

BURN, from page 4

even further behind, so I think we make a big point in the book that coexistence is possible, that you can deal with living in fire habitat if you take precautions.

E.G.: *Can you explain the "Industrial Fire Suppression Complex" and what it's costing the United States?*

D.D.: An awful lot of taxpayer money is going into suppressing forest fires. The Forest Service has become the Fire Service in terms of its budget. In many years, up to half of their total budget approaches fire suppression, and they're crossing off all of these other line items, like trail restoration, recreation management. Those are often suffering because we put so much into suppression, and this isn't necessarily a bad thing, because we want to suppress fires that are close to people's homes, but the reality is that we're putting \$2 billion in annually to suppress forest fires, and the big ones only get stopped by the fall rains.

If you have a fire that's burning through an extreme weather event – a drought, high winds – you're not going to stop that forest fire. Some are just going to burn no matter what we do to them, and it's a big waste of taxpayer money. And that flame retardant that you see coming out of the air tankers, the orange-colored retardant – it's toxic to the environment, and it does a lot of collateral damages.

E.G.: *Flame retardant is a mixture of water and fertilizer, and some say it's actually good for starting regrowth after a forest fire. Is that true, or is regrowth possible without the addition of fertilizer?*

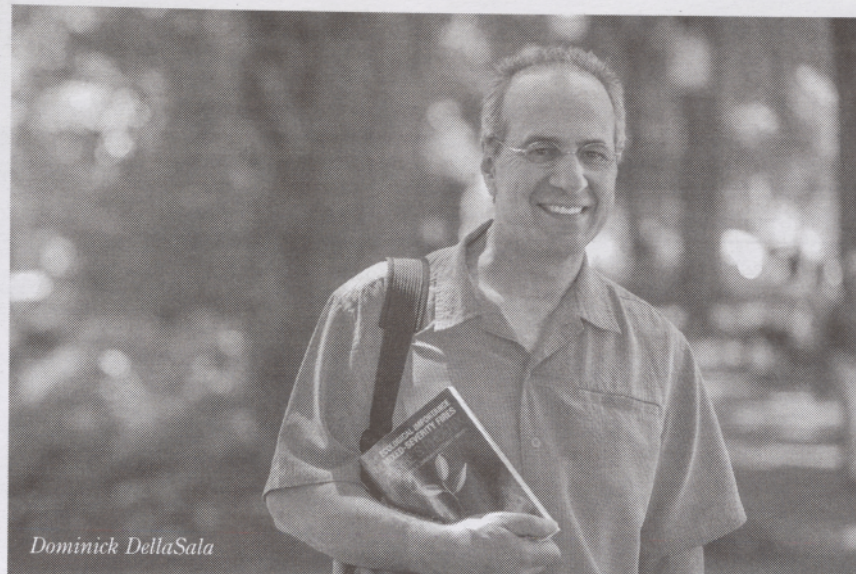
D.D.: Flame retardant has ammonia and nitrites in it. The plants are going to use nitrogen – as soon as the forest fire happens, they're already doing that.

We don't need to fertilize a forest to get a forest to come back, and that's the worst thing you can do after a forest fire, because that's just going to bring in certain plants that aren't supposed to be there – invasive and weed-like species, not the natives.

Typically, we do more harm after a forest fire, than the forest fire, which has just benefited the ecosystem. Fertilizers might be a small benefit of the flame retardant, but there are a lot of toxic impacts from that retardant that wind up in the drinking water supply and in streams, contributing to fish kill and amphibian kill.

E.G.: *We're spending a lot of money fighting fires – is somebody getting rich off of this?*

D.D.: I think that there is a need for more accountability and transparency in the spending. That's been a concern in the peer-reviewed literature now for many years. The Forest Service pretty much gets a blank check from Congress. We don't want people's homes burning down, but it is not doing anything to the fires that are burning during extreme weather events. We've got to start taking a hard look at letting – at least some of these fires – burn their way out under safe conditions. There are all kinds of ways you can compartmentalize a fire. You can hit it really hard where it's headed toward a community and let it burn in the back country. You can use minimum impact suppression tactics that are cost effective. We don't have to go and hit those fires with



Dominick DellaSala

PHOTO BY DIEGO DIAZ

all the air tanker support every time. We've got to be more judicious, more cost effective and more realistic in understanding that we can't stop these big burns.

E.G.: *Once a fire has burned out, loggers often salvage many of the affected logs. What are the effects of this process?*

D.D.: The term "salvaged" is a loaded term. If you look it up in the dictionary, salvaged means "to derive something of value from something that's been destroyed." But that's not what happens after a forest fire. Something of ecological value is created by a forest fire, and something was destroyed by doing the post-fire salvage logging – so we've got it backwards!

When a salvage operation goes in, they compact the soils with heavy tractors in the most sensitive areas. A lot of the conifers that are coming back on their own are getting crushed by the logs being dragged up the hills, and then the loggers take the most valuable components out of the forest: the big, live and dead trees, and they leave behind the flammable logging slash. Take the big stuff out and leave the little stuff as kindling, and you're going to get another fire coming through that's uncharacteristically severe. We see this over and over. After a forest fire, post-fire logging is the worst thing you can do to a fire-adapted system. It's not restoration; it's destruction.

