

## Bats of Latin America

### IMAGES

Blank

1. Title

2. Pallas' long-tongued bat (*Glossophaga soricina*) at *Tricanthera* flower (#0002103)

3. *Tonatia sylvicola* carrying a katydid

4. *Artibeus cinereus* carrying a *Solanum* berry

5. *Lasiurus ega* roosting in palm frond

6. *Macrotus californicus* portrait

7. *Choeronycteris mexicana* portrait

8. *Ectophylla alba* portrait

9. *Ectophylla alba* roosting in leaf tent, close up

10. *Heliconia* leaf tent

11. *Ectophylla alba* roosting in leaf tent (exposed with camera flash)

12. *Ectophylla alba* roosting in leaf tent (natural light)

13. *Ectophylla alba* group

### SCRIPT

Music begins...

Bats of Latin America

Life in Latin America wouldn't be the same without bats. Most people don't know that they pollinate flowers,

control insects,

and spread the seeds of countless tropical trees and shrubs.

In fact, many of Latin America's most fascinating and beneficial animals are bats. Most are small in size and pose no threat to humans.

A surprising variety -- nearly 300 kinds -- live here. This leaf-nosed bat uses its huge ears to listen for the sounds of small insects, and

this long-tongued bat has a narrow head specially adapted for pollinating flowers.

Many of Latin America's most attractive mammals are bats, such as the seldom seen little Honduran white bat.

White bats roost in small colonies under large leaves.

They have chewed this leaf so the sides hang down to form a protective shelter.

When illuminated by the photographer's camera flash, the bats' bright white fur might seem to make them stand out in the forest.

In natural conditions, their white fur actually absorbs the green light that filters through the leaf and lets the bats blend inconspicuously into the shade beneath.

These cute little fellows are found nowhere else in the world and are part of our unique wildlife heritage.

14. *Lasiurus cinereus* portrait The handsomely marked hoary bat has long, silky fur and is also well camouflaged in the trees where it lives.
15. *Uroderma bilobatum* portrait Other bats have distinctive white facial lines,
16. *Noctilio leporinus* portrait bright colors,
17. *Vampyrum spectrum* portrait and comical faces.
18. *Mormoops megalophylla* portrait Ghost-faced bats have eyes that seem to be located in their ears. Their strange faces are a part of an extremely sophisticated navigation system.
19. *Tadarida brasiliensis* in flight, illustrating sound transmission and return Although all bats can see quite well, most hunt flying prey, using pulses of sound emitted through the mouth or nose. The bat's sensitive ears pick up the echoes reflected from even tiny flying insects, such as malaria-carrying mosquitoes.
20. *Myotis yumanensis* in flight with moth That is why Latin America's myotis bats make excellent neighbors. This one has caught a moth, but when mosquitoes hatch, a single bat can catch 600 or more in an hour.
21. *Tadarida brasiliensis* emergence Large colonies of bats, such as these Mexican free-tails, eat 50,000 or more kilos of insects every night over nearby towns and farmland.
22. *Tadarida brasiliensis* roosting in cave Some colonies contain millions of individuals roosting in densities of 600 or more bats per square meter.
23. *Tadarida brasiliensis* adults roosting in cave Such numbers are important because their combined body heat creates the incubator-like conditions needed for rearing young.
24. *Tadarida brasiliensis* mother with newborn baby Each mother gives birth to just one offspring per year which weighs a third of its own body weight -- the equivalent of a human mother giving birth to a 18 kilogram baby.
25. *Tadarida brasiliensis* mother with many babies Incredibly, each mother can pick out her own baby's hungry cries from all the rest. Bats grow rapidly, and
26. *Tadarida brasiliensis* in flight learn to fly in just four or five weeks. Imagine the difficulty faced by one of these youngsters

