

# All The Same But Different:

## Between Islands

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### Prologue

There are two island stories to be told, historically interlaced through the scientific voyages of the HMS Beagle that had begun in the 1820s. In 1835 when Charles Darwin visited the Galápagos Islands, he was to see and gather the materials necessary to completely rewrite the theory of evolution. As a result, in 1859 he published his most famous work *The Origin of Species by Means of Natural Selection*. But to this, we should add the Falklands and the islands of Tierra del Fuego, an archipelago of islands lying to the south of Argentina and Chile.<sup>1</sup> Captain FitzRoy moored the Beagle, enabling Darwin to go onshore for some weeks on the islands and Falklands, collecting fossils, plants and animals. As a result of this preliminary work, he decided to do comparative studies to better understand how similar species adapted to different environments. The Beagle then continued on in its long five-year journey up along the western coastline of South America to where the Galápagos lay.

The Galápagos Islands is the point of reference for the Galápagos Syndrome (*Garapagosu-ka*), a term of Japanese origin, which refers to the isolated development of a globally available product, a phenomenon experienced by Japan as a relatively insulated nation.<sup>2</sup> The term arose as part of the dialogue about Japan's position as an island nation, and the subsequent anxiety it produced about being isolated from the world at large.

The Galápagos Islands lie 600 miles west of South America, off the coast of Ecuador and were first discovered by Europeans some 300 years ago in 1535. The bishop of Panama, Tomas de Berlanga, had sailed to Peru to settle a dispute between Francisco Pizarro and Diego de Almagro after the Spanish conquest of the Incan civilisation in the Andes. The bishop's ship had encountered strong currents that had carried him out to the Galápagos.

In 1570, the Flemish cartographer Abraham Ortelius charted the Galápagos Islands<sup>3</sup>. Calling them the '*Isolas de Galápagos*' (Islands of the Tortoises), Ortelius's recognition was based on sailors' descriptions of the many tortoises inhabiting the islands. There are 10 main islands, and some smaller ones, all formed from the volcanic rock basalt. But the Galápagos Islands were rarely visited and by the 17th century, were ideal bases for

<sup>1</sup> The Portuguese explorer Ferdinand Magellan, who circumnavigated the earth in the early part of the 16th century, named the islands 'Tierra del Fuego', after seeing the campfires of the Fuegian tribes along the coastline. In the late 19th century the Reverend Thomas Bridges (1842-1898), the first permanent white resident of Tierra del Fuego, published the first dictionary of the native Fuegian language.

<sup>2</sup> The term was originally coined to refer to Japanese 3G mobile phones, which had developed a large number of specialised features and dominated Japan, but were unsuccessful abroad.

<sup>3</sup> Abraham Ortelius is known as the creator of the first modern atlas.

pirates who preyed on transiting galleons and coastal towns. The Islands also drew whalers and sealers, with the promise of fur seals and capture of giant tortoises, which could be kept alive in the hold of ships for up to a year with no food or water. As a result, the tortoise populations were decimated, causing the extinction of several species.

Darwin was initially a 'Creationist' until his return from the Galápagos Islands. Up until Darwin's work, evolution had been defined as changes in heritable traits of biological populations over successive generations. The Frenchman Jean Baptiste de Lamarck (1744-1829) had proposed a theory of transmutation and evolutionary processes, calling his theory "transformism" rather than "evolution". Darwin and Alfred Russell Wallace, the British naturalist, questioned how characteristics could be passed onto offspring. Departing from de Lamarck's theory, they proposed alternatively a process of natural selection and branching tree of life. This gave rise to the theory of diversity at every level of the biological organisation, including the level of species, individual organisms and molecular evolution.

## **The Beagle**

In late December 1831, FitzRoy, with his crew and the young Darwin, left England to take a five-year scientific and geographical voyage around the world. FitzRoy was also a naturalist and had wanted another naturalist to help with the collection and identification of specimens. Darwin was available and had been recommended. He was only 22 years old and fresh out of university, but he had been educated to become a naturalist and was a trainee pastor. Darwin had also studied informally with the great Scottish geologist Charles Lyell. As a boy, he knew the Latin names of a great many plants and animals, and avidly read Gilbert White's *Natural History of Selborne* and other books, including that of Humboldt and his exploration and discoveries in South America.

