

SUMMARY OF THE STATUS OF WILD POPULATIONS OF SPECIES LISTED ON CITES APPENDIX I AND THE DIFFICULTY OF KEEPING OR BREEDING SPECIMENS OF THESE SPECIES IN CAPTIVITY

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IMPORTANT NOTES ABOUT THIS TABLE

This document was prepared in response to CITES Secretariat Notification No. 2000/044 (31 July 2000) which requested nominations of Appendix I species that are critically endangered in the wild and/or known to be difficult to breed or keep in captivity. In accordance with Resolution Conf. 11.14, such species will appear on a list and operations breeding listed species for commercial purposes must become registered with the CITES Secretariat; all Parties have an opportunity to influence whether or not these operations are registered. Operations breeding Appendix I species not on the list may do so without registration with the CITES Secretariat and without the approval of all the Parties.

- **Species:** Each species or subspecies that appears on CITES Appendix I is listed in the table. Species listed as higher taxa on CITES Appendix I are addressed species by species. Species appear in the same order in which they are listed on CITES Appendix I.
- **Status:** In each case, the status of the species according to the 2000 IUCN Red List of Threatened Species is given (IUCN 2000). However, it must be noted that not all critically endangered species appear on the IUCN list. For example, there are only 300 Cuba sandhill cranes (*Grus canadensis nesiotus*) in the wild, but the subspecies does not appear on the IUCN list. And, while the IUCN status is given for most mammal and bird species, most other classes have not been as adequately addressed. The status of the species under the Endangered Species Act of the United States is also given when that taxon is so listed (ESA), as is the status of species under other national laws when known.
- **Keep and Breed:** It is often difficult to obtain information on the number of animals of a species that are kept or bred in captivity, or other information that can be used to indicate whether it is easy to breed or keep specimens of the species in captivity. One useful source of such information is the International Species Information System (ISIS 2000) which contains records of species holdings of 550 zoological institutions located in 54 countries around the world. However, it must be noted that ISIS is a voluntary database consisting of the number of animals in zoological collections that submitted data to ISIS, and breeding success of those animals. ISIS information may vastly underestimate the numbers of kept and bred in captivity. This is especially true for species that are kept and bred for commercial purposes or for hobby, or are not kept by zoos. For example, it is known that there are over 500 Edward's pheasants (*Lophura edwardsi*) in captivity, but there are only 54 birds on the ISIS database. However, ISIS information can provide useful information about those species commonly maintained and bred by zoological institutions and this may provide an indication about which species can be kept and / or bred in captivity, although not necessarily on a commercial scale. A second useful source is Doc. AC 15.9.2, a list of animal species commonly bred in captivity, based on information supplied by seven Parties (CITES 1999). This document reports on the breeding of Appendix I species in seven countries, including the number of operations, the number of stock, and the year that breeding started. However, the document does not provide information on the number of offspring produced by each operation, or whether the captive populations are self-sustaining or require augmentation from the wild; this complicates a determination of whether or not breeding or keeping is difficult.

CLASS MAMMALIA		
SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Sminthopsis longicaudata</i> Dunnart	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: known only from 4 specimens (Honacki et al. 1982) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: there are 2 females in captivity (ISIS 2000) • Breed: there has been one offspring produced in past six months (ISIS 2000)
<i>Sminthopsis psammophila</i> Sandhill Dunnart	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: known only from 5 specimens (Honacki et al. 1982) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Thylacinus cynocephalus</i> Thylacine	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Chaeropus ecaudatus</i> Pigfooted Bandicoot	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Macrotis lagotis</i> Bilby	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: there are 9 males and 5 females in captivity (ISIS 2000) • Breed: there has been one birth in the past six months (ISIS 2000)
<i>Macrotis leucura</i> Lesser Bilby	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Perameles bougainville</i> Western Barred Bandicoot	<ul style="list-style-type: none"> • Status: <i>P. bougainville</i>, Endangered (IUCN 2000); <i>P. b. fasciata</i>, Extinct (IUCN 2000); Endangered (ESA) • Distribution: Australia • Threats: extirpated throughout most of its range (Honecki et al 1982) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lasiorhinus krefftii</i> Northern Hairy-nosed Wombat	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lagorchestes hirsutus</i> Rufous Hare-Wallaby	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: 13 males, 22 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: 5 offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Lagostrophus fasciatus</i> Banded Hare-Wallaby	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Onychogalea fraenata</i> Bridled Nailtail Wallaby	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Breed: 20 males, 9 females and 3 animals of unknown sex in captivity (ISIS 2000)
<i>Onychogalea lunata</i> Crescent Nailtail Wallaby	<ul style="list-style-type: none"> Status: Extinct (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
Bettongia spp.	Each species as below	Each species as below
<i>Bettongia gaimardi</i> Tasanian Bettong	<ul style="list-style-type: none"> Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: 2 females are in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)
<i>Bettongia lesueuri</i> Boodie	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: one female is in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)
<i>Bettongia penicillata</i> Woylie	<ul style="list-style-type: none"> Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: 42 males, 52 females, and 7 animals of unknown sex in captivity (ISIS 2000) Breed: 11 offspring produced in past six months (ISIS 2000)
<i>Bettongia tropica</i> Northern Bettong	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: 21 males, 21 females, and 3 animals of unknown sex are in captivity (ISIS 2000) Breed: 11 offspring produced in past six months (ISIS 2000)
<i>Caloprymnus campestris</i> Desert Rat-Kangaroo	<ul style="list-style-type: none"> Status: Extinct (IUCN 2000); Endangered (ESA) Distribution: Australia 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Acerodon jubatus</i> Golden Capped Fruit Bat	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000) Distribution: Philippines Threats: deforestation, heavily hunted for human consumption, largest bat in the world (Heaney and Heideman 1997) 	<ul style="list-style-type: none"> Keep: none in captivity (Thatcher 1999); no ISIS record (2000) Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<i>Acerodon lucifer</i> Panany Giant Fruit Bat	<ul style="list-style-type: none"> Status: Extinct (IUCN 2000) Distribution: Philippines Threats: deforestation, heavily hunted for human consumption (Heaney and Heideman 1997) 	<ul style="list-style-type: none"> Keep: extinct Breed: extinct
<i>Pteropus insularis</i> Chuuk Fruit Bat	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Distribution: Micronesia Threats: commercial export for human consumption, especially to Guam, and deforestation (Thatcher 1999) 	<ul style="list-style-type: none"> Keep: none in captivity (Thatcher 1999); no ISIS record (2000) Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<i>Pteropus mariannus</i> Mariana Fruit Bat	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); <i>P. mariannus mariannus</i> in Guam: Endangered (ESA) Population: 1,400 or fewer in the wild (Thatcher 1999) Distribution: Micronesia, Guam, Japan, Northern Marianas, Palau Threats: hunting and export for human consumption to Guam and Mariana Islands (Thatcher 1999) 	<ul style="list-style-type: none"> Keep: none in captivity (Thatcher 1999); no ISIS record (2000) Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<i>Pteropus molossinus</i> Ponape Fruit Bat	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000) Population: believed to have declined in last 15 years (Thatcher 1999) Distribution: Micronesia 	<ul style="list-style-type: none"> Keep: none in captivity (Thatcher 1999); no ISIS record (2000) Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<i>Pteropus phaeocephalus</i> Morlock Fruit Bat	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000) Distribution: Micronesia 	<ul style="list-style-type: none"> Keep: none in captivity (Thatcher 1999); no ISIS record (2000) Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<i>Pteropus pilosus</i> Palau Fruit Bat	<ul style="list-style-type: none"> Status: Extinct (IUCN 2000) Distribution: Palau Threats: believed to have been hunted to extinction earlier this century (Thatcher 1999) 	<ul style="list-style-type: none"> Keep: extinct Breed: extinct

<p><i>Pteropus samoensis</i> Samoa Fruit Bat</p>	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: in Western and American Samoa populations have declined by 80 – 90%; no data available for Fijian populations (Thatcher 1999) • Distribution: Fiji, American Samoa, Western Samoa • Threats: typhoons, over-hunting for human consumption (Thatcher 1999) 	<ul style="list-style-type: none"> • Keep: none in captivity (Thatcher 1999); no ISIS record (2000) • Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<p><i>Pteropus tonganus</i> White-necked Fruit Bat</p>	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: American Samoa, Cook Islands, Fiji, New Caledonia, Niue, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, Western Samoa • Threats: over-hunting for human consumption (Thatcher 1999) 	<ul style="list-style-type: none"> • Keep: none in captivity (Thatcher 1999); no ISIS record (2000) • Breed: none in captivity (Thatcher 1999); no ISIS record (2000)
<p>Cheirogaleidae spp.</p>	<p>Each species as below</p>	<p>Each species as below</p>

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Allocebus trichotis</i> Hairy-eared Dwarf Lemur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: one male in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Cheirogaleus major</i> Greater Dwarf Lemur	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cheirogaleus medius</i> Fat-tailed Dwarf Lemur	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 117 in captivity (ISIS 2000); over 160 in captivity at 25 zoos worldwide (Duke 1999) • Breed: 3 births in the past six months (ISIS 2000)
<i>Microcebus coquereli</i> [<i>Mirza coquereli</i>] Coquerel's Mouse-lemur	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction and fragmentation, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 45 in captivity (ISIS 2000); approximately 60 in captivity in 13 institutions (Duke 1999) • Breed: no births in the past six months (ISIS 2000)
<i>Microcebus murinus</i> Grey Mouse-lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 222 in captivity (ISIS 2000); 250 in captivity at over 50 institutions worldwide (Duke 1999) • Breed: no births in the past six months (ISIS 2000)
<i>Microcebus myoxinus</i> Pygmy Mouse Lemur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Microcebus ravelobensis</i> Golden-brown Mouse Lemur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: localized range and continued destruction of forest (Garbutt 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Microcebus rufus</i> [<i>M. murinus rufus</i>] Rufous Mouse-lemur	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 2 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Phaner furcifer</i> Fork-marked Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, capture for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
Lemuridae and Megaladapidae spp.	Each species as below	Each species as below
<i>Eulemur coronatus</i> Crowned Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, fragmentation, grazing, burning, and capture for food and as pets (Duke 1999, Suter 2000) 	<ul style="list-style-type: none"> • Keep: 61 in captivity (ISIS 2000); Duke Primate Center currently houses 15 animals, which is the largest captive colony (Duke 1999) • Breed: one birth in the past six months (ISIS 2000)
<i>Eulemur fulvus</i> [<i>Lemur fulvus</i>] Brown Lemur	<ul style="list-style-type: none"> • Status: <i>E. f. albocollaris</i>, Critically Endangered (IUCN 2000); <i>E. f. collaris</i>, Vulnerable (IUCN 2000); <i>E. f. sanfordi</i>, Vulnerable (IUCN 2000); <i>E. f. albifrons</i>, Lower Risk: Near Threatened (IUCN 2000); <i>E. f. fulvus</i>, Lower Risk: Near Threatened (IUCN 2000); <i>E. f. rufus</i>, Lower Risk: Near Threatened (IUCN 2000); <i>Lemur</i> spp., Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, poaching, brushfires, capture for food and as pets (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 3 <i>E. fulvus</i> males in captivity (ISIS 2000); there are approximately 40 <i>E. f. collaris</i> in 6 institutions in the U.S. and Europe; the only captive breeding groups of <i>E. f. sanfordi</i> are at Duke Primate Center (13 animals) and the Banham Zoo in the U.K. (Duke 1999) • Breed: no <i>E. fulvus</i> or <i>E. f. sanfordi</i> births in the past six months (ISIS 2000)
<i>Eulemur macaco</i> Black Lemur	<ul style="list-style-type: none"> • Status: <i>E. macaco</i>, Vulnerable (IUCN 2000); <i>E. m. flavifrons</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest degradation, destruction and fragmentation, capture for food, persecution as crop raiders (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 19 in captivity (ISIS 2000); 275 housed in over 50 institutions worldwide (Duke 1999) • Breed: no births in the past six months (ISIS 2000); breed well in captivity (Duke 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Eulemur mongoz</i> Mongoose Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar, Comoro Islands • Threats: forest destruction, capture for food and pets (Duke 1999); only exists in one protected area on Madagascar and is essentially unprotected on Comoro Islands (AZA1998a) 	<ul style="list-style-type: none"> • Keep: 104 in captivity (ISIS 2000); The Duke Primate Center has the largest colony numbering 30 animals (Duke) • Breed: one birth in the past six months (ISIS 2000)
<i>Eulemur rubriventer</i> Red-bellied Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 60 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS)
<i>Hapalemur aureus</i> Golden Bamboo Lemur	<ul style="list-style-type: none"> • Status: <i>H. aureus</i>, Critically Endangered (IUCN 2000); <i>H.g.griseus</i>, Lower Risk:Near Threatened (IUCN 2000); <i>H.g.occidentalis</i>, Vulnerable (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Population: only 200-400 individuals remain (Gallay 2000) • Distribution: Madagascar • Threats: forest destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: the only observed breeding was that of the pair taken into captivity at Parc Tsimbazaza in 1987, which has successfully bred four times, with three young surviving (Gallay 2000)
<i>Hapalemur griseus</i> Grey Gentle Lemur	<ul style="list-style-type: none"> • Status: <i>H. g. alaotrensis</i>, Critically Endangered (IUCN 2000) and one of the world's top 25 most endangered primates (CI 2000); <i>H. g. occidentalis</i>, Vulnerable (IUCN 2000); <i>H.g.griseus</i>, Lower Risk: Near Threatened (IUCN 2000); <i>H. griseus</i>, Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction, hunting for food and the pet trade (Duke 1999); does not occur in any protected areas (SSC 2000) 	<ul style="list-style-type: none"> • Keep: 4 <i>H. griseus</i>, 42 <i>H. g. alaotrensis</i>, and 7 <i>H. g. occidentalis</i> in captivity (ISIS 2000) • Breed: no births of any <i>H. griseus</i> in the past six months (ISIS 2000)
<i>Hapalemur simus</i> Broad-nosed Gentle Lemur	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction including slash-and-burn cultivation, and cutting of bamboo, its major source of food (Massicot 2000); hunting for food and as pets (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 13 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Lemur catta</i> Ring-tailed Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction, conversion to farmland, overgrazing by livestock, harvest for charcoal production, hunting for food and as pets (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 1,357 in captivity (ISIS 2000); over 1000 in 140 zoos around the world (Duke 1999) • Breed: 23 births in the past six months (ISIS 2000); breed well in captivity (Duke 1999); 89 breeding operations and stock of 529 individuals in UK (CITES 1999)
<i>Varecia variegata</i> Ruffed Lemur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: forest destruction and conversion to farmland, hunting for food and as pets (Duke 1999); collection for export has led to declines in some areas (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 53 in captivity (ISIS 2000) • Breed: 2 births in the past six months (ISIS 2000); <i>V. v. variegata</i> breed very well in captivity (Duke 1999); 173 breeding operations and stock of 990 individuals in UK, breeding since 1980 (CITES 1999)
<i>Lepilemur dorsalis</i> Grey-backed Sportive Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur edwardsi</i> [<i>L. mustelinus edwardsi</i>] Milne-Edwards's Sportive Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur leucopus</i> [<i>L. mustelinus leucopus</i>] White-footed Sportive Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur microdon</i> [<i>L. mustelinus microdon</i>] Light-necked Sportive Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur mustelinus</i> Greater Sportive Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur ruficaudatus</i> [<i>L. mustelinus ruficaudatus</i>] Red-tailed Sportive Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Lepilemur septentrionalis</i> Northern Sportive Lemur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Avahi laniger</i> [<i>Lichanotus laniger</i>] Woolly Lemur	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
Indridae spp.	Each species as below	Each species as below
<i>Indri indri</i> Indris	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction (Duke 1999) 	<ul style="list-style-type: none"> • Keep: not known to be in captivity (Duke 1999) • Breed: not known to be in captivity (Duke 1999)
<i>Propithecus diadema</i> Diademmed Sifaka	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction for agriculture and timber harvesting, hunting for food (Duke 1999) 	<ul style="list-style-type: none"> • Keep: one in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000); never reproduced in captivity (Duke 1999)
<i>Propithecus tattersalli</i> Golden-crowned Sifaka	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Madagascar • Threats: habitat destruction for agriculture and timber harvesting, gold mining, hunting for food (Duke 1999); not found in any protected areas (<i>ibid</i>) 	<ul style="list-style-type: none"> • Keep: 3 in captivity housed at the Duke Primate Center (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Propithecus verreauxi</i> Verreaux's Sifaka	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction through yearly fires set to encourage growth of new grass for livestock grazing, and by tree-cutting for charcoal (Duke 1999); found in only two protected areas (<i>ibid</i>) 	<ul style="list-style-type: none"> • Keep: 27 <i>P. v. coquereli</i>, 14 <i>P. v. coronatus</i>, and one <i>P. v. verreauxi</i> in captivity (ISIS 2000) • Breed: no births of any <i>P. verreauxi</i> in the past six months (ISIS 2000)
<i>Daubentonia madagascariensis</i> Aye-aye	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: habitat destruction for agriculture and timber harvesting, killed for raiding crops and because they are considered to be an omen of evil (Duke 1999) 	<ul style="list-style-type: none"> • Keep: 29 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Callimico goeldii</i> Goeldi's Tamarin	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: habitat destruction for grazing, agriculture and timber harvesting (AZA 1998b); patchy distribution and small isolated populations occurring at low densities, increases vulnerability to local extinction (<i>ibid</i>) 	<ul style="list-style-type: none"> • Keep: 314 in captivity (ISIS 2000); 457 in captivity worldwide (AZA 1998b) • Breed: 6 births in the past six months (ISIS 2000)
<i>Callithrix aurita</i> Buffy-tufted-ear Marmoset	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: habitat fragmentation and loss, capture for biomedical research and the pet trade (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Callithrix flaviceps</i> Buffy-headed Marmoset	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: habitat fragmentation and loss, capture for biomedical research and the pet trade (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
Leontopithecus spp. [Leontideus spp.]	Each species as below	Each species as below
<i>Leontopithecus caissara</i> Black-faced Lion Tamarin	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Brazil • Threats: habitat destruction for agriculture and tourism development and illegal trade (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: none in captivity (SSC 1997) • Breed: none in captivity (SSC 2000)
<i>Leontopithecus chrysomelas</i> Golden-headed Lion Tamarin	<ul style="list-style-type: none"> • Status: Endangered (IUCN); Endangered (ESA) • Distribution: Brazil • Threats: deforestation and habitat loss for agriculture and illegal trade: 1983-1984, between 50 and 60 animals were illegally exported to Belgium and Japan (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 299 in captivity (ISIS 2000) • Breed: 6 births in the past six months (ISIS 2000)
<i>Leontopithecus chrysopygus</i> Golden-rumped Lion Tamarin	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Brazil • Threats: habitat destruction 	<ul style="list-style-type: none"> • Keep: 50 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Leontopithecus rosalia</i> Golden Lion Tamarin	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Population: 800 in the wild (AZA 1998c) • Distribution: Brazil • Threats: habitat destruction, capture as pets, susceptibility to human diseases, wild populations are small and scattered causing inbreeding and loss of genetic diversity (AZA 1998c) 	<ul style="list-style-type: none"> • Keep: 417 in captivity (ISIS 2000); 150 institutions worldwide are involved in international management programs (AZA 1998c); zoos are using contraceptives to maintain a population of about 500 (<i>ibid</i>) • Breed: 17 births in the past six months (ISIS 2000)
<i>Saguinus bicolor</i> Pied Tamarin	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil 	<ul style="list-style-type: none"> • Keep: 40 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Saguinus geoffroyi</i> [<i>Saguinus oedipus</i> (<i>geoffroyi</i>)] Cotton-top Marmoset	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Colombia, Panama 	<ul style="list-style-type: none"> • Keep: 55 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Saguinus leucopus</i> White-footed Tamarin	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Threatened (ESA) • Distribution: Colombia • Threats: habitat destruction (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: 6 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Saguinus oedipus</i> Cotton-top Tamarin	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Colombia, Panama • Threats: habitat destruction and collection for the local pet trade (AZA 1998d) 	<ul style="list-style-type: none"> • Keep: 840 in captivity (ISIS 2000) • Breed: 25 births in the past six months (ISIS 2000); 107 breeding operations and stock exceeding 1494 individuals in UK, breeding since 1976 (CITES 1999); 5 breeding operations and stock of 445 individuals in Germany, breeding since 1991 (<i>ibid</i>)
