

# Giants: 'This the template. You are among titans out here'

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up parcels in Ellsworth Creek and is actively restoring more than 8,000 acres of contiguous former industrial forestland, some of which contains old-growth stands of cedar, spruce and the occasional Douglas fir.

Dave Ryan is The Nature Conservancy's boots-on-the-ground forester. As a commercial forester, Ryan had managed clearcuts, replantings, thinnings and cases of blight. He's seen harvest cycles shrink from 80 to 30 years. He's seen plenty of change in forest management over the years, most for the better, he says, such as stream buffers that help protect salmon runs.

"Back in the day, the stream was your skid trail," Ryan said, pointing toward a meandering stretch of creek he's dubbed "Ellsworth Beach."

"They would just run machinery in the stream," he said. "They'd run logs through and down it."

Hydraulic fluid would end up in the water, stream beds would be gashed, and the scouring of log jams and wood from the creek eliminated much of the prime salmon habitat. But the land is resilient as it is productive.

## Gardens in the sky

"There's nothing wrong with a clearcut in and of itself," Ryan said. "A clearcut is a tool in a land manager's toolbox, but for some owners it's the only tool. So if the one hammer they've got isn't working, the answer is to get a bigger hammer."

If the goal of clearcut logging is to get as much wood out of the forest as possible, Ryan is in some ways now working in reverse. He hopes most of the trees he manages in Ellsworth will outlast him by at least a few lifetimes. Dozens of the giants somehow eluded the soldiers' saws, and Ryan estimates the age of some at more than 800 years. Those trees are integral for endangered species like marbled murrelets, and Ellsworth is now the epicenter of those recovery efforts.

Bounding from log to log like some kind of tac-booted Spiderman, Ryan casually describes a clearcut as having been "slicked off." But then he's just as likely to throw out a term like "vertical heterogeneity" when describing The Nature Conservancy's aspirations to return diversity to the forest; from the mycelium in



David Plech/EO Media Group

Dave Ryan surveys a recently decommissioned road in the Ellsworth Creek preserve. Roads often have negative impacts on water quality, wildlife migrations and habitat. The Nature Conservancy has removed over 20 miles of road in the watershed.

the soil, all the way up through the towering canopy, a world scientists are still exploring.

Ryan says just a few years ago, an entirely new species of earthworm was discovered crawling in the arboreal soils on ancient limbs of Ellsworth old growth. "It was living in these gardens in the sky," he said.

Restoration is not just about keeping the chainsaws out and leaving things as they are. The patchwork of forests that make up the preserve are all at different stages of growth, and most reflect the unnaturally dense monoculture plantings of the industrial timber model.

"We sort of took the watershed out of its natural trajectory in terms of historic succession," Ryan said. As a result, species like Sitka spruce, that were once plentiful in the Ellsworth Creek watershed are now mere "remnants."

Overabundant trees will be thinned out, and new plantings will add species diversity.

"I'm optimistic," Ryan said. He credits The Nature Conservancy's director of forest conservation and management, Dave Rolph, with dreaming up the ambitious Ellsworth restoration project.

"I'm sure he cringes when I say this, but in many ways I consider Dave the godfather of Ellsworth," Ryan said. "He's kind of the reason this thing came together."

## Godfather of Ellsworth

In the late 1990s, Rolph initiated a relatively modest purchase of land at Teal Slough

near the Naselle River Bridge after the Paul Allen Foundation gave money specifically for the purpose of old-growth restoration.

While surveying that purchase, Rolph learned of another stand of big trees along Ellsworth Creek and decided it was worth a look. "What we essentially discovered was that there was a lot more than just an old-growth stand there," Rolph said.

The stream already boasted a booming chum salmon run. There was a stable marbled murrelet population, and the highest known diversity of amphibians anywhere in Washington state.

"If you really want to protect those things," Rolph said, "just protecting that one stand of old growth wouldn't do it."

He said that's when the greater vision for the long-term restoration project started to come together. The Nature Conservancy would patch together multiple parcels, and bring the entire watershed under its management.