At the start of Fitzroy's return voyage to the region in 1831, Darwin had had some experience of collecting beetles and small sea creatures, but regarded himself as a novice in natural history. With a strong interest and training in geology, his plan for the Beagle voyage was twofold — to continue his own investigations of geology and marine invertebrates, and to collect specimens of other organisms that might be new to science.

## **Tierra del Fuego and the Fuegians**

The ship's first stop was the desolate Cape Verde archipelago off the coast of Africa, distinguished by its volcanic landscape. They then travelled up and down the West and East coasts of South America. Darwin collected specimens from the rain forests of Brazil, and the Andean plains between Chile and Argentina, and both the Falkland Islands and Tierra del Fuego that lay around the southern tip of Chile and Argentina.

There were others on board the Beagle, most significantly three Yahgan Fuegians, who were being returned home to their native land Tierra del Fuego, after having been taken to London by

FitzRoy, the year before.<sup>4</sup> They were nicknamed by the sailors as 'Fuegia Basket,' a nine-year old girl whose original name was Yok'cushly, 'York Minster' (or El'leparu) and 'Jeremy (Jemmy) Button' (or O'run-del'lico), a 14-year old boy, who was paid for with a mother-of-pearl button in exchange.<sup>5</sup> The capture of these Fuegians followed an incident in which some Fuegians had stolen one of FitzRoy's whale-boats. After recovering the boat, FitzRoy decided to take the young Fuegians to England, including another young Fuegian man, 'Boat Memory'. FitzRoy's plan was to educate them as part of an evangelical experiment. 'Boat Memory', however, died of smallpox on arrival in London, while the others were 'educated, civilised and Christianised' and taught to speak English. They were subsequently presented to King William IV and Queen Adelaide.

## The Galápagos Islands

Three years and nine months after leaving England, the ship stopped over in the Galápagos Islands for five weeks, from 15th September to 20th October 1835. Darwin spent about five weeks on the islands: Chatham Island (now called San Cristobal), Charles Island (now Floreana), Albemarle Island (now Isabela), and James Island (now Santiago).

The Beagle anchored first off Chatham Island and, while Captain FitzRoy was surveying the coast, Darwin made five landings. Starting on the 16th September, near what is now Puerto Baquerizo Moreno, Darwin's Notebook suggests that his main interest quickly became the exploration of a "craterised district". He made detailed geological notes of the craters, their formation and the lava flows around them. He also noted that three-quarters of the plants were in flower, an essential point for botanical collecting. During one landing he found 10 plant species. The islands were already famous for the iguanas, giant tortoises and finches to be found on them and Darwin was equally impressed. He initially made brief entries on the local reptile life, including the tortoises and iguanas, with a characteristically personal remark: "Met an immense Turpin; took little notice of me."

Darwin's first field-note on a bird of the Galápagos was to prove historic. On the day he studied the "craterised district" on Chatham Island, he also jotted down: "The Thenca (is) very tame & curious in these Islands."<sup>6</sup> The point of interest in Darwin's field notes is how he linked the Galápagos bird with its counterparts on the mainland, asking himself whether there might be similar likenesses between the plants of the continent and those of the archipelago. He wrote: "I shall be very curious to know whether the Flora belongs to America, or is peculiar."

The Beagle next sailed to Charles Island, where Darwin spent three days exploring and collecting samples of its various animals, plants, insects and reptiles. He made a few short entries in the field notebook. One of the birds he found was another mockingbird. As he was to record later, he found that it differed markedly from his Chatham Island specimen, and from that point on, he paid particular attention to their collection, recording the island where he had found it.

<sup>4</sup> FitzRoy's first survey of the Tierra del Fuego region was from 1826 to 1830.

<sup>5</sup> In 1855, a group of Christian missionaries visited Wulaia Bay on Navarino Island to find that Jemmy Button still had a remarkable grasp of English. Some time later in 1859, another group of missionaries was killed at Wulaia Bay by the Yaghan, supposedly led by Jemmy and his family. In early 1860, Jemmy visited Keppel Island, giving evidence at the enquiry into the massacre. He denied responsibility. Some years later in 1863, the missionary Waite Stirling visited Tierra del Fuego and re-established contact with Jemmy. From then on, relations with the Yaghan improved. In 1866, after Jemmy's death, Stirling took one of Jemmy's sons, known as Threeboy, to England.

