

The Australian Environment Before Human Habitation

- Australia is the smallest of the Continents
 - $\frac{3}{4}$ size of Africa $\frac{1}{6}$ size of Asia or America's
- It is the largest Island in the World – Coastline 12,210 miles
- Geologically dates back 2,000 years
- Once part of the Antarctic Continent – reached its present site, through the process of Gradual Drift.
- Skeletal remains and fossils indicate that Australia was inhabited by Giant land fauna (Megafauna)
 - eg. wombat like creature as large as a Rhino
 - lizards 20 ft long
- Arrival of first humans – sparked massive wave of extinctions, and we are still in the middle of another wave with arrival of Europeans.
- Before humans, diversity would have changed, but much slower.
- Every time a species went extinct, by and large something was evolving to fill that niche.
- Therefore – ecosystems would change through time

According to Tim Flannery – “Future Eaters”

“You can imagine the most stable ecosystems working like a full glass of water sitting under a tap and the tap is dripping into it....

.....every time a drop comes in at the top, a drop goes out the side, so it's got a kind of balance in the systems”

What happened with Humans coming into Australian Ecosystems is that someone's basically kicked over the glass, so that extinction rates have far exceeded rates of new evolution

Example:

- 60 million years ago, there were a lot of different plant families in WA.
- Many have become extinct
- Over last 30 million years those families have gone through what Dr. Tim Flannery describes as “evolutionary radiation” and produced thousands of species.
- There's something like 60 species of banksia's. over 100 eucalypts
- Illustrates the complexity of changing ecosystems and interrelationship between time and the environment.

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Refer to pages: 115 – 120 of text



The formation of the Australian Continent:

1. What is the Continental Drift Theory?
2. What effect did the Ice Age have on Pangaea?
3. What evidence is there that the original landmass's were joined together?
4. What are the main factors that have changed the biodiversity of Australia?
5. What is predicted will happen to Australia?

ACTIVITY:

- In a diagrammatic form, outline the changes and movements that Australia has been through from 200 million years ago to present day.

Landscapes:

6. How are land formations developed?
7. What advantage and disadvantage do we have in Australia due to our low volcanic activity?
8. What is erosion?

Flora and fauna:

9. What is the difference between flora and fauna?
10. What factors have affected the flora and fauna within Australia?
11. What problems do we face in Australia with the flora and fauna?
12. What are Megafauna?
13. What evidence is there that they existed?
14. Describe the types of animals commonly found in Australia today.

ACTIVITY from Textbook:
Complete activity 3.1.2 – page 121

