

Alfred Wegener: science, exploration and the theory of continental drift

by Mott T Greene

Introduction

This is a book about the life and scientific work of Alfred Wegener, whose reputation today rests with his theory of continental displacements, better known as ‘continental drift’. Wegener proposed this theory in 1912 and developed it extensively for nearly 20 years. His book on the subject, *The Origin of Continents and Oceans*, went through four editions and was the focus of an international controversy in his lifetime and for some years after his death.

Wegener’s basic idea was that many mysteries about the Earth’s history could be solved if one supposed that the continents moved laterally, rather than supposing that they remained fixed in place. Wegener showed in great detail how such continental movements were plausible and how they worked, using evidence from a large number of sciences including geology, geophysics, paleontology, and climatology. Wegener’s idea – that the continents move – is at the heart of the theory that guides Earth sciences today: namely plate tectonics. Plate tectonics is in many respects quite different from Wegener’s proposal, in the same way that modern evolutionary theory is very different from the ideas Charles Darwin proposed in the 1850s about biological evolution. Yet plate tectonics is a descendant of Alfred Wegener’s theory of continental drift, in quite the same way that modern evolutionary theory is a descendant of Darwin’s theory of natural selection.

Questions 1-4

Do the following statements agree with the claims of the writer in The Reading Passage?

In boxes on your answer sheet, write

YES *if the statement agrees with the claims of the writer*
NO *if the statement contradicts the claims of the writer*
NOT GIVEN *if it is impossible to say what the writer thinks about this*

- 1** Wegener’s ideas about continental drift were widely disputed while he was alive.
- 2** The idea that the continents remained fixed in place was defended in a number of respected scientific publications.
- 3** Wegener relied on a limited range of scientific fields to support his theory of continental drift.
- 4** The similarities between Wegener’s theory of continental drift and modern-day plate tectonics are enormous.