

A close-up photograph of a lemur, likely a Red Ruffed Lemur, climbing a green bamboo stalk. The lemur has a black face with striking orange eyes, a black nose, and a black mouth. Its fur is a mix of grey, white, and orange. It is gripping the bamboo with its hands and feet. The background is dark and out of focus, showing some green leaves.

ALLIANCE FOR
Zero Extinction

Pinpointing and Preventing Imminent Extinctions

Introduction

The Alliance for Zero Extinction (AZE), a joint initiative of 52 biodiversity conservation organizations, aims to prevent extinctions by identifying and safeguarding key sites, each one of which is the last remaining refuge of one or more Endangered or Critically Endangered species.

AZE's goal is to create a front line of defense against extinction by eliminating threats and restoring habitat to allow wildlife populations to rebound.

Extinction can be a natural process, but human activities have led to global extinction rates that are between 100 and 1,000 times higher than those typical of "recent" millennia. Habitat loss, commercial exploitation, disease, and the introduction of invasive species have reduced populations and ranges, and increased the extinction risk for an ever-increasing proportion of the approximately 26,000 species of terrestrial vertebrates. Unless we stem the tide, our descendants will inherit a biologically impoverished world, look back with regret, and wonder why their parents and grandparents did not act while they still could.

The purpose of our alliance is to identify sites in most urgent need of conservation, and act together to prevent species extinctions. Because time is running out for many important sites, our science must be iterative: it must begin with the crises we know about, and expand its focus as new information emerges on the status of species and their habitats.

To date, AZE has identified 595 sites that each represent the last refuge of one or more of the world's most highly threatened species. This report presents an overview of these sites, and explains how they were identified and how they can be protected. We hope that this information will prompt a renewed worldwide effort to prevent extinctions. We welcome the participation of any group or individual sharing our concern for the future of our planet's biodiversity, and wishing to help in this vital global endeavor.

The Alliance wishes to thank the many groups and individuals that have made the AZE effort to date possible. Please visit the AZE Website at www.zeroextinction.org for a complete list of contributors and references, a recommended citation for this report, more details about AZE's methodology, and a complete, searchable database of AZE sites.

www.zeroextinction.org



This report provides a summary of the Alliance for Zero Extinction (AZE), its members, supporters, goals, methods, findings to date, and recommendations. AZE sites have been divided into seven biogeographic regions, each of which is profiled here with sites and species examples. A complete, searchable database of AZE sites can be found by visiting www.zeroextinction.org.

Marvelous spatuletail *Loddigesia mirabilis*
Peru/Pomacochas
Photo by Heinz Plenge

AZE's approach

AZE is an alliance of like-minded organizations working toward a common goal: averting human-induced species extinctions.

AZE is first focusing on species that face extinction either because their last remaining habitat is being degraded at a local level, or because their tiny global range makes them especially vulnerable to external threats. Outside the scope of the Alliance, many AZE members are also working to protect highly endangered species that are more wide-ranging and require different conservation measures.



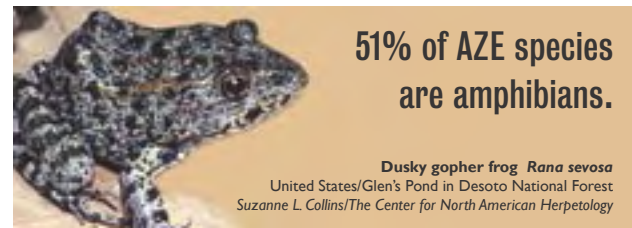
AZE used the following criteria to identify priority sites (a site must meet all three to qualify):

1. **Endangerment.** An AZE site must contain at least one Endangered (EN) or Critically Endangered (CR) species, as listed on the IUCN Red List.
2. **Irreplaceability.** An AZE site should only be designated if it is the sole area where an EN or CR species occurs, contains the overwhelmingly significant known resident population of the EN or CR species, or contains the overwhelmingly significant known population for one life history segment (e.g. breeding or wintering) of the EN or CR species.
3. **Discreteness.** The area must have a definable boundary within which the character of habitats, biological communities, and/or management issues have more in common with each other than they do with those in adjacent areas.

Additional information regarding the application of these guidelines is provided on the AZE Website at: www.zeroextinction.org.

AZE scientists working in collaboration with an international network of experts have so far identified 595 such sites that must be effectively protected to prevent the extinction of 794 of the world's most endangered species (many sites have more than one AZE "trigger species" confined to them).