Additional parcels were added between 2001 and 2005 as The Nature Conservancy worked primarily with two major land owners — the Campbell Group and John Hancock, both major lumber consortiums. A handful of smaller landowners also sold parcels to the conservancy.

Rolph said for the most part, old-growth ecosystems make up less than 1 percent of forests in southwest Washington. He said the majority of old

growth lives in national parks or national forests, and there aren't a lot of either in this corner of the state.

"You can't go out and buy it," Rolph said. "If you really want an old-growth ecosystem, you have to restore it."

## Roads and toads

But even before biologists and preservationists could get their boots muddy, The Nature Conservancy first had to come up with a plan. They formed a scientific panel of top Northwest scientists.

"We went through all potential alternatives," Rolph explained, "what science could tell us, and what science couldn't."

After much deliberation, The Nature Conservancy settled on a slightly experimental route — the restoration would be managed in three distinct treatment areas with the long-run goal of finding the best mode of restoration and then adapting the overall approach.

Rolph said a series of streams that roll down from Bear River Ridge naturally split the basin into three smaller tributary basins. One basin will be "actively" managed, another "passively" managed, and the third will be a "control."

The restoration activities are much more intense in the actively managed section, Rolph said, where thinning of smaller trees should encourage the development of old growth. Roads are also removed altogether or rerouted away from slide-prone areas.

In the passively managed section, there is no timber harvest, but roads are removed, then Mother Nature is left to her own devices. The control area is more or less left completely "as is," and that data will be used to compare the impacts being made in the active and passive areas of restoration.

When managing forest and stream health, a lot of people think about trees and salmon, says Ryan, but the impact of roads on the ecosystem can't be underestimated. They have huge effects on water quality, wildlife migrations and habitat.

As Ryan, the forester, checks in on some recent road decommissions in Ellsworth, he says there is more to road removal than just letting nature run its course. Building roads is heavy-duty work and removing them is equally intense. Roads that cut across slopes create slide hazards, channel sediment into streams and dam up subsurface water flows.

The watershed is a web of perennial streams, seasonal streams and culverts, and, "there's a lot of water that comes down," Ryan said, "and it doesn't just relegate itself to those channels."

Roads also create forest edges, where the effects of wind and sun are magnified. Microclimates produced may be counterproductive. Amphibians may be discouraged from crossing a dry rocky road, and the continuous clearings expose hidden murrelet nests to crows that eat the eggs before they hatch.

The Nature Conservancy has removed more than 20 miles of roads in the Ellsworth Creek watershed.

## Among titans

The restoration project comes down to three basic components — selective thinning and planting, moving or removing roads, and intensive in-stream restoration.

Most of the land in the conservation area has been logged repeatedly. And after a typical clearcut, Rolph said, "the forest comes back incredibly dense."

Under the guidance of Ryan's work on the ground, The Nature Conservancy contract crews harvest some of the more plentiful Douglas fir and hemlock to encourage more space for spruce and cedar to succeed. Rather than a few dominant species, the balance should be struck by complexity.

In the active basin, Ryan said the conservancy is "working the land with restoration in mind." That means taking out smaller trees that crowd strong trees that aid diversity. The harvested trees are sold to market and the proceeds are cycled back into more restoration efforts.

"We pay for our operating costs with our timber revenue," Ryan said.

Thinning requires just the right touch to get the most out of recovering forest ecosystems. Trees support each other. Where roots intertwine stands are more resilient to the effects of wind. "If you hit it too hard, it becomes a little more susceptible to wind throw," Ryan said. "So we're saying you can thin it, you just have to be more thoughtful with your approach."

Part of Ryan's job is to share what The Nature Conservancy is doing with others. Forest managers have come from as far as Chile to study the project. He often leads visitors down a rough-hewn trail that descends from one of the old logging roads into a gully of giant spruce; their gnarled trunks twisting high above anything else in the forest.

"I call those the guardians," Ryan mused.

He doesn't know how they escaped the ax, but said a few hundred acres of Ellsworth are spiked with the towering beauties.

