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In 1849, a group of pioneers seeking the fabled western gold mines became lost in a dry and hot desert valley on the border between Nevada and California. Although only one of them died before they were rescued, this desert area of exceptional heat has been known since as “Death Valley.” Death Valley is part of the dry mountainous Southwest ecoregion, which includes the Mojave, Sonoran, Great Basin, and Chihuahuan deserts, as well as the Colorado River and Rio Grande basins and the surrounding mountain ranges. These arid lands of the United States lay nestled between the mountain ranges of the Southwest, in part because the high mountain peaks tend to block moisture from both the Pacific and the Gulf of Mexico.

Many different habitats exist throughout this mountainous desert region, including arid places nearly devoid of vegetation; cold steppe lands with low-lying shrubs; dry grasslands; savannas with short, thorny trees; and alpine woodlands. Mountain peaks tend to experience more rainfall, leading to isolated alpine meadows and moist forest habitats surrounded by low-lying deserts. The arid Southwest experiences extreme temperature fluctuations, intense winds, seasonal precipitation, and wildfires.

Despite the lack of water, many areas of the arid Southwest ecoregion are home to an

extraordinary variety of species. Some plant species avoid the heat and lack of water by remaining in seed form during the driest parts of the year. Then, when the rainy season arrives, the plants quickly burst into full bloom before producing seeds that remain dormant until the next rainfall. Other plants, such as cactus, survive the whole year by storing great quantities of water during the rainy season, which they gradually deplete during the dry season. Animals also exhibit unusual adaptations in order to survive the high temperatures and lack of water. Snakes, bats, and rodents hide in cool underground areas during the day and only come out at night in order to escape the heat. Other animals dissipate the heat with adaptive mechanisms. For example, jackrabbits have large ears that help radiate heat away from their bodies while turkey and black vultures urinate on themselves to cool down.

### Downloads

- [Case Study: Desert and Arid Regions](#)
- [Activity - Impact of Climate Change on the Desert Pupfish](#)

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