



## Scientists hope to breed Asian 'unicorns' - if they can find them

Conservationists see only one hope for the saola: a risky captive breeding programme

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In 1996, William Robichaud spent three weeks with Martha before she died. Robichaud studied Martha - a beautiful, enigmatic, shy saola - with a scientist's eye but also fell under the gracile animal's spell as she ate out of his hand and allowed herself to be stroked. Captured by local hunters, Martha spent those final days in a Laotian village, doted on by Robichaud.

Since losing Martha, Robichaud has become the coordinator of the Saola Working Group (SWG) at the International Union for Conservation of Nature (IUCN). He has dedicated his life to saving this critically endangered species - and believes the best chance to achieve that now is through a captive breeding programme.

“We need to act while there is still time,” he said adding that “seldom, if ever” are captive breeding programs begun too soon for species on the edge.

“More likely, too late.”

We just found the saola - and now we're very close to losing it forever.

## **Discovery**

Hardly a household name, the saola was one of the most astounding biological discoveries of the 20th Century. In 1992, a group of scientists met a local hunter in Vietnam who gave them a skull of something no biologist had ever seen before. The animal - the saola or *Pseudoryx nghetinhensis* - was a large-bodied terrestrial mammal (80-100kg) that somehow eluded science, though not local people, well into the information age. Scientists compared its remarkable discovery to that of the okapi, described 91 years prior.

The saola was so distinct - two backwards-curving horns, unmistakable white face markings, an ungulate that looked more like those in Africa than Asia - that it was given its own genus. Scholars long debated whether it was in the antelope family or the bovine - genetic evidence shows it's a primitive bovine, despite physically resembling an antelope. But it's been coined the 'Asian unicorn' due to its rarity and elusiveness - its almost magical quality for those privileged enough to encounter it.

Four years after the skull came to light, Martha was caught in Laos and brought into a local village - the first time scientists like Robichaud saw a living animal. But it wasn't until 1998 that researchers were able to get a photo of the saola in the wild by using remote camera traps. And then again in 1999. Fifteen years passed before researchers got the most recent one on camera in 2013.

The animal is only found in the Annamite mountains, a biological hotspot that spans Vietnam, Laos and a sliver of Cambodia (though saolas have never been found in the latter). The forest is also home to Indochinese tigers, Asian elephants, gaurs, douc langur monkey, white-cheeked gibbons - and many other recently discovered species: the Annamite striped rabbit (found in 1996) the large-antlered muntjac (1994) , and the kha-nyou or Laotian rock rat (2005), a large rodent that's believed to be a living fossil, its closest relative having gone extinct 11 million years ago.

No one really knows how many saola are left - the IUCN says “undoubtedly less than 750, and likely much less,” but Robichaud says may be fewer than 100 - and the species is safe nowhere. It's being decimated by poaching snares left out to catch other species. Ranger patrols have removed 150,000 snares from five saola sites in Laos and Vietnam, but it's still not enough.

“There is no site in the saola's range where we believe the species is yet safe from poaching,” Robichaud

Given conservationists can't guarantee the saola's survival in the wild - especially in the midst of an almost total obliteration of animals in southeast Asian forests for the wildlife trade - the next step is captive breeding.

## 'Last hope'

Captive breeding saolas is still a bold proposition, however, given how rarely the species has been seen since its discovery. No biologist has seen a living saola in the wild - ever. And locals encounter them only very rarely.

But conservationists have little choice but to be optimistic that they will not only be able to catch a pair of saolas, but that they will be able to keep them alive: a conservation centre for saolas is being built in Vietnam's Bach Ma national park and will be completed later this year or early next.



A wild saola photographed by camera trap in Laos in 1999.  
Photograph: Ban Vangban village/WCS/William Robichaud

The saola team believes they have a good idea of where they can find them. They will depend on local knowledge, both for finding and catching the 'unicorns'. Information on the exact location is being kept confidential, however, out of fear of poachers.

Robert Timmins, biologist and a member of the SWG, said the captive breeding would do the exact "opposite of what happened in the past". The programme would depend on advice from the best experts worldwide - including those from the zoo community. They would have a facility built specially to the purpose, hire professional staff and work with local governments.

All this opposed to a saola in a pen in a village.

"This is not to say the effort will be without risk," Robichaud said. "But non-action now poses a greater risk to the survival of saola."



William Robichaud with saola horns in Laos. Photograph: William Robichaud

But before the team heads out to round up saolas, they plan to test their methods on another species: the giant or large-antlered muntjac. Although quite different mammals - muntjacs are small, Asiatic deer - the large-antlered muntjac and saola's stories are similar in some important ways. The large-antlered muntjac was also only discovered very recently (two years before the saola) and it is also threatened by overhunting and snaring. Although also critically endangered, the giant muntjac is more common than the saola. According to Robichaud, this makes it a good subject for testing the team's methods for catching and transferring a large mammal safely to the breeding centre - and keeping it alive. Of course, captive breeding giant muntjacs could ensure their survival too.

At the same time Robichaud and other conservationists plan to redouble efforts to rid saola areas of snares and learn more about this real-life unicorn.

But in an age of impending mass extinction, insurance populations are becoming more vital than ever if we are to maintain some of the wonderful animals we share this planet with.

“[Captive breeding] is the last hope and should have been done 10 years or more ago,” Timmins said. “But more easily said than done.”

Martha died 21 years ago with Robichaud by her side; it was only after she succumbed that conservationists realised she was pregnant. Now, conservationists hope they can recreate her story, but with a happier ending.