

CRITICAL AREAS FOR BAT CONSERVATION

Latin American conservationists build a grand strategy

by Luis F. Aguirre and Rubén M. Barquez

Argentina's Provincial Park at El Potrero de Yala, seasonal home for several migratory bat species, was designated as an Area of Importance for the Conservation of Bats.

More than 360 bat species are spread across Latin America, and they are as varied as the remarkably diverse ecosystems they inhabit – and help to sustain. Landscapes range from the deserts of northern Mexico to rainforests of the Amazon, from coastal areas of the Caribbean to the flooded savannas of the Pantanal and the rugged Yungas mosaic of the Andes' eastern slope. Several are considered biodiversity hotspots – sanctuaries for numerous species, many of them found nowhere else. Bats are among the most important ecological players, yet they face severe threats throughout Latin America.

Within each of these ecosystems, bats fulfill crucial ecological roles. In addition to helping to control insect pests, scientists estimate that at least 800 Neotropical plant species depend on bats for pollination and/or seed dispersal.

Yet their great ecological and economic value is largely ignored, as bats are despised throughout much of the region and routinely blamed for rabies and other maladies. Vampire bats present a huge problem, although only three vampire species exist (all of them in Latin America). The common vampire (*Desmodus rotundus*) feeds on the blood of mammals, including

livestock, and often comes into conflicts with cattle producers and other humans. Formal and informal campaigns to destroy vampire bats and their roosts inevitably damage habitats of beneficial species and kill countless valuable bats. And, of course, these bats face the continuing loss of habitat to expanding human populations, farms, ranches and timber harvests. It is not surprising that a number of Latin America bats are at severe risk of disappearing from their fragile ecosystems, along with the critically important ecological services they provide.

These regional risks led in 2007 to the creation of the Latin American Bat Conservation Network (RELCOM), which now includes bat-conservation organizations in 19 countries. Our goal is to magnify our individual efforts by working together with a consistent, regional voice to protect these flying mammals throughout Latin America. RELCOM knows that humans and bats can live in harmony, and our primary mission is to ensure the survival of species and maintain healthy, viable bat populations of bats in Latin America and the Caribbean.

A prime strategy for meeting these goals is the identification and recognition of specific critical sites that are home to especially threatened species, as well as larger areas with high bat-

species diversity, including species that provide vital services to the ecosystems they inhabit.

RELCOM developed in 2011 a formal conservation mandate for the creation of these Areas (AICOMs) and Sites (SICOMs) of Importance for the Conservation of Bats (*Áreas or Sitios Importante para la Conservación de los Murciélagos*). These will be the focus of much of RELCOM's education, conservation and advocacy efforts in the future.

AICOMs include key areas in which bats spend most of their core activities of roosting and foraging. SICOMs are smaller, distinct sites such as caves, parks, bodies of water or even buildings, bridges, tunnels or abandoned mines. Both should include species that are important to national or regional conservation or contain especially rich species diversity, regardless of threat levels.

RELCOM encourages the principle that each country is free to establish as many Areas and Sites as are needed to ensure the conservation of its bats. Each of the local bat-conservation organizations of RELCOM is working on proposals, within the regional guidelines, for their own A&Ss.

We have so far officially recognized eight areas and sites in four countries, creating the foundation of a regional network

that now supports the conservation of at least 24 bat species, including six considered threatened and 18 that are highly relevant to conservation.

We expect within a few years to have a fully functional network of AICOMs and SICOMs throughout Latin America and the Caribbean that will provide truly effective protection for most of the region's threatened bat species.

Within these areas, an army of local volunteers and members of bat-conservation groups will be working on public outreach, communication, environmental education, research, management and the many other activities required to ensure the persistence of our essential allies.

This is just the beginning.

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RELCOM's Initial Areas and Sites of Importance for the Conservation of Bats

Argentina

AICOM Parque Provincial Potrero de Yala (Jujuy Province, northern Argentina): This protected area of lakes, hills, forests and grasslands is just 19 miles (30 kilometers) from the city of San Salvador de Jujuy. It hosts migratory species such as Mexican free-tailed bats (*Tadarida brasiliensis*), hoary bats (*Lasiurus cinereus*) and western red bats (*L. blossevillii*), as well as several data-deficient and near-threatened species, plus the vulnerable Ipanema bat (*Pygoderma bilabiatum*).

SICOM Cueva de los Murciélagos (Córdoba Province, north-central Argentina): The "Bat Cave," actually an abandoned

mine, is home to what is believed to be the largest bat colony in the southern cone of South America. Although no reliable estimate of bat numbers, primarily migratory Mexican free-tailed bats, is yet available, the site is now protected under provincial law.

SICOM El Sauce (Córdoba Province): Located in a mountainous region, El Sauce is a system of natural, structurally complex caves that provide roosting sites for small big-eared brown bats (*Histiotus montanus*) and *Myotis dinellii*. This SICOM's primary importance is the opportunity to educate the public about bats.

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The Peninsula de Macanao off Venezuela's northern coast.

Bolivia

AICOM *Santuario Municipal Ecológico San Juan de Corralito* (San Matías, eastern Bolivia): Two at-risk bat species – the endangered Tomes' sword-nosed bat (*Lonchorhina aurita*) and the vulnerable *Natalus espiritosantensis* – inhabit two small caves in this mountainous landscape that was declared a protected area in 2011. These are the only known roosting sites for Tomes' sword-nosed bats.

SICOM *Gruta de San Pedro* (Sorata, western Bolivia): This scenic cave is the main refuge of two ecologically important bat species: the black myotis (*Myotis nigricans*) and Geoffroy's long-nosed bat (*Anoura geoffroyi*). It is also one of Bolivia's very few permanent sanctuaries with bats that is open to the public.

Venezuela

AICOM *Península de Macanao* (part of the Isla de Margarita off Venezuela's northern coast): The peninsula has a series of

small caves, some known locally as "stones," which are the main day roosts for two dry-climate bat species: Miller's greater nectar bat (*Glossophaga longirostris*) and the Curaçaoan long-nosed bat (*Leptonycteris curasoae*), which is listed as vulnerable.

Bonaire

AICOM *Parque Nacional Washington Slagbaai* (Bonaire Island, Caribbean Sea off Venezuela): This national park includes a natural cave system that probably exceeds 150 caverns, with colonies of at least five bat species: Curaçaoan long-nosed bat, Peters's ghost-faced bat (*Mormoops megalophylla*), Trinidadian funnel-eared bat (*Natalus tumidirostris*), Curaçao myotis (*Myotis nesopolus*) and Miller's greater nectar bat.

SICOM *Kueba di Watapana*: Of two known maternity roosts used by the Curaçaoan long-nosed bat and Peters's ghost-faced bat, Lima Cave, known locally as Kueba di Watapana, has the largest number of pregnant and nursing *L. curasoae* females.



The Municipal Ecological Sanctuary of San Juan de Corralito in Bolivia protects roosts of the endangered Tomes' sword-nosed bat (left), which is listed as endangered, and the vulnerable *Natalus espiritosantensis*.