

The day Darwin climbed Patagonia's Mount Tarn, Conrad Martens painted it from across the bay. (Cambridge University Library)

Evolution and Inheritance

Summer 1
Week 3 - 4



Lesson 3 - 4

L.O: To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (K)

L.O: To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (WS)

S.C.

- to recognise that living things have changed over time
- to begin to identifying scientific evidence that has been used to support or refute ideas or arguments
- To report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations (WS)

Vocabulary

Evolve
Chronological
Evolution
Inheritance

What is evolution?



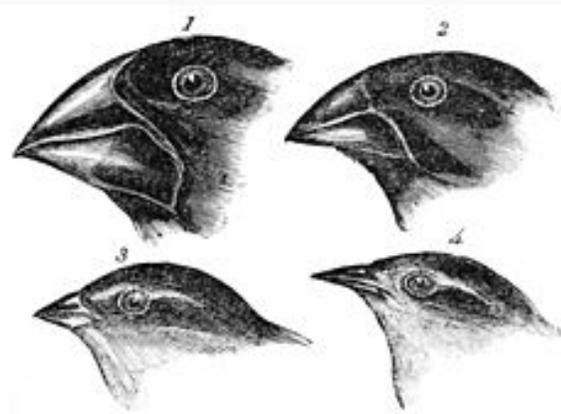
Darwin's finches

Darwin's finches (also known as the **Galápagos finches**) are a group of about 15 [species](#) of [passerine](#) birds. They are well known for their remarkable diversity in beak form and function. They are often classified as the subfamily **Geospizinae** or [tribe Geospizini](#).

They belong to the [tanager family](#) and are not closely related to the [true finches](#). The closest known relative of the Galápagos finches is the South American [Tiaris obscurus](#). They were first collected by [Charles Darwin](#) on the [Galápagos Islands](#) during [the second voyage of the Beagle](#). Apart from the [Cocos finch](#), which is from [Cocos Island](#), the others are found only on the Galápagos Islands.

The term "Darwin's finches" was first applied by Percy Lowe in 1936, and popularised in 1947 by David Lack in his book Darwin's Finches.[7][8] Lack based his analysis on the large collection of museum specimens collected by the 1905–06 Galápagos expedition of the California Academy of Sciences, to whom Lack dedicated his 1947 book. The birds vary in size from 10 to 20 cm and weigh between 8 and 38 grams. The smallest are the warbler-finches and the largest is the vegetarian finch. The most important differences between species are in the size and shape of their beaks, which are highly adapted to different food sources. The birds are all dull-coloured.

Darwin's finches



1. *Geospiza magnirostris*
2. *Geospiza parvula*
3. *Geospiza fortis*
4. *Certhidea olivacea*

Large ground finch, Medium ground finch
Small tree finch, Green warbler-finch

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Aves
Order:	Passeriformes
Family:	Thraupidae

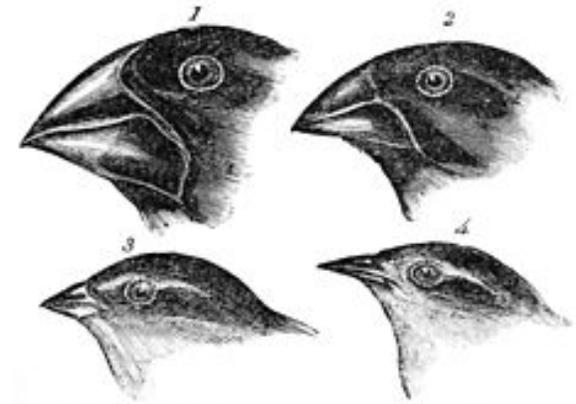
Genera

Geospiza
Camarhynchus
Platyspiza
Certhidea
Pinaroloxias

Re-cap

Darwin believed that the finches started with a common ancestor, but evolved to suit the environmental conditions that they lived in (food sources, plants and insects) on the individual islands.

