The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

South America Conservation Region

Invasive Species in South America

Impacting landscapes, economies and cultures

Deceptively attractive, invasive gorse (*Ulex europaeus*) bushes run rampant in Chile's Andes, overtaking native flora. © Mark Godfrey/TNC

Looks can be very deceiving. Brilliant flowering gorse and delicate California poppies are scattered along the alpine hillsides of Chile's Andes. Endless fields of South African lovegrass cover the pampas of Brazil, Argentina, and Uruguay. Fuzzy European hares also scramble around this grassland scenery. As lovely as these flora and fauna can be, they are in fact invasive species parading as wolves in sheep's clothing. The pretty poppies and gorse have supplanted all native species from broad areas of Chile's Andean hillsides. Unlike native grasses, lovegrass is not palatable to pampas cattle, thus crippling traditional ranching economies. The European hare has become a major pest to native plants and agriculture throughout southern Brazil.

"Not only are we seeing large numbers of native species completely disappear from landscapes, but invasive species are also impacting local cultures," says Dr. Silvia Ziller, Coordinator of the Conservancy's South America Invasive Species Program. "In the Andean regions of Peru and Bolivia, for instance, indigenous communities that were historically accustomed to fishing for dozens of fish in their mountain streams are in some cases now only fishing for introduced trout, which has wiped out all the native species. This has a profound impact on local indigenous cultures, as well as their health."

Silvia's own local landscape has been altered by invasive species. "When I was younger, I worked in areas west of Curitiba, Brazil. Driving across the region over the years, I saw how pine trees, introduced for commercial forestry, were quickly overtaking many areas of native grasslands. This is what caught my interest and ultimately inspired my doctoral studies and now my work with the Conservancy." Silvia is now recognized as a pioneer in the field of invasive species in South America and has propelled the Conservancy into a leadership role as the major international conservation organization to invest in this continent-wide issue.

Important first steps

Unfortunately, Silvia is in a very small minority of people who are aware of the invasive species threats in

The North American bull frog (*Rana catesbeiana*) is a predator to many native species in several parts of South America. © Magno Segalla

South America. Whereas in the United States the general population is more familiar with the impacts of kudzu and Dutch Elm disease, in South America invasives are a new issue. "From just an educational perspective, university-level biology and environmental classes do not even cover the subject of invasive species," says Silvia. "Furthermore, governments are actively introducing non-native species as solutions to problems such as erosion control and cultivation, and do not differentiate between native and non-native species in laws designed to protect biodiversity. These are obviously challenges for us."

Yet, concern is beginning to be piqued. In 2005, the Ministry of Environment and the Federal Environmental Agency sponsored the first Symposium on Invasive Species in Brazil, which was attended by not only the Brazilian Minister of the Environment, but also raised the interest of more than 700 people from federal and local government agencies, universities, and other NGOs. The results of a two-year national survey and the creation of the first database of Brazilian invasive species were presented at the symposium. The database structure has been translated from Portuguese to Spanish and English and has already been shared with environmental agencies in Uruguay, the Dominican Republic and Chile to leverage knowledge and awareness of invasives issues.

Engaging policymakers

Raising awareness, however, is just a preliminary step. According to Silvia, "Really, to work at the large scale in which we have to work across the entire continent of South America, we must work with policymakers to develop a legal framework to both prevent the introduction of new invasive species and control species that have already been introduced. It is cheaper and more effective to prevent the problem than it is to eradicate the species once they become entrenched."

Until new laws are in place, the Conservancy is working to engage the private sector in invasive species mitigation as good business practice. For instance, the Conservancy is advising a Brazilian forestry company on its development of a "clean", no-invasions pine forestry project. One strategy is to prevent wind dispersion of pine seeds by developing "wind breaks", where native tree species are planted around the plantation as a barrier, as well as to remove small trees emerged from any seeds that have spread. Furthermore, this project will help this company – and hopefully other companies – to receive certification that can be used to help market its forest products.

According to Silvia Ziller, "Our Invasives Program in South America is very new and we have a lot of challenges ahead. Yet, it's exciting to see that numerous stakeholders are becoming interested in invasive species prevention and control. The proliferating impacts to biodiversity, as well as economies and cultures, are not easy to ignore. Once we have the policy framework in place, then we can greatly expand our opportunities to implement training and capacity building for stakeholders across South America so that work can get done on the ground. While people ultimately pay the price for invasives damage, perhaps the greatest danger is the spectre of future generations not knowing what's been lost."

South African lovegrass (*Eragrostis plana*) overtakes a field in southern Brazil. © Silvia Ziller/TNC

contact information

Tracey Yuditsky
South America Conservation Region
4245 North Fairfax Drive, Suite 100
Arlington, VA 22203 USA
tyuditsky@tnc.org
tel [703] 841.7484
fax [703] 841.2655
nature.org

February 2006