

## Toward a World Rhino Vision 2020

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An official “World Rhino Vision 2020” has yet to be compiled by the international wildlife conservation community. However, any strategy of this nature would have to address some very basic issues, including the degree to which the threats and logistics differ for each of the world’s five remaining rhino species. The American Association of Zookeepers (AAZK) is committed to the survival of all rhino species and contributes to this international effort largely through its annual Bowling for Rhinos fundraising activities.

According to AAZK, “The rhino is a large, flagship species. By striving to save the rhino, we save large expanses of habitat. By saving these habitats, we are saving many endangered species, not just the rhino.” This vision transforms what might otherwise be perceived as a single-species approach to a much broader biodiversity conservation strategy. A careful look at the programs and projects supported by AAZK confirms that the Association already is making a significant contribution to biodiversity conservation by using rhinos as flagship species, and that additional opportunities exist to expand that effort in the years ahead.

### **Conservation Status of the Five Rhino Species**

Living members of the Family Rhinocerotidae represent four genera, five species and eight subspecies, two of which exist in such low numbers that they are very likely past the point of no return. Two two-horned genera, *Ceratotherium* and *Diceros*, inhabit Africa and two genera, *Rhinoceros* (one-horned) and *Dicerorhinus* (two-horned) inhabit Asia. The genus *Rhinoceros* contains two species, *unicornis* and *sondaicus*, while the other three genera contain a single species each.

#### **White Rhino**

Africa’s southern white rhino (*Ceratotherium simum simum*) has the largest wild population of any living rhino species, numbering an estimated 20,000 or more animals in nine countries (South Africa, Namibia, Kenya, Zimbabwe, Botswana, Swaziland, Zambia, Uganda and Mozambique), including populations that have been introduced to areas outside the species’ historic range. Several hundred southern white rhinos are also maintained in zoological parks and special breeding centers internationally. By comparison, the northern white rhino (*C. s. cottoni*), was extirpated in its original Central African range and is now represented by only four individuals in Kenya’s Ol Pejeta Conservancy and several others in one North American and one European facility. In terms of significant biological diversity, Africa’s white rhinos represent the Maputaland-Pondoland-Albany Hotspot, an endangered terrestrial ecoregion of southern Africa, as well as four major Wilderness Areas - the Kalahari Desert, Okavango, Miombo Mopane Woodlands and Grasslands, and Serengeti.

The species *Ceratotherium simum* is currently considered Near Threatened according to the IUCN Red List of Threatened Species. The white rhino’s story is one of the world’s most incredible comebacks in the history of wildlife conservation. Down to an estimated low of perhaps one hundred animals or less in South Africa in the late 1800s, white rhino numbers have multiplied by two orders of magnitude over the course of a century, largely due to increased protection, the re-establishment of populations in former habitats, and the introduction of populations to suitable habitats outside the species’ original range. The IUCN African Rhino Specialist Group has identified a number of Key 1 white rhino populations (100

animals or more) in Namibia, South Africa and Zimbabwe, an indication of their importance in the long-term conservation effort for this species. Although total population numbers have grown steadily throughout the white rhino's comeback, the current poaching crisis threatens to halt that growth, and overall numbers may soon begin to decline as deaths surpass births.

### **Black Rhino**

In total, black rhinos (*Diceros bicornis*) number just over 5,000 animals in nine countries (South Africa, Namibia, Kenya, Zimbabwe, Tanzania, Zambia, Malawi, Swaziland and Botswana). The southwestern black rhino, *Diceros b. bicornis*, numbers just under two thousand animals in the wild and is known from only two countries, Namibia, which holds more than three-quarters of the population, and South Africa. It was recently extirpated in Angola and is currently not maintained in captivity. The eastern black rhino, *D. b. michaeli*, numbers approximately 800 animals in the wild. Three-fourths of the population is found in Kenya, with smaller populations in Tanzania and South Africa. This subspecies is well represented in *ex situ* managed breeding programs. Most numerous of the black rhino subspecies is the southern-central form, *D. b. minor*, which numbers more than two thousand animals in South Africa, Zimbabwe, Tanzania, Zambia, Malawi, Swaziland, and Botswana. A fourth subspecies, *D. b. longipes*, was recently driven to extinction in West Africa, the last known individual being reported in Cameroon in 2006. In terms of biological diversity, black rhinos represent the same Hotspots and Wilderness Areas as are white rhinos, serving as flagship species for dozens of other threatened vertebrates.