"This the template," Ryan said, gazing upward. "You are among titans out here."

THE DAILY ASTORIAN

# TV LISTINGS

Evening listings  
TUESDAY

TUESDAY EVENING												AUGUST 23	
A	L	6 PM	6:30	7 PM	7:30	8 PM	8:30	9 PM	9:30	10 PM	10:30	11 PM	11:30
2	KATU	(2) KATU News at 6		Jeopardy!	Wheel of Fortune	Bachelor in Paradise (N)		After Paradise (N)		The View: 20 Years in the Making (N)		KATU News at 11	(3:5) Jimmy Kimmel
3	KOMO	(4) KOMO 4 News		Wheel of Fortune	Jeopardy!	Bachelor in Paradise (N)		After Paradise (N)		The View: 20 Years in the Making (N)		KOMO 4 News	(3:5) Jimmy Kimmel
4	KING	(5) NBC Nightly News	KING 5 News	KING 5 News	Evening	America's Got Talent "Live Show 3"	Grace VanderWaal returns to compete. (N)	Better Late Than Never (P) (N)		Better Late Than Never (P) (N)		KING 5 News	(3:5) Tonight Show
6	KOIN	(6) KOIN 6 News at 6	CBS Evening News	Extra	Ent. Tonight	NCIS "Return to Sender"		Zoo "The Yellow Brick Road" (N)		NCIS:NewOrleans "Collateral Damage"		KOIN 6 News @ 11	(3:5) S. Colbert
7	KIRO	(7) KIRO 7 News	CBS Evening News	The Insider	Ent. Tonight	NCIS "Return to Sender"		Zoo "The Yellow Brick Road" (N)		NCIS:NewOrleans "Collateral Damage"		KIRO News	(3:5) S. Colbert
9	KGW	(3) KGW News at 6:00 p.m.		Live at Seven	Inside Edition	America's Got Talent "Live Show 3"	Grace VanderWaal returns to compete. (N)	Better Late Than Never (P) (N)		Better Late Than Never (P) (N)		KGW News at 11	(3:5) Tonight Show
10	KRCW	(3) Seinfeld	Seinfeld	Modern Family	Modern Family	The Flash "The Reverse-Flash Returns"	MADtv (N)	KGW News at 10	(3:5) Two 1/2 Men	(3:5) Two 1/2 Men		King of Hill	(3:5) King of Hill
10	KOPB	(10) Ask-Old House	Business (N)	PBS NewsHour		Chaplin: Legend Explore the life and legacy of Charlie Chaplin.	Pioneers of TV	Oregon Lens		Oregon Lens		Frontline "Chasing Heroin"	
12	KPTV	(12) 6 O'Clock News		Family Feud	Family Feud	Brooklyn 99	New Girl	Lucifer "Et Tu, Doctor?"		10 O'Clock News		11 O'Clock News	Loves Ray 2/2
13	KPDx	(13) Mike & Molly	Mike & Molly	Big Bang Theory	Big Bang Theory	FOX 12's 8 O'Clock News on PDX-TV		FOX 12's 9 O'Clock News on PDX-TV		The Walking Dead "Bloodletting"		The Walking Dead "Save the Last One"	
13	KCPQ	(13) Name Game	Modern Family	Big Bang Theory	Big Bang Theory	Brooklyn 99	New Girl	Lucifer "Et Tu, Doctor?"		Q13 News at 10		Q13 News	Modern Family
20	TBS	(20) Seinfeld	Seinfeld	Seinfeld	Seinfeld	Big Bang Theory	Big Bang Theory	Big Bang Theory	Big Bang Theory	Big Bang Theory	Big Bang Theory	Conan (N)	
22	KZJZ	(22) Two and a Half	Two and a Half	The Simpsons	The Simpsons	Modern Family	Modern Family	Q13 News at 9		Big Bang Theory	Big Bang Theory	Friends	Friends
29	ESPN	(29) (4:30) Baseball	Baseball Playoff	MLB Baseball New York Yankees at Seattle Mariners Site: Safeco Field -- Seattle, Wash. (L)		SportsCenter		SportsCenter		Baseball Tonight (L)		Jalen & Jacoby (N)	NFL's Greatest
