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Earth Science Essay: How Fog Affects Life

Fog is an important abiotic part of coastal ecosystems. Fog is an interaction of the hydrosphere and the atmosphere that affects the biosphere.

Fog affects much of the life where I live on California's Central Coast. For example, redwood trees get most of their summer moisture from the fog. Fog appears to be decreasing, though. The high-pressure system that sits over the Pacific Ocean is moving further away from the coast. This may be due to climate change. To find out why this is happening and how it could impact us, we need the collaboration of oceanographers, atmospheric scientists, and biologists.

If the high pressure moves further away, upwelling will be decreased. When high-pressure systems are near the coast, winds are strong. High pressure causes upwelling because the winds they create push on upper layers of the ocean, drawing cold water from deep layers into contact with warm air. This change in water temperature creates fog.

If fog decreases dramatically, the southern range of redwoods might be doomed. If redwoods die the shade they provide will be lost. The animals that depend on moisture brought in by redwood fog drip during summer nights might also die. California is not the only place with animals that depend on fog. On Africa's east coast, the Namib Desert beetle survives by drinking water that condenses on its back from fog.

The benefits of fog on living things are often overlooked. Most people take fog for granted. For that matter some people don't even like fog. They don't understand that it is crucial for the environment and that if fog's cooling blanket doesn't roll in they will be too hot, just like the animals. Then people would wish that they had done something to save the fog.