*Diceros bicornis* is considered Critically Endangered according to the IUCN Red List of Threatened Species. At one time it may have been the most abundant rhino species, with total population estimates in the mid-1900s ranging from 65,000 to 100,000 across much of Sub-Saharan Africa. However, ruthless slaughter over the second half of the 20<sup>th</sup> century reduced numbers to around 2,500 individuals in the early 1990s. At that point, targeted conservation actions were taken, including those supported by the newly-established International Rhino Foundation, with the result that numbers have essentially doubled over the last two decades. Like their white rhino cousins, Africa's black rhinos are highly threatened by the recent increases in poaching for horn. The IUCN African Rhino Specialist Group has identified at least 10 Key I populations in Namibia, South Africa, Zimbabwe and Kenya, including the Ol Pejeta Conservancy, which receives Bowling for Rhinos support in conjunction with the Lewa Wildlife Conservancy. Other threatened vertebrates found in this region are listed in Appendix 1.

### **Greater One-horned Rhino**

Asia's greater one-horned rhino (*Rhinoceros unicornis*) is found in only two countries, India and Nepal, and is often referred to as the Indian rhinoceros. Current population estimates exceed 3,300 individuals, with approximately 80% of the animals inhabiting seven national parks and wildlife sanctuaries in northeastern India, and the rest found in three protected areas in Nepal. The species' range largely coincides with the Himalayan Hotspot.

*Rhinoceros unicornis* is considered Vulnerable according to the IUCN Red List of Threatened Species. Its story bears significant resemblance to that of the southern white rhino. The total population was reduced to perhaps 100-200 animals at the turn of the 20<sup>th</sup> century, partly due to habitat loss, but also to uncontrolled hunting. Protective measures have helped build back numbers in both India and Nepal. An ambitious program, Indian Rhino Vision 2020, has set a goal of increasing the number of rhinos in the state of Assam from approximately 2,500 to 3,000 by the year 2020. This will be accomplished by translocating rhinos from populations that are approaching or exceeding carrying capacity (e.g., Pobitora Wildlife Sanctuary, Kaziranga National Park) to other areas within the species' former range from which rhinos have been extirpated (e.g., Manas National Park, Burachapori Wildlife Sanctuary), but where they now can be better protected. This strategy is proving successful thus far, with rhinos having been re-

established in Manas National Park. At least two dozen rhinos have been translocated since the program was initiated, and 10 calves have been born since September 2012. However, poaching also re-emerged as a threat, with seven animals killed since October 2011. Low levels of poaching have also recorded in other protected areas of Assam during this same time frame, during which neighboring Nepal lost only a handful of rhinos to poachers.

### **Javan Rhino**

The other member of the genus *Rhinoceros*, the Javan rhino, *R. sondaicus*, is the rarest of the world's rhino species. It once ranged from the foothills of the Himalayas, throughout much of mainland Southeast Asia, including Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Lao PDR and Malaysia, and onto the Indonesian islands of Sumatra and Java. The two former Asian mainland subspecies, *R. s. inermis* and *R. s. annamiticus*, are now extinct, the former probably by the mid-1900s and the last known individual of the latter being killed in Vietnam by poachers in 2010. The last *R. s. sondaicus* on Sumatra were probably killed in the 1930s. Ujung Kulon National Park, located on the extreme western tip of Java, is the species' final stronghold. Approximately 50 animals are believed to remain, this population having survived centuries of hunting and one of the world's greatest natural disasters – the 1883 eruption of Krakatau – which flooded much of western Java. No Javan rhinos are maintained in captivity.

