keep the vicuñas out, though the herbivores (as well as the pumas) could still frequent the general area. Sure enough, he observed that the growth of grass inside the exclosures in the grasslands shot up compared with grass in surrounding control plots, while grass growth in the canyon and meadow exclosures did not, suggesting that vicuñas were indeed sacrificing grazing opportunities there to avoid an ambush.14

This behaviorally mediated cascade is created by the complexity of the animals’ habitat, Donadio says, and in turn, it helps shape the environment. If the pumas weren’t there, “the vegetation in the canyons [and meadows] would look exactly like the vegetation in the plains.” By enhancing the diversity of habitats in San Guillermo, pumas may be creating new niches for other species, he explains, and in doing so, enhancing biodiversity.

Princeton University ecologist Robert Pringle and his colleagues have also used exclosures in their search for trophic cascades in Kenya’s Laikipia Plateau, which was recolonized by African wild dogs (Lycaon pictus) in the 1990s. The researchers didn’t find any difference in grazing pressure exerted on local plants by the dogs’ prey—small antelopes known as dik-diks (Madoqua guentheri)—before and after the arrival of wild dogs, even though the antelopes declined in abundance.15 Pringle sug-

PLANNING FOR FUTURE REINTRODUCTIONS
The release of predators into the wild is controversial, and for years Yellowstone remained one of the only sites of such a bold reintroduction. But now, similar efforts are in the works around the world. In the Iberá wetlands of Argentina, for example, conservationists will soon release their first jaguars, and hypothesize that a variety of ecological changes will occur across the landscape. And in Mozambique’s Gorongosa National Park, where a reintroduction project involving wild dogs and leopards is ongoing, a study is underway using state-of-the-art tools to track the predators’ ecological effects.

Iberá, Argentina
Five jaguars to be reintroduced in 2020/2021

Researchers expect numbers of deer and capybaras, the jaguars’ prey, to drop once the cats are reintroduced. By reconfiguring capybara population structure, the jaguars might reduce the spread of mange between the rodents.

Ecologists suspect that the capybaras’ behavior will change in response to the presence of the jaguars, becoming more vigilant and cautious. If the capybaras spend more time watching for predators than eating, that could allow grassy vegetation to flourish in certain areas.

Jaguars could kill or change the behavior of local foxes and in doing so indirectly boost numbers of the endangered birds that the foxes are known to eat.

Ecologists hypothesize that the jaguars’ presence could increase the abundance of certain scavenger species such as vultures and enhance the diversity of beetles that live off carcasses left behind by the predators.