<i>Alouatta coibensis</i> Coiba Island Howler Monkey	<ul style="list-style-type: none"> • Status: <i>A. coibensis</i>, Endangered (IUCN 2000); <i>A. c. trabeata</i>, Critically Endangered (IUCN 2000) • Distribution: Panama 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Alouatta palliata</i> Mantled Howler Monkey	<ul style="list-style-type: none"> • Status: <i>A. p. mexicana</i>, Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Mexico to South America 	<ul style="list-style-type: none"> • Keep: 6 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Alouatta pigra</i> Guatemalan Howler Monkey	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Threatened (ESA) • Distribution: Mexico, Guatemala, Belize • Threats: habitat destruction (Burton and Pearson 1987) 	<ul style="list-style-type: none"> • Keep: 3 <i>A. pigra</i> in captivity (ISIS 2000); 10 <i>A. p. pigra</i> in captivity (<i>ibid</i>) • Breed: no births in the past six months (ISIS 2000)
<i>Ateles geoffroyi frontatus</i> Black-browed Spider Monkey	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Costa Rica, Nicaragua 	<ul style="list-style-type: none"> • Keep: 5 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Ateles geoffroyi panamensis</i> Red Spider Monkey	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Costa Rica, Panama 	<ul style="list-style-type: none"> • Keep: one in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Brachyteles arachnoides</i> Woolly Spider Monkey	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: habitat destruction and fragmentation for agriculture and settlement, commercial logging and charcoal production, hunting for human consumption and the pet trade, small and isolated populations threatened by inbreeding and low reproductive success (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: very few have been kept in captivity (WCMC 2000) • Breed: one known captive breeding program in Brazil has produced four viable offspring from two males and two females (WCMC 2000)
Cacajao spp.	Each species as below	Each species as below
<i>Cacajao calvus</i> Bald Uakari	<ul style="list-style-type: none"> • Status: <i>C. calvus</i>, Vulnerable (IUCN 2000); <i>c. c. calvus</i>, Endangered (IUCN 2000); <i>C. c. novaesi</i>, Endangered (IUCN 2000); <i>C. c. rubicundus</i>, Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Peru • Threats: habitat destruction for lumber, hunting for food and trapping for pets and for export (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: 2 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Cacajao melanocephalus</i> Black Uakari, Black-headed Uakari	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Venezuela, Brazil 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Chiropotes albinasus</i> White-nosed Bearded Saki	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Brazil 	<ul style="list-style-type: none"> • Keep: one in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Lagothrix flavicauda</i> Yellow-tailed Woolly Monkey	<ul style="list-style-type: none"> • Critically Endangered (IUCN 2000); Endangered (ESA): one of the world's top 25 most endangered primates (CI 2000) • Distribution: Peru • Threats: habitat conversion and hunting (SSC 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Saimiri oerstedii</i> Central American Squirrel Monkey	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Panama, Costa Rica • Threats: deforestation for agriculture and tourism development, insecticide spraying, collection for the pet trade, electrocution from power lines (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: one in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Cercocebus galeritus galeritus</i> Tana River Mangabey	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Kenya 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cercopithecus diana</i> Diana Monkey	<ul style="list-style-type: none"> • Status: <i>C. diana</i>, Endangered (IUCN 2000); <i>C. d. roloway</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Sierra Leone to Ghana • Threats: bushmeat trade (Pearce and Williams 2000) 	<ul style="list-style-type: none"> • Keep: 41 in captivity (ISIS 2000) • Breed: one birth in the past six months (ISIS 2000)
<i>Macaca silenus</i> Lion-tailed Macaque	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India • Threats: habitat destruction (1% of original habitat remains, remaining populations are isolated) and poaching for use in medicine (AZA 1998e) 	<ul style="list-style-type: none"> • Keep: 353 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Mandrillus leucophaeus</i> Drill	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Nigeria, Cameroon • Threats: hunting for bushmeat trade (Pearce and Williams 2000), habitat destruction (WCMC 2000, AZA 1999) 	<ul style="list-style-type: none"> • Keep: 47 in captivity (ISIS 2000) • Breed: 2 births in the past six months (ISIS 2000)
<i>Mandrillus sphinx</i> Mandrill	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) Endangered (ESA) • Distribution: Cameroon, Equatorial Guinea, Gabon, Congo • Threats: hunting for bushmeat trade (Pearce and Williams 2000) 	<ul style="list-style-type: none"> • Keep: 477 in captivity (ISIS 2000) • Breed: 12 births in the past six months (ISIS 2000)
<i>Nasalis concolor</i> [<i>Simias concolor</i>] Pagi Island Langur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Indonesia • Threats: habitat destruction due to logging, hunting for human consumption (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Nasalis larvatus</i> Proboscis Monkey	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Borneo 	<ul style="list-style-type: none"> • Keep: 7 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Presbytis potenziani</i> Long-tailed Langur	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Threatened (ESA) • Distribution: Indonesia • Threats: habitat destruction due to logging, hunting for human consumption (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Procolobus pennantii kirkii</i> [<i>Colobus kirkii</i> , <i>C. badius kirkii</i>] Zanzibar Red Colobus	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Congo, Zaire, Uganda, Tanzania, Zanzibar 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Procolobus rufomitratu</i> [<i>Colobus rufomitratu</i> , <i>C. badius rufomitratu</i>] Tana River Red Colobus	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Kenya 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
Pygathrix spp. [<i>Rhinopithecus</i> spp.]	Each species as below	Each species as below
<i>Pygathrix avunculus</i> [<i>Rhinopithecus avunculus</i>] Tonkin Snub-nosed Monkey	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Vietnam • Threats: hunting for human consumption and for medicine (SSC 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); 19 breeding operations for <i>Rhinopithecus</i> spp. and stock of 216 individuals in China, breeding since 1959 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Pygathrix bieti</i> [<i>P. roxellanae bieti</i>] [<i>Rhinopithecus bieti</i>] Yunnan Snub-nosed Monkey	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: China 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); 19 breeding operations for <i>Rhinopithecus</i> spp. and stock of 216 individuals in China, breeding since 1959 (CITES 1999)
<i>Pygathrix brelichii</i> [<i>Rhinopithecus brelichii</i> , <i>R. roxellana brelichii</i>] Guizhou Snub-nosed Monkey	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: China 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); 19 breeding operations for <i>Rhinopithecus</i> spp. and stock of 216 individuals in China, breeding since 1959 (CITES 1999)
<i>Pygathrix nemaus</i> Douc Langur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Cambodia, Laos, Vietnam, China • Threats: hunting for human consumption, habitat destruction, disruption by military activity (including use of defoliants and bombing) (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: 30 <i>P. n. nemaus</i> and 2 <i>P. n. nigripes</i> in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000); 19 breeding operations for <i>Rhinopithecus</i> spp. and stock of 216 individuals in China, breeding since 1959 (CITES 1999)
<i>Pygathrix roxellana</i> [<i>Rhinopithecus roxellana</i>] Sichuan Snub-nosed Monkey	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: China • Threats: hunting for pelts and traditional medicine, habitat loss and environmental degradation, poaching for zoos (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 2 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000); 19 breeding operations for <i>Rhinopithecus</i> spp. and stock of 216 individuals in China, breeding since 1959 (CITES 1999)
<i>Semnopithecus entellus</i> Entellus Langur	<ul style="list-style-type: none"> • Status: <i>S. entellus</i>, Lower Risk: Near Threatened (IUCN 2000); <i>S.e. dussumieri</i>, Data Deficient (IUCN 2000); <i>S.e. elissa</i>, Data Deficient (IUCN 2000); <i>S.e. hypoleucos</i>, Data Deficient (IUCN 2000); <i>S.e. priam</i>, Data Deficient (IUCN 2000); <i>S.e. thersites</i>, Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: China, India, Pakistan, Sri Lanka, Bangladesh 	<ul style="list-style-type: none"> • Keep: 48 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Trachypithecus geei</i> [<i>Presbytis geei</i>] Golden Langur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India, Bhutan 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Trachypithecus pileatus</i> [<i>Presbytis pileata</i>] Capped Langur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India, Myanmar, Bangladesh 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
Hylobates spp.	Each species as below	Each species as below
<i>Hylobates agilis</i> Agile Gibbon	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Malay Peninsula, Sumatra, Kalimantan 	<ul style="list-style-type: none"> • Keep: 50 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Hylobates concolor</i> Black Gibbon	<ul style="list-style-type: none"> • Status: <i>H. concolor</i>, Endangered (IUCN 2000); <i>N.c. furvogaster</i>, Critically Endangered (IUCN 2000); <i>N.c. jingdongensis</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: China, Laos, Vietnam 	<ul style="list-style-type: none"> • Keep: 19 in captivity (ISIS 2000) • Breed: 2 births in the past six months (ISIS 2000)
<i>Hylobates gabriellae</i> [<i>Nomascus gabriellae</i>] Buff-cheeked Gibbon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Vietnam, Laos 	<ul style="list-style-type: none"> • Keep: 60 <i>H. g. gabriellae</i> and 8 <i>H. g. gabriellae siki</i> in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Hylobates hoolock</i> [<i>Bunipithecus hoolock</i>] Hoolock Gibbon	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India, Myanmar, China • Threats: habitat destruction for lumber, firewood and farming; capture for human consumption (Krebs 2000) 	<ul style="list-style-type: none"> • Keep: 2 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Hylobates klossii</i> Mentawai Gibbon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Indonesia 	<ul style="list-style-type: none"> • Keep: one in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Hylobates lar</i> Common Gibbon	<ul style="list-style-type: none"> • Status: <i>H. lar</i>, Lower Risk: Near Threatened (IUCN 2000); <i>H.l. yunnanensis</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: China, Thailand, Malay Peninsula, Sumatra, Myanmar • Threats: hunting for human consumption, capture for the pet trade, deforestation due to logging and agriculture (Smith 2000) 	<ul style="list-style-type: none"> • Keep: 371 in captivity (ISIS 2000) • Breed: 2 births in the past six months (ISIS 2000)
<i>Hylobates leucogenys</i> [<i>Nomascus gabriellae</i>] White-cheeked Gibbon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA); Critically Endangered in China (Zhang 1998) • Distribution: China, Vietnam 	<ul style="list-style-type: none"> • Keep: 117 in captivity (ISIS 2000) • Breed: 3 births in the past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Hylobates moloch</i> Silvery Gibbon	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); one of the world's top 25 most endangered primates (CI 2000) • Distribution: Java (Indonesia) • Threats: habitat destruction, capture to supply illegal pet trade (SSC 2000) 	<ul style="list-style-type: none"> • Keep: 39 in captivity (ISIS 2000) • Breed: 2 births in the past six months (ISIS 2000)
<i>Hylobates muelleri</i> Bornean Gibbon	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Borneo 	<ul style="list-style-type: none"> • Keep: one <i>H. muelleri</i>, 2 <i>H. m. abbotti</i> and 33 <i>H. m. muelleri</i> in captivity • Breed: no births in the past six months (ISIS)
<i>Hylobates pileatus</i> Pileated Gibbon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Thailand, Cambodia • Threats: habitat loss due to logging and agriculture, hunting for human consumption and the pet trade (Massicot 2000) 	<ul style="list-style-type: none"> • Keep: 42 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Hylobates syndactylus</i> Siamang	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) Endangered (ESA) • Distribution: Sumatra, Malay Peninsula • Threats: habitat destruction due to logging and agriculture, collection for the pet trade (Eastridge 2000) 	<ul style="list-style-type: none"> • Keep: 256 in captivity (ISIS 2000) • Breed: 4 births in the past six months (ISIS 2000)
<i>Gorilla gorilla</i> Gorilla	<ul style="list-style-type: none"> • Status: <i>G. gorilla</i>, Endangered (IUCN 2000); <i>G.g. diehli</i>, Critically Endangered (IUCN 2000); Endangered (ESA); <i>G. g. beringei</i> and <i>G. g. diehli</i> are two of the world's top 25 most endangered primates (CI 2000) • Distribution: Nigeria, Cameroon, Congo, Gabon, Zaire, Uganda, Rwanda • Threats: hunting for bushmeat trade (Pearce and Williams 2000), habitat destruction, capture of infants for illegal international trade, armed human conflict and civil unrest (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 714 <i>G. g. gorilla</i> and 4 <i>G. g. graueri</i> in captivity (ISIS 2000) • Breed: 14 births of <i>G. g. gorilla</i> and no births of <i>G. g. graueri</i> in the past six months (ISIS 2000)
Pan spp.	Each species as below	Each species as below
<i>Pan paniscus</i> Bonobo	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Democratic Republic of Congo • Threats: hunting for bushmeat trade (Pearce and Williams 2000), habitat destruction for forest products and agriculture, collection for pet trade, political and social conflicts (AZA 1998f) 	<ul style="list-style-type: none"> • Keep: 121 in captivity (ISIS 2000) • Breed: no births in the past six months (ISIS 2000)
<i>Pan troglodytes</i> Chimpanzee	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Cameroon, Gabon, Congo, Uganda, Tanzania, Zaire, Central African Republic, Guinea, Nigeria, West Africa • Threats: hunting for bushmeat trade (Pearce and Williams 2000), habitat loss, capture of infants for local pet trade, international biomedical trade, entertainment industry (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: 2715 <i>P. troglodytes</i>, 17 <i>P. t. schweinfurthii</i>, 57 <i>P. t. troglodytes</i> and 136 <i>P. t. verus</i> in captivity (ISIS 2000) • Breeding: 7 births of <i>P. troglodytes</i> in the past six months (ISIS 2000)
<i>Pongo pygmaeus</i> Orangutan	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA); <i>P. p. abelii</i> is one of the world's top 25 most endangered primates (CI 2000) • Distribution: Sumatra, Borneo • Threats: habitat destruction through logging and human encroachment, poaching and smuggling for the pet trade, recent devastating forest fires (SSC 2000, AZA 1998g), hunting for sport (SSC 2000) 	<ul style="list-style-type: none"> • Keep: 48 <i>P. pygmaeus</i>, 66 <i>P. pygmaeus</i> hybrids, and 228 <i>P. p. abelii</i> in captivity (ISIS 2000) • Breed: 8 births of <i>P. p. abelii</i> in the past six months (ISIS 2000)
<i>Priodontes maximus</i> [<i>P. giganteus</i>] Giant Armadillo	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela • Threats: habitat loss and hunting (Nowak 1991) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Caprolagus hispidus</i> Hispid Hare	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India, Nepal, Bangladesh 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Romerolagus diazi</i> Mexican Volcano Rabbit	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Mexico • Threats: habitat loss and hunting (WWF 1997) 	<ul style="list-style-type: none"> • Keep: captive breeding colonies exist in the U.K. and Mexico (WWF 1997); no ISIS record (2000) • Breed: captive breeding colonies exist in the U.K. and Mexico (WWF 1997); no ISIS record (2000)
<i>Cynomys mexicanus</i> Mexican Prairie Dog	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Mexico 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Leporillus conditor</i> Greater Stick-nest Rat	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: 14 males and 16 females are in captivity (ISIS 2000) • Breed: 6 offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Pseudomys praeconis</i> Shark Bay Mouse	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: 10 males, 8 females, and 10 animals of unknown sex in captivity (ISIS 2000) • Breed: 18 offspring produced in past six months (ISIS 2000)
<i>Xeromys myoides</i> False Water Rat	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: one male is in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Zyzomys pedunculatus</i> Central Rock Rat	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: 7 males and 8 females are in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
Chinchilla spp.	Each species as below	Each species as below
<i>Chinchilla brevicaudata</i> Short-tailed Chinchilla	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); <i>C. b. boliviana</i>, Endangered (ESA) • Distribution: Argentina, Bolivia, Chile, Peru (ex?) 	<ul style="list-style-type: none"> • Keep: 11 males, 15 females, and 3 animals of unknown sex are in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Chinchilla lanigera</i> Long-tailed Chinchilla	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Chile 	<ul style="list-style-type: none"> • Keep: 137 males, 161 females, and 37 animals of unknown sex are in captivity (ISIS 2000) • Breed: 30 offspring produced in past six months (ISIS 2000)
<i>Lipotes vexillifer</i> Baiji / Whitefin Dolphin	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: China, Yangtze and Quintangjiang river systems • Threats: further capture for display or breeding may hasten the species' demise (Robeck et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000); do not survive well in captivity (Kaiya and Xingduan 1991) • Breed: a few captive breeding attempts made but none successful; of four animals taken into captivity at Wuhan aquarium between 1980 and 86, one male taken in 1980 was seen alive in 1995, but no offspring have been produced (Hoard and Wachter 1997, IUCN 1991, CBSG 1993); of a pair captured in 1984, the male died after 2 months, the female died after 2.5 years, and no offspring were produced (Broach 1993); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Platanista spp.	Each species as below	Each species as below
<i>Platanista gangetica</i> Ganges River Dolphin	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Ganges and other river systems in India, Nepal and Bangladesh • Threats: the population is divided into isolated subpopulations by dams and barrages, illegal hunting throughout its range (IUCN 1991) 	<ul style="list-style-type: none"> • Keep: of 3 females and one male captured and taken to Japan by a research expedition in the early 1970s, all died after 64 and 176 days; another female sent to Japan Oct 1970 died after 299 days (IUCN 2000); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Platanista minor</i> Indus Dolphin	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Indus river system in Pakistan • Threats: the species is extirpated in parts of its former range, population is split into subpopulations completely isolated from one another by dams (IUCN 1991) 	<ul style="list-style-type: none"> • Keep: About 11 live specimens have been taken into captivity: of 3 young females sent to a US aquarium in 1968, all died within a few weeks; one female was sent to the same aquarium in 1970; of 7 sent to Switzerland for research, most died soon after arrival, but one survived for a year, one for 3 years, and 1 for 5 years (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Berardius spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Berardius arnuxii</i> Arnoux's Beaked Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: southern hemisphere, circumpolar, temperate to subarctic waters 	<ul style="list-style-type: none"> • Keep: no specimens are reported to have been kept in captivity; too large for a captive breeding colony to be feasible (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Berardius bairdii</i> Baird's Beaked Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: N. Pacific, temperate to subarctic waters 	<ul style="list-style-type: none"> • Keep: too large for conservation through captive breeding to be feasible (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Hyperoodon spp.	Each species as below	Each species as below
<i>Hyperoodon ampullatus</i> Northern Bottlenose Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000); Vulnerable (COSEWIC 1996) • Distribution: Atlantic ocean, cold temperature to subarctic waters; possibly N. Pacific and Mediterranean Sea 	<ul style="list-style-type: none"> • Keep: species appears to be too large to be kept in captivity, and there are no reports of such attempts (IUCN 1991) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Hyperoodon planifrons</i> Southern Bottlenose Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: southern hemisphere, circumpolar, temperate to Antarctic waters; occasionally into tropical waters 	<ul style="list-style-type: none"> • Keep: species is too large for conservation through captive breeding to be feasible (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Physeter catodon</i> [<i>P. macrocephalus</i>] Sperm Whale	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: northern hemisphere, tropical to subarctic waters, southern hemisphere, all seas 	<ul style="list-style-type: none"> • Keep: there is no practical possibility of maintaining breeding group in captivity (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Sotalia spp.	Each species as below	Each species as below
