

# All the colours of the dingo: not just a yellow dog

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There is no coat color that distinguishes dingoes from dingo-dog hybrids, a study involving UNSW Sydney has found.

The Centre for Ecosystem Science research suggests that animals assumed to be dingo-dog hybrids based on their coat color and culled may have been pure [dingoes](#).

"We actually found pure dingoes that had a brindle, black and tan, patchy or sable coat color," Dr. Kylie Cairns, a conservation biologist from UNSW Sydney and co-author of the study said.

"So that's showing that really dingoes are much more variable than we think and seeing an animal with an odd coat color doesn't immediately mean that it's a hybrid.

"Using coat color to decide what animals should be culled is not a very good idea."

The study follows 2019 research by UNSW and collaborators which found that almost all [wild dogs](#) in NSW are dingoes or dingo-dominant hybrids, challenging the widely held view that pure dingoes are virtually extinct in the state.

In Australia, dingoes are typically believed to be ginger in color, while unusual coat colors such as brindle (black and brown stripes) or sable (ginger with a black stripe along the spine) are widely put forward to be evidence of contemporary domestic dog hybridisation.

But the study, published in the *Journal of Zoology*, found that while 53 percent of dingoes have a ginger coat color, 9 percent were sable, 11 percent black and tan, 14 percent brindle, 5 percent black, 1 percent white and 6 percent were patchy (white with spots of ginger or black).

Researchers from UNSW, University of Sydney and University of Melbourne took part in the study.

They examined the relationship between coat color and ancestry in wild dingoes by testing the [genetic makeup](#) of 1325 wild canids (animals belonging to the Canidae family, such as dingoes, [domestic dogs](#) and wolves) across south-eastern NSW.

About a quarter of the samples were dingoes with no evidence of domestic dog ancestry while around three-quarters were dingoes with some domestic dog ancestry.

They found that domestic dogs with no dingo ancestry are rare in the wild, representing less than 1.5 percent of the population.

## **No distinguishable coat color**

There was also no coat color that could distinguish dingoes with or without dog ancestry from each other, or from domestic dogs.

"The widely held idea is that a dingo is ginger animal with white socks and a white tail tip," Michael Letnic, senior author of the paper and professor in conservation biology and ecosystem restoration at UNSW Science said.

"But a key finding of this work is that coat color should not be used to assess ancestry in dingoes."

The researchers suggest that other features such as floppy ears or a broad snout shape could be used to identify feral domestic dogs or recent dingo-dog hybrids.

The researchers are planning to use updated genetic techniques to look at dingo [ancestry](#) across Australia to uncover the origin of some of the coat colors.

"We want to examine whether these coat colors are ancestral or came from dogs originally but have been present in the population for 100 and 200 years," Dr. Cairns said.

"We are curious to see if coat color is part of the natural selection and adaption in dingoes, or if there are other reasons for these coat colors.

"For example, the black coat color in wolves came from [dogs](#) and is associated with increased immunity and so we want to look to see if there is a similar pattern in dingoes."

**More information:** *Journal of Zoology* (2021). [DOI: 10.1111/jzo.12875](#)

Provided by University of New South Wales

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