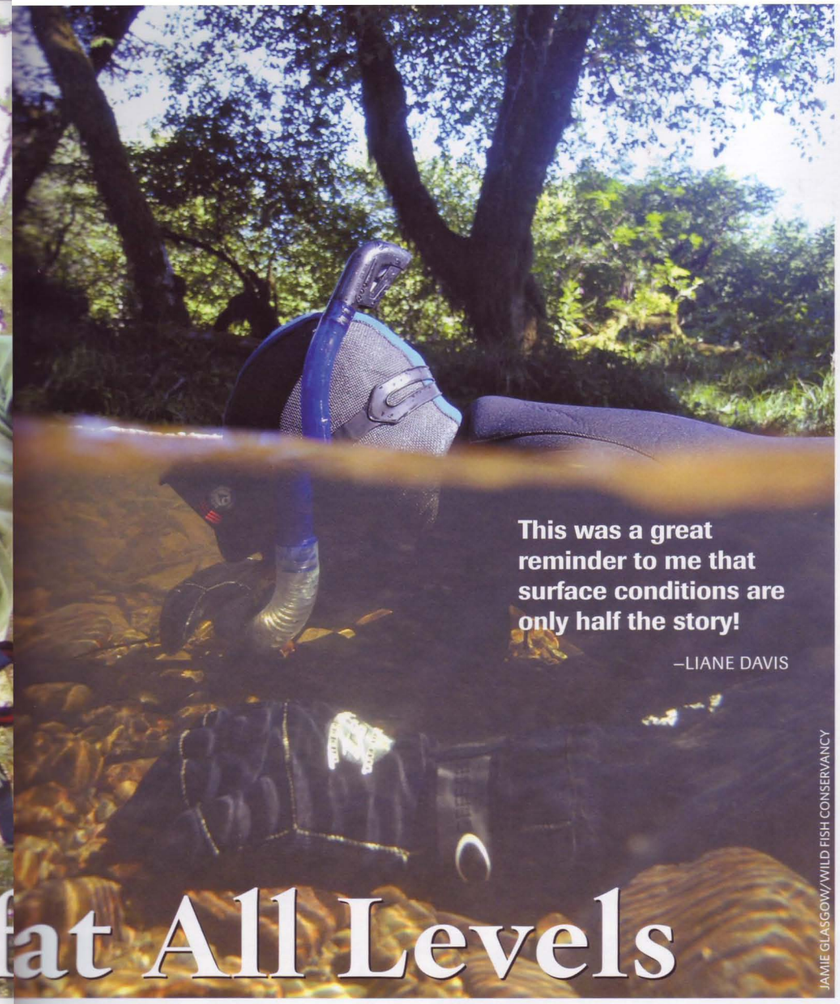
At Ellsworth Creek Preserve, the Conservancy is learning how to restore once-logged forests to a state that fosters the biodiversity found in old-growth forests.

Learning About Lifat All Levels

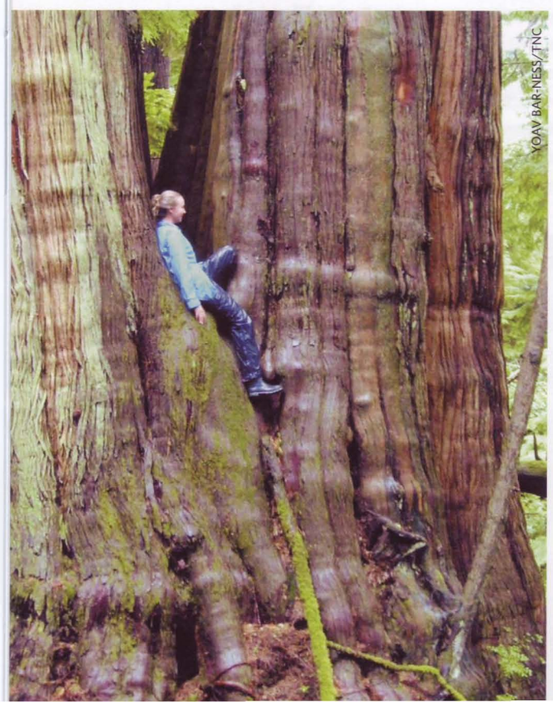


JAMIE GLASGOW/WILD FISH CONSERVANCY

YOAV BAR-NESS/TNC

A crayfish from the creek, top. Youngster Malena Wel helps field researcher Caitlin McDonough sort bugs, center. Wild Fish staff collect data at the creek.