<i>Sotalia fluviatilis</i> Tucuxi	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000) • Distribution: Atlantic, from Costa Rica to Santos, Sao Paulo, Brazil; Amazon river system 	<ul style="list-style-type: none"> • Keep: about 45 were captured for exhibition in the 1960s and 70s (IUCN 1991); currently kept in at least one facility (Couquiaud-Douaze 1999); no ISIS record (2000) • Breed: only one recorded birth in 1986 (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Sousa spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Sousa chinensis</i> Indo-Pacific Hump-backed Dolphin	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000) • Distribution: coastal waters and rivers from Plettenberg Bay (South Africa) east to S. China and Queensland (Australia) 	<ul style="list-style-type: none"> • Keep: a few were captured alive for display in Australia, of which two had been in captivity for 9 and 15 months by 1983; of 3 captured in South Africa in Jan 1963 all died within 3 months; of 2 captured for display in Hong Kong, one female taken in 1968 was still alive after 20 years (IUCN 1991); currently kept in at least three facilities (Couquiaud-Douaze 1999) no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Sousa teuszii</i> Atlantic Hump-backed Dolphin	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000) • Distribution: coastal waters in river mouths from Mauritius to N. Angola 	<ul style="list-style-type: none"> • Keep: successfully kept at at least 9 facilities (Couquiaud-Douaze 1999); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); reportedly successfully bred (Couquiaud-Douaze 1999); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Neophocaena phocaenoides</i> Black Finless Porpoise	<ul style="list-style-type: none"> • Status: Data Deficient except the population of the Yangtze river of China is Endangered (IUCN 2000) • Distribution: Persian Gulf to Java, China and Japan 	<ul style="list-style-type: none"> • Keep: until 1984, about 94 animals have been kept in Japan, at least 11 in China and 2 in Java (IUCN 1991); at least nine facilities currently have the species in captivity (Couquiaud-Douaze 1999); semi-natural reserves have been established in China with mixed results: of one pair introduced into Tongling, both died and no offspring were produced (Hoard and Wachter 1997); of 10 introduced into Shishou, several died (<i>ibid</i>); and of a group of 29 introduced to Tian'ezhou in 1996, 11 offspring were produced (Anonymous 1997); no ISIS record (2000) • Breed: breeding has taken place at three Japanese establishments; records show 2 survived to at least 2 and 5 years, 3 died soon after birth, and 1 was stillborn (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Phocoena sinus</i> Vaquita	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Distribution: N. Gulf of California, Mexico 	<ul style="list-style-type: none"> • Keep: this species is not known to have been kept in captivity (IUCN 1991, Couquiaud-Douaze 1999); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Eschrichtius robustus</i> Grey Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: Pacific, temperate to Arctic waters 	<ul style="list-style-type: none"> • Keep: given the quantity of food required to maintain even a yearling, conservation through captive breeding would be quite impractical (IUCN 1991); two young gray whales were captured and transported to Sea World in the early 1970s: one died and one survived and was released a year later (IUCN 1991); in 1998, one calf was rescued and released approximately a year later (TIME 1998); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Balaenoptera acutorostrata</i> Minke Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: worldwide, subtropical to Arctic waters 	<ul style="list-style-type: none"> • Keep: on three occasions, minke whales have been captured and maintained alive in Japan; one for 37 days, one for three months and a calf for two weeks; one unsuccessful attempt to keep one in captivity was also made in the US (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaenoptera bonaerensis</i> Southern Minke Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: AntArctic areas of Pacific, Atlantic and Indian Oceans 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaenoptera borealis</i> Sei Whale	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: worldwide, subtropical to Arctic waters 	<ul style="list-style-type: none"> • Keep: far too large to be kept in captivity (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaenoptera edeni</i> Bryde's Whale	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000) • Distribution: worldwide, temperate to tropical waters 	<ul style="list-style-type: none"> • Keep: too large for conservation through captive breeding to be feasible (IUCN 1991); one specimen was held at Sea World Florida and later released alive ; no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaenoptera musculus</i> Blue Whale	<ul style="list-style-type: none"> • Status: Endangered, except the N. Pacific stock is Lower Risk: Conservation Dependent, the N. Atlantic stock is Vulnerable and <i>B. m. brevicauda</i> is Data Deficient (IUCN 2000); Endangered (ESA) • Distribution: worldwide, tropical to subarctic waters 	<ul style="list-style-type: none"> • Keep: the potential for live capture and maintenance is nil, in view of the insurmountable problem of feeding, and size (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaenoptera physalus</i> Fin Whale	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: worldwide, tropical to Arctic waters 	<ul style="list-style-type: none"> • Keep: the species' large size makes it impractical to keep in captivity (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Megaptera novaeangliae</i> Humpback Whale	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: worldwide, tropical to Arctic waters 	<ul style="list-style-type: none"> • Keep: the species is too large for there to be any possibility of conservation through captive breeding (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Balaena mysticetus</i> Bowhead Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent except the Baffin Bay, Davis Strait stock is Endangered, the Hudson Bay, Foxe Basin stock is Vulnerable, the Okhotsk Sea subpopulations are Endangered, and the Svalbard-Barents Sea stock is Critically Endangered (IUCN 2000); all stocks and populations, Endangered (ESA) • Distribution: northern hemisphere, Arctic seas 	<ul style="list-style-type: none"> • Keep: not kept in captivity; problems of providing a suitable captive habitat and nutrition are insurmountable (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
Eubalena spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Eubalaena australis</i> Southern Right Whale	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) • Distribution: worldwide in temperate and subarctic seas 	<ul style="list-style-type: none"> • Keep: not kept in captivity; quite impractical (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Eubalaena glacialis</i> Northern Right Whale	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: only up to 300-325 existing, declining 2% per year (Marine Mammal Commission 1999) • Threats: collisions with ships, entanglement with fishing gear (Marine Mammal Commission 1999) • Distribution: worldwide in temperate and subarctic seas 	<ul style="list-style-type: none"> • Keep: not kept in captivity; quite impractical (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Caperea marginata</i> Pygmy Right Whale	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: southern hemisphere, temperate waters 	<ul style="list-style-type: none"> • Keep: providing suitable food may be an insurmountable problem (IUCN 1991); no ISIS record (2000) • Breed: no captive births recorded (IUCN 1991); no ISIS record (2000); no captive populations of cetacean species on Appendix I are self-sustaining and none have successfully produced second generation offspring (Mayer 1998, Mooney 1998)
<i>Canis lupus</i> Grey Wolf (India, Pakistan, Bhutan and Nepal populations)	<ul style="list-style-type: none"> • Status: Mexican sub-population is Endangered (IUCN 2000); little is known about the wild populations in Pakistan, Bhutan and Nepal (IUCN 1990b) • Distribution: North America south to Mexico, Europe, Asia • Threats: the Indian population suffers from persecution (IUCN 1990b) and numbers are decreasing due to the lack of enforcement of legislation (Alderton 1994) 	<ul style="list-style-type: none"> • Keep: for <i>C. l. pallipes</i>, there are 20 males, 8 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: for <i>C. l. pallipes</i>, there has been 1 birth in the past 6 months (ISIS 2000)
<i>Speothos venaticus</i> Bush Dog	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Bolivia, Paraguay, Brazil, Peru, Ecuador, Colombia, Venezuela, Guyana, French Guiana, Suriname, Panama 	<ul style="list-style-type: none"> • Keep: there are 45 males, 37 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: does not breed readily in captivity (Alderton, 1994); there have been 3 births in the past 6 months (ISIS 2000)
<i>Ailuropoda melanoleuca</i> Giant Panda	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population estimated to be about 1000 individuals (IUCN 1999a). • Distribution: China • Threats: habitat loss and fragmentation; poaching outside and inside reserves persists, as does the trade of pelts (IUCN 1999a) 	<ul style="list-style-type: none"> • Keep: there are 5 males and 5 females in captivity (ISIS 2000) • Breed: captive giant pandas have low pregnancy rates, and high rates of neo-natal mortality, resulting in unsustainable captive populations (IUCN 1999a); no births in the past 6 months (ISIS 2000); more than 6 breeding operations and stock exceeding 74 individuals in China, breeding since 1963 (CITES 1999)
<i>Ailurus fulgens</i> Lesser Panda	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: China, Myanmar, Nepal • Threats: large scale habitat destruction (IGCMC 2000) 	<ul style="list-style-type: none"> • Keep: there are 21 males, 27 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: there have been 2 births in the past 6 months (ISIS 2000); more than 12 breeding operations and stock of more than 205 in China, breeding since 1959 (CITES 1999)
<i>Helarctos malayanus</i> Sun Bear	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); there is a lack of knowledge about the species throughout its range (IUCN 1999a) • Distribution: Myanmar, Thailand, Vietnam, Sumatra, Borneo, India, Malaysia, China • Threats: lowland forest habitat fragmentation due to resource extraction and human settlement (IUCN 1999a); in Myanmar, Laos, Cambodia, and Vietnam poaching of bears for sale or for food is unregulated and increasing with market economies and opening of borders now allowing free trade of bears and bear parts, thereby accelerating killing of bears (IUCN 1999a); use on bear bile farms in China (Mills et al. 1997, WSPA 2000), including the stocking of farms with wild-caught bears (Pearce and Williams 2000) 	<ul style="list-style-type: none"> • Keep: there are 35 males, 67 females, and 2 animals of unknown sex in captivity (ISIS 2000); there is limited information available concerning reproduction, contraception, health and nutrition in bears (BAG 1996) • Breed: there have been no births in the past 6 months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Melursus ursinus</i> Sloth Bear	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); there is a general lack of information on abundance and distribution (IUCN 1999) • Population: the total world population of sloth bears is probably between 10,000 and 25,000, but this is very much an estimate (IUCN 1999a) • Distribution: India, Sri Lanka • Threats: illegal export of gall bladders and other bear parts (Kemf et al. 1999) from India to Singapore, Bangkok, Hong Kong, or other intermediary ports, and eventually to Japan, South Korea, Taiwan (IUCN 1999a) 	<ul style="list-style-type: none"> • Keep: there are 17 males, 19 females, and 3 animals of unknown sex in captivity (ISIS 2000); there is limited information is available concerning reproduction, contraception, health and nutrition in bears (BAG 1996) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Tremarctos ornatus</i> Spectacled Bear	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Venezuela, Colombia, Ecuador, Peru and Bolivia (perhaps Panama) • Threats: habitat conversion to commercial agriculture, hunting, illegal trade in bear parts (IUCN 1999a); there is a faster rate of decline in both numbers of individuals, populations, and habitat than has existed in the past (IUCN 1999a); although hunting is prohibited under forestry laws in each of the five Andean countries, the laws are not enforced (IUCN 1999a); cases of international trade have been confirmed in Ecuador and are suspected in Peru (WWF 2000b); there is concern about the effects of the illegal bear trade (Kemf et al. 1999) 	<ul style="list-style-type: none"> • Keep: there are 83 males, 71 females, and 5 animals of unknown sex in captivity (ISIS 2000) • Breed: there have been 3 births in the past 6 months (ISIS 2000); there is limited information is available concerning reproduction, contraception, health and nutrition in bears (BAG 1996)
<i>Ursus arctos</i> Brown Bear (Bhutan, Mongolia, Mexico and China populations)	<ul style="list-style-type: none"> • Status: Not Listed, except for <i>U. a. nelsoni</i> which is Extinct (IUCN 2000); <i>U. a. nelsoni</i>, <i>U. a. pruniosis</i>, and <i>U. a. arctos</i>, Endangered (ESA); <i>U. arctos</i>, Threatened (ESA, in 48 coterminous States) • Population: Heilongjiang population in China (the species stronghold in China) is estimated to be between 500-1500 bears and is classified as a "Vulnerable Species" (IUCN 1999a); the Mongolian population is 25-30 bears (IUCN 1999a) • Distribution: Bhutan, Mongolia, Mexico, China (<i>U. arctos</i>: formerly, NW Africa, all of PaleArctic from W. Europe, Near and Middle East through N. Himalayas to W. and N. China and Chukotka (Russia); Hokkaido (Japan), western N. America, north from N. Mexico) • Threats: Asian populations of this species are a major source of traded gall bladders (WWF 2000a); use in Chinese bear bile farming, where farm stocks are supplemented with wild caught bears (WSPA 2000) 	<ul style="list-style-type: none"> • Keep: for <i>U. arctos</i>, there are of 33 males, 43 females, and one animal of unknown sex in captivity; for <i>U. a. lasiotus</i> there are 3 males and 3 females in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000); limited information is available concerning reproduction, contraception, health and nutrition in bears (BAG 1996); more than 26 breeding operations and stock of more than 151 individuals in China, breeding since 1962 (CITES 1999)
<i>Ursus arctos isabellinus</i> Red Bear	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: India • Threats: exists in very low densities in the alpine regions of the Greater and Trans Himalayan regions of India, little information exists on the past and present status in India (IUCN 1999a) 	<ul style="list-style-type: none"> • Keep: there are 4 males and 7 females in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000); limited information is available concerning reproduction, contraception, health and nutrition in bears (BAG 1996)
<i>Ursus thibetanus</i> Asiatic Black Bear	<ul style="list-style-type: none"> • Status: <i>U. thibetanus</i>, Vulnerable (IUCN 2000); <i>U. t. gedrosianus</i>, Critically Endangered (IUCN 2000) • Population: population in China is estimated to be less than 20,000 individuals, endangered and urgently must be protected (IUCN 1999a); there are no estimates of population numbers or densities in India, 10,000-15,000 are estimated to live in Japan and 4,000-5,000 in Russia (IUCN 1999a) • Distribution: Afghanistan, Pakistan, India, China, Russia, Korea, Japan • Threats: hunting for the illegal international bear parts trade, particularly in China where illegal border trade and smuggling of live bears are serious problems (IUCN 1999a); bear farming in China, where farm stocks are supplemented with wild-caught bears (WSPA 2000) 	<ul style="list-style-type: none"> • Keep: there are 43 males, 59 females and 7 animals of unknown sex in captivity (ISIS 2000); in 1998, 6764 of the 7002 bears kept at Chinese bear bile farms were Asiatic black bears (Fan 1999) • Breed: there have been no births in the past 6 months (ISIS 2000); limited information is available concerning reproduction, contraception, health and nutrition in bears (BAG 1996); more than 89 breeding operation and stock of more than 6975 individuals in China, breeding since 1962 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Aonyx congicus</i> West African Clawless Otter (Cameroon and Nigeria populations)	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); Endangered (ESA); little is known about this species IUCN 1990a) • Distribution: Zaire, Congo Basin to Uganda and Niger 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000)
<i>Enhydra lutris nereis</i> Southern Sea Otter	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Threatened (ESA, except in USA, south of Pt. Conception) • Distribution: W. coast of USA, south to Mexico (Baja California) • Threats: fishery conflicts, incidental take, and direct take (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are 6 males and 3 females in captivity (ISIS 2000) • Breed: difficult to breed in captivity (IUCN 1990a); there have no births in the past 6 months (ISIS 2000)
<i>Lontra felina</i> [<i>Lutra felina</i>] Marine Otter	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: west coast of South America from Peru to the Straights of Magellan • Threats: illegal trade of pelts and the isolation of remnant populations (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS (2000) • Breed: difficult to breed in captivity (IUCN 1990a)
<i>Lontra longicaudis</i> [<i>Lutra longicaudis</i>] Long-tailed Otter	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Mexico, Central America, W. South America to Peru, E. South America south to Uruguay • Threats: illegal trade of pelts (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are 2 males and 1 female in captivity (ISIS 2000) • Breed: difficult to breed in captivity (IUCN 1990a); there have been no births in the past 6 months (ISIS 2000)
<i>Lontra provocax</i> [<i>Lutra provocax</i>] Southern River Otter	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Chile, Argentina • Threats: restricted range, illegal trade of pelts (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: difficult to breed in captivity (IUCN 1990a)
<i>Lutra lutra</i> European River Otter	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Eurasia; NW Africa, India, Sri Lanka, Taiwan, Vietnam, Sumatra, Java • Threats: populations, particularly in Western Europe, are seriously depleted, due to habitat loss and pollution (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are 7 males, 10 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: difficult to breed in captivity (IUCN 1990a); there have been no births in the past 6 months (ISIS 2000)
<i>Pteronura brasiliensis</i> Giant Otter	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: major river systems of S. America east of the Andes as far south as N. Argentina • Threats: range has been greatly reduced and there is illegal trade of pelts (IUCN 1990a) 	<ul style="list-style-type: none"> • Keep: there are 4 captive males (ISIS 2000) • Breed: difficult to breed in captivity (IUCN 1990a)
<i>Mustela nigripes</i> Black-footed Ferret	<ul style="list-style-type: none"> • Status: Extinct In The Wild (IUCN 2000); Endangered (ESA, except experimental populations) • Distribution: formerly Canada and USA 	<ul style="list-style-type: none"> • Keep: there are 87 males, 87 females, and 1 animal of unknown sex in captivity • Breed: difficult to breed in captivity (CBSG, 2000); only a low percentage of the captive females produce litters (AZA 1995); there have been 19 births in the past 6 months (ISIS 2000)
<i>Prionodon pardicolor</i> Spotted Linsang	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: India, N. Indochina, Nepal 	<ul style="list-style-type: none"> • Keep: there are 7 males and 5 females in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Acinonyx jubatus</i> Cheetah	<ul style="list-style-type: none"> • Status: <i>A. jubatus</i>, Vulnerable (IUCN 2000); <i>A. j. hecki</i>, Endangered (IUCN 2000); <i>A. j. venaticus</i>, Critically Endangered (IUCN 2000); <i>A. jubatus</i>, Endangered (ESA) • Distribution: steppe and savanna zones from Baluchistan through Iran and Turkmenia to NE Arabia except the Sahara; formerly India and Egypt • Threats: illegal trade in furs (in Greece, IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 163 males, 132 females and 3 animals of unknown sex in captivity (<i>A. jubatus</i>) (ISIS 2000). there is one captive male <i>A. j. venaticus</i> in captivity (ISIS 2000) • Breed: difficult to breed in captivity (CBSG 2000), which can be attributed to limited genetic diversity (Alderton 1993, IUCN 1996a); captive population not yet self-sustaining and is maintained by the importation of wild-caught animals (Marker-Kraus, 1997); there have been no births in the past 6 months (ISIS 2000)
<i>Caracal caracal</i> Caracal (Asian population)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); in Asia, caracals have declined quite seriously in number, to the point that all the races are considered to be endangered (Alderton 1993); only one study of a caracal population has been carried out in Asia (IUCN, 1996a) • Distribution: from Turkestan and India to Egypt, Algeria and Morocco and sub-Saharan Africa 	<ul style="list-style-type: none"> • Keep: there are 38 males, 43 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: there has been 1 birth in the past 6 months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Catopuma temminckii</i> Asian Golden Cat	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Nepal to China to Sumatra • Threats: widely reported to be uncommon and threatened by deforestation, small range (IUCN 1996a); hunting for its pelt and bones (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: rarely maintained in captivity (Brocklehurst 1997); there are 16 males, 11 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: only moderate breeding success has occurred (Brocklehurst 1997); the captive population is not self-sustaining (IUCN 1996a); there have been no births in the past 6 months (ISIS 2000)
<i>Felis nigripes</i> Black-footed Cat	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA); a naturally rare species and it has a restricted range (IUCN 1996a) • Distribution: South Africa, Namibia, Botswana • Threats: persecution by farmers, carcass poisoning for jackal control (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: high mortality is a serious husbandry problem (Olbricht and Sliwa 1997); there are 9 males and 8 females in captivity (ISIS 2000) • Breed: the captive population is not self-sustaining (IUCN 1996a); there has been one birth in the past 6 months (ISIS 2000)
<i>Herpailurus yaguaroundi</i> Jaguarundi (North and Central American populations)	<ul style="list-style-type: none"> • Status: <i>H. y. cacomitli</i>, Endangered (IUCN 2000); Endangered (ESA) • Distribution: southern Brazil to Peru, north to southern Arizona and Texas, USA 	<ul style="list-style-type: none"> • Keep: there are 31 males, 21 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: difficult to breed in captivity (CBSG, 2000); the captive population is not self-sustaining (IUCN 1996a); there have been 5 births in the past 6 months (ISIS 2000)
<i>Leopardus pardalis</i> Ocelot	<ul style="list-style-type: none"> • Status: <i>L. p. albescens</i>, Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Paraguay, Argentina, and Peru north to Arizona and Texas (USA) • Threats: historically, heavily exploited by the fur trade (IUCN 1996a); recent sale of furs in Greece (RSPCA 2000) 	<ul style="list-style-type: none"> • Keep: for <i>L. pardalis</i>, there are 90 males, 100 females, and 8 animals of unknown sex in captivity (ISIS 2000); for <i>L.p. mitis</i> there are 5 males and 4 females in captivity (ISIS 2000) • Breed: for <i>L. pardalis</i>, there have been 4 births in the past 6 months (ISIS 2000); the species has a small litter size, and one of the longest gestations and slowest growth rates among small felids (IUCN 1996a)
<i>Leopardus tigrinus</i> Tiger Cat	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA); very little is known about this species in the wild (IUCN 1996a) • Distribution: Costa Rica, Colombia to Brazil, Paraguay and Argentina • Threats: the species has a small range (IUCN 1996a); illegal trade in pelts (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 9 males and 6 females in captivity (ISIS 2000) • Breed: difficult to breed in captivity (CBSG 2000); the captive population is not self-sustaining (IUCN 1996a); there have been no births in the past 6 months (ISIS 2000)