To date, AZE has identified sites for those taxonomic groups that have been globally assessed for threat level: mammals, birds, some reptiles (crocodilians, iguanas, turtles, and tortoises), amphibians, and conifers. Other



taxa will be added as data become available. By drawing global attention to these areas, we aim to prevent the most imminent species extinctions. Once a systematic effort to conserve these sites and species is underway, AZE will expand its focus to additional areas, and wider-ranging highly threatened species.

How does AZE fit in with other global conservation initiatives?

Conservation scientists are rapidly developing maps and databases that enhance our ability to set and agree on global biodiversity conservation priorities. Biodiversity features that figure prominently in these efforts include: areas that contain the entire global population of a highly threatened species; regions that contain the highest levels of species endemism; the biologically richest and most threatened hotspots; the most biologically distinct and intact terrestrial, freshwater, and marine ecoregions; and areas that support globally outstanding biological phenomena (such as animal migration bottlenecks, and dense breeding aggregations).

AZE addresses the first of these categories, and complements existing conservation efforts by focusing on a smaller spatial scale and shorter time horizon. Many priority-setting programs identify areas where large-scale sustained efforts will help ensure the conservation of the full range of biodiversity over the long term; AZE maps the specific locales where extinctions will occur first without action.

To conserve representative biodiversity for the future, we must focus on large landscapes as well as smaller key sites. AZE provides a global blueprint for the most urgent set of these key sites to protect.



AZE: Global results overview

AZE Species by taxa



Clockwise from right: *Hyla tapichalaca*/Tapichalaca, Ecuador/Photo by Jose Coloma; Maui parrotbill *Pseudonestor xanthophrys*/East Maui Watershed, United States/Photo by Zoological Society of San Diego; bridled nail-tailed wallaby *Onychogalea fraenata*/Taunton National Park, Australia/Photo © Dave Watts; Mulanje cedarwood *Widdringtonia whytei*/Mulanje Massif, Malawi/Photo by Craig Hilton-Taylor; smooth green snake *Ophedrys vernalis*/Photo by USFWS.

Countries with most AZE Sites

Mexico	63
Colombia	48
Brazil	39
Peru	31
Indonesia	29
China	23
Ecuador	19
Australia	18
Cuba	18
United States	18
Venezuela	18
India	16
Madagascar	16
Honduras	14
Philippines	11
Guatemala	9

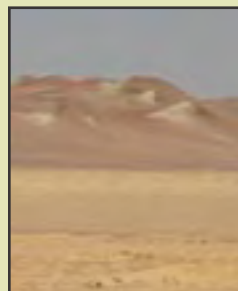
Yellow-eared parrot *Ognorhynchus icterotis*
Colombia/Reservas Comunitarias Roncesvalles
Photo by Fundación ProAves, www.proaves.org.

AZE Sites by biome

Photos by Mike Parr



Tropical moist forest—361 sites



Deserts and grassland—101 sites



Temperate and boreal forest—57 sites



Tropical dry forest—39 sites



Tropical coniferous forest—37 sites

AZE Site median size



29,000 acres, or 1.2%
the size of Yellowstone
National Park, United States

Photo by S.R. Brantley, USGS



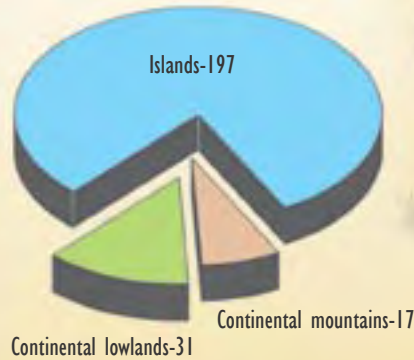
AZE Sites with five or more trigger species

Massif de la Hotte, Haiti	13
Sierra Nevada de Santa Marta, Colombia	9
Chatham Islands, New Zealand	8
Mont Nimba, Côte d'Ivoire, Guinea, Liberia	6
Sierra Norte, Mexico	6
Morningside, Sri Lanka	6
Alakai Plateau, United States	5
East Maui Watershed, United States	5
Los Tuxtlas, Mexico	5
Mount Oku, Cameroon	5
Parques Nacional Turquino and La Bayamesa, Cuba	5
Santa Tereza Municipality, Brazil	5
Udzungwa Mountains, Tanzania	5

Rodrigues flying fox *Pteropus rodricensis*
Mauritius/Rodrigues
Photo by Thomas Kunz

