

## Endemism

By Adam Trujillo

When researching species, either floral or faunal, you can look at a map and find where the particular species resides. Some species have wide ranges of occurrence or winter and summer in different locations. Then there are some species that call only a single geographic place home, whether that home is a single mountain range, an island, or one country in Europe. These are known as endemic species.

Some common examples of endemic animal species include the polar bear, which naturally inhabit the frozen areas of the arctic North Pole, and the lemurs of Madagascar. It's important to note that I said "naturally" inhabit, so seeing a polar bear at the San Diego Zoo does not count as the polar bear's range extending into that area.

In the bird world, the Island Scrub-Jay is found only on the island of Santa Cruz off the Southern California coast. The Florida Scrub-Jay can be found only in Florida. While the Island Scrub-Jay and Florida Scrub-Jay are close in appearance to their cousin the California Scrub Jay, they inhabit different areas. The California Scrub-Jay can extend up into Mexico, Oregon and Washington, hence it is not an endemic species.

There are tons of examples of other species being endemic to an area. But there are only 15 species of birds endemic to the continental United States, including both of these scrub jays.

Endemic species face certain challenges given that they inhabit only one area. First, because they live in only a small, specific area, certain physical characteristics may develop that make them only suitable for that one area. For instance, a polar bear needs a big layer of fat and fur to survive in the freezing Arctic conditions. If the polar bears were to be introduced farther South, or if the North Pole gets much warmer, the heavy fur and fat might be detrimental to the bear.

Secondly, these species often have small population sizes, or few separate populations. This means that their gene pool is already small, and any decrease in their numbers could have a huge effect. Third, extinction threats are highest amongst endemic species due to their limited range and reliance on the very specific resources found there. Once those resources are depleted, those species face higher extinction risks.

It's for these reasons that conservation efforts are being made to protect many endemic species. Some threats, like natural disasters, are out of our control, but reducing climate change conditions, poaching, and habitat destruction are all ways we can help ensure these species can live on. Since there are only 15 species of birds that are endemic to the United States, we want to make sure these species continue on for future generations to see.

Photo credit: USFWS

Caption: Florida Scrub Jays are one of the few birds endemic to the U.S.