

# Speech

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Washington, D.C.



## **El Yunque: A Century of Leading the Way**

Forest Service Chief Dale Bosworth  
Centennial Ceremony, Caribbean National Forest  
El Yunque, PR—January 17, 2003

It's a real pleasure to be here in Puerto Rico. It's not often that I get out to such a beautiful place with such friendly people. And the weather is perfect, especially compared to Washington this time of year. So I thank you for the opportunity to be here.

I'm particularly glad to be here on this special occasion. The Caribbean National Forest is a unique part of the National Forest System, and I consider it an honor to help celebrate its centennial. In a couple of years, we're going to celebrate the centennial of the entire Forest Service. It's fitting that we begin here. This is one of the oldest reserves in the Americas, going back to 1876, when Spain set aside the El Yunque forest reserve.

I understand that the name El Yunque comes from the Taino language, and that this was a special place for the Taino people, the residence of their supreme god. They would come here to celebrate. So I guess it's always been a special place for the people of Puerto Rico. It's always been treasured as a sacred place, a place well worth preserving. As you walk around this forest, it's easy to see why.

Today, I'd like to talk a little about what makes this place so special. I'll start by saying a little about its rich resources and its wonderful recreation opportunities. But El Yunque has even more to offer. This is a place that I think has taught us a great deal about conservation, and there's a lot left to learn. So I'd like to talk a little about that, too.

### **Natural Heritage**

First, I'll talk a little about the special things you can find here. One of the most obvious things is the natural heritage of this place. This is not a very big forest, by national forest standards. In fact, it's one of the smallest forests in the National Forest System. It's about 28,000 acres, compared to 2 or 3 million acres for some of our bigger national forests out West.

It might be small, but the Caribbean National Forest has more biodiversity than any other forest in the National Forest System. In fact, there are about as many tree species here at El Yunque—about 250 different types of trees on less than 30,000 acres—as on all the 192 million acres of other national forests combined. As a forester, I find that pretty amazing.

You can find the same amazing biodiversity in Puerto Rico as a whole. This small island has only about 3,500 square miles. Yet there are 750 different tree species here. That's as many as in all of the continental United States and Canada combined. They say good things come in small packages, and that's certainly true for Puerto Rico.

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The largest concentration of biodiversity in Puerto Rico is right here at El Yunque. The Caribbean National Forest has more than a thousand different plant species, including more than a hundred different ferns. There are 11 different types of bats; 19 different reptiles; 79 different birds, including the endangered Puerto Rican parrot; and 12 different types of the frog that folks here call the coquí, which I understand is a very special part of Puerto Rican culture.

So in a very real way, the Caribbean National Forest plays an important role in protecting Puerto Rico's heritage. I am proud that.

## Water Resources

El Yunque's value comes not just through protecting the island's rich natural heritage, as important as that is. The population of Puerto Rico has been growing by leaps and bounds. Today, it's almost 4 million. That's a lot more than in many states, particularly out West. For example, it's about four times as many people as in my home state of Montana. It's more than a thousand people per square mile, which is more than just about any state, except maybe a few northeastern states.

So there are a lot of people here living on not much land. The first thing that all these people need is water. Nobody could live on this island without water. That's a big reason why Puerto Rico needs El Yunque: 20 percent of the population gets its entire water supply from the national forest, about 50 million gallons a day. In fact, El Yunque has the greatest concentration of usable freshwater in Puerto Rico.

That's why the Forest Service is so concerned about protecting the headwaters of the streams here. By protecting the streams, we can continue to supply the water that Puerto Ricans need. That's why it was so important to get some of the waterways on the Caribbean National Forest into the National Wild and Scenic Rivers System. The streams and rivers in the system enjoy the highest possible protection, which means that the quantity and quality of the water they deliver will always remain high. I'm happy to say that President Bush signed the Caribbean National Forest Wild and Scenic Rivers Act (P.L. 107-365) into law on December 19. I would like to commend Resident Commissioner Anibal Acevedo-Vilá for introducing the bill and facilitating its passage. I would be remiss if I did not acknowledge and also thank Pablo Cruz, the supervisor of the Caribbean National Forest, for leading this effort for the Forest Service.

But we can't leave it at that. Resident Commissioner Acevedo-Vilá introduced H.R. 3955—the Caribbean National Forest Wilderness Act of 2002—as another step in assisting the Forest Service in managing the national forests. In the 107<sup>th</sup> Congress, the House passed H.R. 3955, which would have designated about 10,000 acres of national forest land as the El Toro Wilderness, a component of the National Wilderness Preservation System. The Senate did not take action on the bill. Nevertheless, H.R. 3955 had bipartisan congressional support. If reintroduced, it is likely to become law.