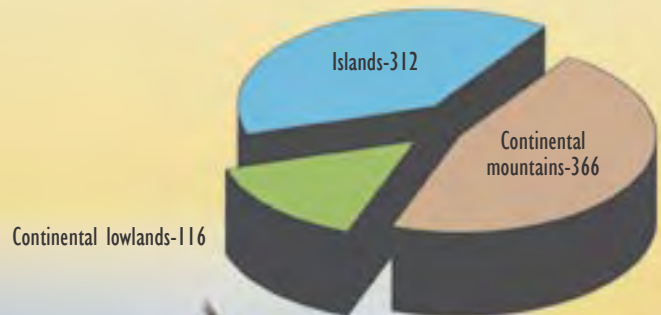
The extinction wave builds and heads to the continents

Known vertebrate extinctions in the past 500 years



Dodo, from "A German Menagerie Being a Folio Collection of 1100 Illustrations of Mammals and Birds" by Edouard Poppig, 1841.

AZE species currently facing imminent extinction



Yellow-eared parrot
Ognorhynchus icterotis
Colombia/Reservas Comunitarias Roncesvalles
Photo by Fundación ProAves, www.proaves.org.

Protected vs unprotected AZE Sites

Protection Status	No. of Sites
Protected	204
Partially Protected	86
Unprotected	257
Protected status currently unknown	48



Spectacled petrel *Procellaria conspicillata*
United Kingdom Overseas Territory/Inaccessible Island
Photo by Peter Ryan

AZE Sites and Species Examples from the Region



Worthen's sparrow *Spizella wortheni*
Mexico/Salttillo savanna
Photo by Ray Bieber

Volcano rabbit *Romerolagus diazi*
Mexico/Sur del Valle de México
Photo by Alejandro Velázquez

Ramsey Canyon leopard frog
Rana subaquavocalis
United States/Huachuca Mountains
Photo courtesy of the Phoenix Zoo

North America

Biogeography

This AZE region is made up of Canada, the United States (excluding Hawai'i), Mexico, and the islands of Bermuda in the western Atlantic Ocean. These countries contain an array of habitat types from the vast expanses of Arctic tundra, boreal forests, and lakes in the north; to mountain ranges that extend from the western United States down through Mexico; open grasslands in the center of the continent; and extensive deciduous forests along the eastern coastal belt. Large arid areas and deserts also cross south into Mexico, and significant tracts of tropical moist forest occur in the southern part of the region, especially in the Yucatan Peninsula.

A major feature of the region's ecology is the annual migration of more than one billion neotropical migratory birds which spend the winter principally in Mexico, the Caribbean, and northern South America, and return to breed as far north as the Arctic Circle.

AZE Sites and Species

Many of North America's AZE species exist on isolated islands. A cluster of islands off Mexico's Baja Peninsula supports a wide variety of endemic species, including the Bryant's woodrat (Isla Cedros) and Slevin's mouse (Isla Santa Catalina). Other AZE island species in the North American region include Socorro mockingbird, Cozumel coati, Bermuda cedar, and Vancouver Island marmot.

The Sierra Madre Occidental, Oriental, and Norte mountain ranges of Mexico support a diverse mixture of pine-oak, cloud forest, and desert-like habitats. AZE species found

in these rugged mountains include the Tuxtla quail-dove and Tehuantepec jackrabbit.

The southern United States contains a number of AZE sites sheltering species such as the Alabama red-bellied turtle and yellow-blotched map turtle. The exciting, recent rediscovery of the ivory-billed woodpecker in the Cache River area of Arkansas will result in the designation of an additional AZE site in this area.

The Colorado Plateau and the taiga of north-central Canada contain two other well-known AZE species: the Gunnison sage-grouse and the whooping crane.

Threats

Loss of habitat, conversion of land for agriculture, and introduced invasives are the biggest threats to AZE sites and species in this region.

