

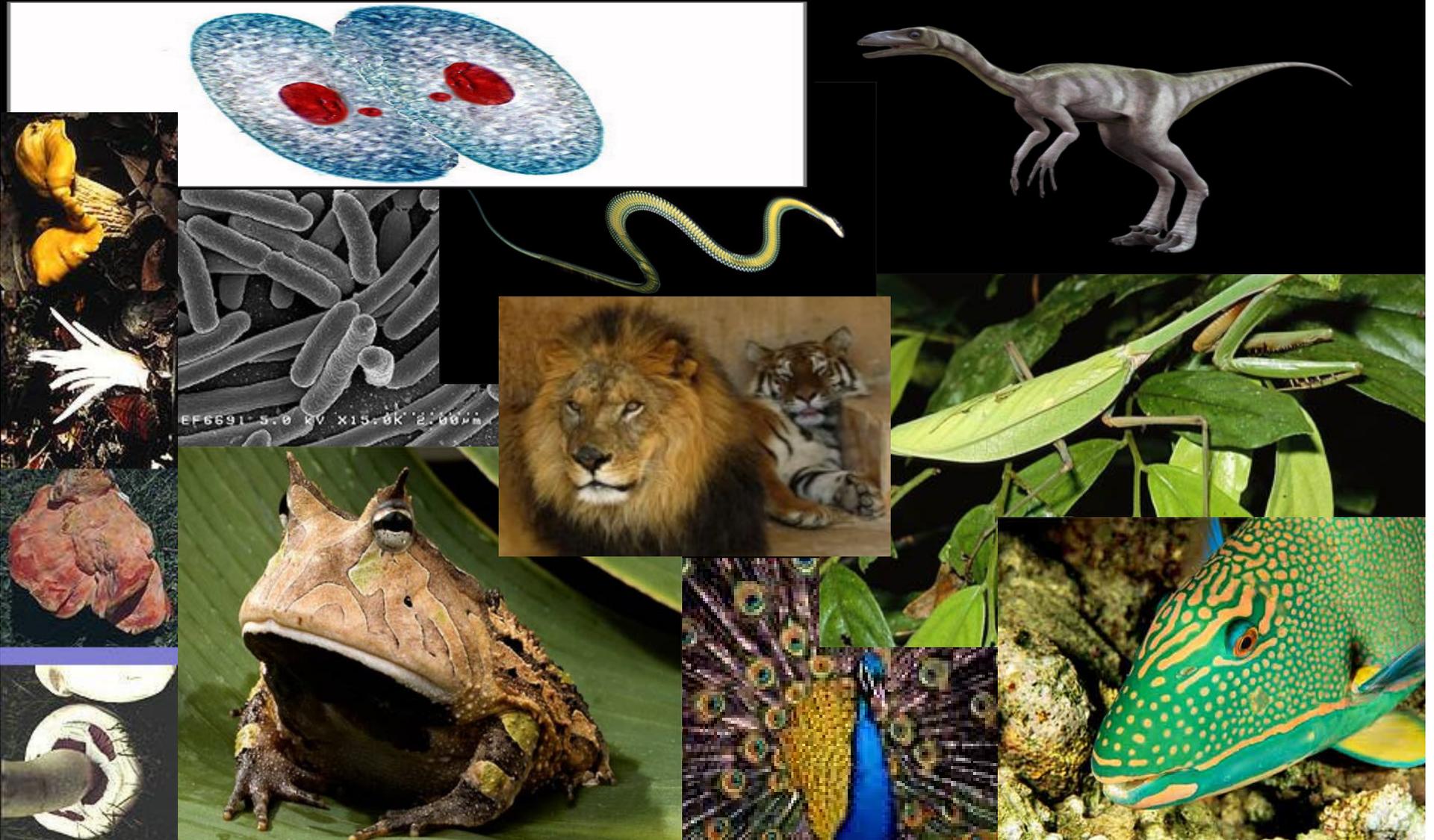
Chapter 15-1

The Puzzle of Life's Diversity



- Evolution: process by which modern organisms have descended from ancient organisms.
- Theory: a well supported testable explanation of phenomena that have occurred in the natural world.
 - Phenomena=a fact, occurrence, or circumstance observed or observable: ***to study the phenomena of nature.***

Evolutionary Theory: A *scientific explanation* that can account for the diversity of life.