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Commissioner Acevedo-Vilá also introduced H.R. 3213—the Puerto Rico Karst Conservation Act of 2001. Karst is a kind of landscape with sinkholes and underground caves filled with water. The purpose of the proposed legislation was to protect critical aquifers and watersheds that serve as a principal water supply for Puerto Rico, and we strongly supported its intent. If the bill is reintroduced and passed by the 108<sup>th</sup> Congress, it will protect groundwater supplies. A lot of water is at stake—twice as much as Puerto Ricans now get from El Yunque. That’s enough to supply about 4 out of 10 Puerto Ricans. Saving the karst will go a long way toward assuring water supplies for future generations here in Puerto Rico.

## Recreational Value

So El Yunque is vital for Puerto Rico’s water supply and for its natural heritage. But El Yunque offers even more. As Puerto Rico’s population has grown, its economy has become less agrarian and more industrial and service-based. The focal point for the island has shifted from the agricultural interior to the more urbanized coast.

With urban change come the pressures of urban life. As nice as Puerto Rico is, I bet it might seem pretty crowded at times, particularly near San Juan. The Caribbean National Forest offers relief from that. It’s a place where people can come to rest and recover in natural surroundings. If people have the chance to do that from time to time, it improves their quality of life.

That’s why it’s so important that we keep these spaces open. El Yunque is not only a refuge for endangered species, but also a refuge for people. In fact, it has an international reputation as a refuge—it’s one of the most important destinations in the Caribbean for ecotourism. It gets at least 900,000 visitors annually. It’s one of the most heavily visited natural areas in all of Puerto Rico.

This building right here, the El Portal Rain Forest Center, is living proof of that. It’s the largest visitor center we’ve got on the National Forest System and also one of the newest. It’s certainly a beautiful one. Here, with help from many of our partners in the community, we put on all kinds of interpretive and educational programs. These activities contribute materially to the Puerto Rican economy and to the quality of life for Puerto Ricans.

Ironically, though, El Yunque’s popularity brings problems. You can see something similar going on all across the United States. In many parts of our country, we’re seeing urban areas encroach on the national forests. Here, too, as I understand it, urbanization on the periphery of the Caribbean National Forest is a major concern.

That’s why the Commonwealth government, in its wisdom, established a buffer zone with rules and regulations against overdevelopment around the national forest. But unless people respect the buffer zone, it does no good. The Forest Service is working cooperatively with private landowners and the government to sustain a viable wildland/urban interface zone. I would like to commend both Forest Supervisor Cruz and Dr. Ariel Lugo, director of the International Institute of Tropical Forestry, for their efforts to protect the zone.

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## Learning Opportunities

That's only one of many challenges we face here at El Yunque. Tropical forest ecosystems are tremendously complex. Long ago, we recognized the enormity of the challenge. That's why we designated the whole national forest in 1956 as an experimental forest—the Luquillo Experimental Forest. This is the only place in the National Forest System where the entire national forest is a designated experimental forest.

Here, research and management work hand-in-hand to resolve conservation issues. And that has turned the challenge into an opportunity. Here on the Caribbean National Forest, we lead the nation in finding ways of integrating science and management. In fact, El Yunque has become a model for the nation. For example, we are discovering new ways of working together to help endangered species through our program for managing the Puerto Rican parrot. We are also discovering new ways of working together to protect watersheds, a top priority for the Forest Service all across the nation.

We are even discovering new ways of working together worldwide. Here at El Yunque, we bridge the gap between forestry in the United States and tropical forestry all over the world. Our International Institute of Tropical Forestry has three programs:

- State and Private Forestry, serving Puerto Rico and the U.S. Virgin Islands;
- International Forestry, serving more than 70 countries worldwide; and
- Research, conducted not only on the Luquillo Experimental Forest, but also throughout Puerto Rico and the Caribbean, as well as Central and South America.

In fact, the Caribbean National Forest is one of the best-studied tropical forests in the world. It has become a world-class management model for tropical forestry, something every Puerto Rican can be proud of. You can see that special mission mirrored in the people who work here. A great majority of the people who work here are fully bilingual and multicultural. That's a tremendous asset for the Forest Service in fulfilling our worldwide conservation mission.

## Challenges

Conservation has always been central to our mission, but what that means has changed over the years. Society has changed, demographics have changed, technology has changed, ecosystems have changed, and public expectations have changed. All that has changed the conservation challenges we face.

Some of the conservation challenges we faced a century ago were quite different from the challenges we face today. A century ago, we thought we faced a timber famine. We were more of an agrarian society, and we needed wood for much of our energy and most of our building materials. We saw our forests vanishing, and we were concerned.

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So we set aside forest reserves nationwide, including the Luquillo Forest Reserve here at El Yunque. A few decades later, we got help from the Civilian Conservation Corps in reforesting ravaged land. I understand that the CCC was also very active here in Puerto Rico. The CCC replanted vast forest stands here, doubling the size of the national forest. Today, the Caribbean National Forest carries on the conservation tradition in many ways. For example, we test the properties of wood and wood preservatives in the tropics, in conjunction with our Forest Products Lab and our International Institute for Tropical Forestry.