Total AZE sites in region: 79

Total AZE species in region: 100

Country with most AZE sites: Mexico: 63

Site with most AZE species: Sierra Norte, Mexico: 6

Only 40% of sites in the region are known to have any legal protection

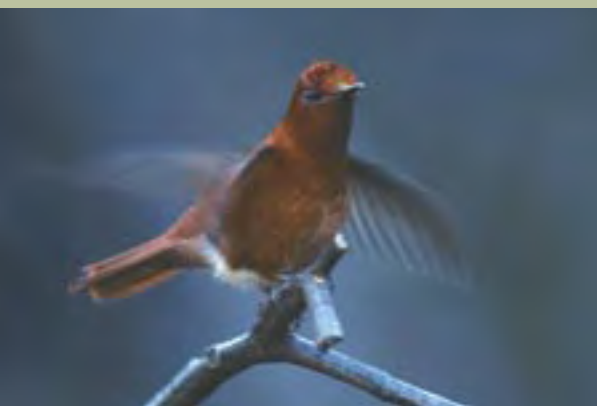
Ivory-billed woodpecker
Campephilus principalis

United States/Cache River area

Photo by Arthur Allen, colorized by George M. Sutton/
Cornell Lab of Ornithology



AZE Sites and Species Examples from the Region



Fuertes's parrot *Hapalopsittaca fuertesi*
Colombia/Reserva Natural El Mirador
Photo by Fundación ProAves, www.proaves.org

Golden poison frog *Phyllobates terribilis*
Colombia/Rio Saija
Photo by John White/CalPhoto

Juan Fernández firecrown
Sephanoides fernandensis
Chile/Isla Robinson Crusoe
Photo by James Ownby

Though climate change will likely cause extinctions in the longer term, AZE sites face many more immediate threats. We do not yet know what future technologies may help lessen the threat from climate change, but unless we act now, we do know that AZE sites and species are unlikely to still be around to benefit from them.

Caribbean, and Central and South America

Biogeography

This hugely diverse region reaches south from the Mexico–Guatemala border in the north to Cape Horn, Chile, in the south. It includes the isolated archipelagos of Galapagos and Juan Fernández, and the Caribbean islands.

The region is characterized by a highly varied topography and ecosystem diversity, which includes the high peaks of the Andes, vast tracts of lush lowland tropical forests, dry forests, high deserts and lakes, extensive wetlands, seasonally flooded grasslands, and extensive coastal mangrove forests.

AZE Sites and Species

This region’s biodiversity is characterized by exceptional levels of speciation among birds, plants, and amphibians. Several hummingbirds (a group unique to the Americas), and amphibians are micro-endemics, occurring in tiny ranges as small as individual mountains or valleys.

Several large clusters of AZE sites are found in the region. The Andes combine high species diversity and a high concentration of micro-endemics. AZE sites stretching from Colombia through Chile and Argentina harbor a wide variety of AZE species, including the Dahl’s toad-headed turtle, mountain grackle, sapphire-bellied hummingbird, and many amphibian species.

Massif de la Hotte, a mountainous region in the southwestern corner of Haiti, contains the most AZE species of any site in the region, all of which are amphibians.

Another cluster of AZE sites is found in Brazil’s Atlantic forests, which also have a

very high level of endemism, and lie in close proximity to some of the most populated regions on the planet.

The Caribbean islands have many endemic species, but like many other islands, are jeopardized by increasingly heavy development. Some of the larger islands, such as Hispaniola, have multiple AZE sites.

Threats

AZE sites in this region are under increasing pressure from fast-growing human populations, and the associated problems of habitat clearance and agricultural development.

Additional threats to this region include road building, mining, and oil and other resource extraction.

Total AZE sites in region: 250

Total AZE species in region: 332

Country with most AZE sites: Colombia: 48

Site with most AZE species: Massif de la Hotte, Haiti, with 13 (all amphibians)

Only 40% of sites in the region are known to have any legal protection

Background photo/Paul Salaman

Jamaican ground iguana *Cyclura collei*
Jamaica/Hellshire Hills

Photo by Glenn Gerber, Zoological Society of San Diego



AZE Sites and Species Examples from the Region



Chinese alligator *Alligator sinensis*
China/Anhui Chinese Alligator National Nature Reserve
Photo by John White/CalPhoto



Azores bullfinch *Pyrrhula murina*
Portugal/Azores, east of São Miguel
Photo by Leo J. R. Boon/Cursorius



Asia Minor spiny mouse *Acomys cilicicus*
Turkey/Silifke
Photo by Ahmet Karatas

Population viability depends on a complex set of factors. Small populations of many species can persist and recover, as evidenced by the Seychelles magpie-robin, white rhino, Mauritius kestrel, Mauritius parakeet, American bison, whooping crane, Laysan teal, black robin, short-tailed albatross, and California condor.

Europe, Central Asia, and Japan

Biogeography

This has the largest east-west reach of any AZE region, and extends more than halfway around the world. It spans from the tiny islands of the Azores in the east-central Atlantic, encompassing the whole of Europe, the Middle East, north-central Asia, China and Japan, and reaches the north Pacific coast of Siberia at its eastern limit.