27. *Tadarida brasiliensis* emergence trying its wings for the first time in a traffic-jam like this where it must avoid several collisions a second. Life is certainly not easy for a young Mexican free-tailed bat.
28. Cave survey In a recent Mexican survey, scientists found that five of ten caves that once housed millions of bats each
29. Sunlit cave entrance had decreased by more than 95% because people burned the caves or disturbed the roosting bats. This must be stopped.
30. *Carollia perspicillata* and *Tracophs cirrhosus* emerging from tree hollow Not all bats live in caves; some live in hollow trees
31. *Carollia perspicillata* roosting in hollow tree Of these, many form harems; groups of female bats guarded and defended by a single male.
32. *Artibeus jamaicensis* male guarding harem The sultan of this group, at the top, is trying to protect his wives from the photographer.
33. *Thyroptera tricolor* roosting in unfurling leaf Some bat have special adaptations for roosting. These disc-winged bats have suction cups on their wrists and ankles that enable them to adhere to the slick surface of an unfurling leaf.
34. *Trachops cirrhosus* catching a frog from water Other bats live near ponds from which they capture frogs for food.
35. Male frog They prey primarily on male frogs, listening for their mating calls; but also recognizing the calls of poisonous species, which they avoid.
36. *Trachops cirrhosus* grabbing frog in water Scientists from as far away as Czechoslovakia and Germany come to Latin America to study these remarkable bats.
37. *Noctilio leporinus* catching a fish Fishing bats also get their food from ponds.
38. *Noctilio leporinus* with fish in feet They snatch up minnows with their long hind feet
39. *Noctilio leporinus* roosting on tree and carry them off to a perch to eat.
40. *Hylonycteris underwoodi* coming to *Matisia* flower Many of our most important bats pollinate flowers, especially those of rain forest trees. Only one species of long-tongued bat is known to pollinate this *Matisia* flower.

41. *Hylonycteris underwoodi* at *Matisia* flower  
As the bat enters the flower to drink nectar, the flower's hand-shaped arm dusts him with pollen he will carry to another plant. This service is vital to the tree's reproduction.
42. *Carollia perspicillata* taking *Piper* fruit  
Spreading seeds is another way bats help the forest. Many plants, such as this *Piper*, produce fruits with odors and shapes designed specifically to attract bats.
43. *Carollia perspicillata* eating *Piper* fruit  
This short-tailed fruit bat picked a stalk of *Piper*, which he has carried away to much like an ear of corn.
44. *Carollia perspicillata* carrying *Piper* fruit  
Just one bat may transport as many as 60,000 seeds to new locations in a single night. Even a small colony of bats can, therefore, account for enormous numbers of new seedlings being planted every year.
45. *Artibeus lituratus* eating *Cecropia* fruit  
*Cecropia* fruits are eaten by both birds and fruit bats, but it is primarily bats that carry their seeds into cleared areas, where *Cecropia* plays a key role in reforestation.
46. French Guiana clearing  
In this French Guiana clearing, the first woody plants to appear have grown from seeds dropped by flying bats.
47. First pioneer plants in French Guiana clearing  
The plants grow rapidly and begin to attract birds and other seed-dispersers who will also contribute to forest re-growth.
48. Pioneer plants two and a half years later in same French Guiana clearing  
Three years later the scars have begun to heal, thanks to the process begun by bats.
49. *Artibeus jamaicensis* carrying an allspice berry  
Many plants that rely on bats are also of great economic value. Seventy percent of the fruit in Latin American markets come from plants that, in the wild, rely on bats to carry their seeds or pollinate their flowers.
50. Market showing fruits from bat-dependent plants  
These include: bananas, plantain, breadfruit, avocados, mangoes, and guanabana.
51. *Artibeus jamaicensis* on balsa flower  
Many timber trees, such as this balsa, also depend on bats for their successful reproduction.
52. Sonoran desert showing three species of columnar cacti  
Even in Latin America's deserts, some of the most important plants rely on bats.