My point is that the Caribbean National Forest has always been a leader in addressing the conservation challenges we faced. Today, fears of a timber famine are over. We are far more industrial and service-oriented, and we get much more of what we need through commercial ties with the world. The challenges we face are new.

The growth of commercial ties has coincided with rising threats from nonnative species. In some places, urban growth has coincided with ecosystem fragmentation. I know that wildland fire is not a major factor here in Puerto Rico—instead, you get hurricanes. But you’ve probably heard about the huge fire seasons we’ve been getting out West. In fact, catastrophic fire, invasive species, and wildland fragmentation are some of the worst threats we face today in much of the United States.

## Contributions

How does that apply to Puerto Rico? Even though you don’t get much in the way of fires, you’ve still pitched in to help. The Caribbean National Forest trains, reissues, and dispatches crews each year. With your help, we kept 99 percent of the fires we faced last year to very small sizes. That’s the best record we’ve ever had, even though it was the second-worst fire season in almost 50 years. All the folks from Puerto Rico who were involved deserve the highest praise for that. I am personally deeply grateful for their selfless dedication to protecting communities and natural resources throughout our nation.

The Caribbean National Forest has also been a leader in meeting the threat from nonnative species. A good example is the pink hibiscus mealybug. It’s a nonnative pest first found in the Caribbean in the 1990s. It can attack more than 200 plant species, including many urban and forest trees.

Fortunately, researchers discovered that a parasite can help control this pest. The Forest Service is now leading efforts to monitor and evaluate an integrated pest management program to control the pink hibiscus mealybug. We are also leading efforts to control invasive animals such as iguana, mongoose, and rats. These programs are based right here at El Yunque. They are models for the entire Caribbean.

Finally, let me repeat that we can all learn a lot from the Caribbean National Forest. I think there might be some take-home lessons for the rest of the National Forest System—in particular, some food for thought about invasive species and forest fragmentation. Dr. Ariel Lugo has done some long-term research in these areas, and I think it’s worth mentioning some of his findings.

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For one thing, about 30 percent of the tree species in Puerto Rico are naturalized, meaning that they are alien species that have been here for so long they have become part of the landscape. By national forest standards, that's a really high number of nonnative trees. Yet the forest ecosystem has remained basically healthy, even though these nonnatives have changed forest composition. I think that's useful for us to keep in mind in looking at invasive plants elsewhere. Not all invasives are equally threatening, and some might even be benign.

So the lesson is this: Our highest priority should be controlling the spread of invasives that do real damage. An example from the Southwest—Arizona and New Mexico—is saltcedar. It's a woody invasive plant along many streams, and it sucks up water so efficiently that it can change the whole hydrology of streams. That can do real damage to ecosystem function. I think we ought to be focusing on controlling that kind of damage.

The other thing Dr. Lugo and his scientists have discovered in Puerto Rico is that urbanization doesn't always lead to wildland fragmentation. Since 1912, Puerto Rico's population has more than doubled. Today, Puerto Rico has one of the highest population densities in the United States. So you might expect the area of forest to have steadily declined in recent decades. Instead, just the opposite has occurred: In 1948, the area covered by forest was 13 percent; by 1990, it had increased to about 32 percent. In fact, during the second half of the 20<sup>th</sup> century, Puerto Rico had a rate of reforestation that was proportionally higher than anywhere else on earth!

The general reason for forest recovery is that farmland declined. The details are pretty complicated, and there are still a lot of unknowns. But I think there's something useful here to keep in mind when we look at fragmentation issues elsewhere. It's not simply a question of too many people. We need to look more specifically at how people are using the land and what the opportunities are for influencing that, which will always vary locally. So the lesson is this: We need to manage for the entire landscape, not just for natural areas, and we need to retain the flexibility to find local solutions in collaboration with our partners.

## **Rising to the Occasion**

So the Caribbean National Forest has taught us a great deal, and it probably has a lot left to teach us. This unique place plays a pivotal role in tropical forest management worldwide. I believe it also plays a pivotal role for the island of Puerto Rico by protecting its natural heritage, its water and other natural resources, and its outdoor legacy for future generations.

In closing, let me say this: It's a new day and a new time. A century ago, when President Theodore Roosevelt established the Luquillo Forest Reserve, our nation faced threats such as a looming timber famine. Under T.R.'s leadership, we rose to the occasion.

Today, our generation faces a new set of threats, ranging from fires and forest health, to nonnative species, to wildland fragmentation. It is up to us to rise to the challenge. The Caribbean

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National Forest has always helped lead the way, and I have no doubt that it will again. I thank you.