The region is bounded on its south-central flank by the world's highest mountain chain, the Himalayas. It also includes three large, mostly land-locked seas, the Caspian, Black, and Mediterranean. It has large tracts of deciduous and coniferous forest, rocky coastline, the giant delta of the Danube River, and large expanses of desert.

The temperate north has many mammal and bird species in common with North America. The two regions were once joined by the Bering Land Bridge, and both people and animals migrated from Eurasia to North America for a lengthy period.

AZE Sites and Species

In general, there are fewer AZE species in temperate latitudes, since micro-endemism is generally less prevalent in these regions.

Emei Shan, a mountain site sacred to Buddhists, is located in the southwest of Sichuan province, China. This relatively undisturbed area, covered with lush bamboo forests, contains the most AZE species of any site in the region. Emei Shan is home to many of China's endemic birds, and several AZE-listed amphibians.

The arid deserts and plains of the Middle East contain several little-known AZE mammal

species: the Iranian jerboa, the Dhofarian shrew (Oman), and the Asia Minor spiny mouse (Turkey).

A number of endemic island species also occur in this region, including the Azores bullfinch (Portugal), Okinawa rail (Japan), and the Sicilian fir (Italy).

Once additional plant taxa have been assessed for the IUCN Red List, it is likely that more AZE sites will be identified in the Mediterranean region, which combines high threat levels with unusually high levels of plant endemism.

Threats

Human development and the resulting loss of habitat are major problems in parts of this region. European and Asian landscapes in particular have been permanently changed by centuries of deforestation and human settlement. Illegal hunting and overgrazing also pose threats to AZE species and sites.

Total AZE sites in region: 49

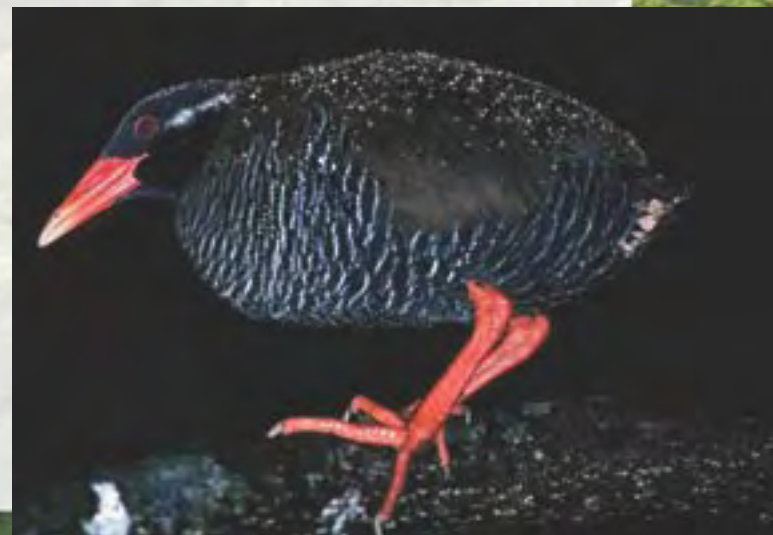
Total AZE species in region: 54

Country with most AZE sites: China: 23

Site with most AZE species: Emei Shan, China, 4

Only 47% of sites in the region are known to have any legal protection

Okinawa rail *Gallirallus okinawae*
Japan/Yambaru, Northern Okinawa forest
Photo by Takuki Hanashiro/BirdLife



AZE Sites and Species Examples from the Region



Giant-striped mongoose *Galidictis grandieri*

Madagascar/Tsimanampetsotsa

Strict Nature Reserve

Photo by Chris Wozencraft

Flat-backed spider tortoise

Pyxis planicauda

Madagascar/Menabe Forest

Photo by John Behler, Bronx Zoo/WCS

Mont Nimba viviparous toad

Nimbaphrynoides occidentalis

Côte d'Ivoire, Guinea, Liberia/Mont Nimba

Photo by Piotr Naskrecki

AZE is not only compatible with other biodiversity conservation approaches, but complementary and mutually reinforcing. AZE maps the specific locales within priority areas where extinctions will, without action, occur first.

Africa and Madagascar

Biogeography

The landscapes represented within this expansive region are extremely diverse. The Sahara Desert dominates the North African countries, giving way to the agriculturally productive Sahel region in the south, which transitions into the lowland forests of West and Central Africa.

