

## **WINTER RAINS IMPORTANT ON CATALINA**

### **Catalina Island Conservancy Education Department**

AVALON, CALIF. 13 DECEMBER 2013-Last week, .05 inches of rain was recorded in Avalon and .02 inches in Two Harbors. That's not much rain, and some tourists might conclude that Catalina is a desert island-which is not true! Its terra firma is actually recognized as having a Mediterranean climate ecosystem, which, aside from representing a big ecological difference from a desert island, also conveys a much more romantic notion than does a desert.

What are the specific differences?

Mediterranean climates are typified by wet winters and dry summers. Plants in Mediterranean climates have adapted to the rather extreme difference in rainfall and temperature between winter and summer seasons. The West Coast is home to the only true Mediterranean climate in the United States.

Desert climates are obviously dry. More specifically, a desert biome is typically defined by an annual average precipitation of less than 10 inches. Catalina has an average annual precipitation of more than 12 inches, meaning it's not a desert island.

It's human nature to grumble when it rains. But as Avalon residents know from the recent water rationing, rain is something to be celebrated on the Island. While all dry climates rely on rain, islands are more vulnerable to shifts in weather. A couple of dry seasons in a row can really impact the Island and, unlike mainland communities, we can't look further upstream or a hundred miles away for another supply of water. If rain doesn't fall from the sky, things get pretty thirsty pretty fast.

Of course, every living thing on this Island is affected by rain. And December is a great time to see how true this is. After just a few good rainfalls, the Island greens up at an amazing rate. Plants that went dormant in the heat of the summer are suddenly triggered by moisture: It's "growth time."

When a habitat changes, all of the birds, insects and animals living in that habitat feel the impact. But what happens when the rains don't come? Catalina's plants and animals have developed mechanisms and behaviors to get them through dry times. Some plants develop waxy or hairy leaves that reduce evaporation and, hence, water loss.

If a drought gets severe enough, Catalina's oaks can drop all of their leaves to prevent water from evaporating, then grow new leaves when the rains return. Plants with this adaptation are referred to as "drought deciduous."

Some of our animals can even get through lean water times on what's called "metabolic water." That means they can get much of the water they need from just the food they eat. For instance, the Catalina Island foxes will switch their diet in the dry season and eat more moisture-rich cactus fruits.

### **Photos & Captions**



Storm Over Catalina - Rain clouds gather. Catalina Island typically receives 12 or more inches of rain a year. Courtesy Catalina Island Conservancy.