The last remaining Javan rhino population resides squarely within the Sundaland Hotspot, which is extremely rich in vertebrate diversity. Javan rhinos share critical lowland tropical forest habitat with at least 25 other threatened terrestrial vertebrates including three amphibians, two reptiles, six birds and 14 other mammals (Appendix 2). In addition to national park personnel, the forests and wildlife of Ujung Kulon are protected by Rhino Protection Units (RPUs) managed by the Rhino Foundation of Indonesia (Yayasan Badak Indonesia or YABI), which receives the bulk of its support from the International Rhino Foundation, with a significant percentage provided by AAZK's Bowling for Rhinos annual fundraising efforts. Four 4-man RPUs currently patrol Ujung Kulon, where these units have maintained a zero-rhino-poaching record since the late 1990s.

Given its extremely small population, the Javan rhino is listed as Critically Endangered by the IUCN. Although anti-poaching efforts have been highly successful, with no reported rhino deaths due to poaching recorded this century, biologists believe that the extent of suitable habitat within the national park may be a significant factor limiting population growth. As a result, an ambitious program is now underway to restore suitable habitat within the park's newly-created Javan Rhino Science and Conservation Area (JRSCA), a 4,000-hectare forest tract where an invasive palm species is being cleared to allow the regrowth of rhino food plants. This project is expected to expand rhino ranges within the national park and increase the carrying capacity for this species. Based on anticipated population growth, surplus animals from Ujung Kulon eventually could be translocated to secondary sites within the species former range, perhaps elsewhere on Java or even on neighboring Sumatra.

### **Sumatran Rhino**

Like the Javan rhino, the Sumatran rhino, *Dicerorhinus sumatrensis*, once roamed across an extensive historic range. The two species, in fact, may have coexisted in a number of areas on mainland Asia and on the island of Sumatra. *D. s. lasiotis* formerly occurred in India, Bhutan, Bangladesh, and Myanmar. While the subspecies may be extinct, unconfirmed reports of its existence in Myanmar persist. The Bornean subspecies, *D. s. harrisoni*, still exists in Sabah, Malaysia and Kalimantan, Indonesia, but in very low numbers in what are considered non-viable populations. *D. s. sumatrensis* formerly occurred in Thailand and Peninsular Malaysia, but is now restricted to three isolated Sumatran populations – Gunung

Leuser National Park in northern Sumatra's mountainous Leuser Ecosystem, and Bukit Barisan Selatan National Park and Way Kambas National Park in southern Sumatra. In total, the wild Sumatran rhino population is now believed to be no more than 100 individuals, representing a significant decline over the past few decades and warranting its Critically Endangered status on the IUCN Red List of Threatened Species. The three Sumatran national parks in which the species remains also harbor a significant number of other threatened terrestrial vertebrates including at least one amphibian, one reptile, 13 birds and 26 other mammals (Appendix 3).

In addition to national park personnel, seven RPUs currently operate in Bukit Barisan Selatan National Park and five more units are employed in Way Kambas National Park, both with support from AAZK's Bowling for Rhinos program. There is also a need for similar efforts in Gunung Leuser. The last recorded rhino poaching incidents in Bukit Barisan Selatan and Way Kambas occurred in 2002 and 2006, respectively, which demonstrate the effectiveness of these protection efforts.

Way Kambas National Park is also home to the 100-hectare Sumatran Rhino Sanctuary, which currently houses five animals, a proven breeding pair, their male offspring, and two mature wild-caught females. Another adult male is currently held at the Cincinnati Zoo and three non-breeding adult animals are maintained at a special facility in Sabah, Malaysia. The majority of these animals potentially factor into a meta-population survival strategy for Sumatran rhinos.

### **Expanding AAZK's Rhino Conservation Role**

Rhino specialists seem to agree that a net annual population increase of at least 3%-5% will be necessary to ensure the survival of the world's five rhino species. This is presently the case for the black and greater one-horned rhinos, and may also be found to be true for the Javan rhino, once estimates from ongoing camera-trap studies are confirmed. Unfortunately, the Sumatran rhino population appears to have declined significantly over the past decade, such that increases projected only a few years ago will not be realized. Also very likely is that white rhino numbers will finally plateau or begin to decline this year as a result of the unrelenting poaching in southern Africa. As a result, efforts to halt current declines must first meet with success before there is any hope of rebuilding wild populations.