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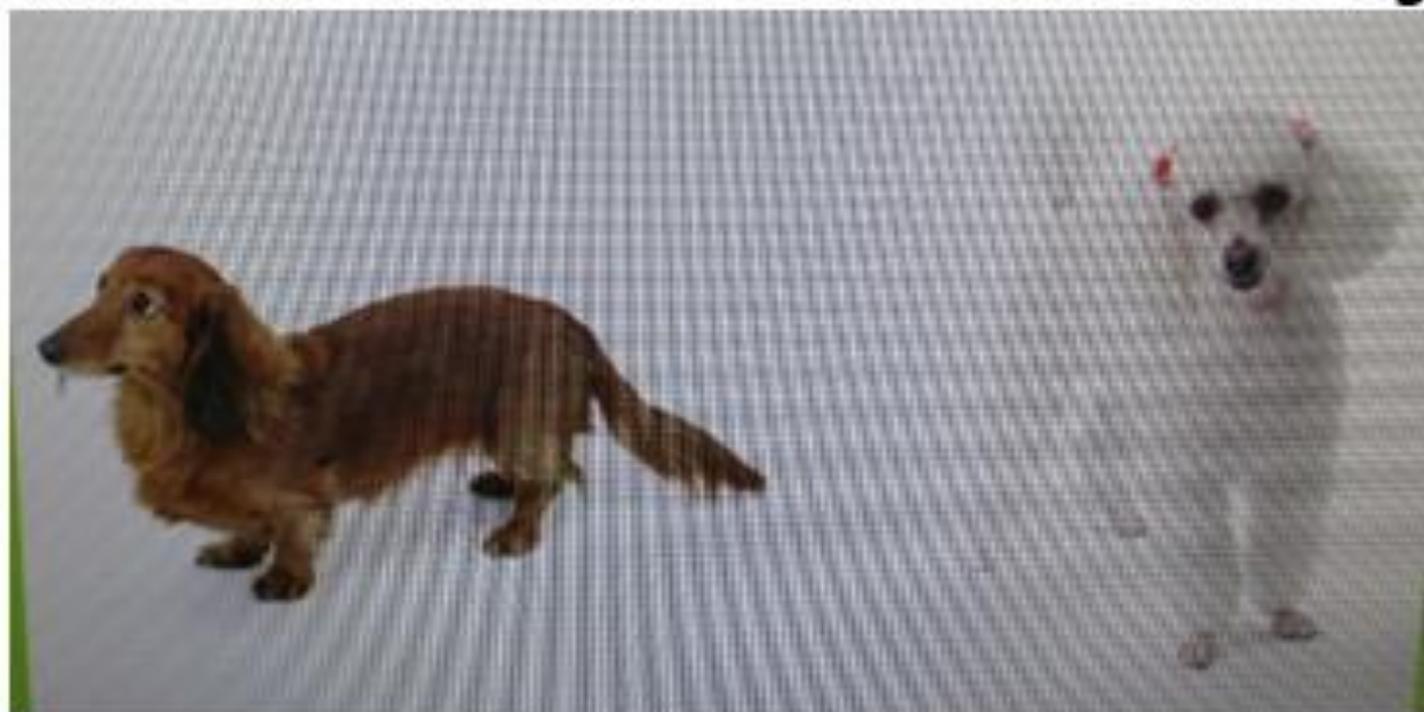
Pinaroloxias

Task 1:

- . *What human adaptation would help you be best fitted to your environment?* (E.g. extra fingers or thumbs to improve texting, bigger brains to process more information, larger more effective eyes to see in the dark, etc.) Write your ideas. Remember to justify!
- . You must create a fact card about a plant or animal and how it has adapted to suit its environment. *What information might you need? Where might you find this?* To help you succeed, you will need to do some research, e.g. through the internet or books.

Task 2 - Compare these two dogs.

Observe the similarities and differences between the two dogs.



Make notes in the Carroll diagram.

Extension: Write **WHY** you think these differences occurred.

Task 3 - Adaptation in dogs.

1. Choose one picture of a dog from the internet.
2. Look at the dog carefully.
3. Write down *WHY* you think your dog has adapted as it has.

Extension; write a description for the type of ORIGINAL environment your dog could have adapted FOR - link your comments to the features that the dog has.

	Hair-type	Eye shape	Paw size and shape	Ear shape
Curvature of the back				