To the east, the highly fragmented Guinea forests open into the vast, relatively intact rainforests of the Congo Basin. Their eastern edge is flanked by the Albertine Rift, a series of mountain chains separating the western moist forests from the wooded and savanna mosaics of East Africa.

To the north lie the Ethiopian Highlands, and to the southeast the Eastern Arc Mountains, which continue through the Southern Highlands of Tanzania south to the Chimanimani Highlands of Zimbabwe.

Coastal forest fringes much of eastern Africa, and at its southern edge gives way to the unique Mediterranean fynbos vegetation, with its remarkable floristic endemism.

Madagascar is the world's fourth-largest island. It consists of a series of high central plateaus and mountains, with eastern and southern coastal areas that contain tropical dry forests, deserts, and xeric shrublands.

AZE Sites and Species

Isolated islands and ecologically isolated mountain peaks dominate the bulk of the African AZE sites. There are clusters of sites along the Semandou Range in Guinea, on Mt. Cameroon, and on peaks elsewhere in West Africa. Mont Nimba, which contains the most AZE species of any site in the region, shelters the Mont Nimba viviparous toad, which is the world's only known tailless amphibian that is totally viviparous (bearing live young). Several

other amphibian species and Wimmer's shrew round out the list of AZE species at this site.

The Eastern Arc mountains of Tanzania hold the largest cluster of AZE sites on the African mainland, where AZE species such as the Usambara akalat (an Old World flycatcher), Uluguru bush-shrike, and a variety of amphibian species occur.

The island of Madagascar boasts the most AZE species and sites in the region. Mammals such as the golden-brown mouse lemur and golden-crowned sifaka occur here, along with reptiles such as the angonoka and flat-backed spider tortoise.

Threats

Resource exploitation and habitat destruction pose major threats to AZE sites in this region.

Madagascar suffers from some of the worst land degradation and erosion in the world—only about 17 percent of the original vegetation remains, with most remaining forests now found along the coasts.

Total AZE sites in region: 76

Total AZE species in region: 122

Country with most AZE sites: Tanzania: 9

Site with most AZE species: Mont Nimba, Côte D'Ivoire, Guinea, Liberia, with 6

Only 60% of sites in the region are known to have any legal protection

Golden-crowned sifaka *Propithecus tattersalli*
Madagascar/Daraina Forest
Photo by David Haring/Duke University Primate Center



AZE Sites and Species Examples from the Region



Kirthisinghe's rock frog
Nannophrys marmorata
Sri Lanka/Knuckles Forest Reserve
Photo by Don Church

Caerulean paradise-flycatcher
Eutrichomyias rowleyi
Indonesia/Gunung Sahendaruman
Photo by Jon Riley/BirdLife

Roti Island snake-necked turtle
Chelodina mccordi
Indonesia/Roti Island
Photo by R. Andrew Odum, The Toledo Zoo

Indo-Malaya

Biogeography

The continental portion of this region encompasses the Indian subcontinent and continues east to include Indochina and peninsular Malaysia. The region also extends south and east to include the Philippine and Indonesian archipelagos, though it does not include New Guinea, which is grouped with Australasia and the Pacific by AZE. The region's northernmost border is formed by the towering Himalayan mountain range, which contains a broad variety of alpine meadows, temperate broadleaf and coniferous forests, and grasslands.

The Indian subcontinent and Indochina contain vast swaths of moist forest, tropical savanna, and extensive arid areas. Flooded grasslands and mangroves are concentrated around the deltas of the region's largest rivers. The Philippine and Malaysian-Indonesian archipelagos are dominated by tropical forest. Muddy shores are lined with mangroves, which give way to large peat-swamp forests inland. Montane and subalpine forests, dominated by rhododendrons, cover the mountains.

AZE Sites and Species

AZE species in India include the pygmy hog, Peter's tube-nosed bat, and the Andaman shrew. The Western Ghats contain a number of AZE-listed amphibians.

The tropical rainforests of Morningside, Sri Lanka contain the greatest number of AZE species of any site in this region, most of which are amphibians. In total, the island is home to more than 100 species of frog.

Approximately 17 percent of the world's bird species occur in the Indonesian archipelago. AZE species include the Bali starling, red-and-blue lory, Siau scops-owl, and Banggai crow.

Threats

AZE sites in the Indo-Malayan region are threatened primarily by human population growth and habitat conversion.

