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Organization: Conservation Congress

Title:

Comments: FW: Old-Growth Provide Temperature Refuges In Face Of Climate Change

From: Denise Boggs [mailto:deniseboggs@q.com]

Sent: Saturday, April 23, 2016 10:10 AM

To: McRae, Heather -FS <hmcrae@fs.fed.us>; Denise Boggs <denise@conservationcongress-ca.org>

Subject: Fwd: Old-Growth Provide Temperature Refuges In Face Of Climate Change

Heather,

Below is another article on research showing the value of maintaining old growth, high complex forest for thermal regulation. As you likely know NSO are very sensitive to heat and cold and late-successional complex forests protect them. The STNF never seems to take this into consideration. I'd like to ask you to include this in with my scoping comments for the Lower McCloud project. Although the scoping deadline has passed, the FS may take scoping comments at any time. Thank you.

I would also add these cool moist forests are far more of a deterrent to wildfire than an open canopied, hot, dry, forest that permits wind to blow through the floor of the forest.

Denise Boggs

Begin forwarded message:

Old-Growth Forests Provide Temperature Refuges In Face Of Climate Change: Study

by Jes Burns <<http://www.opb.org/contributor/jes-burns/>> OPB/EarthFix | April 22, 2016 3:15 p.m.

Old-growth forests in the Northwest have the potential to make the extremes of climate change less damaging for wildlife. New research <<http://advances.sciencemag.org/content/2/4/e1501392>> out of Oregon State University shows complex forests do a surprisingly good job of regulating temperature on the ground - even compared to fully mature tree plantations.

"On a sunny day, if you were sitting underneath them, you'd get a similar amount of shade," says study co-author Matt Betts, an Ecologist at OSU.

But the kind of forest makes a big difference on temperature.

"The more structurally complex the forest, the more big trees, the more vertical layers - the cooler it was," he says.

The research showed differences as much as 4.5 degrees on warm days. Old growth forests also held in heat during cold weather. Overall, these forests have a moderating effect on temperature extremes.

One reason, researchers suspect, is that tree plantations, even mature ones, don't have early the under story material - small trees, shrubs, ground cover - as more complex stands. Nor do these single-age plantations have a lot of big trees - unlike old growth stands.

"We think one of the mechanisms causing this is thermal inertia," Betts says. "That takes these trees longer to warm up and longer to cool down. And that could be providing some of the buffering capacity of these older forests."

Betts says these stands of old growth could provide refuges for temperature-sensitive wildlife in the face of climate change.

"It gives us some hope that how we actually manage our forest, can influence positively those species that are declining," he says.

The study was published Friday in Science Advances.