30	ESPN2	(30) Champ.Drive "Schedule Analysis Show"		Champ.Drive "Path to the Playoff"		SportsCenter		SportsCenter		Baseball Tonight (L)		Jalen & Jacoby (N)	NFL's Greatest
31	NICK	(31) Henry Danger	Henry Danger	Crashletes	The Thundermans	NickyRickyDicky	School of Rock	Full House	Full House	Full House	Full House	Friends	Friends
32	DISN	(32) Liv and Maddie	K.C. Undercover	Stuck in Middle	Bizaardvark	Bunk'd (SP) (N)	★ Camp Rock (2008, Musical) Kevin Jonas, Joe Jonas.	(1:15) Stuck Middle	(1:40) Bizaardvark	(1:15) Stuck Middle	(1:40) Bizaardvark	(3:05) Bunk'd	Liv and Maddie
34	FAM	(34) Dead of Summer "The Devil Inside"		Pretty Little Liars "Exes and OMGs"		Pretty Liars "The Wrath of Kahn" (N)		DeadSum. "Home Sweet Home" (N)		Cheer "Standing Out or Fitting In" (N)		The 700 Club	
35	FMC	(35) (5:00) Epic (13, Act)	(5:55) ★★ Epic (13, Act)	Voices of Josh Hutcherson, Beyoncé Knowles, Colin Farrell. (4:45) FXM Presents		★ The Five-Year Engagement (2012, Comedy) Emily Blunt, Chris Pratt, Jason Segel.		Gold Medal Families		Gold Medal Families		Gold Medal Families	(4:40) FXM Presents
36	LIFE	(36) Celebrity Wife Swap		Celebrity Wife Swap		Celebrity Wife Swap		Gold Medal Families		Gold Medal Families		Gold Medal Families	
38	ROOT	(38) Mariners Access	MarinersPre-game	MLB Baseball New York Yankees at Seattle Mariners Site: Safeco Field -- Seattle, Wash. (L)		Post-game		MLB Baseball New York Yankees at Seattle Mariners		Post-game		MLB Baseball New York Yankees at Seattle Mariners	
39	FS1	(39) Boxing Premier Champions (L)		Fox Sports Live	TMZ Sports (N)	Speak for Yourself		Fox Sports Live	Best I Heard (N)	Fox Sports Live	Best I Heard (N)	Fox Sports Live	TMZ Sports
43	SPIKE	(43) Ink Master "Head in the Game"		Ink Master "Turning the Tables"		Ink Master "Revenge Live"		Ink Master (N)		Ink Master "Weeding Out the Weak" (N)		Ink Master (N)	Ink Master
44	COM	(44) Futurama	Futurama	Futurama	Futurama	Tosh.0	Tosh.0	Tosh.0	Tosh.0	Tosh.0	Tosh.0	The Daily Show	The Nightly Show
45	HIST	(45) Counting Cars	Counting Cars	Counting Cars	Counting Cars	Counting Cars	Counting Cars	Counting Cars	Counting Cars	(3:05) Motors	(3:35) Motors	(3:05) Counting Cars	
46	A&E	(46) The First 48 "Blood Alley/ Bad Deal"		Married at First Sight "Just Married"		Married1stSight (4:45) Married at First Sight "Honeymoons, Part 2" 2/2 (N)		Born This Way "Bachelor Pad" (N)		Born This Way "Bachelor Pad" (N)		(3:05) Married/ First Sight "Just Married"	
47	TLC	(47) (3:05) Cake Boss	(3:35) Counting On	Countdown to the New Season" (N)		Count On "A Courtship Begins" (SP) (N)		Cake Boss (N)		Playhouse Masters (N)		(3:05) Counting On "A Courtship Begins"	
48	DISC	(48) (5:00) Deadliest Catch		Deadliest Catch "The Widemaker: Heartbreak" 2/2		Deadliest Catch (SP) (N)		Deadliest Catch "Grand Canyon" (N)		D. Catch "Legend of the Northwestern"		Deadliest Catch	