Through Bowling for Rhinos, AAZK has been involved in the survival of all five of the world's five rhino species, both in Africa and Asia. In the case of the Javan and Sumatran rhinos, in fact, AAZK-supported protection efforts continue to target roughly 65% of the Sumatran rhino's and 100% of the Javan rhino's remaining world populations. These efforts also benefit dozens of other threatened vertebrate species, including several other charismatic mega-vertebrates such as the Sumatran elephant, Sumatran tiger and Javan leopard.

To ensure the survival of the Sumatran rhino, RPU programs similar to those now operating in Bukit Barisan Selatan National Park and Way Kambas National Park are also being implemented in northern Sumatra's Gunung Leuser National Park. This will not only benefit the resident Sumatran rhino population, but will also add several other threatened species to the list of those receiving protection, including the Sumatran orangutan. Maintaining the zero-rhino-poaching performance of the Bukit Barisan Selatan and Way Kambas RPUs is the highest priority, which may require more "boots on the ground" should rhino ranges and populations expand as hoped, and having a functional program in place in Gunung Leuser in the next 2 years is a reasonable expectation.

In Ujung Kulon National Park, additional RPUs may very well be required over the short-term as the Javan rhino population expands into reclaimed habitat, especially in areas that border large human populations. Searches for habitat suitable to hold a second Javan rhino population are now being planned,

and it will take a number of years before population growth provides a surplus of animals sufficient to support a translocation initiative.

There are excellent opportunities for AAZK to become more directly involved in expanding greater one-horned rhino populations, particularly under the auspices of Assam's Indian Rhino Vision 2020 program. Beefing up the anti-poaching program in Manas National Park will help ensure the success of reintroduction efforts to date, as will support for building community benefits from the rhino's presence in surrounding communities. In addition, security programs and community-based initiatives will be critical to the success of future reintroductions to protected areas where the species formerly occurred, including the Burachapori Wildlife Sanctuary and Dibru Saikhowa National Park. In addition to greater one-horned rhinos, wildlife protection efforts in this region benefit at least 35 other threatened terrestrial vertebrates including two critically endangered vulture species and the pygmy hog (Appendix 4).

As stated earlier, the Lewa Wildlife Conservancy holds one of the most important black rhino populations in eastern Africa, and AAZK's continued support for its operations is critical, especially as it relates to regional wildlife collaborations in Kenya's Laikipia District. Collaborations with the Ol Pejeta Conservancy, Borana Ranch and community-owned Sera Conservancy will help to expand black rhino numbers, while those with organizations such as the Northern Rangelands Trust target endangered species such as Grevy's zebra. Should there be opportunity for AAZK to expand its support for black rhino conservation efforts beyond this region, consideration might be given to programs that target Key 1 populations of the southern and southwestern black rhino subspecies in Zimbabwe, South Africa or Namibia.

AAZK support for white rhino conservation efforts is directed to the Lewa Wildlife Conservancy and combined with that for black rhinos. Similarly, should there be opportunities for expansion, consideration might be given to direct involvement with high priority populations in southern Africa. For example, Zimbabwe's Bubye Valley Conservancy harbors significant populations of both white and black rhinos and would benefit significantly from increased support of monitoring and protection efforts.

In 2014, AAZK will reach an important milestone, having raised a total of \$5 million for rhino conservation since the inception of Bowling for Rhinos. It's also highly likely that Bowling for Rhinos events this year will surpass the \$500,000 annual goal set several years ago, posing the question of how the continued success and growth of these efforts can best benefit biodiversity conservation efforts in coming years, using rhinos as flagship species. In truth, AAZK need not look any further than its iconic rhino program to save species. By conserving and protecting rhinos, AAZK can save a myriad of other species, and benefit people as well. Hopefully, this review will help formulate an appropriate vision toward that aim.

