

The monkey's voyage by alan de queiroz | review



**ASSIGN
BUSTER**

Introduction:

There are a number of basic definitions that have to be considered before an individual before providing a scientific analysis and review of the book by Alan Quieroz (2013) that is the *Monkey's voyage*. One such definition is the concept of biogeography. Biogeography refers to the study of the manner in which living organism, are able to move around the planet earth. For instance, biogeography concerns itself with how the same species of monkeys are found in Africa, and in South America. In other words, Biogeography concerns itself with an analysis of the manner which the same species of animals are able to be found in the same continent. One of the major reasons advanced for the occurrence of such kind of a phenomenon is the concept of plate tectonics. Plate tectonics refers to the structure of earth, which are able travel and float independently. This is the most common argument that scientists have managed to bring out, in regard to explaining why the same species exists in different parts of the continent. Another important definition that an individual needs to understand, before scientifically analyzing this book, is the concept of vicariance.

This is a term that is used for purposes of providing a description of certain types of living organisms, that were able to get separated into groups that are non-communicating, through external circumstances. Examples include the submersion of a land, the rise of a mountain range, etc. Another important term that is contained in this book is Gondwana. This is a scientific term that refers to the Southern half of the continent, which existed millions of years ago, but was able to fragment, and drift apart. Therefore, this paper is a review of the book by Dr. de Queiroz.. In providing a review of this book,

<https://assignbuster.com/the-monkeys-voyage-by-alan-de-queiroz-review/>

the researcher will use two approaches. The first approach is the manner in which this book explains the major scientific points. The second approach would be an overall analysis of the book, and how the author manages to convey scientific ideas, and use examples to explain these ideas.

Review:

In writing this book, the author manages to use the three scientific approaches that are always used in scientific research. These approaches are, the identification of the historical origin of the concept, the concept itself, and any future consideration regarding the concept. In giving an explanation on the reasons why the same species are found in different parts of the continent, Dr. de Queiroz begins by providing the historical biogeography, and the reasons why he thinks that the breakage of the tectonic plates is not the major reason for the existence of the same species of animals, in different continents. In providing the historical origin of his points, de Queiroz is able to introduce a leading scholar of biology, by the name of Leon Croizat. De Queiroz gives us a description of the works of Croizat, and the manner in which he was able to dispute the explanation of the existence of earth by Charles Darwin, and the existence of the same species of animals in different continents, through the process of plate tectonics. Croizat believes that Darwin was wrong, through his concept of natural selection (De Quieroz, 11). Natural selection is a scientific process, in which the biological traits of an animal can become common, or less common, within a population. This may occur because of the traits that are inherited during the reproductive process of the organism. It is therefore important to explain that natural selection is one of the important aspects of

<https://assignbuster.com/the-monkeys-voage-by-alan-de-queiroz-review/>

the theory of evolution that explains the existence of the world. Therefore, another concept that is introduced in this book is evolution, which is a theoretical framework that was developed by Charles Darwin, to explain the reasons for the existence of different species of animals. These animals evolved, and through the process of natural selection, the toughest animals and species were able to survive, and hence exists.

The theory of evolution and natural selection focuses on the environment in explaining the reasons why animals are found in a particular continent or environment. Based on these facts, it is therefore possible to denote that this is a theoretical framework that does not support the use of the theory of tectonic plates to explain the reason why the same species of animals are found in the same region. This section further brings us to the concept of historical biogeography, and the reasons why it is not sufficient in explaining the distribution of species around the world, or in different continents of the world. Historical biogeography is the study of the distribution of animals, and how they were distributed, based on different time scales. From this book, we are able to learn that this was one of the major concepts or elements of the theory of evolution. A good example of the historical biogeography that is depicted in the book is on the primate time tree that talks about the voyage of the monkeys (De Quiroz, p. 214). This time tree shows the evolution of the monkeys, from the millions of years ago, to the current species of monkeys, hence reinforcing the ideas of Charles Darwin, in regard to the concept of the evolution theory. The author of this book uses the concepts of historical biogeography, to give an explanation why the Tectonic plate theory cannot explain the reasons for the existence of the same

species of animals, in different continents of the world. Furthermore, in arguing against the existence of the same species of animals, in different continents, the author introduces the concept of panbiogeography.