53. *Leptonycteris curasoae* approaching saguaro flower Approaching a saguaro cactus flower, this lesser long-nosed bat
54. *Leptonycteris curasoae* with head in saguaro flower enters the bloom for less than a second. During its brief stay,
55. *Leptonycteris curasoae* with head in cutaway of saguaro flower its head forms a perfect lock and key fit with the blossom.
56. Agave plant in bloom on desert hillside Many other flowers of desert plants are similarly adapted for bat pollination,
57. *Leptonycteris curasoae* pollinating agave flowers producing their nectar at night. Both cacti and the *Agave* -- from which tequila is made --
58. Gila woodpecker at nest hole in cardon cactus provide either homes of food for many other animals, such as this Gila woodpecker.
59. *Leptonycteris curasoae* feeding on cardon fruit Because these bats are endangered, the survival of cacti, agaves, and all the animals that depend on them is also threatened.
60. *Leptonycteris curasoae* roosting in cave Long-nosed bats live in caves and in hollow trees, where they unfortunately are often killed by people who mistakenly believe they are vampires.
61. *Desmodus rotundus* in flight The true vampire bat feeds on a variety of livestock. It lives in many parts of Latin America, where it is
62. *Desmodus rotundus* walking on hind legs the only bat that can walk on its hind legs. Agility and speed are necessary for these tiny creatures, who must avoid being harmed by prey animals thousands of times their size.
63. *Desmodus rotundus* feeding on a chicken The vampire makes a small, painless incision with its exceptionally sharp teeth. An anticoagulant in its saliva enables the bat to drink until it's full.
64. *Desmodus rotundus* portrait Out of nearly 1000 kinds of bats worldwide, the common vampire bat of Latin America is the only one that feeds on the blood of mammals. Fortunately the vampire is easily identified.
65. Graphic of vampire identification It has a body about 9cm long and never has a tail or noseleaf. All other bats in Latin America have either noseleaves or at least short tails.
66. *Desmodus rotundus* caught in mist net Where vampires harm domestic animals, they can be caught quite easily in a fine-meshed net set near where the bitten animals sleep. Captured bats that have no nose-leaves or tails are vampires.

67. <i>Desmodus rotundus</i> being pasted with anti-coagulant paste	After a poisonous paste is applied to their backs, the vampires are released.
68. <i>Desmodus rotundus</i> caught in mist net	When these bats return to their roosts, other vampires will lick and groom them, thereby poisoning the entire colony.
69. Vampire bites being pasted with poison	Sometimes it is easier to put the vampire poison directly on bitten animals at sundown. Vampires will return and feed from the same wounds and be poisoned. This technique is very effective and never harms other bat species.
70. <i>Desmodus rotundus</i> bats roosting in cave	Vampires generally live in small colonies.
71. <i>Tadarida brasiliensis</i> roosting in cave	Wherever many bats live together, few if any are vampires.
72. <i>Macrotus waterhousii</i> carrying a katydid	Killing all bats is a great mistake, since most are extremely valuable for their help in controlling insects,
73. <i>Artibeus lituratus</i> pollinating <i>Pseudobombax</i> flower	in pollinating flowers,
74. <i>Uroderma bilobatum</i> in flight with wild fig	and in carrying seeds that replenish our forests.
75. <i>Vampyroides carracioloii</i> eating fig	Bats are our friends and allies,
76. <i>Glossophaga commersoni</i> coming to <i>Macuna</i> flower	and many Latin American varieties live nowhere else in the world.
77. <i>Leptonycteris curasoae</i> approaching cactus flower	Where ever bats are found, they are essential to nature's delicate web of life.
78. <i>Artibeus jamaicensis</i> coming to red almond	Bats are an important part of our natural heritage,
79. <i>Tadarida plicata</i> emergence	contributing greatly to the quality of life throughout Latin America.
80. <i>Ectophylla alba</i> in tent	Credit Slide.