<i>Leopardus wiedii</i> Margay	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA, in Mexico and southward); very little is known about the status and abundance across its range (IUCN 1996a) • Distribution: Brazil, Uruguay, Argentina north to Mexico and USA • Threats: illegal hunting for the illegal skin trade (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 27 males, 25 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: does not breed well in captivity (Mansard 1997); difficult to breed in captivity (CBSG, 2000); there have been no births in the past 6 months (ISIS 2000)
<i>Lynx pardinus</i> Spanish Lynx	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA); has the highest extinction risk of any felid (IUCN 1996a) • Distribution: Spain, Portugal • Threats: very limited range, extremely fragmented (IUCN 1996a); persecuted by humans in certain areas of its range (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000); in the wild, it may take three years from birth before lynx breed for the first time (Alderton 1993)
<i>Neofelis nebulosa</i> Clouded Leopard	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA); there have been no in-depth population studies (IUCN 1996a) • Distribution: Nepal to China and Indochina, south to Sumatra and Borneo, and Taiwan • Threats: suitable forest habitat is generally fragmented (IUCN 1996a); hunting for its teeth and pelt, and for bones for the traditional Asian medicinal trade (IUCN 1996a); illegal trade between China and Taiwan (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 86 males, 77 females and one animal of unknown sex in captivity (ISIS 2000) • Breed: difficult to breed in captivity (CBSG 2000); there have been 8 births in the past 6 months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Oncifelis geoffroyi</i> Geoffroy's Cat	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); status is not well known (IUCN 1996a) • Distribution: Uruguay, Paraguay, Argentina, Bolivia, Brazil • Threats: small range (IUCN 1996a); so little is known about the species' ecological requirements that it is at present impossible to judge the actual impact of hunting or habitat loss (IUCN 1996a); historically, illegal international fur trade (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 22 males and 20 females in captivity (ISIS 2000) • Breed: the captive population is not self-sustaining (IUCN 1996a); there have been no births in the past 6 months (ISIS 2000); with regard to breeding and maternal behaviour, there are still more questions than answers for this species (Foreman 1997)
<i>Oreailurus jacobita</i> Andean Cat	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA); population status is insufficiently known (IUCN 1996a) • Distribution: Chile, Peru, Bolivia, Argentina • Threats: occurs at low densities and has a restricted range; only a few scattered colonies are believed to survive (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000)
<i>Panthera leo persica</i> Asiatic Lion	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: between 200 to 300 individuals in the wild • Distribution: Turkey to India • Threats: range is restricted to the Gir forest, Northern India, which is approximately 1300 km² (IUCN 1996a); significant human-animal conflict, and lions have been killed by villagers (IUCN 2000) 	<ul style="list-style-type: none"> • Keep: there are 32 males, 42 females and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Panthera onca</i> Jaguar	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Argentina and Brazil to Peru, north to Mexico and USA • Threats: Amazon basin rain forest is the stronghold but the species is declining in most other habitats (IUCN 1996a); historically, international fur trade (IUCN 1996a); recent sale of furs in Greece (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 118 males, 140 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Panthera pardus</i> Leopard	<ul style="list-style-type: none"> • Status: Not Listed except as follows: <i>P. p. japonensis</i>, Endangered (IUCN 2000); <i>P. p. kotiya</i>, Endangered (IUCN 2000); <i>P. p. melas</i>, Endangered (IUCN 2000); <i>P. p. nimr</i>, Critically Endangered (IUCN 2000); <i>P. p. orientalis</i>, Critically Endangered (IUCN 2000); <i>P. p. panthera</i>, Critically Endangered (IUCN 2000); <i>P. p. saxicolor</i>, Endangered (IUCN 2000); <i>P. p. tulliana</i>, Critically Endangered (IUCN 2000); Endangered (ESA, except south of and including Gabon, Congo, Zaire, Uganda and Kenya) • Distribution: Africa, Asia • Threats: in Asia, illegal commercial hunting for pelts and for bones for traditional medicine (IUCN 1996a); illegal trade: 18,000 leopard claws and 70 leopard skins were seized recently in India (Jain 2000); illegal export of leopard medicinal products from Russia (TRAFFIC 1998); in northern India, there is high juvenile and adult mortality due to persecution (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: for <i>P. pardus</i>, there are 87 males, 99 females and 4 animals of unknown sex in captivity; for <i>P. p. japonensis</i>, there are 29 males, 35 females (and 2 unknown sex); for <i>P. p. kotiya</i>, there are 28 males, 24 females (and 1 unknown sex); for <i>P. p. melas</i>, there are 7 males and 9 females; for <i>P. p. nimr</i>, there are 2 males, 1 female (and 2 unknown sex); for <i>P. p. orientalis</i>, there are 74 males and 66 females; for <i>P. p. panthera</i>, there is one captive female; for <i>P. p. saxicolor</i>, there are 60 males, 57 females (and 1 unknown sex); and for <i>P. p. tulliana</i> there are no captive populations (ISIS 2000) • Breed: for <i>P. pardus</i> and <i>P. p. nimr</i>, there have been 2 births in the past 6 months; for <i>P. p. orientalis</i>, there has been 1 birth in the past 6 months; there have been no births in the past 6 months for <i>P. p. japonicus</i>, <i>P. p. kotiya</i>, <i>P. p. melas</i>, <i>P. p. panthera</i>, or <i>P. p. saxicolor</i>; and for <i>P. p. tulliana</i> there are no captive populations (ISIS 2000); at least 12 breeding operations and stock of more than 205 individuals in China, breeding since 1956 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Panthera tigris</i> Tiger	<ul style="list-style-type: none"> • Status: <i>P. tigris</i>, Endangered (IUCN 2000); <i>P. t. altaica</i>, Critically Endangered (IUCN 2000); <i>P. t. amoyensis</i>, Critically Endangered (IUCN 2000); <i>P. t. sumatrae</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: temperate and tropical Asia, Russia • Threats: its small range has been greatly reduced in recent times and tigers survive only in scattered populations (IUCN 1996a); significant poaching and illegal international trade in skins, bones and body parts which are used in traditional Chinese and Korean medicines (IUCN 1996a); recently, 132 tiger claws and 4 tiger skins were seized in India (Indian Express Newspapers 2000); illegal export of tiger medicinal products from Russia (TRAFFIC 1998); shooting and poisoning for livestock predation (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: for <i>P. tigris</i>, there are 87 males, 106 females (and one animal of unknown sex) in captivity; for <i>P. t. altaica</i>, there are 197 males, 210 females (and 22 unknown sex); for <i>P. t. amoyensis</i>, there are no captive populations; and for <i>P. t. sumatrae</i>, 73 males, 63 females (and 2 unknown sex) • Breed: for <i>P. tigris</i>, there has been 1 birth in the past 6 months; for <i>P. t. altaica</i> and <i>P. t. sumatrae</i> there have been 3 births in the past 6 months; and for <i>P. t. amoyensis</i>, there are no captive populations (ISIS 2000); more than 57 breeding operations and stock of more than 462 individuals in China, breeding since 1956 (CITES 1999)
<i>Pardofelis marmorata</i> Marbled Cat	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); Endangered (ESA) • Distribution: India and Nepal to Vietnam, Thailand, Malaysia, Sumatra and Borneo (possibly also China) • Threats: small range (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 3 males, 2 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: the captive population is not self-sustaining (IUCN 1996a); there have been no births in the past 6 months (ISIS 2000)
<i>Prionailurus bengalensis</i> <i>bengalensis</i> Leopard Cat (Bangladesh, Indian and Thailand populations)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Bangladesh, India, Thailand (<i>P. bengalensis</i>: E. Sibera through Korea and NE China and most of Asia west to Baluchistan and southeast to Taiwan, Philippines, Java, Bali, and Borneo) • Threats: Chinese populations have been subject to heavy commercial exploitation for the fur trade (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 25 males, 17 females, and 8 animals of unknown sex in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Prionailurus planiceps</i> Flat-headed Cat	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Thailand, Malaysia, Sumatra, Borneo • Threats: small range (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 3 captive males in captivity (ISIS 2000) • Breed: no young have been raised in captivity and the captive population is not self-sustaining (IUCN 1996a)
<i>Prionailurus rubinginosus</i> Rusty-spotted Cat (Indian population)	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000) • Distribution: India, Sri Lanka • Threats: restricted range (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: rare in captivity (IUCN 1996a); there are 3 males and 4 females in captivity (ISIS 2000) • Breed: the captive population is not self-sustaining (IUCN 1996a); there have been no births in the past 6 months (ISIS 2000)
<i>Puma concolor coryi</i> Florida Panther	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: between 30-50 individuals in the wild (IUCN 1996a) • Distribution: USA (<i>P. concolor</i>: Argentina and Chile north to Canada) • Threats: confined to fragmented patches of habitat (IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 3 males and 6 females in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Puma concolor costaricensis</i> Costa Rican Puma	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Nicaragua, Costa Rica, Panama (<i>P. concolor</i>: Argentina and Chile north to Canada) 	<ul style="list-style-type: none"> • Keep: there is one captive female (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Puma concolor cougar</i> Eastern Cougar	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: eastern North America (<i>P. concolor</i>: Argentina and Chile north to Canada) 	<ul style="list-style-type: none"> • Keep: there are 2 males and 5 females in captivity (ISIS 2000) • Breed: there have been no births in the past 6 months (ISIS 2000)
<i>Uncia uncia</i> Snow Leopard	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: mountains of Central Asia from Altai through the Tien Shan and Pamir Ranges to Afghanistan, Kashmir, Nepal and parts of W and NC China • Threats: small range and an extremely patchy and fragmented distribution (IUCN 1996a) fur trade, increased human-animal conflict (Alderton 1993) and poaching for bones which are used in traditional Asian medicine (Alderton 1993, IUCN 1996a) 	<ul style="list-style-type: none"> • Keep: there are 203 males, 239 females, and 5 animals of unknown sex in captivity (ISIS 2000) • Breed: there have been 10 births in the past 6 months (ISIS 2000)
<i>Arctocephalus townsendi</i> Gaudalupe Fur Seal	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Threatened (ESA) • Population: estimated to be 6000 in the wild (Reijnders 1983) • Distribution: Guadalupe Island (Mexico) and Channel Islands (USA) • Threats: species has undergone an extensive genetic bottleneck, this reduction in genetic diversity may influence further population expansion (WWF 2000b) 	

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
Monachus spp.	Each species as below	Each species as below
<i>Monachus monachus</i> Mediterranean Monk Seal	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: estimated at several hundred and declining (Reijnders 1993) • Distribution: Mediterranean and Black Seas, NW Africa to Cape Blanc • Threats: killing by fishermen, incidental catching, entanglement in fishing gear, reduction in food due to over fishing (WWF 2000c); very sensitive to disturbance, especially detrimental during pupping season (WWF 2000c) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000); French plan to breed this species in captivity was halted when the Moroccan government refused to allow removal of 6 seal pups to a commercial sea mammal center; government concluded that the seals could easily be harmed or killed during capture and disturbance to colony may affect breeding (WWF 2000c)
<i>Monachus schauinslandi</i> Hawaiian Monk Seal	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: estimated current population is 1300-1400 and stable (Marine Mammal Commission 1999) • Distribution: NW Hawaiian Islands (USA) • Threats: impacts of fishing not known (WWF 2000b); uneven sex ratio in wild, with more males than females, results in mobbing of females by males, high female mortality and a reduction in reproductive potential (WWF 2000b) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000)
Monachus tropicalis Caribbean Monk Seal	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: Caribbean Sea and Yucatan 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000)
<i>Dugong dugon</i> Dugong	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA, except in USA) • Population: estimated 100,000 in wild (Arquiza 1997) • Distribution: Red Sea and E. Africa to S. Japan, Caroline Islands, Australia, Solomon Islands, New Hebrides and New Caledonia • Threats: main threats in Philippines are excessive hunting, use of cyanide and dynamite in fishing and pollution, and government policy of open access to marine resources; dugongs are slow swimmers and are sometimes captured unintentionally in fishing nets; some 20 animals were caught in the town of Roxas, in Palawan, having strayed into fish corrals or become snared in nets (Arquiza 1997) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000); low reproductive rate: single calf born after gestation period of 13 months, cycle not repeated for 3-5 years (Arquiza 1997)
<i>Trichechus inunguis</i> Amazonian Manatee	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Amazon Basin • Threats: hunting for their meat (Reynolds 1999) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: there are no captive populations (ISIS 2000)
<i>Trichechus manatus</i> West Indian Manatee	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: S. Atlantic and Caribbean coasts from Virginia (USA) and West Indies to Sergipe (Brazil) and the Orinoco and Magdalena river systems • Threats: killing, injury and disturbance caused by watercraft; hunting, trapping, incidental capture (Reynolds 1999) 	<ul style="list-style-type: none"> • Keep: there are 9 males and 9 females in captivity (ISIS 2000) • Breed: there have been 0 births in the last 6 months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Elephas maximus</i> Asian Elephant	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam 	<ul style="list-style-type: none"> • Keep: for <i>E. maximus</i>, 54 males, 280 females, and one animal of unknown sex are in captivity (ISIS 2000); for <i>E. m. hirsutus</i>, there are 10 males and 20 females in captivity (ibid); for <i>E. m. indicus</i>, there are 19 males and 78 females in captivity (ibid); and for <i>E. m. maximus</i>, there are 7 males and 13 females in captivity (ibid) • Breed: 6 offspring produced from all subspecies in past six months (ISIS 2000); there are more than 11 breeding operations and stock of more than 32 individuals in China, breeding since 1978 (CITES 1999)
<i>Loxodonta africana</i> African elephant (except for the populations of Botswana, Namibia, South Africa and Zimbabwe)	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Threatened (ESA) • Distribution: sub-Saharan Africa 	<ul style="list-style-type: none"> • Keep: for <i>L. africana</i>, there are 32 males, 173 females, and one animal of unknown sex in captivity (ISIS 2000); for <i>L. a. africana</i>, there are 17 males, 61 females, and one animal of unknown sex in captivity (ibid); for <i>L. a. cyclotis</i>, there are 2 males in captivity; for <i>L. a. knochenhaveri</i>, there are 4 males, 27 females and one animal of unknown sex in captivity (ibid); and for <i>L. a. oxyotis</i>, there is one female in captivity (ibid) • Breed: there have been two <i>L. africana</i> offspring produced in the past six months (ISIS 2000)
<i>Equus africanus</i> African Wild Ass	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: world's most endangered wild ass with only a few hundred in the wild (Duncan 1992) • Distribution: Ethiopia, Sudan, Somalia • Threats: hunting, for food and traditional medicines, competition for grazing with domestic livestock and hybridization with domestic livestock (Duncan 1992) 	<ul style="list-style-type: none"> • Keep: there are 47 males and 74 females (and one animal of unknown sex) in captivity (ISIS 2000) • Breed: there have been 6 births in the last 6 months (ISIS 2000)
<i>Equus grevyi</i> Grevy's Zebra	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Threatened (ESA) • Population: estimated population 4,276 Kenya (1988), 1,500 Ethiopia (1980); numbers probably decreasing (Duncan 1992) • Distribution: Kenya, Ethiopia, Somalia • Threats: habitat loss through competition with domestic livestock; habitat erosion through excessive tourism, occasionally caught in snares and shot for food (Duncan 1992); low recruitment due to low juvenile survival in wild (Moehlman 2000) 	<ul style="list-style-type: none"> • Keep: there are 120 males and 238 females (and 2 unknown sex) in captivity (ISIS 2000) • Breed: there have been 7 births in the last 6 months (ISIS 2000)
<i>Equus hemionus hemionus</i> Mongolian Wild Ass	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); <i>E. hemionus</i>, Endangered (ESA) • Distribution: Mongolia 	<ul style="list-style-type: none"> • Keep: one male and one female in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000); more than 11 breeding operations and stock of more than 68 individuals in China, breeding since 1977 (CITES 1999)
<i>Equus onager khur</i> Khur	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: India 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000); in 1996 there were 4 males and 6 females in zoos in India (Olney and Fisker 1998) • Breed: no ISIS record (2000); in 1996, one offspring was born, 6 of 10 animals in captivity in India were born in captivity (Olney and Fisker 1998)
<i>Equus przewalskii</i> Przewalski's Horse	<ul style="list-style-type: none"> • Status: Extinct in the Wild (IUCN 2000); Endangered (ESA) • Distribution: Mongolia, China 	<ul style="list-style-type: none"> • Keep: there are 205 males and 395 females (and 6 unknown sex) in captivity (ISIS 2000) • Breed: there have been 13 births in the last 6 months (ISIS 2000); 6 breeding operations and stock of more than 142 individuals in China, breeding since 1985 (CITES 1999)
<i>Equus zebra zebra</i> Cape Mountain Zebra	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: South Africa 	<ul style="list-style-type: none"> • Keep: there are one male and 3 females in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000)
Tapiridae spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Tapirus bairdii</i> Central American Tapir	<ul style="list-style-type: none"> • Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: S. Mexico to Colombia and Ecuador • Threats: habitat destruction and hunting (IUCN 1997) 	<ul style="list-style-type: none"> • Keep: there are 28 males and 14 females in captivity (ISIS 2000) • Breed: there has been one birth in the last 6 months (ISIS 2000); species has a low reproductive rate, interbirth interval rarely less than 18 months for captive tapirs; single young born after 390-410 days gestation (IUCN 1997)
<i>Tapirus indicus</i> Asian Tapir	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Myanmar, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Thailand • Threats: in Malaysia, forest conversion for agriculture and human settlement is the most serious threat; hunting to supply market for tapirs; a young animal may be sold for US\$5500 by Thai wildlife export companies; growing demand for tapirs in zoos, the effect of which can be detrimental to existing populations (IUCN 1997) 	<ul style="list-style-type: none"> • Keep: there are 64 males and 90 females (and 3 unknown sex) in captivity (ISIS 2000) • Breed: there have been 4 births in the last 6 months (ISIS 2000); species has a low reproductive rate (IUCN 1997)
<i>Tapirus pinchaque</i> Mountain Tapir	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: estimated 2,500 in wild (IUCN 1997) • Distribution: Colombia, Ecuador and possibly Peru and Venezuela • Threats: destruction of cloud forest and paramo habitat and hunting (IUCN 1997) 	<ul style="list-style-type: none"> • Keep: there are 3 males and 3 females in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000); species has a low reproductive rate and is susceptible to disease, past attempts to maintain and breed the species in captivity have failed (IUCN 1997)
Rhinocerotidae spp. (except <i>Ceratotherium simum simum</i>)	Each species as below	Each species as below
<i>Ceratotherium simum cottoni</i> Northern White Rhinoceros	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Zaire, Sudan, Uganda, Central African Republic • Threats: poaching for horn, valued at USD \$30,000.00 per pound (0.5kg) (Jamieson 1999) 	<ul style="list-style-type: none"> • Keep: there are 4 males and 5 females in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000)
<i>Dicerorhinus sumatrensis</i> Sumatran Rhinoceros	<ul style="list-style-type: none"> • Status: <i>D. sumatrensis</i>, Critically Endangered (IUCN 2000); <i>D. s. lasiotis</i>, Extinct (IUCN 2000); <i>D. sumatrensis</i>, Endangered (ESA) • Population: estimated 300 in wild (Jamieson 1999) • Distribution: Bangladesh to Vietnam to Indonesia (Borneo) • Threats: poaching for horn which is used in traditional Chinese medicine, horn appears to be a speculators commodity in several consumer states, habitat destruction is also a significant threat (AsRSG 2000) 	<ul style="list-style-type: none"> • Keep: there are one male and 3 females in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000); captive breeding has been unsuccessful (AsRSG 2000)
<i>Diceros bicornis</i> Black Rhinoceros	<ul style="list-style-type: none"> • Status: <i>D. bicornis</i>, Critically Endangered (IUCN 2000); <i>D.b. bicornis</i>, Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated 2500 in wild (Jamieson 1999) • Distribution: sub-Saharan Africa • Threats: poaching for horn, valued at USD \$30,000.00 per pound (0.5kg) (Jamieson 1999) 	<ul style="list-style-type: none"> • Keep: there are 20 males and 11 females (and 1 unknown sex) in captivity (ISIS 2000) • Breed: there have been no births in the last 6 months (ISIS 2000); there have been problems with captive breeding attempts; where 2 adult females are kept together, association may suppress estrus cycles and hence reproduction (AZA 1998f)
<i>Rhinoceros sondaicus</i> Javan Rhinoceros	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: estimated 70 in wild (Jamieson 1999) • Distribution: Indonesia, Indochina, Myanmar, Thailand, Sikkim, Bangladesh, Malaysia • Threats: poaching for horn which is used in traditional Chinese medicine, horn appears to be a speculators commodity in several consumer states, habitat destruction is also a significant threat (AsRSG 2000) 	<ul style="list-style-type: none"> • Keep: there are no captive populations (ISIS 2000) • Breed: captive breeding has not been attempted (AsRSG 2000)