De Quiroz (p. 33) in defending his argument that animals were not found in different parts of the continent through geographical dispersal borrows this concept panbiogeography concept that was introduced by Croizat. De Quiroz argues that it was virtually impossible for the same animals to find themselves in different continents because of dispersal, and he provides examples to illustrate this point. For instance, it is not likely for the same species of snails to find themselves in the same continent, by attaching themselves to the tail of a bird, or even a spider to find itself in a different continent, by using its web, and being carried by wind. These are impossible circumstances to occur; hence this theoretical notion of tectonic plates is absurd, and uncalled for. Section two and section three of this book are used in the explanation of the reasons why the de Quiroz believes that the same species of animals did not find themselves in different continents, through the breakup of the land mass, or through the process of tectonic plates. For instance, de Quiroz does a great job, in coming up with a new method, that can be used for purposes of conducting the process of genetic sequencing. De Quiroz uses this method for purposes of estimating the period in which two populations, of the same species were able to split, in the last one hundred thousand of years.

In this study, De Quiroz explains that the garter snakes were able to float in an open ocean, which was approximately 120 miles, and this is an explanation on why they can be found in different regions of the world. His

<https://assignbuster.com/the-monkeys-voyage-by-alan-de-queiroz-review/>

study of snakes began when de Queiroz was curious on the reasons for existence of the garter snakes, at the tip of California. This was one of the major factors that contributed in the desire of Quiroz to study and examine the impact of tectonic plate's theory, in the dispersal of living organisms. For instance, De Quiroz was able to wrongly assume that the species of this snake came into the region, over a long period of time, and this is through the drifting continents, when the peninsula, was able to come apart from the mainland. However, through his study of the garter snake, De Quiroz (57) comes to the conclusion that distinctive and vibrant biological communities, were creating, when living organism were able to soar through the atmosphere, and float through the large water mass, or water body. Through these findings, De Quiroz manages to come out of the theory of evolution and the theory of tectonic plates that explains the why the same species of animals and other living organisms are found in different continents. This type of knowledge and information is very contentious, and this is majorly because it challenges the existing body of knowledge, regarding the dispersion of animals, and other living organisms, through the process of continental drift. For instance, in the 1950s, and the 1960s, geologists were able to find that the coasts of Africa and South America were united, and through the process of tectonic plates, these coasts were separated.

However, because of new technological innovations, scientists were able to measure the floor of the ocean, revealing several ridges, and this includes a ridge that was found in the Atlantic Ocean. These discoveries were able to provide a clear mechanism on the manner in which the continent was able to creep, making scientists to believe that in about 180 years back, there was

the existence of a continent referred to as Gondwana that comprised of Australia, Africa, America, India, and Antarctica. The new knowledge brought about by de Quieroz was challenging these facts, and scientific knowledge, and hence this information is controversial. Furthermore, in explaining the concept of Gondwana, and the continental drifting theory, scientists use the presence of emus, rheas and ostriches, in explaining why they are found in Africa, Australia, and other continents of the world.

Scientist explains that these animals were able to drift to these other continents, and this is because of the moving continents. However, the genetic studies that were conducted by De Quieroz (44), on garter snakes, was a proof that these birds found themselves in these different continents, through their movements, and not through the drifting apart of the continent. Other examples include the New World monkeys, which were able to move to South America, by rafting themselves, through the use of the earth's clump, and today, they comprise of 73% of the land mammals.

Conclusion:

This book by Quieroz is well written, and it manages to provide clearly the views of de Quiroz, on the reasons why the same species of animals are found in different continents. The information contained in this book is controversial. This is majorly because it challenges the knowledge that existed, on the reasons why the same species of animals are found in different continents. That is the drifting of continents, hence these animals finding themselves in different geographic regions.

Works Cited:

<https://assignbuster.com/the-monkeys-voyage-by-alan-de-queiroz-review/>

De, Queiroz A. *The Monkey's Voyage: How Improbable Journeys Shaped the History of Life* . 2013. Print.