); 30 June 2016 ('Prohibited rosewood seized en route to China'); etc.

[12] 'Leaked report reveals huge scale of Laos illegal logging', 21 June 2016, https://eia-international.org/leaked-report-reveals-huge-scale-of-illegal-logging-in-laos (accessed 29 Dec. 2016).

[13] Reports in 2016 from the *Vientiane Times*: 15 June: 'PM directs crackdown on illegal logging in Khammuan'; 16 June: 'Ministry to set up logging units'; 17 June: 'Savannakhet illegal logging declines after tougher action: governor'.

local drinkers at house parties. At one such gathering, he notes the plastic bags of sticky rice, bottles of beer "and bowls brimming with brown lumps in brown puddles" (p. 31). Accounts of unfamiliar foods and dishes featuring animal parts that most Westerners would sample only as acts of bravado on a drunken night out, are recurring themes, like the pig's blood fortified with raw liver offered to Robichaud and his team during one of the many instances of local hospitality. Surveying a remote area of Xieng Khouang province several years ago, I have vivid recollections of large platters of raw chicken's blood, a local delicacy thoughtfully and artistically decorated with green leaves but of which, alas, I declined to partake, under cover of orders from my physician.

DeBuys is candid about his unfamiliarity with the customs that long-term residents of Asia discharge with ease and flair, such as refraining from entering someone's home wearing shoes. Loss of face is averted because DeBuys is a model student who copies culturally-aware Robichaud. On entering a house on stilts, DeBuys kicks off his sandals but his shoe-spoiled feet are unaccustomed to the ladder's wooden rungs. The discomfort endured stoically on the trip is given full vent in the book: "I feel as an alien on a new planet" (p. 29), he confesses. Even his *sabaidee*, the traditional Lao greeting and one of DeBuys' rare forays into the local language, is met with a frosty reception from a young member of the local community (p. 29).

Along the way, the author allows us into his private life, where we witness his angst on learning that two people close to him are battling illness or old age, thousands of miles away from Laos.

The language employed by DeBuys is precise and descriptive, as when Robichaud "is sitting as straight and attentive as a bird dog on its way to a hunt" (p. 10), or a "motorbike fishtails up the muddy slope beyond" (p. 49) or when backpacks covered in pink tarpaulin resemble "heaps of dead flamingos" (p. 50).

Despite its massive pungent scent glands and horns as singular and hard as a narwhal's tusk, the saola's precarious fate has been helped, if we can define it in these terms, by its age-old isolation, escaping the notice of TCM. According to DeBuys, this is because the saola "lived in a land whose people were too obscure and too poor to bring their straight-horned mountain goat to the attention of the remedy hungry world" (p. 82). The fact that the saola stands on the very brink of extinction will hamper our ability to understand this unique species. In addition to poaching and the loss of habitat, other threats may surface when the saola has been studied in more detail and over a long period of time.

An estimated few hundred, and maybe "only a few tens",[14] survive in the remote, dense forests along the Vietnam-Laos border and there are no saola anywhere "in captivity".[15] The trade in rare animals further diminishes the survival odds for the saola and transboundary co-operation will be essential in protecting the remaining specimens in the wild.

Images of 7 September 2013 from a camera trap set by the WWF and the Vietnamese government's Forest Protection Department show a saola moving through

[14] WWF, 2013.
[15] *Rediscovering the saola*, 2004: IV.

thick vegetation along a rocky forest valley stream in a remote corner of the Central Annamite Mountains. This sighting, the first of the 21st century, bodes well for DeBuys: "Maybe luck will intervene. The essential thing is not to give up. Not ever. Surprise happens" (p. 323).

Even before venturing on the expedition, DeBuys doubted his fitness and ability to withstand the rigours of a physically challenging expedition in an inhospitable part of Laos. Visiting Laos in August 2009 to attend the week-long meeting of the Saola Working Group in Vientiane, after the first few days he increasingly doubted "the wisdom of having come to Laos" (p. 102). We should be thankful that he overcame his misgivings, since few people could have written such an intense, informative and utterly compelling book.

Lia Genovese

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