

Biol4270 – History of Biology

The Voyage of Charles Darwin, Part 5

1. What is the “**Mystery of Mysteries**”?
2. 2:10 – First illness. What are the speculations?
3. 4:00 – Fitzroy’s depression. What are its symptoms?
 - a. “*Officially reprimanded*”
 - b. **Fossilized seashell at 12,000 ft. Provocation?**
4. 12:00 – Wickham intervention: “*As time permits...*”
5. 16:30 - Reception at Valparaiso*
6. 20:30 – **Premonition of earthquake on ship**
 - a. 22:00 – tremors
 - b. 23:00 – Earthquake, 20 Feb 1835: “*To experience an earth tremor ...*”
 - c. 24:30 – Devastation at Conception, Chile [magnitude 8.5; cf Maldivida, 9.5 in 1960]
 - d. 27:20 – “*The most remarkable effect ...*” – seashore raised by 2 ~ 3 feet
7. 28:00 - **Voyage to Islas Galapagos** [0° latitude]
 - a. 32:30 – “*The First Circle of Hell*”** – **Marine Iguanas. What profound questions raised?**
 - b. 36:00 – note nature of lava: ‘*A*’ rough, *Pahoehoe* smooth
 - c. 37:00 – Geological origins of island archipelago?
 - d. Sally lightfoot crabs, sea-weed feeding marine iguanas. **Relationship to land iguanas?**
 - i. Speculation on inter-island variation
 - e. Charles Island [Floreana]
 - i. 45:00 – **Note form of tortoise carapace & neck. Relationship to other tortoises?**
 - ii. 48:00 – Consultation with locals
 - iii. 51:00 – Function of tortoise mating ritual – “*Fittest & Strongest*”
 - iv. 54:00 – 600 lbs, “1786”: [? island] Hood “turned up” vs James “better flavour”
 - f. Variation among island 50 ~ 60 islands apart. Strong currents prevent movement.
 - g. “*That mystery of mysteries*”
8. **HOMEWORK: Investigate and summarize current thinking on relationships of Marine Iguana and Tortoises to mainland species. Is there evidence for speciation among islands?**

*Tory vs Whig politics: The Reform Bill (1832) eliminated “*Rotten Boroughs*”, Parliamentary districts with few or no inhabitants that nonetheless sent as many members as more populous districts. Such districts controlled by single wealthy families had long given Tories disproportionate influence in Parliament. Fitzroy favours the notion that it is appropriate that the upper classes dominate government; Darwin is opposed.

**Dante’s “*Inferno*” envisioned Hell as comprising Nine Circles of increasingly severe punishment. Out of humanistic feeling, Dante consigned pre-Christian notables such as Homer, Sophocles, Plato, Aristotle, etc., to the “First Circle”, a neutral sort of confinement. Solzhenitsyn’s “*First Circle*” places technically-competent political prisoners (“*zeks*”) in prison laboratories where they work for the State. Though in the Gulag, their relatively benign existence is contrasted to “free” citizens on the outside who live in fear of being sent to one of the more severe “circles” of the Gulag.

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The Voyage of Charles Darwin, Part 6

1. "In the distant future, light may be thrown"
2. Continued exploration of Galapagos
 - a. "Creative force," "Aboriginal forms"
 - b. Fur Seals. Relationship to southern fur seals.
 - c. Land iguanas. [Note head bobbing display].
 - d. First arrivals must be **birds**, carrying **seeds & insects**
 - i. Frigate bird mating ritual.
 - ii. Blue-footed Booby
 - iii. Mocking thrushes, hawks show no fear of humans [filmed in 20th cent.]
 - e. **13:30 – Finches**
 - i. Variation in beaks – nutcrackers, piercers, fly catchers, seed gleaners, etc
 - ii. "True significance did not occur to me" – specimens mingled haphazardly
 - iii. 21 endemic **land** birds out of 26
 - f. Passage to Tahiti & Australia
 - i. Fitzroy's notes & commentary on Finch origins >> Darwin's
 - ii. Each creature perfectly adapted to its island, by divine providence
3. 20:00 – Fitzroy's suggestion to incorporate **Darwin's diary** into *Beagle* narrative
 - a. Bynoe suggests separate publication
 - b. Darwin reflections
 - i. Lush tropical jungles – desolation of Tierra del Fuego
 - ii. Reflections on Earth viewed from great heights
 - iii. "Why should these creatures die out?"
 - iv. **First experience of an earthquake: solidity changed to fluidity**
 - v. **Darwin vs Genesis**
 - vi. **30:00 – Struggle for existence**
4. 31:30 – **Return to England [Date]**
 - a. FitzRoy's benediction / recessional
 - b. FitzRoy & Darwin part
 - c. Return to Shrewsbury – "The shape of his head is quite altered!"
 - d. 39:00 – Plans for the future – Henslow & Lyell
 - e. 42:00 – Alone with Emma – Thoughts on Marriage
 - i. "Marry – Marry – Marry"
5. 45:00 – FitzRoy's reaction to Darwin's book [Date]
 - a. Lyell's attitude towards FitzRoy
6. 51:20 – "**I think...**" Sketch of the Origin of Species
 - a. Model of evolution as a tree branch
 - b. Darwin proposes, Emma disposes
7. 57:00 – Meets **Hooker** at Kew Gardens, **Autumn 1843**
 - a. "Joseph" & "Charles" [Post-dates sketch of 1842]
 - b. Species are not immutable – "It feels like confessing a murder!"
 - i. Not Lamarck – "willing itself"
 - ii. "Natural Selection" / "Struggle for existence" / "Successful vs unsuccessful variations"
8. **1:01:41 Conclude Episode 6**