E.G.: *There's a piece of legislation that's been introduced into U.S. Congress that says we need to be logging our forests to save them from forest fires. Is that true?*

D.D.: No. It's far from the truth. For the reasons we talked about with post-fire logging, it's going to make forests more susceptible to uncharacteristically severe burns. You take out the most fire resistant parts of the forest, the big trees that were born to resist fire, and you put in small, densely-packed tree plantations – you leave behind logging slash – that's what blows up in the big burn.

E.G.: *What should we be doing instead? Should we just let fires that aren't near human homes burn?*

D.D.: What we could be doing are two things:

We're not going to log our way out of forest fires. With climate change, we're setting the system up for more extreme fire. So we've got to do something about reducing

our fossil-fuel emissions.

The second thing we need to do is more homeowner fire risk reduction. Every homeowner in the wildland-urban interface needs to be a steward of his or her property. Clear out the vegetation in about a 200-foot circle around your property, build with fire-resistant materials and prepare for fire, because it's going to be here for a long time. If you do those two things, you have a better-than-90 percent chance of a home surviving the biggest forest fires.

We also need to reduce the sprawl of building in fire-prone areas because that's just going to increase fire suppression costs.

E.G.: *With forests serving as carbon sinks, absorbing nearly half our greenhouse gases, and with black carbon deposits from forest fires accelerating snow melt – along with the carbon dioxide released when forests burn – aren't fires doing more harm than good when it comes to climate change?*

D.D.: Not at this point. If you look at most of the fires, even the severe fires, their living material gets volatilized and put into the atmosphere as carbon dioxide, but they only emit about 5 to 30 percent of their standing biomass, and here's the interesting thing: You see those big plumes when a fire is burning – most of that's water vapor and not carbon. But we're not going to solve climate change by stopping forest fires.

By far the biggest contributors to climate change are the burning of fossil fuels and deforestation. So, reduce our emissions, take steps close to where people live to reduce their fire risk and start to talk about what it takes to get to coexistence with fire, as it's not going away.

E.G.: *Wildfire season arrived a month early this year, and there have already been 368 fires in Oregon between January and June. That's 167 more than our 10-year average for the same time period. Is this a problem?*

D.D.: It depends on how you view fire with respect to the time interval involved. The early settlers that came over here in the 1880s, and the Native American people that were here before the settlers, saw a lot more acres burning on an average year than what we're seeing today.

We have less acres burning, and we have less high severity fire burning. However, since around the 1980s, there's been a gradual increase in the amount of acres burning in the West. Fire acres are just starting to come back to where they were

historically because we've suppressed most fires.

Most people don't look that far back. They only look 1980s forward and say we've got a big problem, but we're still below the historical average, at least for now.

E.G.: *Is there anywhere in the country, or in the world, where we are doing this right?*

D.D.: We point to a place in sub-Saharan Africa where people have been living and coexisting with fire for hundreds of years. They recognize it in terms of a management tool. They know in drought years they're going to get forest fires, so they have learned to coexist with it, and they know it's beneficial to big game populations that they depend on for subsistence.

We have examples of Native Americans that lived in this region who were very much in-tuned to fire cycles. They set some of them, they benefited by fire that was producing big game habitat and culturally significant plants.

We've moved away from that in the 20th century with the era of fire suppression, it became more the era of Smokey Bear. We need to move more in the direction of the "Nature's Phoenix era" and let some of these fires burn!

E.G.: *Do you have any idea how that anti-fire propaganda got started?*

D.D.: I could show you some stuff that was very targeted at World War II propaganda. There was a paranoia that the Japanese and the Germans were going to come over and light forest fires in the West as a war tactic. There are some posters that are very racially offensive that were linking forest fires to WWII, so I think it started back in the 1940s. Then it went to Smokey Bear and campfire maintenance, and, "Let's put out all forest fires by 10 a.m. the next day."

E.G.: *Are policy makers or the forestry department starting to acknowledge some of the contemporary research?*

D.D.: I've written about this before, the Forest Service is bipolar when it comes to forest fires. During the fall when nothing is burning they talk about, "Let's use ecologically appropriate wildland fire." That means: Let some of the fires burn. And as soon as we get a forest fire, they're out there with suppression forces, the air tankers, putting on the big show, because they're under a lot of pressure – the local politicians, the communities – want those forest fires put out, so we don't see enough judicious use of fire suppression forces to allow at least some of these fires to burn safely in the back country.

E.G.: *If I wanted to go hiking through a recently burned area near Portland, where I could really see the "phoenix has risen," where would I go?*

D.D.: Most of the old-growth forests in our region were born out of a prior fire. If you look close enough, you can see the fire-scars on some of the big ponderosa pines that survived the last fire. You can also go see the so-called 36 Pit Fire that burned last September just east of Estacada along the Clackamas River near Highway 224. Parts of that fire burned in a mixed-severity mosaic, and it's already well on its way to rejuvenation, if it's not salvage logged.