## Appendix 1: Threatened Terrestrial Vertebrates of the Lewa Wildlife Conservancy

### Birds

Scientific Name	Common English Name	Assessment
<i>Polemaetus bellicosus</i>	Martial eagle	Vulnerable
<i>Sagittarius serpentarius</i>	Secretary bird	Vulnerable
<i>Torgos tracheliotos</i>	Lappet-faced vulture	Vulnerable
<i>Trigonoceps occipitalis</i>	White-headed vulture	Vulnerable
<i>Balearica regulorum</i>	Grey crowned crane	Endangered
<i>Gyps africanus</i>	White-backed vulture	Endangered
<i>Gyps ruppelli</i>	Ruppell's vulture	Endangered
<i>Necrosyrtes monachus</i>	Hooded vulture	Endangered

### Mammals

Scientific Name	Common English Name	Assessment
<i>Acinonyx jubatus</i>	Cheetah	Vulnerable
<i>Hippopotamus amphibius</i>	Hippopotamus	Vulnerable
<i>Loxodonta africana</i>	African elephant	Vulnerable
<i>Panthera leo</i>	African lion	Vulnerable
<i>Equus grevyi</i>	Grevy's zebra	Endangered
<i>Lycaon pictus</i>	African wild dog	Endangered
<i>Diceros bicornis</i>	Black rhino	Critically Endangered

## Appendix 2: Threatened Terrestrial Vertebrates of Ujung Kulon National Park

### Amphibians

Scientific Name	Common English Name	Assessment
<i>Huia masonii</i>	Javan torrent frog	Vulnerable
<i>Kalophryalus minusculus</i>		Vulnerable
<i>Limnonectes macrodon</i>	Fanged River frog	Vulnerable

### Reptiles

Scientific Name	Common English Name	Assessment
<i>Ophiophagus hannah</i>	King cobra	Vulnerable
<i>Python bivittatus</i>	Burmese python	Vulnerable

### Birds

Scientific Name	Common English Name	Assessment
<i>Centropus nigrorufus</i>	Javan coucal	Vulnerable
<i>Leptoptilos javanicus</i>	Lesser adjutant	Vulnerable
<i>Lophura erythrophthalma</i>	Crestless fireback	Vulnerable
<i>Mulleripicus pulverulentus</i>	Great slaty woodpecker	Vulnerable
<i>Pavo muticus</i>	Green peafowl	Endangered
<i>Sturnus melanopterus</i>	Black-winged starling	Critically Endangered

### Mammals

Scientific Name	Common English Name	Assessment
<i>Aonyx cinerea</i>	Asian small-clawed otter	Vulnerable
<i>Arctictis binturong</i>	Binturong	Vulnerable
<i>Lutrogale perspicillata</i>	Smooth-coated otter	Vulnerable
<i>Niviventer cremoriventer</i>	Dark-tailed tree rat	Vulnerable
<i>Nycterus javanica</i>	Javan slit-faced bat	Vulnerable
<i>Rusa timorensis</i>	Javan deer	Vulnerable
<i>Trachypithecus auratus</i>	Javan leaf monkey	Vulnerable
<i>Bos javanicus</i>	Javan banteng	Endangered
<i>Cuon alpinus</i>	Dhole	Endangered
<i>Hylobates moloch</i>	Silvery gibbon	Endangered
<i>Manis javanica</i>	Malayan pangolin	Endangered
<i>Nycticebus javanicus</i>	Javan slow loris	Endangered
<i>Presbytis comata</i>	Javan surili	Endangered
<i>Panthera pardus melas</i>	Javan leopard	Critically Endangered
<i>Rhinoceros sondaicus</i>	Javan rhinoceros	Critically Endangered