<sup>6</sup> 'Thenca' is the Spanish name for the thrush-like mockingbird from the west coast of South America.

Further, Darwin was told by the local prisoners that each island had its own peculiar tortoise. They weighed up to and over 90kg, big enough for Darwin and others to ride like a horse, and the staple meat for the islanders and visitors alike. They seemed to live a long age and was informed that “the old ones seem generally to die from accidents, as from falling down steep precipices.” Darwin let this local wisdom pass him by, thinking at the time that the tortoises were originally imported by man. Likewise he seemed little impressed by the iguanas, not realising they were unique to the island chain. In a conversation about the giant Galápagos tortoises of which there were small numbers on Charles island, the English Vice-Governor, Nicholas Lawson (who had met the Beagle crew by chance when they landed), observed that the tortoises on different islands showed “slight variations in the form of the shell.” Lawson claimed that he could tell from which of the islands a tortoise had come.

On 29th September the Beagle reached Albemarle Island and the next day the ship anchored in the inlet Darwin knew as Blonde Cove, (now Tagus Cove). Darwin landed on 1st October to examine the volcanic terrain, as well as collecting plants and animals, including another mockingbird. On 3rd October the Beagle moved round to the northern end of Albemarle, and then sailed eastwards to survey the coasts of Abingdon (now Pinta), Tower (Genovesa) and Bindloe (Marchena) Islands. On 8th October the Beagle reached James Island. Darwin went ashore with three others from aboard the ship. During their time there, Darwin explored the inland region and collected specimens with help from the others. He collected evidence to support his theory of the generation of different lavas from the same magma through “fractional crystallisation”. He was also struck by the extraordinary numbers of giant tortoises and made detailed observations of their drinking and feeding habits and calculated the swiftness of their movements. He and his companions were given tortoise meat and found that it was delicious in soup.

Darwin initially missed the evolutionary clues hidden in the finches, finding them very hard to tell apart. In fact, he was not even aware that they were finches at all. He was more interested in how tame they were and surmised they had only recently encountered man, and did not yet have the instinctive fear for people. Darwin found he could even prod them with his gun and many would still sit still. The mockingbirds caught his eye, noticing that some of these were different on different islands, but also that they were all similar to mockingbirds on the mainland. He collected specimens as he had done on the other islands, labelling them separately. Although he collected many finches, he did not label them by island. Fortunately for his later studies, FitzRoy and Syms Covington, (a young cabin boy who had become an assistant to Darwin) were keeping more meticulous records.

Darwin noted that the unique creatures he saw were similar from island to island, but perfectly adapted to their environments which led him to ponder the origin of the islands’ inhabitants. But still the significance of this find did not sink in; he wrote in his *Journal of Researches* (2nd ed., 1845):

I never dreamed that islands, about fifty or sixty miles apart, and most of them in sight of each other, formed of precisely the same rocks, placed under a similar climate, rising to a nearly equal height, would have been differently tenanted.

## Returning home

As the *Beagle* sailed home towards England during June and July 1836, Darwin had time to prepare and organise into sets the specimens that he would need to hand over to other experts for examination. He took his specimen lists and zoological notes and drew up separate sets of notes for mammals, birds, insects, shells, plants, reptiles, crustaceans and fish, expanding on his former entries. He needed an expert ornithologist's verdict on his birds, especially his judgement that the three Galápagos mockingbirds should be counted as separate species, and wrote about the mockingbirds in his notes to accompany the specimens. He noted that while the specimens from Chatham and Albemarle Islands appeared to be the same, the other two were different. On each island, each kind had been exclusively found but their habits were indistinguishable. He then developed his brief comment in his zoological notes about the parallel between the mockingbirds and the tortoises.

When I recollect the fact that [from] the form of the body, shape of scales and general size, the Spaniards can at once pronounce from which island any tortoise may have been brought; when I see these islands in sight of each other and possessed of but a scanty stock of animals, tenanted by these birds, but slightly differing in structure and filling the same place in nature; I must suspect they are only varieties. The only fact of a similar kind of which I am aware, is the constant asserted difference between the wolf-like fox of East and West Falkland Islands. If there is the slightest foundation for these remarks, the zoology of archipelagoes will be well worth examining; for such facts would undermine the stability of species.

