

# Golden Gate Climate Update Transcript

Interview with Dr. Emily Limm  
Post-doctoral research scientist, U.C. Santa Cruz  
Interviewed on November 3, 2009

James Osborne interviewer

## Part 2

*James* - Hi, I'm Ranger James Osborne, and welcome to Golden Gate Climate Update..., your source for information on climate change and sustainability.

This episode is a continuation of our discussion with Dr. Emily Limm, a postdoctoral student at U.C. Santa Cruz, who studies how the ferns, shrubs, and trees of the redwood forest absorb fog. But before we get back to Emily, it's time for the answer to our climate update challenge. Hurricane Katrina killed 320-million trees. Their decomposition will release 367-million tons of carbon dioxide into the atmosphere ... equal to an entire year of forest fires in America.

Now back to our discussion with Dr. Limm. So when it comes to the distribution of the redwoods and their potential habitat, especially farther north, if that is where there is more water available, both in precipitation and in fog, how could that happen? How could redwoods either move on their own or with human intervention up to the Pacific Northwest, farther up north than they already are, say British Columbia?

*Emily* – Well a lot of the predictions we have for climate are suggesting that the type of climate that redwoods prefer and do best in is going to be moving more northwards. So, if there is more water in the north, and there is more habitat available, it is possible, that over long periods of time, the trees may be able to disperse further north. But of course these are very long-lived species, and it would take thousands of years to develop old growth forests like we have in Muir Woods. The other component to that is we have urbanization over many parts of the globe, and so a lot of habitat is not available, or there is a different type of habitat there. Plants and different kinds of ecosystems that are already established, and we don't know how redwoods would be able to compete with different species that naturally occur further to the north.

*James* – I see. Now Emily do you have any suggestions for how parks like Muir Woods National Monument should manage their redwood forests to retain their ecosystems in a changing climate regime, or is that even a possibility?

*Emily* – Well, of course doing what Muir Woods has already done, preserving as much habitat as possible, is important, so that if there are regions where the plants do better, they may actually be able to expand. So if we can increase the park size, that would be the best. But the other thing managers can do is to encourage park visitors to carpool or take public transportation to the parks to reduce their carbon footprint. The most direct way everyone can help reduce the negative impact of climate change on the redwood forest is simply to emit less carbon dioxide into the atmosphere to curtail global warming.

*James* – So you're saying that in fact, we can help save the redwoods. We can help save Muir Woods can't we?

*Emily* – Absolutely, it's definitely in our hands to reduce the impact of climate change. It is something that everyone can do.

*James* – Well thank you Emily for talking with us today.

*Emily* – Oh, a pleasure to talk with you.

James - Please join us for our next podcast, when we will be interviewing Marcus Koenen, Program Manager for the National Park Service, San Francisco Bay Area Network Inventory and Monitoring Program, which is monitoring for the effects of climate change in Bay Area national parks. Until our next podcast, this is James Osborne, thanks for listening.

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*Male voice* - Golden Gate Climate Update is produced by Will Elder and is a product of the Earth to Sky Program, an innovative partnership between the National Park Service and NASA.

Music from *A Walk in the Desert* by Electronic Symphonic