**Appendix 3: Threatened Terrestrial Vertebrates of Bukit Barisan Selatan and Way Kambas National Parks, Sumatra**

Scientific Name	Common English Name	Assessment	Bukit Barisan	Gunung Leuser	Way Kambas
<b>Amphibians</b>					
<i>Limnonectes macrodon</i>	Fanged River frog	Vulnerable			1
<b>Reptiles</b>					
<i>Oligodon pulcherrimus</i>		Vulnerable		1	
<i>Ophiophagus hannah</i>	King cobra	Vulnerable	1	1	1
<b>Birds</b>					
<i>Alcedo euryzona</i>	Blue-banded kingfisher	Vulnerable	1	?	1
<i>Caprimulgus concretus</i>	Sunda nightjar	Vulnerable	1	?	1
<i>Centropus rectunguis</i>	Short-toed coucal	Vulnerable	1	?	1
<i>Cochoa beccarii</i>	Sumatran cochoa	Vulnerable		1	
<i>Cyornis caerulatus</i>	Sunda blue flycatcher	Vulnerable	1	?	1
<i>Garrulax bicolor</i>	Sumatran laughingthrush	Vulnerable	?	1	
<i>Leptoptilos javanicus</i>	Lesser adjutant	Vulnerable	?		1
<i>Lophura erythrophthalma</i>	Crestless fireback	Vulnerable	1	?	1
<i>Lophura hoogerwerfi</i>	Aceh pheasant	Vulnerable		1	
<i>Lophura inornata</i>	Salvadori's pheasant	Vulnerable	1		?
<i>Melanoperdix niger</i>	Black partridge	Vulnerable	1	?	1
<i>Nisaetus nanus</i>	Wallace's hawk-eagle	Vulnerable	1	?	1
<i>Pitta schneideri</i>	Schneider's pitta	Vulnerable		1	
<i>Pitta venusta</i>	Black-crowned pitta	Vulnerable	?	?	?
<i>Pycnonotus zeylanicus</i>	Straw-crowned bulbul	Vulnerable	?	?	
<i>Tringa guttifer</i>	Nordmann's greenshank	Endangered		?	1
<i>Cairina scutulata</i>	White-winged wood duck	Endangered	1	1	1
<i>Ciconia stormi</i>	Storm's stork	Endangered	1	?	1
<i>Carpococcyx viridis</i>	Sumatran ground cuckoo	Critically Endangered	1		
<i>Cyornis ruckii</i>	Rueck's blue flycatcher	Critically Endangered		?	

## Mammals

Scientific Name	Common English Name	Assessment	Bukit Barisan	Gunung Leuser	Way Kambas
<i>Aonyx cinerea</i>	Asian small-clawed otter	Vulnerable	1	1	1
<i>Arctictis binturong</i>	Binturong	Vulnerable	1	1	1
<i>Capricornis sumatraensis</i>	Sumatran serow	Vulnerable	1	1	
<i>Dyacopterus brooksi</i>	Brook's Dyak fruit bat	Vulnerable	1	1	1
<i>Helarctos malayanus</i>	Malayan sun bear	Vulnerable	1	1	1
<i>Hemigalus derbyanus</i>	Banded civet	Vulnerable	1	1	1
<i>Lutrogale perspicillata</i>	Smooth-coated otter	Vulnerable	1	1	1
<i>Macaca nemestrina</i>	Pig-tailed macaque	Vulnerable	1	1	1
<i>Maxomys rajah</i>	Rajah spiny rat	Vulnerable	1	1	1
<i>Maxomys whiteheadi</i>	Whitehead's spiny rat	Vulnerable	1	1	1
<i>Neofelis diardi</i>	Sunda clouded leopard	Vulnerable	1	1	
<i>Nesolagus netscheri</i>	Sumatran striped rabbit	Vulnerable	1	1	
<i>Niviventer cremoriventer</i>	Dark-tailed tree rat	Vulnerable	?	?	1
<i>Nycticebus coucang</i>	Greater slow loris	Vulnerable	1	1	1
<i>Pardofelis marmorata</i>	Marbled cat	Vulnerable	?	1	
<i>Petinomys genibarbis</i>	Whiskered flying squirrel	Vulnerable	1	1	1
<i>Petinomys setosus</i>	Temminck's flying squirrel	Vulnerable	1	1	1
<i>Presbytis thomasi</i>	Thomas's langur	Vulnerable		1	
<i>Rattus hoogerwerfi</i>	Hoogerwerf's rat	Vulnerable		1	
<i>Rusa unicolor</i>	Sambar	Vulnerable	1	1	1
<i>Tarsius bancanus</i>	Horsfield's tarsier	Vulnerable	1		1
<i>Cuon alpinus</i>	Dhole	Endangered	1	1	
<i>Cynogale bennettii</i>	Sunda otter civet	Endangered	1	?	1
<i>Hylobates agilis</i>	Agile gibbon	Endangered	1		1
<i>Hylobates lar</i>	White-handed gibbon	Endangered		1	
<i>Manis javanica</i>	Malayan pangolin	Endangered	1	1	1
<i>Pteromyscus pulverulentus</i>	Smoky flying squirrel	Endangered	1	1	1
<i>Symphalangus syndactylus</i>	Siamang	Endangered	1	1	1
<i>Tapirus indicus</i>	Malayan tapir	Endangered	1		1
<i>Dicerorhinus s. sumatrensis</i>	Sumatran rhinoceros	Critically Endangered	1	1	1
<i>Elephas maximus sumatrensis</i>	Sumatran elephant	Critically Endangered	1	1	1
<i>Panthera tigris sumatrensis</i>	Sumatran tiger	Critically Endangered	1	1	1
<i>Pongo abelii</i>	Sumatran orangutan	Critically Endangered		1	

