The Beagle Voyage



Activity 5: Plan an expedition Subject: Science/Geography

2 hours

Suggested preparation

What do I need?

Presentation: The Beagle Voyage Letter 295: Charles Darwin to John Stevens Henslow

- Diary entries for 25 September, 1 and 9 October, 1835
- Image of giant tortoise
- Who's who?

Discover what Darwin experienced on the Galapagos Islands by reading his diary entries. Compare attitudes to exploration and conservation then and now. Consider what your priorities would be in putting together an expedition to the Galapagos Islands today.

What do I do?

- 1. Read through the letter and diary extracts and answer the questions.
- 2. Imagine you are trying to recruit volunteers for a modern natural history scientific expedition to the Galapagos Islands to study giant tortoises. The study must have minimal impact on the environment. As part of the recruitment package you need to show:
 - How you will travel to and between the islands
 - Length of the overall expedition and how volunteers will spend their time
 - What equipment will be provided
 - What accommodation will be provided
 - How the research will be carried out
 - What kind of data/ specimens you will send home
- 3. Design a brochure for your package and promote your expedition to your class.
- 4. Create a diary entry for a modern day expedition to an island, describing your day and what you might encounter.

Letter 295: Charles Darwin to John Stevens Henslow

January 1836 Sydney

My dear Henslow,

... I last wrote to you from Lima, since which time I have done disgracefully little in Nat: History; or rather I should say since the Galapagos Islands, where I worked hard.— Amongst other things, I collected every plant, which I could see in flower, & as it was the flowering season I hope my collection may be of some interest to you.— I shall be very curious know whether the Flora belongs to America, or is peculiar. I paid also much attention to the Birds, which I suspect are very curious.— The Geology to me personally was very instructive & amusing; Craters of all sizes & forms, were studded about in every direction; some were such tiny ones, that they might be called quite Specimen Craters.— There were however a few facts of interest, with respect of layers of Mud or Volcanic Sandstone, which must have flowed liked streams of Lava. Likewise respecting some grand fields of Trachytic Lava.— The Trachyte contained large Crystals of glassy fractured Feldspar & the streams were naked, bare & the surface rough, as if they had flowed a week before.— I was glad to examine a kind of Lava, which I believe in recent days has not in Europe been erupted....

Believe me, Dear Henslow Ever yours Most Faithfully Chas. Darwin

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Darwin's Diary on board HMS Beagle

25th September 1835

The inhabitants here lead a sort of Robinson Crusoe life; the houses are very simple, built of poles & thatched with grass. — Part of their time is employed in hunting the wild pigs & goats with which the woods abound; from the climate, agriculture requires but a small portion. — The main div however of animal food is the Terrapin or Tortoise: such numbers yet remain that it is calculated two days hunting will find food for the other five in the week. — Of course the numbers have been much reduced; not many years since the Ship's company of a Frigate brought down to the Beach in one day more than 200,— where the settlement now is, around the Springs, they formerly swarmed. — Mr Lawson thinks there is yet left sufficient for 20 years: he has however sent a party to Jame's Island to salt (there is a Salt mine there) the meat. — Some of the animals are there so very large, that upwards of 200 £bs of meat have been procured from one. — Mr Lawson reccollect having seen a Terrapin which 6 men could scarcely lift & two could not turn over on its back. These immense creatures must be very old, in the year 1830 one was caught (which required 6 men to lift it into the boat) which had various dates carved on its shells; one was 1786. — The only reason why it was not at that time carried away must have been, that it was too big for two men to manage. — The Whalers always send away their men in pairs to hunt. —

1st October 1835

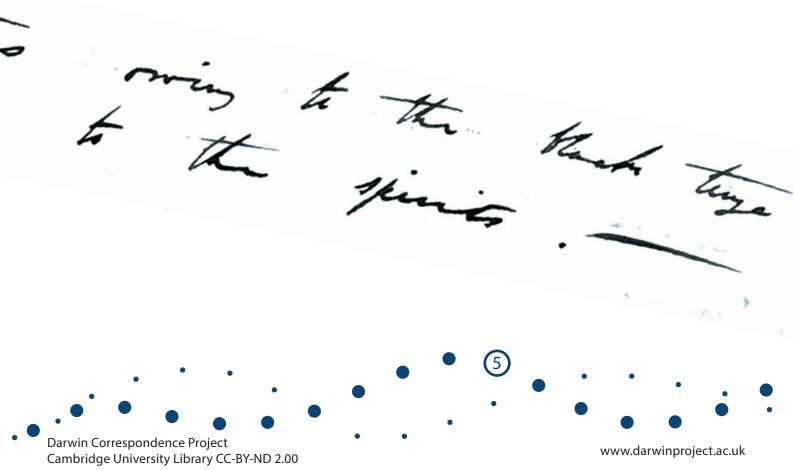
The little of the country I have yet seen in this vicinity is more arid & sterile than in the other Islands. — We here have another large Reptile in great numbers. — it is a great Lizard, from 10–15 lb in weight & 2–4 ft in length, is in structure closely allied to those imps of darkness which frequent the sea-shore. — This one inhabits burrows to which it hurrys when frightened with quick & clumsy gait. — They have a ridge & spines along the back; are

colored an orange yellow, with the hinder part of back brick red. — They are hideous animals; but are considered good food: This day forty were collected. —