<i>Rhinoceros unicornis</i> Great Indian Rhinoceros	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: estimated 1900 in wild (Jamieson 1999) • Distribution: India, Nepal • Threats: poaching for horn which is used in traditional Chinese medicine, horn appears to be a speculators commodity in several consumer states, habitat destruction is also a significant threat (AsRSG 2000) 	<ul style="list-style-type: none"> • Keep: there are 40 males and 45 females in captivity (ISIS 2000) • Breed: there has been one birth in the last 6 months (ISIS 2000); there have been problems with captive breeding attempts; many enclosures too small or unsafe to accommodate breeding (AZA 1998f)
<i>Babyrousa babyrussa</i> Babirusa	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Indonesia 	<ul style="list-style-type: none"> • Keep: 60 males, 46 females, and 2 animals of unknown sex are in captivity (ISIS 2000) • Breed: 5 offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Sus salvanius</i> Pygmy Hog	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Bhutan (ex?), India, Nepal (ex?) 	<ul style="list-style-type: none"> • Keep: there are 2 males in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Catagonus wagneri</i> Chacoan Peccary	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Argentina, Bolivia, Paraguay 	<ul style="list-style-type: none"> • Keep: there are 3 males and 9 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Vicugna vicugna</i> Vicuña (except the population of Peru and certain populations of Argentina, Bolivia and Chile)	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) • Distribution: Argentina, Bolivia, Chile, Peru 	<ul style="list-style-type: none"> • Keep: 41 males and 60 females are in captivity (ISIS 2000) • Breed: 13 offspring produced in past six months (ISIS 2000)
Moschus spp. Musk Deer	<ul style="list-style-type: none"> • Status: <i>M. moschiferus</i>, Vulnerable (IUCN 2000); <i>M. chrysogaster chrysogaster</i>, <i>M. fuscus</i>, <i>M. berezovskii</i>, <i>M. chrysogaster</i> and <i>M. chrysogaster leucogaster</i>, Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA, in Afghanistan, Bhutan, Myanmar, China (Tibet, Yunnan), India, Nepal, Pakistan, Sikkim) • Distribution: China, Vietnam, Sikkim, Mongolia, Korea, Russia, Afghanistan, Bhutan, India, Myanmar, Nepal, and Pakistan • Threats: trade musk pods, a specialized scent-producing male organ which produces highly valued musk which is used perfumes and for its alleged medicinal properties (IUCN 1999b); habitat destruction, large-scale illegal hunting to meet commercial demand for the musk pod (TRAFFIC 1999); conversion of habitat for agriculture and destruction for timber harvests, hunting with guns, dogs and snares (Homes 1999) (Note: musk has been synthetically produced and is used in many non-medicinal products; there are at least 300 musk-like compounds used in perfumes (Gaski and Johnson 1999)) 	<ul style="list-style-type: none"> • Keep: for <i>M. moschiferus</i>, there are 17 in captivity; for <i>M. m. moschiferus</i>, there are 8 in captivity (ISIS 2000); difficult to manage and breed on farms because of their solitary habits, territorial behavior, and excitable nature (Green 1989); high losses of wild-caught animals reported as “animals died from gastroenteritis and poor husbandry” (Homes 1999) • Breed: no births in the 6 month preceding 31 March 2000 (ISIS 2000); “experience with musk deer has shown that populations bred in captivity... regularly require replenishment with wild animals” (Homes 1999); “the Chinese government began farming a program to domesticate musk deer for the production of musk in 1958 (Zhang 1983), but there is no information readily available on breeding success or commercial production” (Gaski and Johnson 1994); more than 21 breeding operations and stock of more than 586 individuals in China, breeding since 1960 (CITES 1999)
<i>Axis calamianensis</i> [<i>Cervus porcinus calamianensis</i>] Calamian Deer	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); <i>A. porcinus calamianensis</i>, Endangered (ESA) • Distribution: Philippines 	<ul style="list-style-type: none"> • Keep: 15 males, 23 females, and 8 animals of unknown sex in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000)
<i>Axis kuhlii</i> [<i>Cervus porcinus kuhlii</i>] Khul’s Deer	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); <i>A. porcinus kuhlii</i> Endangered (ESA) • Distribution: Indonesia 	<ul style="list-style-type: none"> • Keep: 6 males and 6 females are in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000)
<i>Axis porcinus annamiticus</i> [<i>Cervus porcinus annamiticus</i>] Indo-Chinese Hog Deer	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); Endangered (ESA) • Distribution: Cambodia, China, Laos, Thailand (ex), Vietnam 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Blastocerus dichotomus</i> Marsh Deer	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Argentina, Bolivia, Brazil, Paraguay, Peru, Uruguay 	<ul style="list-style-type: none"> • Keep: 2 females are in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Cervus duvaucelii</i> Swamp Deer	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: India, Nepal 	<ul style="list-style-type: none"> • Keep: 48 males, 89 females and one animal of unknown sex are in captivity (ISIS 2000) • Breed: 19 offspring produced in past six months (ISIS 2000)
<i>Cervus elaphus hanglu</i> Hangul	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: India 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cervus eldii</i> Eld’s Deer	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Cambodia, China, India, Laos, Myanmar, Thailand, Vietnam 	<ul style="list-style-type: none"> • Keep: 2 males and 4 females are in captivity (ISIS 2000) • Breed: one offspring produced in past six months (ISIS 2000)
<i>Dama mesopotamica</i> [<i>Cervus dama mesopotamicus</i>] Persian Fallow Deer	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Iran, Iraq (ex?) 	<ul style="list-style-type: none"> • Keep: 22 males, 32 females and 8 animals of unknown sex are in captivity (ISIS 2000) • Breed: 10 offspring produced in past six months (ISIS 2000)
Hippocamelus spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Hippocamelus antisensis</i> North Andean Deer	<ul style="list-style-type: none"> Status: Data Deficient (IUCN 2000); Endangered (ESA) Distribution: Argentina, Bolivia, Chile, Ecuador (ex?), Peru 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Hippocamelus bisulcus</i> South Andean Deer	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Argentina, Chile 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Megamuntiacus vuquanghensis</i> Giant Muntjac	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); just discovered in 1991, described in 1994(Animal Info 2000) Distribution: Vietnam, Laos, Cambodia Threats: hunting, habitat, degradation (Animal Info 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000); there is reportedly one specimen at a menagerie in Lak Xao, Laos (Schaller and Urba 1996) Breed: no ISIS record (2000)
<i>Muntiacus crinifrons</i> Black Muntjac	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000) Distribution: China 	<ul style="list-style-type: none"> Keep: one male in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)
<i>Ozotoceros bezoarticus</i> Pampas Deer	<ul style="list-style-type: none"> Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) Distribution: Argentina, Bolivia, Brazil, Paraguay, Uruguay 	<ul style="list-style-type: none"> Keep: for <i>O. b. campestris</i>, there is one male and one female in captivity (ISIS 2000); for <i>O. b. leucogaster</i>, there are one male and 5 females in captivity (<i>ibid</i>) Breed: no offspring produced in past six months (ISIS 2000)
<i>Pudu puda</i> Southern Pudu	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Argentina, Chile 	<ul style="list-style-type: none"> Keep: 65 males and 71 females are in captivity (ISIS 2000) Breed: 17 offspring produced in past six months (ISIS 2000)
<i>Antilocapra americana</i> Mexican Pronghorn (population of Mexico)	<ul style="list-style-type: none"> Status: <i>A. a. mexicana</i>, Lower Risk: Conservation Dependent (IUCN 2000); <i>A. a. peninsularis</i>, Critically Endangered (IUCN 2000); <i>A. a. sonoriensis</i>, Endangered (IUCN 2000); <i>A. a. peninsularis</i> and <i>A. a. sonoriensis</i>, Endangered (ESA) Distribution: <i>A. a. mexicana</i> and <i>A. a. sonoriensis</i>, Mexico and USA; <i>A. a. peninsularis</i>, Mexico 	<ul style="list-style-type: none"> Keep: for <i>A. americana</i>, 16 males and 23 females are in captivity (ISIS 2000); for <i>A. a. americana</i>, 34 males and 46 females are in captivity (<i>ibid</i>); and for <i>A. a. mexicana</i>, 2 females are in captivity (<i>ibid</i>) Breed: 3 <i>A. americana</i> and 9 <i>A. a. americana</i> produced in past six months (ISIS 2000)
<i>Addax nasomaculatus</i> Addax	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000) Distribution: Algeria (ex), Chad, Egypt (ex), Libya (ex), Mali, Mauritania, Niger, Sudan (ex?), Tunisia 	<ul style="list-style-type: none"> Keep: 220 males, 347 females and 9 animals of unknown sex are in captivity (ISIS 2000) Breed: 56 offspring produced in past six months (ISIS 2000)
<i>Bos gaurus</i> [<i>B. frontalis</i>] Guer	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Bangladesh (ex?), Bhutan, Cambodia, China, India, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Bos mutus</i> [<i>B. grunniens</i>] Wild Yak	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: China, India, Nepal (?) 	<ul style="list-style-type: none"> Keep: one male is in captivity (ISIS 2000) Breed: one offspring produced in past six months (ISIS 2000)
<i>Bos sauveli</i> [<i>Novibos sauveli</i>] Kouprey	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Distribution: Cambodia, Laos, Thailand, Vietnam 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Bubalus depressicornis</i> [<i>Anoa depressicornis</i>] Lowland Anoa	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Indonesia 	<ul style="list-style-type: none"> Keep: 44 males and 45 females are in captivity (ISIS 2000) Breed: 8 offspring produced in past six months (ISIS 2000)
<i>Bubalus mindorensis</i> [<i>Anoa mindorensis</i>] Tamaraw	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Distribution: Philippines 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Bubalus quarlesi</i> [<i>Anoa quarlesi</i>] Mountain Anoa	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Indonesia 	<ul style="list-style-type: none"> Keep: 4 males and 3 females are in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)
<i>Capra falconeri</i> Markhor	<ul style="list-style-type: none"> Status: <i>C. falconeri</i>, Endangered (IUCN 2000); <i>C. f. heptneri</i>, Critically Endangered (IUCN 2000); <i>C. f. megaceros</i>, <i>C. f. chittanensis</i>, and <i>C. f. jerdoni</i>, Endangered (ESA) Distribution: Afghanistan, India, Pakistan, Tajikistan, Turkmenistan, Uzbekistan 	<ul style="list-style-type: none"> Keep: for <i>C. falconeri</i>, 31 males, 48 females and 5 animals of unknown sex are in captivity (ISIS 2000); for <i>C. f. falconeri</i>, there is one female in captivity (<i>ibid</i>); for <i>C. f. heptneri</i>, 88 males, 114 females and 5 animals of unknown sex are in captivity (<i>ibid</i>); and for <i>C. f. megaceros</i>, there is one male in captivity (<i>ibid</i>) Breed: 6 <i>C. falconeri</i> and 21 <i>C. f. heptneri</i> offspring produced in past six months (ISIS 2000)
<i>Cephalophus jentinki</i> Jentink's Duiker	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Ivory Coast, Liberia, Sierra Leone 	<ul style="list-style-type: none"> Keep: 2 males are in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Gazella dama</i> Dama Gazelle	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Algeria (ex), Chad, Libya (ex), Mali, Mauritania (ex), Morocco (ex), Niger, Senegal, Sudan, Western Sahara (ex) 	<ul style="list-style-type: none"> • Keep: for <i>G. dama</i>, 14 males and 33 females are in captivity (ISIS 2000); for <i>G. d. mhorri</i>, 56 males, 106 females and one animal of unknown sex are in captivity (<i>ibid</i>); for <i>G. d. ruficollis</i>, 44 males and 110 females are in captivity (<i>ibid</i>) • Breed: 8 <i>G. dama</i>, 16 <i>G. d. mhorri</i>, and 18 <i>G. d. ruficollis</i> produced in captivity in past six months (ISIS 2000)
<i>Hippotragus niger variani</i> Giant Sable Antelope	<ul style="list-style-type: none"> • Status: Critically Endangered ((IUCN 2000); Endangered (ESA) • Distribution: Angola 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Naemorhedus baileyi</i> Red Goral	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: China, India, Myanmar 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Naemorhedus caudatus</i> Long-tailed Goral	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: China, Laos, North Korea, Russia, South Korea, Thailand 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Naemorhedus goral</i> Himalayan Goral	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Bhutan, India, Nepal, Pakistan 	<ul style="list-style-type: none"> • Keep: 5 males and 7 females are in captivity (ISIS 2000) • Breed: 3 offspring produced in past six months (ISIS 2000)
<i>Naemorhedus sumatraensis</i> [<i>Capricornis sumatrensis</i>] Mainland Serrow	<ul style="list-style-type: none"> • Status: <i>C. sumatrensis</i>, Vulnerable (IUCN 2000); <i>C.s. rubidus</i>, Endangered (IUCN 2000); <i>C.s. sumatrensis</i>, Endangered (IUCN 2000); Endangered (ESA) • Distribution: Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam 	<ul style="list-style-type: none"> • Keep: for <i>N. sumatraensis</i>, one male and one female are in captivity (ISIS 2000); for <i>N. s. swettenhami</i>, 3 males and 2 females are in captivity (<i>ibid</i>) • Breed: one <i>N. s. swettenhami</i> produced in past six months (ISIS 2000)
<i>Oryx dammah</i> [<i>O. tao</i>] Scimitar-horned Oryx	<ul style="list-style-type: none"> • Status: Extinct in the Wild (IUCN 2000); Endangered (ESA) • Distribution: Aleria (ex), Burkina Faso (ex?), Chad (ex?), Egypt (ex), Israel, Libya (ex), Mali (ex?), Mauritania (ex), Morocco (ex), Niger (ex?), Senegal (ex), Sudan (ex?), Tunisia, Western Sahara (ex) 	<ul style="list-style-type: none"> • Keep: 227 males, 554 females and 16 animals of unknown sex are in captivity (ISIS 2000) • Breed: 63 offspring produced in past six months (ISIS 2000)
<i>Oryx leucoryx</i> Arabian Oryx	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Egypt (ex), Iraq (ex), Israel (ex), Jordan, Oman, Saudi Arabia, Syria (ex), United Arab Emirates (ex), Yemen (ex) 	<ul style="list-style-type: none"> • Keep: 271 males, 359 females, and 5 animals of unknown sex are in captivity (ISIS 2000) • Breed: 37 offspring produced in past six months (ISIS 2000)
<i>Ovis ammon hodgsonii</i> Tibetan Argali	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: China, India, Nepal 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ovis ammon nigrimontana</i> Kara Tau Argali	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Kazakhstan 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ovis orientalis ophion</i> [<i>O. aries ophion</i>] Cyprus Mouflon	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Cyprus 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ovis vignei vignei</i> Ladakh Urial	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: India, Pakistan 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pantholops hodgsonii</i> Tibetan Antelope	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: China, India, Nepal (?) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pseudoryx nghetinhensis</i> Vu Quang Ox	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Laos, Vietnam 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Rupicapra pyrenaica ornata</i> [<i>R. rupicapra ornata</i>] Apennine Chamois	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Italy 	<ul style="list-style-type: none"> • Keep: 2 males and 3 females are in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)

CLASS AVES		
SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Struthio camelus</i> Ostrich (populations of Algeria, Burkino Faso, Cameroon, Central African Republic, Chad, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Sudan)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); <i>S. c. syriacus</i> and <i>S. c. spatizi</i>, Endangered (ESA) • Distribution: Africa 	<ul style="list-style-type: none"> • Keep: for <i>S. camelus</i>, there are 157 males, 287 females and 88 animals of unknown sex in captivity; for hybrid <i>S. camelus</i> there are 2 males, 6 females, and one animal of unknown sex; for <i>S. c. australis</i> there are 35 males, 49 females, and 16 animals of unknown sex; for <i>S. c. camelus</i> there are 14 males, 9 females, and 6 animals of unknown sex; and for <i>S. c. massaicus</i> there are 21 males, 43 females, and 3 animals of unknown sex (ISIS 2000) • Breed: for <i>S. camelus</i>, 44 offspring produced in the past six months; for <i>S. c. australis</i>, one offspring; and for the others, no offspring (ISIS 2000)
<i>Rhea pennata</i> Lesser Rhea (except populations of Argentina)	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Argentina, Bolivia, Peru, Uruguay 	<ul style="list-style-type: none"> • Keep: commonly kept in captivity by private collectors (Farinato 2000); no ISIS record (2000) • Breed: commonly bred in captivity by private collectors (Farinato 2000); no ISIS record (2000)
<i>Tinamus solitarius</i> Solitary Tinamou	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Paraguay, Argentina 	<ul style="list-style-type: none"> • Keep: rarely kept in captivity, low demand for public display (Farinato 2000); there are 2 males, 2 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: rarely bred in captivity (Farinato 2000); no offspring produced in the last six months
<i>Spheniscus humboldti</i> Humboldt Penguin	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: fewer than 10,000 survive in the wild (AZA 1994) • Distribution: coastal islands of Peru and northern Chile • Threats: commercial guano exploitation in caves where they nest, nests fall prey to gulls and local hunters, competition for food with the fishing industry and hunting for food and skin (AZA 1994) 	<ul style="list-style-type: none"> • Keep: there are 440 males, 460 females, and 456 animals of unknown sex in captivity (ISIS 2000) • Breed: 181 offspring produced in the past six months (ISIS 2000)
<i>Podilymbus gigas</i> Atitlan Grebe	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Population: recently extinct in the only known locality, Lake Atitlan. (Erritzoe 1993) • Distribution: Guatemala 	<ul style="list-style-type: none"> • Keep: extinct; no ISIS record (2000) • Breed: extinct; no ISIS record (2000)
<i>Diomedea albatrus</i> [<i>Phoebastria albatrus</i>] Short-tailed Albatross	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: fewer than 50 birds in 1951 to approximately 500 birds in 1991 (Collar et al. 1994) • Distribution: Japan, Midway Atoll 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because of housing requirements (it is a pelagic species), no demand for public display (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pelecanus crispus</i> Dalmatian Pelican	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000) • Distribution: from eastern Europe into east-central Asia • Threats: drainage of wetlands has caused a massive decline in numbers (IUCN 1994) 	<ul style="list-style-type: none"> • Keep: there are 93 males, 95 females, and 107 animals of unknown sex in captivity (ISIS 2000) • Breed: 4 offspring produced in the past six months (ISIS 2000)
<i>Papasula abbotti</i> Abbott's Booby	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: declining overall (Collar et al. 1994) • Distribution: Christmas Island (Australia), Indonesia • Threats: habitat clearance (it is a tree-nesting species); crowding on remaining nesting areas (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because of housing requirements (it is a pelagic species), no demand for public display (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Fregata andrewsi</i> Christmas Island Frigatebird	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: fewer than 1,600 breeding pairs (Collar et al. 1994) • Distribution: Christmas Island (Australia) • Threats: poaching, habitat destruction and degradation, hunting no longer a serious threat (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because of housing requirements (it is a pelagic species), no demand for public display (Farinato 2000); no ISIS record (2000) • Breed: unknown in captivity; low reproductive rate, requires 17 months to raise a single chick (Collar et al. 1994); no ISIS record (2000)

<p><i>Ciconia boyciana</i> Oriental Stork</p>	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: estimated at 2,500 (Collar et al. 1994) • Distribution: Russia, China, Japan, South Korea, North Korea, Taiwan, India, Bangladesh and Myanmar • Threats: hunting, human disturbance, habitat destruction, pesticides and other pollution (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 27 males, 29 females, and 17 animals of unknown sex in captivity (ISIS 2000) • Breed: 14 offspring produced in the past six months (ISIS 2000); more than 8 breeding operations and stock of more than 83 individuals in China, breeding since 1987 (CITES 1999)
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SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Geronticus eremita</i> Northern Bald Ibis	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Distribution: Yemen, Saudi Arabia, Morocco 	<ul style="list-style-type: none"> Keep: there are 266 males, 273 females, and 335 animals of unknown sex in captivity (ISIS 2000) Breed: difficult to breed (requires establishment of colonies) (Farinato 2000); 36 offspring produced in the past six months (ISIS 2000); breeding stock of 644 in Germany (CITES 1999)
<i>Jabiru mycteria</i> Jabiru	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000) Distribution: Mexico to Argentina 	<ul style="list-style-type: none"> Keep: there are 7 males and 5 females in captivity (ISIS 2000) Breed: no offspring produced in the past six months (ISIS 2000)
<i>Mycteria cinerea</i> Milky Stork	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000) Distribution: Vietnam, Cambodia, Malaysia and Indonesia Threats: destruction of habitat, timber exploitation, hunting and human disturbance (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: there are 12 males, 13 females, and 2 birds of unknown sex in captivity (ISIS 2000) Breed: no offspring produced in the past six months (ISIS 2000)
<i>Nipponia nippon</i> Crested Ibis	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Population: 140 birds in China, extinct in the wild in Japan in 1981 (Coleman 1999) Distribution: China, Japan Threats: shooting and habitat loss, use of chemical fertilizers and pesticides, possible inbreeding (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: in China, there are several birds in captivity which have hatched several young since 1989 (Collar et al. 1994); in Japan, the first captive-bred bird hatched in 1999 (Coleman 1999); no ISIS record (2000)
<i>Anas aucklandica nesiotis</i> Brown Teal	<ul style="list-style-type: none"> Status: <i>A. aucklandica</i>, Vulnerable (IUCN 2000); <i>A. a. nesiotis</i>, Endangered (ESA) Population: on Campbell Island, extinct, but on nearby islet, numbers 60 – 100 birds (Collar et al. 1994) Distribution: Campbell Island (New Zealand) Threats: wetland drainage, introduction of predators, excessive shooting and possibly poultry disease (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: commonly kept in private collections (Farinato 2000); no ISIS record (2000) Breed: commonly bred in captivity in private collections (Farinato 2000); no ISIS record (2000)
