

Chapter 1 The Biology of the Deserts Introduction Deserts are defined by their arid conditions. However, fossils found in deserts such as those discovered in the Gobi desert by Roy Chapman Andrews in the 1920s, the Lystrosaurus fossils in the Karoo desert (Kitching 1977; Rubidge 2005), the ammonite fossils in the Arabian desert (Parnes 1962), and the soft-bodied Ediacaran fossils of the Great Basin desert (Hagadorn and Waggoner 2000) indicate that these were once shallow seas, deltas or even, in the case of the Arabian desert, areas of the former Tethys Sea when the world was a single continent known as Pangaea (Parnes 1962).

CLASSIFICATION In 1961 Peveril Meigs divided desert regions on Earth into three categories according to the amount of precipitation they received:–

- 1– Extremely arid lands have at least 12 consecutive months without rainfall
- 2– Arid lands have less than 250 mm (10 in) of annual rainfall
- 3– Semiarid lands have a mean annual precipitation of between 250 and 500 mm (10–20 in)

Arid and Extremely arid lands are deserts, and Semi arid grasslands are generally referred to Steppes

How old are deserts? While the abiotic environment defines deserts and imposes strong selection pressure on the organisms that live there, the biotic interactions among the organisms in deserts are no less exciting or intricate than those of other environments

Desert definition : An arid biome occupying approximately 20% of the land surface of the earth in which water loss due to evaporation and transpiration by plants exceeds precipitation during most of the year.

Plate tectonics has resulted in major changes in the positions of the continents and, consequently, in the positions of the deserts (Wegener 1966). Many, if not most, deserts are reasonably young, although they do vary considerably in age.

FOUR FACTORS INFLUENCE THE LACK OF RAINFALL IN DESERTS (PAGE 1984; MILICH 1997);

1.1.7 WHAT DENIES RAINFALL TO DESERTS? (2006). 1983