In the summer of 1837, he started a series of private writings on the subject, focusing on geology more than natural history<sup>7</sup>. Through 1837 and 1838 Darwin thought to himself about the fixity or mutability of species and the implications of the Galápagos mockingbirds for the possibility that they might change. He then began to write his *Zoology of the Voyage* (1838-1843), noting: "This bird which is so closely allied to the *Thenca* of Chili ... is singular from existing as varieties or distinct species in the different islands. ... This parallels that of the tortoises." Darwin was beginning to detect deep patterns in the distribution of species that reach between whole classes of the animal kingdom. Darwin had written in his first note on the '*Thenca*' in his field notebook: "I certainly recognise South America in ornithology; would a botanist?" When he first noticed the bird on Chatham Island, he thought of parallels with other species and he was already collecting the plants of the island for an analysis of their links with the flora of other regions.

<sup>7</sup> Darwin had written to his sister Catherine "there is nothing like geology; the pleasure of the first days partridge shooting or first days hunting cannot be compared to finding a fine group of fossil bones, which tell their story of former times with almost a living tongue." (April 1834). The total bulk of Darwin's Geology Notes (including Paleontology) were nearly four times greater than that of the Zoology Notes and Natural History.

From this work, it became clear to Darwin that, over time, different species adapt to their environment. He was intrigued by the fact that each small island had its own characteristic species of bird, lizard and tortoise. Because the islands' physical and climatic conditions were relatively similar, he reasoned that they were not responsible for these differences. Instead, he concluded that the differences were related to feeding habits. This theory helped form the basis of Darwin's unprecedented works on biological adaptation, natural selection and evolution. Darwin had not opened his notebooks on transmutation (evolution) until after his return to England. The Galápagos Islands gave him food for thought about bio-geography, because he recognised that the animals had to come from elsewhere (in this instance, western South America), but only later did he tie these thoughts to evolutionary ideas about adaptation and speciation in isolation. His argument was that if individuals vary with respect to a particular trait and if these variants have a different likelihood of surviving to the next generation, then, in the future, there will be more of those with the variant more likely to survive.

The Galápagos Islands impressed Darwin more for what they said about bio-geography and adaptive differentiation than what they said about natural selection. The iguanas came in more than one form; there was a marine and a land iguana that were unique in the world. Darwin managed to decipher the marine iguana's unique ecology from his observations, concluding that they fed on seaweed at the bottom of the sea around the coast. Darwin did not recognise the finches as finches, thinking they were different kinds of wrens, ground finches, and other birds. Darwin set about sorting his specimens, and as a result, figured things out. He needed help to classify all his many specimens and these experts often spotted what Darwin missed. From them he learned that each island had its own finch species.

Darwin offered his collection of bird specimens to John Gould, an ambitious young bird illustrator who was rapidly building a reputation as an ornithologist. Gould responded swiftly and positively with a series of presentations of the specimens at meetings of the Zoological Society of London. Gould confirmed Darwin's suggestion that there were three species of mockingbird in his Galápagos collection, though he changed the grouping of two of the specimens. He also pointed out to Darwin that the many birds he had identified as finches and collected on the different islands, often without recording which, should be grouped together with a number of other birds Darwin had identified as wrens, 'gross-beaks' and 'Icteruses' (relatives of blackbirds) as "a series of ground Finches which are so peculiar as to form an entire new group containing twelve new species." Darwin was fascinated at once by what the new grouping revealed about possible evolutionary adaptations in the archipelago but, found that he could not study the distribution of the finches between islands because he had failed to identify from which of the several islands he had collected many of his specimens.

<sup>8</sup> Darwin had also read Malthus's *Essay on Population* (1798) in 1838 and started applying Malthus's ideas to natural organisms by the 1840s.