<i>Anas laysanensis</i> Laysan Duck	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Population: In 1987, numbers estimated at 500 (Collar et al. 1994) Distribution: Hawaiian Islands (USA) Threats: nearly extinct in the late nineteenth and early twentieth centuries, partly owing to shooting for sport and food by guano-miners and feather-hunters, and partly to the denudation of vegetation by introduced rabbits (eliminated in 1923) (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: commonly kept in private collections (Farinato 2000); no ISIS record (2000) Breed: commonly bred in captivity in private collections (Farinato 2000); no ISIS record; 62 breeding operations and stock of 297 individuals in UK, breeding since 1849 (CITES 1999)
<i>Anas oustaleti</i> Marianas Mallard	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Population: has not been seen in the wild since 1979 despite extensive surveys; is probably extinct in the wild (USFWS 1992) Distribution: Guam, Mariana Islands (USA) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Branta canadensis leucopareia</i> Aleutian Canada Goose	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000) Population: grew from 790 individuals in 1975 to an estimated 32,000 birds in 1999 (though the goal of having 50 or more pairs nesting in each of the three geographic parts of its historic range has not been met) (USFWS-7 1999) Distribution: USA, Japan Threats: decline began in 1750 when fur farmers and trappers introduced foxes on more than 190 islands in Alaska (USFWS-7 1999) 	<ul style="list-style-type: none"> Keep: there are 23 males, 25 females, and 43 animals of unknown sex in captivity (ISIS 2000) Breed: 27 offspring produced in the past six months (ISIS 2000)
<i>Branta sandvicensis</i> Nene or Hawaiian Goose	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Population: declined from an estimated 25,000 at the end of the 20th century to a low of perhaps 30 in 1951 (Collar et al. 1994), following release of captive-bred birds, an estimated 925 currently exist in the wild (Zablan 2000) Distribution: Hawaiian Islands (USA) Threats: excessive hunting (Collar et al. 1994); inbreeding depression, loss of adaptive skills, disease, poaching, road kills dietary deficiencies and predation from introduced mammals (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: there are more in captivity than in the wild (WWF 1997b); there are 406 males, 375 females, and 113 animals of unknown sex in captivity (ISIS 2000) Breed: regularly bred in zoos and wildfowl collections (WWF 1997b); 20 offspring produced in the past six months (ISIS 2000); 86 breeding operations with stock of 668 individuals in UK, breeding since 1951 (CITES 1999); breeding stock of less than 100 in Germany (<i>ibid</i>)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Cairina scutulata</i> White-winged Duck	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: known population is only 336 individuals (Collar et al. 1994) • Distribution: India, Malaysia, Indonesia, Thailand • Threats: deforestation, inappropriate forest management, drainage of wetlands, hunting, human disturbance and probably pesticides and pollution (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: limited availability; rare in collections (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Rhodonessa caryophyllacea</i> Pink-headed Duck	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: probably extinct, last authentic site record 1935, a few records from the 1960s too doubtful to be believed (Erritzoe 1993) • Distribution: India, Myanmar, Nepal • Threats: conversion of habitat to agricultural land and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Gymnogyps californianus</i> California Condor	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: all birds removed from the wild in 1987 for breeding and reintroduction purposes, currently 3 birds in the wild and 84 in breeding facilities (USFWS 1998) • Distribution: USA • Threats: declined rapidly throughout the twentieth century due to direct persecution and accidental lead ingestion from carcasses (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 26 males, 25 females, and 7 animals of unknown sex in captivity (ISIS 2000) • Breed: captive-bred for reintroduction purposes only (USFWS 1998); naturally slow rate of reproduction: one egg every other year. (USFWS 1998); six offspring produced in the past six months (ISIS 2000)
<i>Aquila adalberti</i> Spanish Imperial Eagle	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: extinct in Algeria and Morocco. (Collar et al. 1994) • Distribution: Spain, Portugal, Morocco, Algeria • Threats: shooting, poisoning, trapping, electrocution (power lines), chemical pollution and humane disturbance (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity (need large facilities/expensive to maintain) (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Aquila heliaca</i> Imperial Eagle	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: a few thousand pairs (Collar et al. 1994) • Distribution: Greece to Siberia, NE Africa, India, China • Threats: persecution, disturbance while breeding, poisoning, zoo collecting, habitat loss, felling of nest trees, collision with and electrocution by power lines (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 9 males, 14 females, and 7 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in the past six months (ISIS 2000)
<i>Chondrohierax uncinatus</i> <i>Wilsonii</i> [<i>Chondrohierax wilsonii</i>] Cuba Hook-billed Kite	<ul style="list-style-type: none"> • Status: <i>C. wilsonii</i>, Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Cuba 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity (need large facilities/expensive to maintain) (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pithecophaga jefferyi</i> Philippine Eagle	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: an estimated 200 birds survived in the mid 1980s (WWFd 1997) • Distribution: Phillipines • Threats: primary forest clearance, hunting and trapping (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 13 eagles were held by the Philippines Parks and Wildlife Service in 1992 (WWFd 1997); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Falco araea</i> Seychelles Kestrel	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Seychelles 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: difficult to breed (Farinato 2000); no ISIS record (2000)
<i>Falco jugger</i> Laggar Falcon	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Himalayas, India, Myanmar, Baluchistan 	<ul style="list-style-type: none"> • Keep: there are 10 males, 4 females and one animal of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); approximately 10 breeding operations with stock of 156 individuals in UK, breeding since 1970/80 (CITES 1999)
<i>Falco newtoni</i> Aldabra Kestrel	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Madagascar 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000) • Breed: difficult to breed (Farinato 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Falco pelegrinoides</i> Barbary Falcon	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Mediterranean 	<ul style="list-style-type: none"> • Keep: there is one male and one female in captivity (ISIS 2000) • Breed: no offspring produced in last six months (ISIS 2000); approximately 10 breeding operations with stock of 60 individuals in UK, breeding since 1970/80 (CITES 1999)
<i>Falco peregrinus</i> Peregrine Falcon	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); <i>F. p. peregrinus</i>, Endangered (ESA) • Population: in 1975 there were 324 nesting pairs in North America, currently there are an estimated 1,650 breeding pairs (USFWS 1999b) • Distribution: worldwide • Threats: collection for falconry, in Russia, smugglers from Turkey, Iran and Middle Eastern countries target this species (TRAFFIC-Europe1998b); in the USA and Canada, declined after World War II as a result of the use of the pesticide DDT (USFWS 1999b) 	<ul style="list-style-type: none"> • Keep: for <i>F. peregrinus</i>, there are 21 males, 33 females and 4 animals of unknown sex in captivity; for 8 subspecies, there are an additional 18 males, 9 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: no offspring have been produced in the past six months (ISIS 2000); breeding programs are used to produced birds for reintroduction in the USA and Canada (USFWS 1999b); approximately 100 breeding operations with stock of 1596 individuals in UK, breeding since 1970/80 (CITES 1999); 18 breeding operations with stock of 77 individuals in Germany, breeding since 1993 (<i>ibid</i>)
<i>Falco punctatus</i> Mauritius Kestrel	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: only six birds in the wild 1974, by early 1994, wild population was 56-68 pairs, with a post-breeding estimate of 229-286 birds (Collar, Crosby and Stattersfield 1994) • Distribution: Mauritius 	<ul style="list-style-type: none"> • Keep: there are 4 males, 7 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: bred in captivity for reintroduction purposes (Collar, Crosby and Stattersfield 1994); one offspring produced in past six months (ISIS 2000)
<i>Falco rusticolus</i> Gyr Falcon	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Population: in Europe there are approximately 1,300 to 2,300 breeding pairs, the North American population is estimated to be 18,000 including 3,000 breeding pairs. (CITES COP11 Prop. 11.32) • Distribution: Arctic Europe, Asia and N. America • Threats: use of traditional nest sites makes gyrfalcons vulnerable to mismanagement and illegal collection of eggs and nestlings for falconry (CITES COP11 Prop. 11.32); some demand among falconers and breeders is thought to exist for wild birds, to improve captive breeding stock and because they can be sold for higher prices (CITES COP11 Prop. 11.32) 	<ul style="list-style-type: none"> • Keep: there are 4 males, 7 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: no offspring have been produced in the past six months (ISIS 2000); approximately 30 breeding operations with stock of 139 individuals in UK, breeding since 1980s (CITES 1999); one breeding facility with stock of 6 individuals in Germany (<i>ibid</i>)
<i>Haliaeetus albicilla</i> White-tailed Eagle	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); <i>H. a. groenlandicus</i>, Endangered (ESA) • Distribution: Greenland, Europe, N. Asia, India, China, Japan 	<ul style="list-style-type: none"> • Keep: there are 37 males, 47 females and 21 animals of unknown sex in captivity (ISIS 2000) • Breed: 3 offspring produced in past six months (ISIS 2000)
<i>Haliaeetus leucocephalus</i> Bald Eagle	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Threatened (ESA) • Population: in 1963, only 417 nesting pairs in lower 48 states of the USA, currently an estimated 5,748 pairs (USFWS 1999a) • Distribution: North America • Threats: past threats include killing, loss of nesting habitat and, since after World War II, the use of DDT and other pesticides (USFWS 1999a) 	<ul style="list-style-type: none"> • Keep: for <i>H. leucocephalus</i>, there are 102 males, 100 females and 30 animals of unknown sex in captivity; for <i>H. l. aloscanus</i>, there are 39 males, 35 females, and 7 animals of unknown sex; and for <i>H. l. leucocephalus</i>, there are 10 males, 15 females and 3 animals of unknown sex (ISIS 2000) • Breed: 7 offspring of <i>H. leucocephalus</i> produced in past six months (ISIS 2000)
<i>Harpia harpyja</i> Harpy Eagle	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Mexico south to Argentina 	<ul style="list-style-type: none"> • Keep: there are 11 males, 8 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Vultur gryphus</i> Andean Condor	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Colombia to Chile and Argentina 	<ul style="list-style-type: none"> • Keep: there are 94 males, 82 females, and 5 animals of unknown sex in captivity (ISIS 2000) • Breed: five offspring produced in past six months
<i>Macrocephalon maleo</i> Maleo Megapode	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Indonesia • Threats: nesting sites are threatened from agricultural development, human disturbance, invasive secondary vegetation and the over-harvesting of eggs (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 4 males and 3 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Crax blumenbachii</i> Red-billed Curassow	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: total population is very small (Collar et al. 1994) • Distribution: Brazil • Threats: though restricted to protected forest patches, are still poached (Collar et al. 1994); highly desired by private collectors (Farinato 2000) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: difficult to breed in captivity (Farinato 2000); no ISIS record (2000)
<i>Mitu mitu</i> Alagoas Curassow	<ul style="list-style-type: none"> • Status: Extinct in the Wild (IUCN 2000); <i>M. m. mitu</i>, Endangered (ESA) • Population: probably extinct in the wild (Collar et al. 1994) • Distribution: Brazil • Threats: probable extinction caused by chronic habitat loss and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); private captive population numbered 11 in 1984 (Collar et al. 1994); no ISIS record (2000) • Breed: difficult to breed in captivity (Farinato 2000); no ISIS record (2000)
<i>Oreophasis derbianus</i> Horned Guan	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Mexico, Guatemala • Threats: highly desirable to private collectors (Farinato 2000); habitat destruction and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); there is one male and 2 females in captivity (ISIS 2000) • Breed: difficult to breed in captivity (Farinato 2000); no offspring produced in past six months (ISIS 2000)
<i>Penelope albipennis</i> White-winged Guan	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: possibly less than a hundred individuals exist in the wild (Collar et al. 1994) • Distribution: Peru • Threats: hunting pressure and habitat loss (Collar et al. 1994); highly desired by private collectors (Farinato 2000) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: difficult to breed in captivity (Farinato 2000); no ISIS record (2000)
<i>Pipile jacutinga</i> Black-fronted Piping-guan	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Paraguay, Argentina • Threats: uncontrolled hunting and widespread habitat destruction (Collar et al. 1994); highly desired by private collectors (Farinato 2000) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: difficult to breed in captivity (Farinato 2000); no ISIS record (2000)
<i>Pipile pipile</i> Trinidad Piping-guan	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: around 1980 the population was estimated at only 100 (Collar et al. 1994) • Distribution: Trinidad • Threats: highly desired by private collectors (Farinato 2000); continued hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: difficult to breed in captivity (Farinato 2000); no ISIS record (2000)
<i>Catreus wallichi</i> Cheer Pheasant	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Pakistan, India, Nepal • Threats: hunting, habitat degradation and land conversion (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 19 males, 22 females, and 6 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Colinus virginianus ridgwayi</i> Masked Bobwhite	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: an estimated 500-1000 in the wild in Mexico; 300–500 in the wild in the USA (all released captive-reared birds from Mexican founder stock) (Gall 2000) • Distribution: Mexico, USA 	<ul style="list-style-type: none"> • Keep: there are 800 birds held in captivity in the USA, including 120 breeding pairs, all captive birds are part of the reintroduction program (Gall 2000) • Breed: no offspring produced in the past six months (ISIS 2000)
<i>Crossoptilon crossoptilon</i> White-eared Pheasant	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Population: declining (Collar et al. 1994) • Distribution: China • Threats: hunting and deforestation (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there are 11 males and 9 females in captivity (ISIS 2000) • Breed: no offspring produced in the past six months (ISIS 2000)
<i>Crossoptilon harmani</i> Tibetan-eared Pheasant	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Population: locally common (Collar et al. 1994) • Distribution: China • Threats: deforestation and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Crossoptilon manchuricum</i> Brown-eared Pheasant	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: 1,230 estimated present in 1989 (Collar et al. 1994) • Distribution: China • Threats: populations outside protected areas are threatened by habitat destruction and egg collecting for food (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: common in aviculture (Cowell 1997); there are 14 males, 10 females, and 12 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in the past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Lophophorus impejanus</i> Himalayan Monal	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Himalayas, from Afghanistan to China 	<ul style="list-style-type: none"> • Keep: well established in captivity (Cowell 1997); there are 92 males, 81 females, and 25 animals of unknown sex in captivity (ISIS 2000) • Breed: 11 offspring produced in past six months (ISIS 2000)
<i>Lophophorus lhuysii</i> Chinese Monal	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: declining (Collar et al. 1994) • Distribution: China • Threats: hunting and habitat degradation by overgrazing (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: not kept in private collections; it is believed that the only captive birds outside of China are at the San Diego Zoo (Cowell 1997); there is one male in captivity (ISIS 2000) • Breed: no offspring produced in the past six months (ISIS 2000)
<i>Lophophorus sclateri</i> Sclater's Monal	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: India, Myanmar, China • Threats: hunting and localized forest loss (China) and hunting for food and feathers (India) (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: none believed to be held in captivity outside of China (Cowell 1997); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lophura edwardsi</i> Edward's Pheasant	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: may be extinct in the wild (Collar et al. 1994) • Distribution: Vietnam 	<ul style="list-style-type: none"> • Keep: over 500 birds in captivity (Collar et al. 1994); ISIS records show 26 males, 26 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: one offspring produced in past six months (ISIS 2000)
<i>Lophura imperialis</i> Imperial Pheasant	<ul style="list-style-type: none"> • Status: Data Difficient (IUCN 2000); Endangered (ESA) • Distribution: Vietnam • Threats: hunting and deforestation (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: there is one male and one female in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Lophura swinhoii</i> Swinhoe's Pheasant	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Taiwan 	<ul style="list-style-type: none"> • Keep: 62 males, 61 females, and 30 animals of unknown sex in captivity (ISIS 2000) • Breed: 19 offspring produced in past six months (ISIS 2000)
<i>Polyplectron emphanum</i> Palawan Peacock-pheasant	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Philippines • Threats: hunting and deforestation 	<ul style="list-style-type: none"> • Keep: 106 males, 81 females, and 28 animals of unknown sex in captivity (ISIS 2000) • Breed: 17 offspring produced in past six months (ISIS 2000)
<i>Rheinardia ocellata</i> Crested Argus	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Vietnam, Laos, Myanmar • Threats: deforestation and hunting 	<ul style="list-style-type: none"> • Keep: rare in captivity; may be none in captivity outside of Vietnam and Malaysia (Cowell 1997); for <i>R. o. ocellata</i>, there are 3 males, 7 females and 13 animals of unknown sex in captivity (ISIS 2000) • Breed: 5 offspring produced in past six months (ISIS 2000)
<i>Syrmaticus ellioti</i> Elliot's Pheasant	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: increasingly rare in wild (Erritzoe 1993) • Distribution: China • Threats: hunting for food, deforestation and agricultural encroachment have already rendered much of its range uninhabitable and fragmented its population (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 22 males, 17 females and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000)
<i>Syrmaticus humiae</i> Hume's Pheasant	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: India, Myanmar, Thailand, China • Threats: numbers have greatly diminished in China because of habitat destruction and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: for <i>S. humiae</i>, 5 males, 9 females, 3 animals of unknown sex in captivity; for <i>S. h. humiae</i>, 6 males and 7 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Syrmaticus mikado</i> Mikado Pheasant	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Taiwan (ESA) 	<ul style="list-style-type: none"> • Keep: 22 males, 17 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000)
<i>Tetraogallus caspius</i> Caspian Snowcock	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Taurus Mts. to Iran 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity (alpine species) (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Tetraogallus tibetanus</i> Tibetan Snowcock	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: India, Tibet, China 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity (alpine species) (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Tragopan blythii</i> Blyth's Tragopan	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: range and numbers are being reduced (Collar et al. 1994) • Distribution: Bhutan, India, Myanmar, China • Threats: habitat destruction and fragmentation and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: for <i>T. blythii</i>, 3 males, 3 females and one animal of unknown sex in captivity; for <i>T. b. blythii</i>, 3 males and one animal of unknown sex in captivity (ISIS 2000) • Breed: 2 <i>T. blythii</i> offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Tragopan caboti</i> Cabot's Tragopan	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: China • Threats: hunting and forest destruction and degradation by timber harvesting and the conversion of land for agriculture (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 20 males, 16 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Tragopan melanocephalus</i> Western Tragopan	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated at 900 in Pakistan and 5,000 in India; numbers are declining (Collar et al. 1994) • Distribution: Pakistan, India • Threats: habitat degradation continues to reduce and fragment its range (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to rear in captivity; delicate species (WWF 1997f); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Tympanuchus cupido attwateri</i> Attwater's Greater Prairie Chicken	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: fewer than 50 individuals remain in the wild (USDOI 1999) • Distribution: USA • Threats: has declined sharply as its coastal prairie habitat has been destroyed and fragmented; less than one percent of the species' historic habitat remains; other threats include parasites, disease, inbreeding, and fire ants (USDOI 1999) 	<ul style="list-style-type: none"> • Keep: 60 males, 59 females, and 77 animals of unknown sex in captivity (ISIS 2000) • Breed: coordinated captive-breeding program provides birds for release into the wild (USDOI 1999); 61 offspring produced in past six months (ISIS 2000)
<i>Grus americana</i> Whooping Crane	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: as of 1996, 205 adults in the wild (Meine and Archibald 1996) • Distribution: North America • Threats: habitat loss and pollution, collision with utility lines, human disturbance, disease, predation, loss of genetic diversity within the population, and vulnerability to natural and human-caused catastrophes (Meine and Archibald 1996) 	<ul style="list-style-type: none"> • Keep: 91 birds in captivity (Meine and Archibald 1996); 31 males, 28 females, and 12 animals of unknown sex in captivity (ISIS 2000); captive population maintained for release/reintroduction purposes (Meine and Archibald 1996) • Breed: 8 offspring produced in past six months (ISIS 2000)