Caitlin McDonough learns how to ascend into the canopy, above. Heidi Huber explores some of the giants of the Ellsworth Creek forest, below.



YOAV BAR-NESS/TNC

When he perches in the highest branches of the forest at The Nature Conservancy's Ellsworth Creek Preserve, Yoav Bar-Ness is doing science, but he's also soaking up the essence of the forest.

"The thing I find really exciting is that you get a sense of how individual each tree is. A centuries-old tree has accumulated so much experience. Its actual form is a result of windstorms, fires, everything it has lived through," he said. "These remnants of old forest are communities of old trees, old shrubs, and old soil layers where all these processes have been functioning together for a long time.

Researchers have gone high and deep into the Ellsworth Creek Preserve this year, snorkeling through the streams and climbing into the forest canopy in a quest to understand the coastal forest's biodiversity.

To get into the treetops, he starts with a crossbow and some fishing line, said Bar-Ness, who is leading the canopy study for the Conservancy. First, he ties the fishing line to the crossbow and shoots it up and over a high branch, so the arrow comes back to the ground. Then he uses the fishing line to drag heavier cord up into the tree. Finally, he uses the cord to haul up climbing rope, then ties it off and ascends into the canopy. The researchers sometimes work more than 200 feet above the forest floor.

Bar-Ness's team is conducting a study of insects that are found in the canopy and on the forest floor in this temperate coastal rainforest, both in the 5,000-acre Ellsworth Creek Preserve and in the neighboring Willapa National Wildlife Refuge. They started collecting samples on the forest floor last summer, working on standing dead trees and fallen logs. In September—after the nesting season for the endangered marbled murrelets had passed—they moved into the treetops to take samples.

The team worked at eight sites, doing a comparative study between the arthropods found in the remnant old-growth forest, and arthropods found in the previously logged forest. Part of the overall effort at Ellsworth Creek Preserve is to learn how to restore once-logged forests to a state that fosters the biodiversity found in old-growth forests.

Meanwhile, another team from the Wild Fish Conservancy was contracted to snorkel and wade the streams of the preserve to identify the species of fish in the watershed and estimate the abundance of coho salmon, cutthroat, and steelhead. They found juvenile rainbow trout and steelhead, coastal cutthroat trout, juvenile coho, brook lamprey, and several species of sculpin. This work was funded as part of a grant from the U.S. Fish and Wildlife Service's Jobs in the Woods program.

"We were struck by the diversity of body shapes, markings, and colorings in the rainbow trout and cutthroat trout," said Jamie Glasgow of the Wild Fish Conservancy. He said the team hopes to anaylyze the Ellsworth trout population genetically to better understand the distribution of rainbow, cutthroat, and potential hybrids throughout the watershed.

Liane Davis, the Conservancy's Ellsworth Creek project ecologist, said snorkeling the stream gave her a whole new perspective on the preserve. "I was amazed by how different the stream habitat appeared once I actually got underwater. A pool that appeared to be great fish habitat from above the water turned out to be much less exciting when I viewed it from a fish's perspective, while sub-par habitat from above actually offered a lot of complexity in terms of hiding spots and substrate diversity once I looked beneath the surface of the water," she said. "This was a great reminder to me that surface conditions are only half the story!"

This rich, diverse forest is an incredibly intriguing place, and the work the Conservancy is doing here is important, Bar-Ness said. "At Ellsworth and the Willapa Wildlife Refuge, several important remnants of once-extensive old-growth coastal rainforest on the Pacific Northwest coast are preserved. It's exciting to be part of this body of biodiversity research in these wonderful forests."

To view photos and learn more about research at Ellsworth Creek, go to nature.org/washington.