The forests of the Western Ghats and Sri Lanka have been dramatically impacted by the demand for timber and agricultural land. The remaining forests are heavily fragmented. Agriculture, logging, and poaching are continuing threats to the region's protected areas.

Total AZE sites in region: 72

Total AZE species in region: 98

Country with most AZE sites: Indonesia: 29

Site with most AZE species: Morningside Plains, Sri Lanka: 6

Only 49% of sites in the region are known to have any legal protection

Javan rhinoceros *Rhinoceros sondaicus*
Indonesia/Ujung Kulon
Photo by Klaus Lang



AZE Sites and Species Examples from the Region



Puaiohi *Myadestes palmeri*
United States/Alakai'i Plateau, Kaua'i
Photo by Jim Denny

Northern hairy-nosed wombat
Lasiorhinus krefftii
Australia/Epping Forest National Park
Photo by Alan Horsup, Queensland Parks & Wildlife Service

Conifer *Dacrydium guillauminii*
New Caledonia/Plaine des Lacs
Photo by Timothy Waters

If we are to save the broad range of biodiversity on Earth, we cannot do so only by saving areas that have the largest number of species, or solely by saving areas that are not degraded. Many species are confined to small, highly threatened areas. To ignore conservation of these species and sites would also result in significant and irreversible biodiversity loss.

Australasia and Pacific

Biogeography

Encompassing the terrestrial habitats scattered across the Pacific Ocean, this region includes the Australian continent, the islands of New Guinea and New Zealand, Melanesia, Micronesia, Polynesia, and the Hawaiian Islands.

There are a considerable variety of habitats represented across the region. Australia contains extensive deserts, grasslands, and forests. New Guinea, to the north, is the world's second largest island, and is one of just three major tropical rainforest wilderness areas on the planet. The islands of the Solomons, New Guinea, Vanuatu, and New Caledonia are among the world's outstanding natural laboratories for species evolution. New Zealand encompasses subtropical to subantarctic habitats.

AZE Sites and Species

Australia is well known for its species uniqueness and diversity. The Great Dividing Range, a series of mountains and plateaus curving along the eastern coast, encompasses a cluster of AZE sites with species such as tapping nursery-frog, armored frog, and Wollemi pine.

All the island archipelagos in the region exhibit high levels of endemism. New Zealand's Chatham Islands hold the most AZE species for a single site in the region, and includes endemics such as Forbes's parakeet, Chatham Island oystercatcher, shore plover, and Chatham Island shag.

The Hawaiian honeycreepers are a striking example of adaptive radiation—over 30 species are believed to have evolved from a single North American finch ancestor. Unfortunately, 14 of these unique species have already gone extinct, the most recent likely being the Po'o-uli in November, 2004. AZE bird species

on the Hawaiian Islands include the akeke'e, puaiohi, akikiki, and the Maui 'alauahio.

Threats

Humans arrived in Australia and the then-connected island of New Guinea between 40,000 and 70,000 years ago. Species that were vulnerable to human exploitation and invasive species were driven to extinction soon thereafter.

Introduced and invasive species remain a huge problem in this region. The introduction of rats, pigs, goats, feral cats, and mongooses has had a devastating effect on small vertebrate populations on many islands. In Hawai'i, birds are also threatened by avian pox and malaria, spread by introduced mosquitoes.

A classic example of an alien species invasion is the inadvertent introduction of the brown tree snake to Guam in the early 1950s. The snake arrived on the island with military ships and thrived there, eventually causing the extinction of nine native bird species and all endemic lizard species.

Total AZE sites in region: 66

Total AZE species in region: 85

Country with most AZE sites: Australia: 18

Site with most AZE species: Chatham Islands, New Zealand, with 8

Only 57% of sites in the region are known to have any legal protection

Kakapo *Strigops habroptilus*
New Zealand/Codfish Island
Photo by Don Merton



Oceanic Islands

Biogeography

Three isolated oceanic islands are so far removed from continental land masses that they deserve mention in this separate section. Two are United Kingdom Overseas Territories: Gough and Inaccessible Islands, which are part of the South Atlantic's Tristan da Cunha group. Amsterdam Island, in the extreme south of the Indian Ocean, belongs to France.

Along with their biodiversity value, these “natural laboratories” are bleak, windswept, and ruggedly beautiful sites that should be kept as close to pristine as possible as a natural legacy for the future.

AZE Species

The AZE species found on these islands are the Tristan and Amsterdam albatrosses and spectacled petrel. Although the islands are triggered by just these three species, each one is also vitally important for a host of other less endangered, but equally unique flora and fauna, that have evolved from colonizing ancestors in perfect isolation over the millennia.