<i>Grus canadensis nesiotis</i> Cuba Sandhill Crane	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: estimated at 300 (Meine and Archibald 1996) • Distribution: Cuba and Isle of Pines (sedentary) • Threats: loss and degradation of wetlands and other habitats 	<ul style="list-style-type: none"> • Keep: no ISIS record (ISIS 2000) • Breed: no ISIS record (ISIS 2000)
<i>Grus canadensis pulla</i> Mississippi Sandhill Crane	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: estimated at 120 (Meine and Archibald 1996) • Distribution: Gulf Coast, USA • Threats: loss and degradation of wetlands and other habitats (Meine and Archibald 1996) 	<ul style="list-style-type: none"> • Keep: 23 males, 20 females, and 5 animals of unknown sex in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000)
<i>Grus japonensis</i> Japanese or Red-crowned Crane	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: worldwide, 1700-2000 birds in the wild (Meine and Archibald 1996) • Distribution: Japan, China, Russia, Mongolia, North Korea, South Korea • Threats: habitat loss, pesticides and fire (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 1992 studbook lists 747 birds in 158 institutions (Meine and Archibald 1996); 83 males, 92 females, and 15 animals of unknown sex in captivity (ISIS 2000) • Breed: readily breed under captive conditions (Meine and Archibald 1996); 9 offspring produced in past six months (ISIS 2000); more than 20 breeding operations with stock of more than 280 in China, breeding since 1963 (CITES 1999)
<i>Grus leucogeranus</i> Siberian Crane	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: worldwide, 2900-3000 birds in the wild (Meine and Archibald 1996) • Distribution: Russia, China, Iran, India, Afghanistan, Pakistan 	<ul style="list-style-type: none"> • Keep: in 1994, 84 Siberian cranes were in the captive program (for reintroduction purposes) (Meine and Archibald 1996); 31 males, 28 females, and 12 animals of unknown sex in captivity (ISIS 2000) • Breed: 111 chicks had been hatched in the breeding program in 1994 (Meine and Archibald 1996); 8 offspring produced in past six months (ISIS 2000)
<i>Grus monacha</i> Hooded Crane	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: worldwide, 9400-9600 in the wild (Meine and Archibald 1996) • Distribution: Japan, Russia, China, South Korea (Meine and Archibald 1996) 	<ul style="list-style-type: none"> • Keep: 17 males, 22 females, and 4 animals of unknown sex in captivity (ISIS 2000) • Breed: does not breed consistently in captivity (Meine and Archibald 1996); 2 offspring produced in past six months (ISIS 2000); not a subject of reintroduction plans (Meine and Archibald 1996)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Grus nigricollis</i> Black-necked Crane	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: worldwide, 5600-6000 in the wild (Meine and Archibald 1996) • Distribution: China, India, Bhutan, Myanmar, Vietnam 	<ul style="list-style-type: none"> • Keep: between 77 and 94 Black-necked Cranes were in captivity in China as of 1993; another 18 birds are in captivity at three other sites (Meine and Archibald 1996); 4 males, 4 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: breeds relatively easily in captivity (Meine and Archibald 1996); 2 offspring produced in past six months (ISIS 2000); more than 3 breeding operations with stock of more than 58 individuals in China, breeding since 1986 (CITES 1999)
<i>Grus vipio</i> White-naped Crane	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated at 4900-5300 in the wild (Meine and Archibald 1996) • Distribution: China, Mongolia, Russia, North Korea, South Korea, Japan • Threats: habitat destruction on the breeding grounds and at passage and wintering sites (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 409 were in captivity worldwide as of 1993 (Meine and Archibald 1996); 96 males, 86 females, and 26 animals of unknown sex in captivity (ISIS 2000) • Breed: 18 offspring produced in past six months (ISIS 2000); more than 14 breeding operations with stock of more than 85 individuals in China, breeding since 1971 (CITES 1999)
<i>Gallirallus sylvestris</i> Lord Howe Wood Rail	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: one specimen was collected in 1929, only subsequent observation is of one in 1953 (Collar et al. 1994) • Distribution: Solomon Islands • Threats: introduced mammalian predators (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Rhynochetos jubatus</i> Kagu	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: in 1992, estimated to be 691 in the wild (Collar et al. 1994) • Distribution: New Caledonia (France) • Threats: dogs and other introduced predators (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: 7 males, 7 females, and one animal of unknown sex in captivity (ISIS 2000) • Breed: one offspring produced in past six months (ISIS 2000)
<i>Ardeotis nigriceps</i> Great Indian Bustard	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: 1,500 –2,000 birds in the wild (Collar et al. 1994) • Distribution: India • Threats: habitat loss and disturbance, hunting for food and sport and taking of eggs for food (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Chlamydotis undalata</i> Houbara Bustard	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: Canary Islands, Sahara to Nile Valley, Syria to Asia and India • Threats: prime quarry of traditional Arab hunting/falconry (Al-Saihati 1997); illegal hunting is reported to be common in Uzbekistan (TRAFFIC Europe 1998a); in Turkmenistan, local zoologists recorded a dramatic decrease in populations, which they attribute to unsustainable hunting by Sheikhs from Bahrain, Qatar and Saudi Arabia, hunts totaling 2,000-5,000 birds (TRAFFIC Europe 1998a); estimated that at least 30% of migratory houbara are killed in Pakistan primarily by meat collectors and hunters (Mustikhan 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Eupodotis bengalensis</i> Bengal Florican	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Population: plummeted by 80% from 4,374 birds in 1982 to 750 birds in 1989 (Collar et al. 1994) • Distribution: Nepal, India, Cambodia, Vietnam • Threats: conversion of its primary grassland habitat and the early influence of hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Numenius borealis</i> Eskimo Curlew	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: estimated at about 20 birds (Erritzoe 1993) • Distribution: Canada to S. America 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Numenius tenuirostris</i> Slender-billed Curlew	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: only 50-270 birds likely survive in the wild (known wintering birds numbered as few as six in early 1994) (Collar et al. 1994) • Distribution: Siberia, Mediterranean region, Iran, W. Morocco 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Tringa guttifer</i> Nordmann's Greenshank	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: worldwide, estimated at 1,000 in the wild (Collar et al. 1994) • Distribution: Siberia, India, Malaysia • Threats: urbanization of habitat, which also promotes increased crow predation, human disturbance and hunting pressure (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Larus relictus</i> Relict Gull	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: discovered in 1929, none seen until 1968, when a small population was discovered in Kazakhstan, now also known from several places in China (Erritzoe 1993) • Distribution: Kazakhstan, China 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Caloenas nicobarica</i> Nicobar Pigeon	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: Nicobar Islands to Luzon, New Guinea 	<ul style="list-style-type: none"> • Keep: for <i>C. nicobarica</i>, 146 males, 147 females, and 163 animals of unknown sex in captivity; for <i>C. n. nicobarica</i>, 64 males, 46 females, and 18 animals of unknown sex in captivity (ISIS 2000) • Breed: 17 <i>C. nicobarica</i> and 16 <i>C. n. nicobarica</i> offspring produced in past six months (ISIS 2000)
<i>Ducula mindorensis</i> Mindoro Imperial-pigeon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Philippines • Threats: hunting, logging continues to erode its habitat (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity; difficult to maintain in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Amazona arausiaca</i> Red-necked Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: less than 2500 birds in the wild (Snyder et al. 2000) • Distribution: Dominica • Threats: historically, hunting for food, habitat conversion and hurricanes (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Breed: small number of birds held in government aviary in Dominica. (Reillo 2000); a few illegally obtained birds are held outside Dominica (Reillo 2000); no ISIS record (2000) • Keep: difficult to breed, no success to date (Reillo 2000); no ISIS record (2000)
<i>Amazona barbadensis</i> Yellow-shouldered Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Venezuela, Bonaire • Threats: trade for the national and international pet market illegal trade (DOJ Press Release); 60 wild-caught specimens were recorded in international trade between 1991 and 1995 (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: for <i>A. barbadensis</i>, 2 males, 2 females and 2 animals of unknown sex in captivity; for <i>A. b. babadensis</i>, one male and one animal of unknown sex in captivity (ISIS 2000) • Breed: captive breeding moderately successful in the USA (AFA 1996); no offspring produced in past six months (ISIS 2000)
<i>Amazona brasiliensis</i> Red-tailed Amazon Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: estimated between 3,500 and 4,500 birds in 1997 (Snyder et al. 2000) • Distribution: Brazil • Threats: capture of both adults and young for the pet trade, shooting, loss of nest trees to boat builders and deforestation three wild-caught specimens were recorded in international trade between 1991 and 1995 (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Graber 1999); 11 males and 11 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Amazona guildingii</i> St. Vincent Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated at 800 birds (Snyder et al. 2000) • Distribution: St. Vincent • Threats: 10 to 20 young are captured each year for export (AZA 1998e); eggs are being collected from the wild and taken abroad for incubation (CITES Notification No. 2000/30) 	<ul style="list-style-type: none"> • Keep: estimated to be 90 in captivity (Snyder et al. 2000) ; 20 males and 26 females in captivity (ISIS 2000) • Breed: difficult to breed in captivity (AZA 1998e); no offspring produced in past six months (ISIS 2000)
<i>Amazona imperialis</i> Imperial Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated 250-300 birds in the wild (Snyder et al. 2000) • Distribution: Dominica 	<ul style="list-style-type: none"> • Keep: captive population limited to one living specimen in government aviary in Dominica. (Reillo 2000); no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Amazona leucocephala</i> Cuban Amazon Parrot	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA); Cuban population, Vulnerable (Snyder et al. 2000); Bahama Islands and Cayman Islands populations, Endangered (Snyder et al. 2000) • Population: <i>A.l. bahamensis</i>: in 1995, estimated to be 1100-1200 in the wild (Snyder et al. 2000); <i>A.l. hesternae</i>: 300-430 (Snyder et al. 2000); and <i>A.l. caymanensis</i>: about 2000, with captive population on Grand Cayman numbering approximately 500 birds (Snyder et al. 2000) • Distribution: Cuba, Bahamas, Caiman Islands (UK) • Threats: though protected in Cuba, still marketed in Eastern European countries; in 1988, US seized 49 Cuban amazons en-route to the US; most serious threat is habitat destruction for agriculture, cattle and firewood and natural disasters such as hurricanes that limit the number of dead trees for nesting in the Bahamas, vulnerable to exotic predators, poaching, possible habitat loss and hurricanes; in Cayman Islands, most serious threats are predation by rats, barn owls, smooth-billed ani, greater Antillean grackle and feral cats, disease, starvation of young after hurricane or period of drought, flooded cavities, felling of parrot nesting trees by humans and collection of chicks for pets (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: rare in aviculture (AFA 1996); for <i>A. leucocephala</i>, 11 males, 13 females, and 2 animals of unknown sex in captivity; for <i>A. l. bahamensis</i>, 3 animals of unknown sex in captivity; for <i>A. l. caymanensis</i>, 2 males and 3 females in captivity; for <i>A. l. hesternae</i>, one male, one female, and 4 animals of unknown sex in captivity; for <i>A. l. leucocephala</i>, 66 males, 46 females, and 27 animals of unknown sex in captivity; and for <i>A. l. palmarom</i>, one male in captivity (ISIS 2000) • Breed: captive breeding moderately successful (AFA 1996); one <i>A. l. leucocephala</i> offspring produced in past six months and none for any other subspecies (ISIS 2000); more than 15 breeding operations with more than 100 individuals in UK, breeding since 1956 (CITES 1999)
<i>Amazona pretrei</i> Red-spectacled Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: approximately 16,300 in 1997 (Snyder et al. 2000) • Distribution: Argentina, Brazil • Threats: illegal domestic trade; approximately 500 chicks are taken from the wild annually (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: very rare in captivity (AFA 1996); one male in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Amazona rhodocorytha</i> Red-browed Amazon Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: size is unknown but is assumed to be rapidly declining (Snyder et al. 2000) • Distribution: Brazil • Threats: habitat destruction, illegal trade a threat as it is for all large parrots in Brazil (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: rare in aviculture: USA population is 30 with 11 founders; European population is approximately 80 (AZA 1998d); 20 males, 17 females, and 8 animals of unknown sex in captivity (ISIS 2000) • Breed: very difficult to breed (Reillo 2000); no offspring produced in past six months (ISIS 2000); more than 5 breeding operations with stock of more than 150 individuals in UK, breeding since 1980 (CITES 1999)
<i>Amazona tucumana</i> Tucuman Amazon Parrot	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); conservation status poorly known (Juniper and Parr 1998) • Distribution: Argentina, Bolivia • Threats: serious decline in the twentieth century in response to large scale deforestation and, until listing on CITES Appendix I the late 1980s, extensive international trade (Juniper and Parr 1998) 	<ul style="list-style-type: none"> • Keep: 28 males, 21 females, and 9 animals of unknown sex in captivity (ISIS 2000) • Breed: moderately available in aviculture in the USA; captive breeding successful (AFA 1996); no offspring produced in past six months (ISIS 2000); more than 30 breeding operations with stock of more than 150 individuals in UK, breeding since 1980 (CITES 1999)
<i>Amazona versicolor</i> St. Lucia Amazon Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: estimated to be 350 – 500 in the wild (Snyder et al. 2000) • Distribution: St. Lucia • Threats: Recent suspected attempt to smuggle eggs from the wild for international trade (Butler 2000); illegally obtained specimens are thought to be held in Eastern Europe (Butler 2000) 	<ul style="list-style-type: none"> • Keep: 5 birds in captivity in St. Lucia; approximately 22 in the UK (Butler 2000); 11 males, 7 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: difficult to breed in captivity (Butler 2000); no offspring produced in past six months (ISIS 2000)
<i>Amazona vinacea</i> Vinaceous Amazon Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Argentina, Paraguay • Threats: habitat destruction and pet trade (Snyder et al. 2000); illegal trade (USDOJ 1996) 	<ul style="list-style-type: none"> • Keep: 8 males, 5 females, and 7 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding moderately successful in the USA (AFA 1996); 5 offspring produced in past six months (ISIS 2000); more than 20 breeding operations with stock of more than 50 individuals in UK, breeding since 1977 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Amazona viridigenalis</i> Green-cheeked Amazon Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Mexico • Threats: large-scale illegal international trade (Snyder et al. 2000, USFWS-6 1998); ability to successfully make use of disturbed habitat mosaics indicates that capture is the main problem (Snyder et al. 2000); estimated minimum harvest was approximately 5,000 <i>A. viridigenalis</i> per year for a 12 year period (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 42 males, 37 females, and 23 animals of unknown sex in captivity (ISIS 2000) • Breed: commonly bred in captivity in the USA (AFA 1996); no offspring produced in past six months (ISIS 2000); 6 breeding operations with stock of 30 individuals in UK, breeding since 1937 (CITES 1999)
<i>Amazona vittata</i> Puerto Rican Amazon Parrot	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: in 1975, only 13 were known to survive in the wild; in 1996, 48 birds were in the wild (Snyder et al. 2000) • Distribution: Puerto Rico (USA) • Threats: near island-wide elimination of its original habitat (Snyder et al. 2000); disease spread from exotic species of parrots and competition with these and other species of birds and other introduced animals (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 87 in captivity in 1996 (Snyder et al. 2000); 29 males and 27 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
Anodorhynchus spp.	Each species as below	Each species as below
<i>Anodorhynchus hyacinthinus</i> Hyacinth Macaw	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Brazil, Bolivia, Paraguay • Threats: highly sought in illegal trade (Kievit 1998, USDOJ 1996); birds hatched from smuggled eggs are laundered as captive-bred (Anderson 2000); illegal trapping remains a problem in some areas, nest-trees are still often cleared to provide areas for cattle (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 196 males, 160 females, and 19 animals of unknown sex in captivity (ISIS 2000) • Breed: reproductive rate in captivity has been low, as it is reported to be in the wild (Clubb 1992); 7 offspring produced in past six months (ISIS 2000)
<i>Anodorhynchus leari</i> Lear's Macaw	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: 100–200 birds in the wild (Snyder et al. 2000) • Distribution: Brazil • Threats: highly sought in illegal trade (Richardson 1999); more than 25 birds trapped for trade over the last three years (Snyder et al. 2000); illegally obtained birds are known to be held in Singapore, Switzerland, eastern Europe, UK and Brazil (Snyder et al. 2000); main threat illegal pet trade by specialized trappers who systematically catch adults and chicks with mist nests (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: officially 6 in captivity (Snyder et al. 2000); 2 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Anodorhynchus glaucus</i> Glaucous Macaw	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil, Uruguay, Paraguay, Argentina 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ara ambigua</i> Great Green Macaw	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (Snyder et al. 2000) • Population: fewer than 2500 individuals in the wild with no subpopulation greater than 250 mature birds (Snyder et al. 2000) • Distribution: Ecuador, Honduras, Nicaragua, Costa Rica, Panama, Colombia • Threats: highly sought in illegal trade (Kievit 1998); loss of habitat, poaching of nestlings for the cagebird trade and poaching of birds for food (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: rare in aviculture (AFA 1996); for <i>A. ambigua</i>, 21 males, 22 females, and 4 animals of unknown sex in captivity; for <i>A. ambigua</i> hybrid, one male in captivity; and for <i>A. a. ambigua</i>, 2 males and 2 females in captivity (ISIS 2000) • Breed: captive breeding moderately successful in USA (AFA 1996); 2 <i>A. ambigua</i> offspring produced in past six months (ISIS 2000)
<i>Ara glaucogularis</i> Blue-throated Macaw	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: between 75 and 150 in the wild (Snyder et al. 2000) • Distribution: Bolivia • Threats: 14 specimens in trade between 1991 and 1995 (Snyder et al. 2000); trapping for the pet trade still a problem (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: very rare in captivity (AFA 1996); 25 males, 26 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding successful (AFA 1996); no offspring produced in past six months (ISIS 2000); more than 15 breeding operations with stock of more than 50 individuals in UK, breeding since 1984 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Ara macao</i> Scarlet Macaw	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); <i>A.m.cyanoptera</i>, Endangered (Snyder et al. 2000) • Population: virtually extirpated from middle America by a combination of capture for the pet trade and habitat loss, the former being by far the most important factor (Snyder et al. 2000) • Distribution: Mexico, Guatemala, Belize, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Guyana, Surinam, French Guiana, Ecuador, Peru, Brazil, Bolivia • Threats: highly sought in illegal trade (Kievit 1998) 	<ul style="list-style-type: none"> • Keep: for <i>A. macao</i>, 253 males, 243 females, and 104 animals of unknown sex in captivity; for <i>A. macao</i> hybrid, 15 males, 8 females and 12 birds of unknown sex in captivity (ISIS 2000) • Breed: commonly bred in captivity in the USA (AFA 1996); 4 <i>A. macao</i> offspring produced in past six months (ISIS 2000); more than 100 breeding operations with stock of more than 1000 individuals in UK, breeding since 1916 (CITES 1999)
<i>Ara maracana</i> Illiger's Macaw	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: information is urgently needed on the current distribution, population status and threats (Snyder et al. 2000) • Distribution: Brazil, Argentina, Paraguay • Threats: habitat destruction but rate of decline suggests involvement of other factors as well (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 13 males, 11 females, and 33 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding moderately successful in the USA (AFA 1996); 2 offspring produced in past six months (ISIS 2000); more than 30 breeding operations with stock of more than 150 individuals in UK, breeding since 1931 (CITES 1999)
<i>Ara militaris</i> Military Macaw	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Mexico, Colombia, Venezuela, Peru, Bolivia, Argentina, Honduras, Costa Rica, Nicaragua • Threats: highly sought in illegal trade (USFWS-DLE 2000) 	<ul style="list-style-type: none"> • Keep: for <i>A. militaris</i>, 97 males, 74 females, and 51 animals of unknown sex in captivity; for <i>A. militaris</i> hybrid, one male in captivity (ISIS 2000) • Breed: easily bred in captivity; moderate availability in the USA (AFA 1996); 5 <i>A. militaris</i> offspring produced in past six months (ISIS 2000); more than 100 breeding operations with stock of more than 1000 individuals in UK, breeding since 1963 (CITES 1999)