## Appendix 4: Threatened Terrestrial Vertebrates of Assam, northeastern India

### Amphibians

Scientific Name	Common English Name	Assessment
<i>Occidozyga borealis</i>	Northern frog	Vulnerable

### Reptiles

Scientific Name	Common English Name	Assessment
<i>Nilssonia hurum</i>	Indian peacock softshell turtle	Vulnerable
<i>Python bivittatus</i>	Burmese python	Vulnerable

### Birds

Scientific Name	Common English Name	Assessment
<i>Aquila clanga</i>	Greater spotted eagle	Vulnerable
<i>Aquila hastata</i>	Indian spotted eagle	Vulnerable
<i>Chaetornis striata</i>	Bristled grassbird	Vulnerable
<i>Chrysomma altirostre</i>	Jerdon's babbler	Vulnerable
<i>Emberiza aureola</i>	Yellow-breasted bunting	Vulnerable
<i>Francolinus gularis</i>	Swamp francolin	Vulnerable
<i>Grus antigone</i>	Sarus crane	Vulnerable
<i>Haliaeetus leucoryphus</i>	Pallas' fish eagle	Vulnerable
<i>Mulleripicus pulverulentus</i>	Great slaty woodpecker	Vulnerable
<i>Ploceus megarhynchus</i>	Yellow weaver	Vulnerable
<i>Turdoides longirostris</i>	Slender-billed babbler	Vulnerable
<i>Leptoptilos dubius</i>	Greater adjutant	Endangered
<i>Gyps bengalensis</i>	Asian white-backed vulture	Critically Endangered
<i>Gyps tenuirostris</i>	Slender-billed vulture	Critically Endangered
<i>Houbaropsis bengalensis</i>	Bengal florican	Critically Endangered

## Mammals

Scientific Name	Common English Name	Assessment
<i>Aonyx cinerea</i>	Asian small-clawed otter	Vulnerable
<i>Arctictis binturong</i>	Binturong	Vulnerable
<i>Bos gaurus</i>	Gaur	Vulnerable
<i>Lutrogale perspicillata</i>	Smooth-coated otter	Vulnerable
<i>Melursus ursinus</i>	Sloth bear	Vulnerable
<i>Neofelis nebulosa</i>	Clouded leopard	Vulnerable
<i>Nycticebus bengalensis</i>	Bengal slow loris	Vulnerable
<i>Pardofelis marmorata</i>	Marbled cat	Vulnerable
<i>Rhinoceros unicornis</i>	Indian rhino	Vulnerable
<i>Rucervus duvaucelii</i>	Barasingha	Vulnerable
<i>Ursus thibetanus</i>	Himalayan bear	Vulnerable
<i>Axis porcinus</i>	Hog deer	Endangered
<i>Caprolagus hispidus</i>	Hispid hare	Endangered
<i>Elephas maximus</i>	Asian elephant	Endangered
<i>Panthera tigris tigris</i>	Bengal tiger	Endangered
<i>Trachypithecus geei</i>	Golden langur	Endangered
<i>Trachypithecus pileatus tenebricus</i>	Capped langur	Endangered
<i>Porcula salvania</i>	Pygmy hog	Critically Endangered