As he developed his ideas about evolution in the late 1830s and early 1840s, he became more and more confident in biogeography and adaptive differentiation's power to explain<sup>8</sup>. However, the



evidence on which these ideas were based needed to be built up before he could apply them to other cases. The three species of mockingbirds on three of the islands would not be enough to persuade. He had given his collection of Galápagos plants to John Stevens Henslow shortly after his return to England. Henslow had been Darwin's mentor at Cambridge University and introduced him to the study of the geographical distribution of species. Moreover, he had explained the special interest of the links between the flora and fauna of oceanic islands and the continents they were close to, and the Galápagos was an obvious case for further study.

In 1843 as a result of Henslow not having enough time to study, Darwin arranged for the young botanist Joseph Dalton Hooker to take over the collection of specimens he had brought home from Galápagos. Darwin was eager to hear how many species were shared with South America and how many were unique to the Galápagos and more so, how many were unique to a single island. Hooker found that the flora had many close and clear links with the plants of South America, and his conclusions on the distinctiveness of the archipelago and individual islands were astonishing. Of a total of 217 species collected, Hooker found that 109 were confined to the archipelago and 85 of those were confined to a single island.

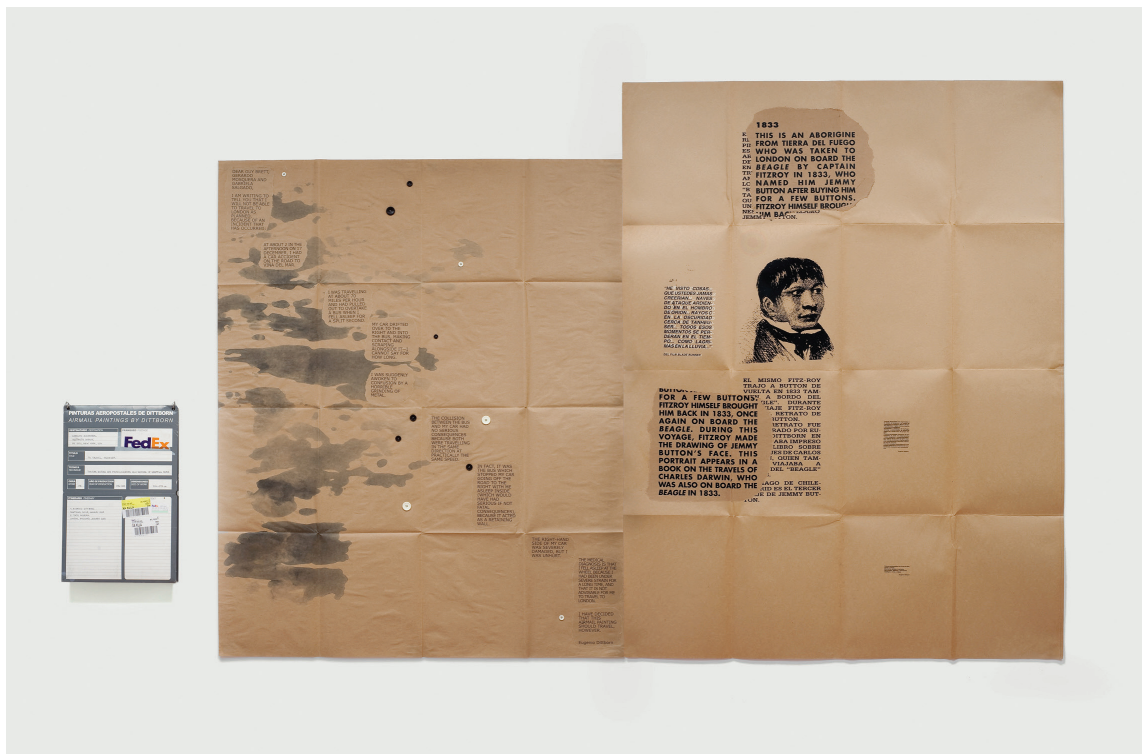
After studying Covington's and FitzRoy's more carefully labelled specimens, Darwin could see that each island had its own unique species, some endemic to particular islands, all with unique bill shapes and sizes. He concluded in his Journal:

Seeing this gradation and diversity of structure in one small, intimately related group of birds, one might really fancy that from an original paucity of birds in this archipelago, one species had been taken and modified for different ends.

