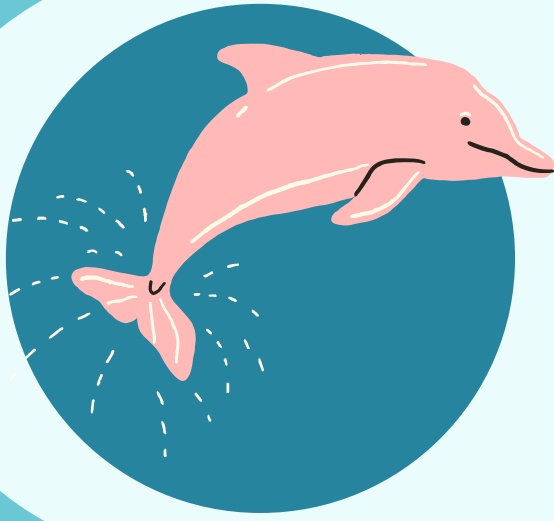


# THE FOUNDER EFFECT

## An example of genetic drift

Camille Scandurro, Lucy Langholz, Aubrey DiStefano

### Meet Poppy



Off the coast of Emerald Island, Poppy lives happily with her 20-dolphin pod.

One day, a voracious pack of orcas kill the first 15 dolphins they see, but thankfully Poppy and 4 of her friends are able to escape to a nearby reef.

### The Pod Before Orca Attack



### The Pod After Orca Attack



### Genetic Drift: random change in allele frequency

The Founder Effect: loss of genetic variation when a very small number of individuals separate from the population

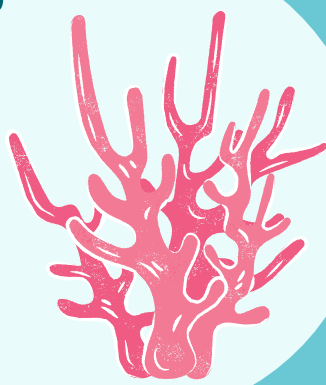
### The New Pod, 10 years later...



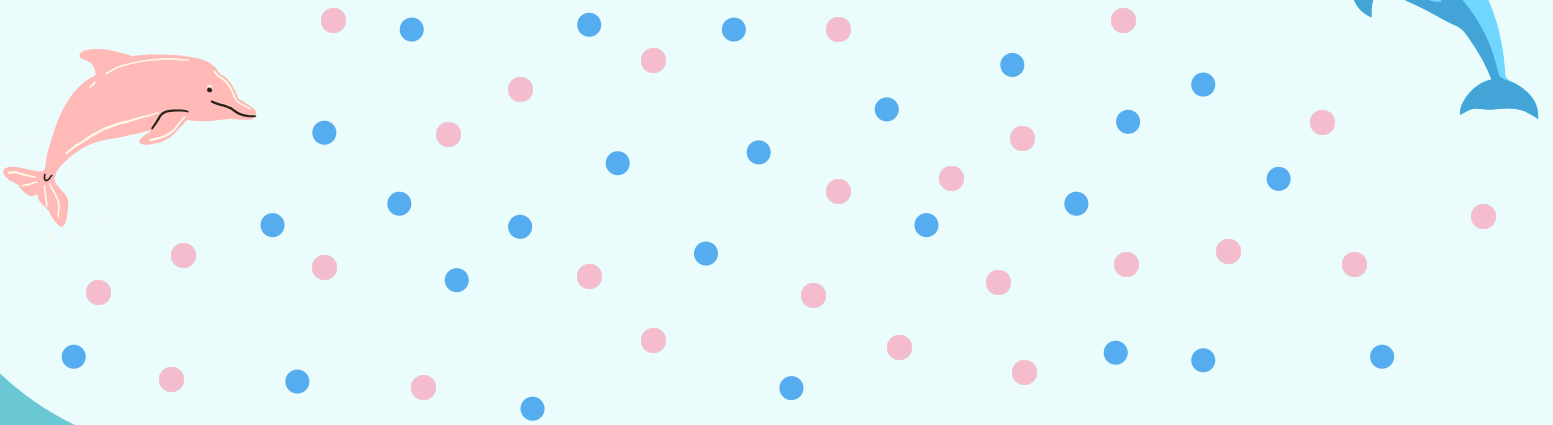
The Founder Effect significantly changed the genetic makeup of the pod's offspring, as compared to the original population.

# What if Poppy's pod was bigger?

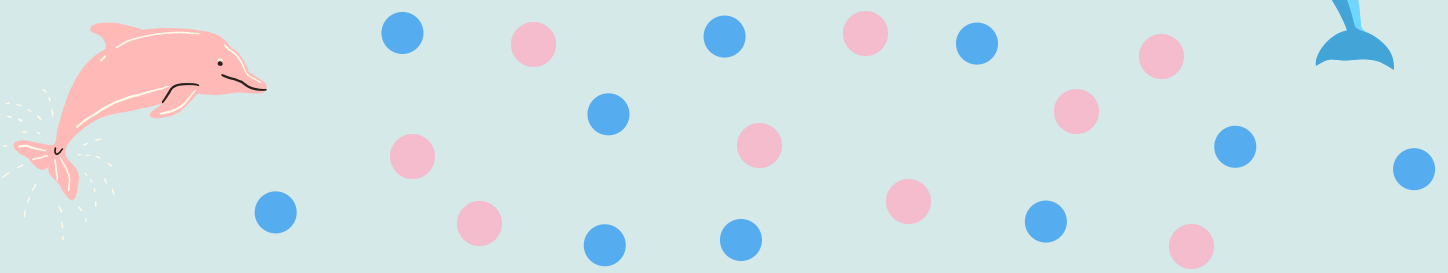
Larger Populations = More Genetic Variation = Less Dramatic Effects



## 50+ Pod Before Orca Attack



## 50+ Pod After Orca Attack



The Founder Effect is much less noticeable when the beginning pod is larger, because there is more starting genetic variation.

## Genetic drift: random yet consequential



Poppy's story shows that chance events, like predator attacks, can significantly alter the genes of a population for generations to come.

Conservation efforts, which aim to maintain a high amount of genetic variation in wildlife populations, are important in species preservation!

## Sources:

<https://www.nature.com/scitable/knowledge/library/natural-selection-genetic-drift-and-gene-flow-15186648/>

[https://www.pbs.org/wgbh/evolution/library/06/3/l\\_063\\_03.html](https://www.pbs.org/wgbh/evolution/library/06/3/l_063_03.html)