I. Charles Darwin

- A. Contributed more to our understanding of evolution than anyone.
- B. Sailed around the world (after college) on the H.M.S. Beagle
 - 1. One of the most important voyages in the history of science.
 - 2. Made many observations and collected evidence.

II. Darwin's Observations

A. Patterns of Diversity

1. Intrigued that many plants and animals seemed especially well suited to the environment they lived in and **wondered why?**
2. Impressed by the many different ways organisms live and reproduce and **wondered why?**
3. Noticed that similar ecosystems do not contain the same organisms and **wondered why?**

B. Living Organisms and fossils

1. *Living* organisms only provided part of the puzzle.
2. Darwin began collecting fossils, preserved remains of ancient organisms.
3. Noticed:
 - a. some resembled organisms living then
 - b. others were like none he had ever seen.

C. Galapagos Islands

1. The one stop that influenced Darwin's studies the most
2. Close together but very different climates



D. Fascinated by Tortoises

1. They varied in predictable ways
2. Shape of tortoise's shell could be used to identify which island it inhabited.



E. Darwin also studied finches at Galapagos

1. **Noted** the little brown birds had differently shaped beaks

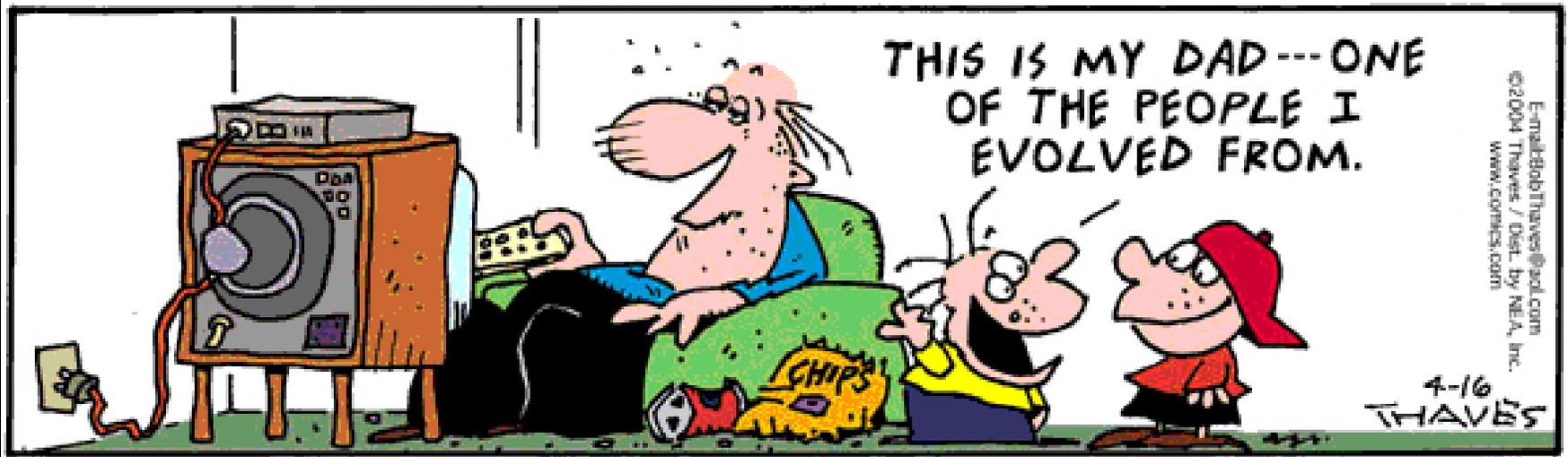


2. **At first** thought some were blackbird, wrens and warblers.



F. The Journey Home:
thinking about his findings,
Darwin *wondered*:

- A. Did the different types of birds and tortoises once belong to the same species???
- B. Had they become different from each other after being isolated from one another????



THIS IS MY DAD --- ONE
OF THE PEOPLE I
EVOLVED FROM.

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4-16
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