By this time, some 10 years after he had left the Galápagos, Darwin explained that when he compared together "the numerous specimens, shot by myself and several other parties on board, of the mocking-thrushes", he found: "to my astonishment, I discovered that all those from Charles Island belonged to one species ... all from Albemarle Island to [another] and all from James and Chatham Islands to [a third]." (*Journal of Researches*):

The distribution of tenants of this archipelago", he wrote, "would not be nearly so wonderful, if for instance, one island has a mocking-thrush and a second island some other quite distinct species... But it is the circumstance that several of the islands possess their own species of tortoise, mocking-thrush, finches, and numerous plants, these species having the same general habits, occupying analogous situations, and obviously filling the same place in the natural economy of this archipelago, that strikes me with wonder.

In 1845, Darwin published a general account of his observations as *The Voyage of the Beagle*. He then published books on the *Structure and Distribution of Coral Reefs* visited during his



Viajar, sin Embargo  
 Airmail Painting No. 178 1986-2007  
 tincture, buttons, ink and photosilkscreen on two sections of kraft paper  
 80 x 115 1/2 in/203.2 x 293.4 cm  
 Image courtesy Alexander and Bonin, New York

trip, as well as the *Geology of South America*. Darwin's eventual conclusions, stemming from his first question about the birds and plants of the Galápagos, were to feature in one of the most important passages in *The Origin of Species*:

The relations just discussed ... [including] the very close relation of the distinct species which inhabit the islets of the same archipelago, and especially the striking relation of the inhabitants of each whole archipelago or island to those of the nearest mainland, are, I think, utterly inexplicable on the ordinary view of the independent creation of each species, but are explicable on the view of colonisation from the nearest and readiest source, together with the subsequent modification and better adaptation of the colonists to their new homes.

These words capturing one of his key points about evolution by natural selection. For those born with characteristics that make them best suited to their environment are most likely to survive and successfully produce offspring.

Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving,



namely, the production of higher animals, directly follows. There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved.

## Conclusion

Many years later the Chilean artist, Eugenio Dittborn, was reading Darwin's account of his trip on the Beagle and saw FitzRoy's drawing of Jemmy Button. Dittborn subsequently produced a series of airmail paintings that included images of the Fuegians, in particular Jemmy Button (see *Airmail Painting No.178*, 1986-2007). He went on to use the image of Button again and again as in *Airmail Painting No.102* (1993). They became what Guy Brett described as "a graphic mark" (that) is also a 'life trace'.<sup>9</sup> This idea becomes of central importance in defining the character of Dittborn's Airmail Paintings and his practice.<sup>10</sup>

Moreover, the idea of exile as an allegory of these works is related to the notion of displacement, and that of travel. One of the critical values of Dittborn's Airmail Paintings is the restoration of their subject. By transferring the images from one referential field to another, Dittborn makes the sources of these found images interconnected and recombines their links with history, redressing the official archive. Transit becomes the possibility for of the subject's survival. Nelly Richard notes: "While the Chilean State tried to put out of circulation some determined subjects to condemn them to oblivion, Dittborn's Airmail Paintings put back into circulation images of subjects condemned to forgetfulness. The artist became a kind of "guardian of memory," the one which was suppressed by the official apparatus."<sup>11</sup>

A story of islands then.

This article is based on a series of readings:

Charles Darwin: *The Voyage of the Beagle*. First published 1839.

Grant, T & Estes, G. *Darwin in Galápagos*. Princeton University Press, 2009. And various websites: (i) Darwin's Finches Wikipedia; (ii) The Galápagos Geology: A Brief History of the Galápagos; (iii) Galápagos Islands History and Charles Darwin.

<sup>9</sup> Brett, Guy. *La Casa, the Letter, the House: (transperiphery) 5 Airmail paintings from Chile: Eugenio Dittborn*. Sydney: Australian Centre for Photography, 1989.

<sup>10</sup> See Dittborn, Eugenio. *Mapa: The Airmail Paintings of Eugenio Dittborn 1984-1992*. (London ICA, 1993).

<sup>11</sup> In Richard, Nelly. *Margins and Institutions*. Melbourne: Art & Text, 1986.



To Return (YVR)  
Airmail Painting No. 102 1993  
paint, stitching, charcoal and photosilkscreen on six sections of non woven fabric  
165¼ x 165¼ in/420 x 420 cm  
Image courtesy Alexander and Bonin, New York

