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SCIENCE & NATURE

The Spotted Owl's New Nemesis

An epic battle between environmentalists and loggers left much of the spotted owl's habitat protected. Now the celebrity species faces a new threat—a tougher owl

| | | |

By Craig Welch
Photographs by Gary Braasch
Smithsonian magazine, January 2009, [Subscribe](#)

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Biologist Eric Forsman was delighted that a breeding pair of wild spotted owls he has studied for years did it again (their 3-week-old hatchlings on a hemlock in Oregon this past May). (© Gary Braasch)

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Yet the protection would prove insufficient. Throughout their range, from Canada to California, Northern spotted owls are disappearing three times faster than biologists had feared. Populations in parts of Washington are half what they were in the 1980s. So few birds remain in British Columbia that the provincial government plans to cage the last 16 known wild spotted owls and try to breed them in captivity. "In certain parts of its range," says Dominick DellaSala, chief scientist of the National Center for Conservation Science & Policy, "the spotted owl is circling the drain."

Barred Owls, meanwhile, are thriving. Farther south in the Oregon woods, I crunched through dead leaves behind Robert Anthony, a U.S. Geological Survey biologist, and David Wiens, a wildlife science graduate student at Oregon State. Wiens swept an antenna through the forest, weaving it in and out of snarled branches below overcast skies. Within minutes he pulled up short. The source of his signal looked down from upslope—a barred owl. He'd outfitted the bird with a transmitter the year before.

Half a dozen years earlier, Wiens whispered, spotted owls occupied this patch of forest. "Then barred owls were found and they've kind of taken over," he said. Spotted owls have not been seen here since.

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Most of the evidence that barred owls are harming spotted owls is circumstantial; that's why Wiens and other researchers traipse the woods daily, studying how the two species fight for space and food. Still, the trend is clear. Rocky Gutiérrez, a University of Minnesota wildlife biologist, wrote in 2006 that "despite the paucity of information, many biologists now feel that the barred owl is the most serious current threat to the spotted owl."

Both barred and spotted owls, along with great gray owls and rufous-legged owls, belong to the genus *Strix*, medium-sized birds that lack the hornlike tufts of ear feathers common to many other owls. They are so closely related that they sometimes crossbreed, blurring species boundaries and diluting spotted owl genes. More often, though, when barred owls move in, spotted owls just disappear.

Where spotted owls are finicky eaters, barred owls consume almost anything, including spotted owls. Barred owls, typically 20 percent larger than their rivals, may take over spotted owl nests or slam into their breasts like feathery missiles. "The barred owl is the new bully on the block," DellaSala says. A few years ago, a naturalist in Redwood National Park observed the aftermath of a murderous encounter: a barred owl with a tuft of mottled feathers clinging to its talons flapping near a decapitated, partially gnawed spotted owl. When scientists dissected the spotted owl's body, they saw that it had been sliced and perforated, as if by talons.

No one knows precisely why the bigger birds came West. Barred owls originally ranged from Florida to Maine and west to the treeless expanse of the Great Plains. Sometime in the 20th century, the birds skipped west, possibly across Canada. Perhaps they followed settlers who suppressed fire, allowing trees to grow and providing nesting pockets. Some scientists blame the influx of barred owls on climate change; a few suggest it's a natural range expansion. In 1990, barred owls in a forest west of Corvallis, Oregon, occupied less than 2 percent of spotted owl sites; today, barred owls nest in 50 percent of them. Barred owls have yet to saturate Oregon and California, but in a part of Washington's Gifford Pinchot National Forest set aside for the smaller bird, barred owl nests outnumber spotted owl sites by a third. When barred owls invaded the Olympic Peninsula, spotted owls moved to higher, steeper forests with smaller trees and less food—"like moving from the Sheraton to some dive motel," DellaSala says.

To count owls, which are nocturnal and hard to find, researchers do a lot of hooting; when the birds call back, biologists plunge into the forest toward the sound, usually at a sprint, stopping every so often to call out and listen again, the hoots echoing back and forth through the woods until human and bird wind up face to face. For spotted owls, the sound is vaguely like a cross between a muted rooster call and a French horn: "hoot-hoot-hoot-hoo." For barred owls, the tone is similar but the call is longer and patterned differently: "hoot-hoot-wahoot, hoot-hoot wahoo." For a time, some researchers hoped that spotted owls were just clamming up around barred owls and there were actually more than they thought. But that hope has largely faded. "There's evidence that spotted owls decrease vocalizations in response to barred owls," says Forest Service biologist Stan Sovern. "But honestly, I don't think spotted owls can just be silent somewhere and stay there. Part of their natural history is calling back and forth to one another."

