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New hope for Galapagos' 'Lonesome George'

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NewScientist.com news service
Henry Nicholls

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The rarest living creature - a giant tortoise thought to be the last of his kind - may not be alone after all, say geneticists. The revelation gives new hope to "Lonesome George" as conservationists consider a proposal to get him to breed in captivity.

There were once thousands of giant tortoises roaming over the volcanic slopes of Pinta in the Galapagos Islands. Today there are none, mostly as a result of centuries of passing sailors hunting them for food. The only known Pinta tortoise - named Lonesome George - was discovered in 1972 and taken into captivity in the hope that a companion might one day be found.

Incredibly, more than 35 years later, that day may have come. Conservation geneticists studying the DNA of tortoises on nearby Isabela Island have stumbled upon a tortoise with clear signs of Pinta ancestry. "It's a real surprise," says Jeff Powell, professor of ecology and evolutionary biology at Yale University in Connecticut, US. Powell thinks this gives Lonesome George's species new hope.

Powell and colleagues analysed the DNA of 27 tortoises from Wolf Volcano on Isabela. One of these appears to be a cross between a Pinta male and an Isabela female, they discovered. Unfortunately, it is also male. But its mere existence raises the intriguing possibility there might be a female carrying Pinta genes that would make a suitable match for Lonesome George.

The animal - dubbed PBR03 by the researchers - is probably only around 30 years old, the team estimates. It could have plenty of sisters out there that carry a similar smattering of Pinta genes. There's even a chance of finding a full-blown Pinta female, Powell says.

Distant cousins

The Charles Darwin Foundation, which coordinates scientific research on the islands, estimates there could be as many as 1500 tortoises in the area PBR03 was found. "This suggests the need to mount an immediate and comprehensive survey of the population to search for additional individuals of Pinta ancestry," says Gisella Caccone, who was involved in the study. "Let's go there and see what we find."

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Lonesome George at the Charles Darwin Research Station. (Credit: Alison Llerena/CDRS)

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"If any individuals of undisputed Pinta ancestry are found, we would certainly want to develop a captive breeding program around them," says Bryan Milstead, head of vertebrate research at the Charles Darwin Foundation.

The renewed hope that Lonesome George might yet be coaxed to reproduce has stalled plans to populate Pinta with another type of Galapagos tortoise to complete its ecological makeup. However, a successful captive breeding programme involving Lonesome George would take many years and time may be a luxury that Pinta does not have. In the absence of a dominant herbivore, several plant species are dominating the island's mix of vegetation, threatening the survival of some species. "We will need to consider very carefully whether it is worth the risk to wait," says Milstead.

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