49	NGEO	(49) Border Wars "Checkpoint Texas"		Wild Spaces "Hidden Hawaii"		America's Parks "Gates of the Arctic"		America's National Parks "Olympic"		America's National Parks "Olympic"		America's Parks "Grand Canyon"	
50	TNT	(50) Castle "When the Bough Breaks"		Castle "Vampire Weekend"		Castle "Famous Last Words"		Castle "Kill the Messenger"		Castle "Love Me Dead"		Castle "One Man's Treasure"	
51	AMC	(51) (4:30) Thinner '96	★ The Conjuring	(2013, Horror) Vera Farmiga, Ron Livingston, Patrick Wilson.		Halt and Catch Fire (SP) (N)		Halt and Catch Fire (N)		Halt and Catch Fire (N)		Halt and Catch Fire	
52	AMC	(52) Chrissy Knows	Chrissy Knows	Chrissy Knows	Chrissy Knows	WWE Smackdown! WWE superstars do battle in long-running rivalries.		Chrissy Knows	Chrissy Knows	Chrissy Knows	Chrissy Knows	Modern Family	Modern Family
53	FOOD	(53) Chopped		Chopped		Chopped "Nugget? Fuhgettaboutit!" (N)		Chopped "Teen Redeem"		Chopped (N)		Chopped "Food Truck Kitchen"	
54	HGTV	(54) Fixer Upper		Fixer Upper		Fixer "School Spirit Spurs Home Search"		Fixer Upper		House Hunters	House Hunters	Fixer Upper	
56	FX	(56) (5:30) ★★ The Twilight Saga: Breaking Dawn Part 1 (11) Kristen Stewart.		★★★ The Twilight Saga: Breaking Dawn Part 2 (12) Taylor Lautner, Robert Pattinson.		★★★ The Twilight Saga: Breaking Dawn Part 2 (12) Taylor Lautner, Robert Pattinson.		★★★ The Twilight Saga: Breaking Dawn Part 2 (12) Taylor Lautner, Robert Pattinson.		★★★ The Twilight Saga: Breaking Dawn Part 2 (12) Taylor Lautner, Robert Pattinson.		Saga: Breaking Dawn Part 2	
57	CNN	(57) Anderson Cooper 360		CNN Tonight With Don Lemon		CNN Tonight With Don Lemon		Anderson Cooper 360		Anderson Cooper 360		CNN Tonight With Don Lemon	
58	FNC	(58) The Kelly File With Megyn Kelly		Hannity		The O'Reilly Factor		The Kelly File With Megyn Kelly		Hannity		On the Record	
61	CNBC	(61) Shark Tank		West Texas Investors Club		Shark Tank		Shark Tank		West Texas Investors Club		Paid Program	Paid Program
63	BRAV	(63) Don't Be Tardy...	Don't Be Tardy...	Don't Be Tardy...	Don't Be Tardy...	Don't Be Tardy...	Don't Be Tardy...	The Real Housewives of New Jersey		The Real Housewives		To Be Announced	
64	TCM	(64) Movie	(4:45) ★★ Made in Paris '66, Com) Louis Jourdan, Richard Crenna, Ann-Margaret. (4:45) Plucking the Daisy (1956, Comedy) Daniel Gelin, Robert Hirsch, Brigitte Bardot.									Masculin-Feminin Jean-Pierre Léaud.	
65	SYFY	(65) (5:00) ★★ The Hulk (2003, Sci-Fi) Jennifer Connelly, Sam Elliott, Eric Bana.		★★★ Push (2009, Thriller) Dakota Fanning, Dijon Hounsou, Chris Evans.						★★ Lake Placid (1999, Action) Bridget Fonda, Bill Pullman.			
162	RFD	(162) (5:30) Cattlemen	LandLeader TV	Downunder Horseman.		Chris Cox	Rural Eve. News	Ag PhD	Cattlemen to Cattlemen		LandLeader TV	Product Showcase	

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