Predictably, perhaps, loggers, timber companies and politicians seized on the barred owls as evidence that logging wasn't to blame for the spotted owl's plight. They have called for a return of chain saws to federal woods, so far without success. But years of efforts by the Bush administration to jump-start logging in the Pacific Northwest remain the subject of courtroom skirmishes between the timber industry, conservation groups and several federal agencies.

Yet far from saying that the logging restrictions were a mistake, owl biologists largely insist that more forests must be spared, especially since heavy logging continues on state and private land. As Wiens and I peered across a timbered ridge, craning to see the barred owl's nest, Anthony said, "If you start cutting habitat for either bird, you just increase competitive pressure."

Spotted Owls Endangered by the Encroaching Barred Owl

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A Conservation Strategy for the Northern Spotted Owl: Report of the Interagency Scientific Committee To Address the Conservation of the Northern Spotted Owl, published by the USDA Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Park Service, 1990

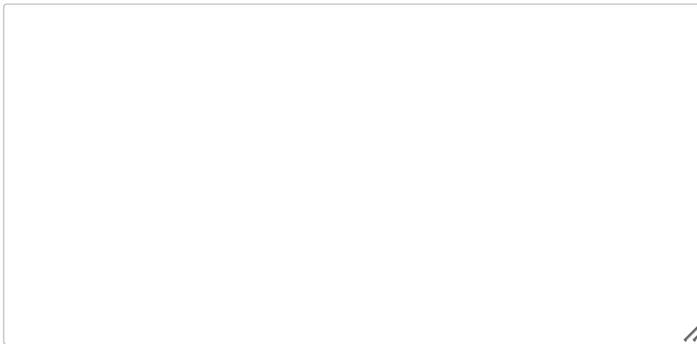
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How simple minded is this journalism? Almost entirely ignoring the main issue of habitat loss (federal forests are only one third of the radically altered forest habitat in the PNW), and instead taking the easy path to focus the story on the bad guy (barred owls) and good guys (spotted owls). Historic clearcutting of old growth forests, and now, short term rotation of second growth forests, are the clear culprit. It's the logging management system that's the problem -- extraction/conversion -- not the barred owl. C'mon, use proper science for your articles!!

Posted by Shawn Cardinall on January 29,2013 | 10:04 PM

Spotted Owls and Barred Owls are in fact the same biological species. They are two races of the same species, separated by the continental ice sheet during the last glacial maximum only 15,000 years ago. What has happened since is that the Barred Owl has reclaimed much of its previous territory across southern Canada, and is now merging once again with its relict western race. This kind of thing happens all the time with many different biological species, whereby geographically isolated races form for a while but do not differentiate to the point where interbreeding with other races is no longer possible. Honestly, some of these wildlife management people (who are not necessarily scientists by any means) act like they are 'creationists' who believe that each 'species' is a concise and immutable created entity. This is just nonsense. There is genetic variation in each of the eastern and western gene pools of this species, and as these merge the genetic variation within the entire population will increase. It's evolution in action- live with it. Species are not static clones of one type.

Posted by Dr. David E. Hill on June 12,2012 | 12:24 AM

Oh yes, how "wise" they were in the management of Yellowstone - and they sure made a mess of that, didn't they? (see Michael Crichton's videos for a thorough expose of that foolishness.) No, we do not need to sacrifice one species for another - next will be the golden winged vs. blue winged warblers. The environmentalists need to knock it off - it's time they realized we are not God, and despite all efforts, they cannot save birds from one another without royally screwing up the rest of the ecological balance.

Posted by rasureuwant2know on March 27,2012 | 09:48 PM

If Science "believes" that Darwin is correct, then why are they concerned about the Bard Owl, is the concept of "The survival of the fittest" not appropriate anymore, professing to be wise, they became fools, Romans 1:22 New Testament. This is just too funny!! We puny humans have no ability to control created nature!

Posted by 1stLogVietnam on March 19,2012 | 10:35 PM

Is the barred owl is used as a scapecoat and excuse to lumber the rest of the old forest off?

I agree with the experts who wrote and said that the old growth forest should be preserved for many other reasons not only as habitat for the spotted owl but due to finding new drugs in such old places as was done with Taxol, a cancer drug found in such places.

Maybe people should just live a more sustainable lifestyle that includes growing food locally and trading it with restaurants and making a living and that probably would not lead to a lot of taxes collected as would happen in the lumber business. It could lead to more topsoil being created and people living healthier and even employing others to also help in growing local vegetables like in this case here:

<http://www.nytimes.com/2012/02/23/garden/living-off-the-land-in-maine-even-in-winter.html?pagewanted=all>

government turns around and writes 400 page draft environmental impact statements about the rationale of killing owls to let other owls live --- well that is taxpayer wasted money and we would be better off just living sustainable livelihoods not lumbering. thank you.