9th October 1835

The tortoise when it can procure it, drinks great quantities of water: Hence these animals swarm in the neighbourhead of the Springs. — The average size of the full-grown ones is nearly a yard long in its back shell: they are so strong as easily to carry me, & too heavy to lift from the ground. — In the pathway many are travelling to the water & others returning, having drunk their fill. — The effect is very comical in seeing these huge creatures with outstreched neck so deliberately pacing onwards. — I think they march at the rate 360 yards in an hour; perhaps four miles in the 24. — When they arrive at the Spring, they bury their heads above the eyes in the muddy water & greedily suck in great mouthfulls, quite regardless of lookers on. —

During our residence of two days at the Hovels, we lived on the meat of the Tortoise fried in the transparent Oil which is procured from the fat. — The Breast-plate with the meat attached to it is roasted as the Gauchos do the "Carne con cuero". It is then very good. — Young Tortoises make capital soup — otherwise the meat is but, to my taste, indifferent food.



Giant tortoise



Image courtesy of Vanessa Green, Galapagos Conservation Trust

Letter questions: Plan an expedition

Using letter 295 and diary entries from 25 September and 1 and 9 October 1835, answer the following questions.

1. From the letter to Henslow, what topic did Darwin find very instructive on the Galapagos Islands?

2. In the diary extracts Darwin discusses a key aspect of survival on any expedition to a remote place. What is it and what makes his accounts of the encounters with animals different from how we would expect a scientific expedition to be reported today?

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Who's who?

Charles Darwin

Charles Darwin (1809-1882) was a naturalist who established natural selection as the mechanism for the process of evolution. He joined the voyage of HMS *Beagle* when he was 22, a journey he described as the 'most fortunate circumstance in my life'. He wrote to around 2000 correspondents all over the world as a means to inform his research. Most famously he published *On the Origin of Species* in 1859, but he researched and wrote extensively on natural history throughout his life.



Susan Darwin

Susan Darwin (1803-66) was Darwin's sister. They wrote regularly to each other during the *Beagle* voyage. She conveyed much family news to him and referred to herself as 'Granny' in her letters as she was always giving him advice. She also corrected his grammar and spelling.

Robert FitzRoy

Robert FitzRoy (1805-65) was Vice-Admiral to the Navy, a pioneering meteorologist and hydrographer. He was made the commander of HMS *Beagle* at the age of 23. He was appointed Governor of New Zealand in 1843. He is credited with inventing several barometers and devising sea charts to forecast the weather. Despite FitzRoy's explosive temper, he and Darwin were close friends during the voyage and he supported Darwin's work. FitzRoy subsequently distanced himself from Darwin's ideas and turned increasingly to religion.



Image of Robert FitzRoy: ©National Portrait Gallery, London. NPG x128426. CC BY-NC-ND 3.0

The Beagle Voyage: Who's who?

Robert Waring Darwin

Robert Waring Darwin (1766-1848) was Charles Darwin's father and a physician. He had a large practice in Shrewsbury and resided at The Mount. He was the son of Dr Erasmus Darwin who took a great interest in botany. Robert Waring Darwin married Susannah, daughter of Josiah Wedgwood I.

Image of Robert Waring Darwin ©Shrewsbury Museums Service (SHYMS: FA/1991/033/2)



William Darwin Fox

William Darwin Fox (1805–80) was a clergyman and Charles Darwin's second cousin. He was a good friend of Darwin's at Cambridge and shared his enthusiasm for studying insects. He maintained an active interest in natural history throughout his life and provided Darwin with much information. He was the Rector of Delamere, Cheshire (1838–73) but spent the last years of his life at Sandown, Isle of Wight.



John Stevens Henslow

John Stevens Henslow (1796–1861) was a clergyman, botanist and mineralogist. He was Charles Darwin's teacher and friend. He was Professor of Mineralogy at Cambridge University from 1822 to 1827 and Professor of Botany from 1825 to 1861. He also extended and remodelled the Cambridge Botanic Garden as well as being firstly curate of Little St Mary's Church in Cambridge, then vicar of Cholsey-cum-Moulsford, Berkshire, and finally rector of Hitcham, Suffolk. Henslow recommended Darwin as an ideal candidate for the *Beagle* voyage.



Image of John Stevens Henslow courtesy of the National Library of Medicine