These species have developed in largely predator-free environments. The introduction of additional alien predators could lead to sudden and disastrous population crashes.

Threats

Maintaining the delicate ecological balance of each of these AZE oceanic islands, and preventing the introduction of new invasive species are top conservation priorities.

On Gough Island, introduced house mice are preying on sea-bird eggs and chicks, including those of the endangered Tristan albatross. According to researchers, there are now approximately 700,000 mice on Gough Island.

Amsterdam is the most degraded of the islands, with extensive deforestation, large-scale historic sealing operations, and introduced cats and rats.



Amsterdam albatross
Diomedea amsterdamensis
French territory/Plateau des Tourbières, Amsterdam Island
Photo by Jean-Yves Georges

Total AZE sites: 3

Total AZE species: 3

Country with most AZE sites: United Kingdom: 2

Site with most AZE species: All have 1

100% of the sites have legal protection

Background photo/Mike Parr



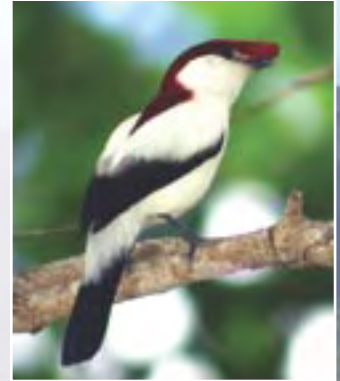
Spectacled petrel *Procellaria conspicillata*
United Kingdom Overseas Territories/Inaccessible Island
Photo by Peter Ryan

Call to Action

The 595 sites identified by AZE are a vital part of our global natural heritage, and a part that will soon be lost to us and to our descendants unless we act now.

The 52 member groups of AZE call on the global conservation community, national governments, corporations, academic institutions, private individuals, and non-governmental organizations to help safeguard AZE sites as an urgent global priority. Specifically:

- ❖ We invite all of the world's governments that are the custodians of AZE sites to work with us to fully safeguard those sites and the unique species they contain.
- ❖ We call on funding and lending institutions to help provide the necessary financial support to make AZE site conservation possible, and to avoid supporting actions that would further endanger these sites.
- ❖ We invite the world's scientists to help us further study AZE sites and species, to rediscover those AZE species that have not been recorded recently and determine their conservation needs, and to continue building and refining the list of AZE sites.
- ❖ We invite the zoo community to support on-the-ground conservation projects, and to establish captive-breeding programs where needed, to provide a lifeline for species that are on the verge of extinction.
- ❖ We invite biodiversity conservation organizations to join AZE and to develop projects and programs in collaboration with their national governments to safeguard the sites and species identified.
- ❖ We invite the public at large to provide financial support to projects and organizations that safeguard AZE sites. To learn more about specific AZE projects, and to obtain contact information for AZE member groups, please visit www.zeroextinction.org.



Photos, top to bottom:
Araripe manakin
Antilophia bokermanni
Brazil/Chapada do Araripe
Photo © Paul Noakes/BirdLife International

Aneгада ground iguana
Cyclura pinguis
British Virgin Islands/Aneгада Island
Photo by Glenn Gerber, Zoological Society of San Diego

Pygmy hog
Sus salvanius
India/Manas National Park
Photo by Goutam Narayan

AZE Member Groups



Charles Darwin Foundation • Hawai'i Endangered Bird Conservation Program • Instituto Ecologia Aplicata • NOË Conservation
Wildlife Conservation • Environmental Development Association of Ethiopia.

Alliance for Zero Extinction members are grateful to the following supporters:

American Bird Conservancy	Ben Hammett	National Science Foundation
American Zoo and Aquarium Association	The Regina Bauer Frankenberg Foundation for Animal Welfare	NatureServe
The Beneficia Foundation	The John D. and Catherine T. MacArthur Foundation	The Nature Conservancy
BirdLife International's Founder Patrons and Rare Bird Club	MAYA Foundation	US Department of State
Conservation International	George Meyer	Wildlife Conservation Society
Critical Ecosystem Partnership Fund	Gordon and Betty Moore Foundation	World Parks
Disney Foundation	Moore Family Foundation	WWF
Fauna & Flora International	National Audubon	

Cover photo:
Golden-crowned sifaka
Propithecus tattersalli
Madagascar/Daraina Forest
Photo by David Haring/Duke University Primate Center