Posted by gudrun scott on March 1,2012 | 08:16 PM

What's wrong with Barred Owls making a presence there. They might have not been there for hundreds or even thousands of years but, to have balance in nature there must be change. The strong will survive. There are times when without the help of humans introducing species that other species overtake the home range of other animals. This could be part of the process of evolution.

Leave it alone or maybe stop clear cutting the home range of Barred Owls making them move their home range into a less dominant owls territory.

Derek Fritz

Posted by Derek Fritz on September 29,2011 | 03:01 PM

As a former Humboldt county resident, it's gratifying to know that the decimation of our timber industry, the loss of ten thousand good paying jobs and the economic misery that the entire region has suffered since those fateful prophetic prognostications emanated from those omniscient biologists, wasn't for naught. After all, how can one put a price on delaying for twenty years the inevitable demise of a species on Mother Nature's hit list, even when that price is measured out in human misery?

Posted by Jeff Patterson on July 14,2011 | 02:06 PM

We work at a wildlife center in Everson, WA. We have been getting a lot of barred owls in recently, and we have both witnessed their overall sweet disposition. And then we hear that people are planning to murder these innocent raptors, and for what? What do we gain out of it? (Jenny)

Barred owls have no less right to exist than Spotted owls. Barred Owls are wonderful creatures with their own voices. Now excuse us while we go tube feed a seagull. (Cheri)

Posted by Jenny and Cheri Foster on December 19,2010 | 04:35 PM

I cannot estimate how valid all of the science was that led to the listing of the NSO, but the listing was inevitable, since it served to protect remaining old-growth forest on Federal lands. The public had simply reached the point that cutting of old-growth, especially by clearcutting, was not considered acceptable. Most people equate old-growth with any forest composed of trees greater than 24 inches in diameter, though most of these may be second-growth, the product of either fire or past forest management. We have successfully moved much of our sustainable forest management practices out of the country by imposing severe restrictions upon wise and sustainable management. This, even in those areas of our vast Federal forest system where good, sustainable management can be done without causing significant effects to fish and wildlife resources. As usual, we simply went too far in one direction. Unfortunately, this may have increased the overall level of environmental impact substantially on a world-wide basis, since we import our wood from countries that provide minimal environmental protection. In the southern portion of the coastal range of the spotted owl, including much of northern California, the owl does quite well in managed forests, due to the abundance of prey species that forest management produces. Lets keep both the owl scientists and forest management scientists in communication, so that cooperative science leads the way, not the fear of chainsaws. The use of forest products in construction offsets a substantial amount of carbon dioxide production by providing an alternative to steel and concrete, while also maintaining viable rural industry in a region where it has all but disappeared, leaving destitute people in it's wake.

Posted by Marc Jameson on May 28,2010 | 07:04 PM

"barred and spotted owls ... are so closely related that they sometimes crossbreed, blurring species boundaries and diluting spotted owl genes."

By the very definition of SPECIES, one of these has been misnamed. Since they interbreed, they are the SAME species.

Posted by Frank Weigert on January 10,2010 | 08:22 AM

thank this help me alot on my history project about the spotted owls

Posted by patty on April 15,2009 | 06:10 PM

As a retired BLM wildlife biologist, it was my pleasure to work with Dr. Eric Fosrman for over thirty years. From 1975 through about 1995, I worked primarily on Spotted owls but had opportunity to work with other noted individuals on everything from small mammals and birds to fungi and vascular plants. What this has shown is that the importance of the remaining old growth, virgin forests of the northwest cannot be overstated. This importance has been eclipsed by a single species focus on the spotted owl. These forests gave us taxol, a anti-cancer drug found in the bark of the Yew tree, very few of which existed outside of the natural, native forests, or second growth. At present, work on several species of fungi show promise as anti-inflammatory drugs and one species in particular has been effective in controlling several strains of tuberculosis bacteria. To date, very little of the biological resources found in the native forests have been screened. To lose the remnants of remaining native forest would be a travisty to mankind, not just the timber industry.

Posted by Gerald Mires on February 1,2009 | 06:39 PM

Of course they don't want to kill barred owls. The newcomer has provided more leverage in this "managed crisis" The plan is to keep the spotted owl at extinction levels (guess who's counting the owls?)to maintain control over federal forests. I've seen several spotted owls, and they were

all in 2nd+ growth forests. These are wild animals with a built in ability to adapt. When are we going to realize that we can't freeze time in the moment when we thought it was best?

Posted by Nikole Jacoby on January 9,2009 | 12:10 AM

As humans, we have a duty to protect the environment from ourselves as we do our best to co-exist with it; however, when cases like this where a stronger, more "fit" animal comes along and causes the extinction of another animal it is simply natural for this to happen. To me, targeted hunts are ethically similar to the destruction of habitats for timber. We need to protect habitats but also not interfere with the natural order of things even if that the extinction of some animals.

Posted by Zach Blake on January 9,2009 | 09:20 PM

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