<i>Ara rubrogenys</i> Red-fronted Macaw	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Population: estimated at 2,000-4,000 (Snyder et al. 2000) • Distribution: Bolivia • Threats: highly sought in illegal trade (Kievit 1998); nearly 40% of its original habitat destroyed; trapping for the pet trade also threatens this species; nest semi-colonially in cliffs, making them particularly vulnerable to trapping and nest destruction (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 73 males, 55 females, and 44 birds of unknown sex in captivity (ISIS 2000) • Breed: easily bred in captivity; moderate availability in the USA (AFA 1996); 7 offspring produced in past six months (ISIS 2000); more than 30 breeding operations with stock of more than 100 individuals in UK, breeding since 1978 (CITES 1999)
<i>Aratinga guarouba</i> [<i>Guaruba guarouba</i>] Golden Conure	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: information urgently required on its distribution, status and threats (Snyder et al. 2000) • Distribution: Brazil • Threats: sought in illegal trade (USDOJ 1996); destruction of its rainforest habitat and illegal trapping (much desired aviary bird, both internationally and nationally) (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 75 males, 78 females, and 19 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding moderately successful in the USA (AFA 1996); 21 offspring produced in past six months (ISIS 2000)
<i>Cacatua goffini</i> Goffin's Cockatoo	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: Indonesia 	<ul style="list-style-type: none"> • Keep: 74 males, 46 females, and 34 animals of unknown sex in captivity (ISIS 2000) • Breed: commonly bred in captivity in the USA (AFA 1996); one offspring produced in past six months (ISIS 2000); more than 100 breeding operations with stock of more than 1000 individuals in UK, breeding since 1975 (CITES 1999)
<i>Cacatua haematurpygia</i> Red-vented Cockatoo	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: 1000-4000 birds in the wild (Snyder et al. 2000) • Distribution: Philippines • Threats: intensive trapping ("The young of every known accessible nest are taken for the pet trade") combined with destruction of its lowland forest habitat suggest that this species may soon become extinct (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: approximately 20 birds are held in zoos and more than 300 by private collectors (WWF 1997); 15 males, 11 females and 3 animals of unknown sex are in captivity (ISIS 2000) • Breed: captive breeding has been successful in few instances (WWF 1997), no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Cacatua moluccensis</i> Salmon-crested Cockatoo	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Indonesia • Threats: illegal trade (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 179 males, 139 females, and 95 birds of unknown sex in captivity (ISIS 2000) • Breed: commonly bred in captivity in the USA (AFA 1996); 6 offspring produced in past six months (ISIS 2000); more than 100 breeding operations with stock of more than 1000 individuals in UK, breeding since 1951 (CITES 1999); breeding stock of 8 individuals in South Africa, breeding since 1983 (<i>ibid</i>)
<i>Cyanopsitta spixii</i> Spix's Macaw	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: one in the wild (Snyder et al. 2000) • Distribution: Brazil • Threats: trapping of adult birds important factor in population decline (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 42 known to be in captivity (Snyder et al. 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cyanoramphus auriceps forbesi</i> [<i>Cyanoramphus forbesi</i>] Forbes' Yellow-fronted Parakeet	<ul style="list-style-type: none"> • Status: <i>C. auriceps</i>, Lower Risk: Near Threatened (IUCN 2000); Endangered (<i>C. a. forbesi</i>, ESA); • Population: 100-120 (1997) (Snyder et al. 2000); should be restored to status as a distinct species and may qualify as Critically Endangered (Snyder et al. 2000) • Distribution: New Zealand • Threats: 37 wild-caught specimens of <i>C. auriceps</i> in international trade between 1991 and 1995 (Snyder et al. 2000); deforestation, predation by cats (later eradicated) (<i>Collar et al. 1994</i>); hybridization with <i>C. n. chathamensis</i> remains greatest threat (<i>Collar et al. 1994</i>) 	<ul style="list-style-type: none"> • Keep: 17 males, 9 females, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); breeding stock of more than 1000 individuals in Germany (CITES 1999)
<i>Cyanoramphus cookii</i> [<i>Cyanoramphus novaezelandiae cookii</i>] Norfolk Island Parakeet	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA); • Population: in 1996, 60 in the wild (Snyder et al. 2000) • Distribution: Norfolk Island (Australia) • Threats: historically, hunting (including scientific collection) and habitat destruction (Snyder et al. 2000); now, predation by introduced rats (<i>Rattus rattus</i>), competition for nest-sites from introduced crimson rosellas (<i>Platycercus elegans</i>) and Psittacine Circovirus Disease (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 20 in captivity in 1996 as part of a release/reintroduction program (Snyder et al. 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cyanoramphus novaezelandiae</i> Red-fronted Parakeet	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Population: quite rare over large parts of range; its only strongholds are protected off-shore islands (Fingland 1997) • Distribution: New Zealand • Threats: disappearance from the main islands due to introduction of rats, cats, stoats and weasels and exotic diseases (Fingland 1997) 	<ul style="list-style-type: none"> • Keep: 23 males, 16 females, and 25 animals of unknown sex in captivity (ISIS 2000). • Breed: commonly bred in captivity in Australia (Fingland 1997); no offspring produced in past six months (ISIS 2000); breeding stock of more than 1000 individuals in UK, breeding since 1958 (CITES 1999); 450 breeding operations with stock of 5000 in Belgium, breeding since 1968 (<i>ibid</i>); 3 breeding operations with stock of 3600 in Germany, breeding since 1992 (<i>ibid</i>)
<i>Cyclopsitta diophthalma coxeni</i> Coxen's Fig Parrot	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Population: extremely rare, population size unknown., no reports between 1977 and 1981, likely sighting in 1996. (Forshaw 1999) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Eos histrio</i> Red and Blue Lory	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: Indonesia • Threats: estimated 1,335 individuals trapped in 1996, although the species was placed on Appendix I in 1995 (Snyder et al. 2000); logging may become a serious threat in the future (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: limited number of birds in captivity (Schulenburg 2000); for <i>E. histrio</i>, 3 males, 2 females and one animal of unknown sex in captivity; for <i>E. h. histrio</i>, 5 males, 4 females and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: limited success in breeding (Arndt 1996); no <i>E. histrio</i> and one <i>E. h. histrio</i> offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Eunymphicus cornutus</i> Horned Parakeet	<ul style="list-style-type: none"> • Status: Endangered (IUCN) • Population: <i>E. c. uveaensis</i>: 617 in the wild (Snyder et al. 2000); <i>E. c. cornutus</i>: 2000-10000 in the wild in 1994 (Snyder et al. 2000) • Distribution: New Caledonia (France) • Threats: habitat destruction, cage bird trade (Collar et al. 1994); enforcement in New Caledonia inadequate to prevent illegal take of wild-caught birds (CITES COP11 Prop. 11.33, CITES COP11 Prop. 11.34); for <i>E. c. uveaensis</i>, 30 to 40 individuals are trade per year (CITES COP11 Prop. 11.34) and lack of success in breeding in captivity suggests that demand for wild-caught birds by overseas collectors will continue (CITES COP11 Prop. 11.34) 	<ul style="list-style-type: none"> • Keep: for <i>E. c. cornutus</i>, about 500 birds exist in captivity, mainly in Europe (CITES COP11 Prop. 11.33); <i>E. c. uveaensis</i> is rare in captivity, captive population in Europe estimated at 50 individuals in the early 1990s (CITES COP11 Prop. 11.34); no ISIS record (2000) • Breed: for <i>E. c. cornutus</i>, captive reproduction regularly achieved despite small numbers held in captivity (Arndt 1996); <i>E. c. uveaensis</i> is difficult to breed in captivity (CITES COP11 Prop. 11.34); no ISIS record (2000)
<i>Pezoporus occidentalis</i> [<i>Geopsitticus occidentalis</i>] Night Parrot	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: possibly extinct (CITES); only six reliable records of live sightings were made 1935-1984, a single corpse was found in 1990 (Snyder et al. 2000) • Distribution: Australia • Threats: habitat degradation, predation by cats and foxes and reduction of available water by introduced camels may all be causes of decline (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Neophema chrysogaster</i> Orange-bellied Parakeet	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: 100 adults with 80 young fledging in most years, all cohorts are known to experience at least 50% mortality each year (Snyder et al. 2000) • Distribution: Australia • Threats: loss of favored feeding habitat throughout the winter range, lack of safety in numbers for a small bird attractive to avian predators (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: 30 males, 23 females, and 9 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding program established for reintroduction purposes (OPRT 1998); 55 fledged in 1998/1999 breeding season (Romer 2000); 29 offspring produced in past six months (ISIS 2000)
<i>Ognorhynchus icterotis</i> Yellow-eared Conure	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: 82 survive in the wild (Low 2000) • Distribution: Colombia, Ecuador • Threats: two wild-caught specimens were seized in the USA in 1992 (Snyder et al. 2000); hunting at traditional roosts, severe habitat fragmentation, destruction of traditional nesting palms (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: only a handful of individuals have ever reached western markets (Snyder et al. 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pezoporus wallicus</i> Ground Parrot	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Australia • Threats: extensive habitat clearance, drainage of wetlands for agriculture, forestry and badly timed fire regimes (Juniper and Parr 1998) 	<ul style="list-style-type: none"> • Keep: very few <i>P. w. wallicus</i> and no <i>P. w. flaviventris</i> held in captivity, extremely difficult to maintain in captivity (Mawson 2000); no ISIS record (2000) • Breed: <i>P. w. wallicus</i> has bred twice, no chicks survived to fledge, <i>P. w. flaviventris</i> never bred in captivity (Mawson 2000); no ISIS record (2000)
<i>Pionopsitta pileata</i> Red-capped or Pileated Parrot	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: widespread but declining (Juniper and Parr 1998) • Distribution: Brazil, Paraguay, Argentina • Threats: extensive loss of forest to urban growth, agriculture and mining (Juniper and Parr 1998) 	<ul style="list-style-type: none"> • Keep: very rare in captivity (Juniper and Parr 1998); 4 males in captivity (ISIS 2000) • Breed: rarely bred in captivity (AFA 1996); no offspring produced in past six months (ISIS 2000)
<i>Probosciger aterrimus</i> Palm Cockatoo	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Australia, Indonesia, Papua New Guinea • Threats: highly sought in illegal trade, illegally exported for N. America, Europe and Japan. (AZA 1998c) 	<ul style="list-style-type: none"> • Keep: in 1998, about 250 birds in USA captive population (AZA 1998c); for <i>P. aterrimus</i>, 69 males, 52 females, and 18 animals of unknown sex in captivity; for <i>P. a. aterrimus</i>, 13 males and 6 females in captivity; and for <i>P. a. goliath</i>, 1 male in captivity (ISIS 2000) • Breed: not often achieved (Arndt 1996); 5 <i>P. aterrimus</i> produced in past six months (ISIS 2000); breeding stock of 4 individuals in South Africa, breeding since 1983 (CITES 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Psephotus chrysopterygius</i> Golden-shouldered Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Population: less than 2,500 adults and declining (Snyder et al. 2000) • Distribution: Antipodes Islands, New Zealand • Threats: initial establishment of aviary stocks involved significant illegal taking of chicks and adults from the wild and had a serious adverse impact on local populations (Forshaw 2000); current threat is a change in the burning regime over the last century resulting in the invasion of woody weeds into grassy nesting habitat, and higher predation occurring where habitat is overgrown (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: one male <i>P.chrysopterygius</i> in captivity and 15 males, 13 females and 7 animals of unknown sex of <i>P. c. chrysopterygius</i> in captivity (ISIS 2000) • Breed: well established in captivity in Australia but difficult to breed (Forshaw 2000); 6 <i>P. c. chrysopterygius</i> offspring produced in past six months (ISIS 2000)
<i>Psephotus dissimilis</i> Hooded Parrot	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Australia • Threats: historically, trapping, burning and grazing regimes which may limit the availability of dry season grass seed, mining also threatens habitat in part of the species range (Juniper and Parr 1998) 	<ul style="list-style-type: none"> • Keep: 16 males, 9 females and 25 animals of unknown sex in captivity (ISIS 2000) • Breed: commonly bred in captivity in Australia (Mawson 2000, Hyde 2000); 8 offspring produced in past six months (ISIS 2000); breeding stock of 800 individuals in South Africa (CITES 1999)
<i>Psephotus pulcherrimus</i> Paradise Parakeet	<ul style="list-style-type: none"> • Status: Extinct (IUCN 2000); Endangered (ESA) • Population: last reliably recorded in 1927 (Collar et al. 1994) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Psittacula echo</i> [<i>Psittacula eques</i>] Echo Parakeet	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: minimum wild population in 1997 was 73 individuals (Woolaver 1999) • Distribution: Mauritius 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: as part of reintroduction/release program, the 1998/99 season produced 21 fledglings via captive-breeding and captive hatching (Woolaver 1999); no ISIS record (2000)
<i>Pyrrhura cruentata</i> Blue-throated Parakeet	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: four specimens in international trade in 1992. as pets (Snyder et al. 2000); known to be in illegal trade (DOJ Press Release); extreme deforestation and fragmentation threatens the species throughout its range (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: rare in aviculture (Low 1992); 41 males, 22 females and 27 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); more than 100 breeding operations with stock of more than 500 individuals in UK, breeding since 1937 (CITES 1999)
Rhynchopsitta spp.	Each species as below	Each species as below
<i>Rhynchopsitta pachyrhyncha</i> Thick-billed Parrot	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Mexico, USA • Threats: suffered heavily from shooting in the USA and was very likely extirpated north of the border as a result, recent decline due to large scale felling of pine forests (Snyder et al. 2000); extensive trapping for the pet and avicultural trades (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: numbers in captivity possibly exceed 1,000, almost all taken illegally (Snyder et al. 2000); 13 males, 6 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding moderately successful in USA (AFA 1996); no offspring produced in past six months (ISIS 2000)
<i>Rhynchopsitta terrisi</i> Maroon-fronted Parrot	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution : Mexico • Threats: destruction of forest habitat by fire, housing development, logging and forest clearing for agricultural purposes (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Stigops habroptilus</i> Kakapo	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: only nine of 20 females in a known population of 54 birds have produced fertile eggs (Snyder et al. 2000); because a single female has been found within its natural range in 1997 and further birds are thought to occur, the IUCN status of this species will be changed to Critically Endangered (Snyder et al. 2000) • Distribution: New Zealand • Threats: this flightless, lekking, nocturnal parrot is especially vulnerable to predation by mammalian carnivores, particularly during breeding (Snyder et al. 2000) 	<ul style="list-style-type: none"> • Keep: all birds reared in captivity (from eggs/chicks produced in the wild) are part of the reintroduction program (Greene 2000); no ISIS record (2000) • Breed: naturally have a slow and erratic reproductive rate (Collar et al. 1994); no ISIS record (2000)
<i>Vini ultramarina</i> Ultramarine Lory	<ul style="list-style-type: none"> • Status: Endangered (IUCN) • Distribution: Marquesas Islands (France) • Threats: 6 wild-caught specimens in international trade in 1993 (Snyder et al. 2000); European rats are most likely cause of its decline (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: limited number in captivity (Schulenburg 2000); no ISIS record (2000) • Breed: breeding seldom achieved (Arndt 1996); no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Tyto soumagnei</i> Madagascar Red Owl	<ul style="list-style-type: none"> • Status: Endangered (IUCN); Endangered (ESA) • Population: has been seen only once (in 1973) in the wild since 1934, although a captive live specimen was discovered in 1993 (Collar et al. 1994) • Distribution: Madagascar • Threats: habitat loss continuing (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Athene blewitti</i> Forest Owlet	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: last collected in 1914, last seen in 1968, very rare (Erritzoe 1993); recently re-discovered (King and Rasmussen 1998) • Distribution : India • Threats: habitat destruction (Collar et al. 1994), fragmentation and degradation (King and Rasmussen 1998) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Mimizuku gurneyi</i> Lesser Eagle-owl	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Philippines • Threats: extensive habitat clearance (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ninox novaeseelandiae undulata</i> Norfolk Island Boobook Owl	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Range: Norfolk Island (New Zealand) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000); 90 breeding operations with stock of more than 216 individuals (<i>N. novaeseelandiae</i>) in UK, breeding since 1975 (Doc. AC.15.9.2)
<i>Ninox squamipila natalis</i> Moluccan Hawk Owl	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Population: less than 100 birds remain. (Erritzoe, 1993) • Distribution: Christmas Island (Australia) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Ramphodon dohrnii</i> [<i>Glaucis dohrnii</i>] Hook-billed Hermit	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: massive habitat loss (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pharomachus mocinno</i> Resplendent Quetzal	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Mexico to Panama 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Aceros nipalensis</i> Rufous-necked Hornbill	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Population: about 400 in the wild in 1982 (Collar et al. 1994) • Distribution: Bhutan, India, Bangladeshi, China, Myanmar, Thailand, Laos and Vietnam • Threats: deforestation is reducing and fragmenting suitable habitat in much of its range; hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: knowledge of husbandry and propagation techniques insufficient to develop self-sustaining captive populations (AZA 1998b); no ISIS record (2000)
<i>Aceros subruficollis</i> Plain-pouched Hornbill	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Myanmar, Thailand, Indonesia • Threats: extensive deforestation within its range (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: knowledge of husbandry and propagation techniques insufficient to develop self-sustaining captive populations (AZA 1998b); no ISIS record (2000)
<i>Buceros bicornis</i> Great Hornbill	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: India, China, Bangladesh, India, Thailand, Mainland SE Asia, Malaya, Sumatra • Threats: hunting in India and Indonesia for food and medicine, deforestation (AZA 1998b) 	<ul style="list-style-type: none"> • Keep: for <i>B. virgil</i>, 47 males, 52 females, and 4 animals of unknown sex in captivity (ISIS 2000) • Breed: poor nesting success in captivity, knowledge of husbandry and propagation techniques insufficient to develop self-sustaining captive populations (AZA 1998b); no offspring produced in past six months (ISIS 2000)
<i>Buceros vigil</i> Helmeted Hornbill	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Thailand, Malaysia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: knowledge of husbandry and propagation techniques insufficient to develop self-sustaining captive populations (AZA 1998b); no ISIS record (2000)
<i>Campephilus imperialis</i> Imperial Woodpecker	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: has not been recorded with certainty since 1958 (Collar et al. 1994) • Distribution: Mexico • Threats: exploitation for food, widespread destruction of its specialized open pine-forest habitat, especially the removal of large nesting trees (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Dryocopus javensis richardsi</i> Tristram's White-bellied Woodpecker	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: North Korea and South Korea 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cotinga maculata</i> Banded Cotinga	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: extensive and continuing deforestation within its range (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Xipholena atropurpurea</i> White-winged Cotinga	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brazil • Threats: extensive and continuing deforestation within its range (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pitta gurneyi</i> Gurney's Pitta	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: no records in Myanmar since 1914; in Thailand, numbers declined from 39 to 40 pairs in 1986 to 21 to 25 pairs (WWF 1997a) • Distribution: Thailand, Myanmar • Threats: forest clearing and degradation (Collar et al. 1994), capture for the pet trade (WWF 1997a) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because of its highly specialized diet and environmental needs, a delicate species (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pitta kochi</i> Whiskered Pitta	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Philippines • Threats: hunting with snares, habitat loss (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because of its highly specialized diet and environmental needs, a delicate species (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Atrichornis clamosus</i> Noisy Scrub-bird	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: rediscovered 1961; in 1993, population of singing males was estimated at 400 individuals (Collar et al. 1994) • Distribution: Australia • Threats: wildfire (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pseudochelidon sirintarae</i> White-eyed River Martin	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: not reliably reported since 1980 (Collar et al. 1994) • Distribution: Thailand • Threats: concentrations of roosting barn swallows (<i>Hirundo rustica</i>) with which it formerly associated have been greatly reduced as a result of the harvesting of reeds and disturbance caused by illegal bird-trapping (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because it feeds on the wing (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Dasyornis broadbenti litoralis</i> Western Rufous Bristlebird	<ul style="list-style-type: none"> • Status: <i>D. broadbenti</i>, Lower Risk: Near Threatened (IUCN 2000); Endangered (<i>D. b. litoralis</i>, ESA) • Population: extinct (Collar et al. 1994) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Dasyornis longirostris</i> Western Bristlebird	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Population: unlikely to exceed 1,000 (Collar et al. 1994) • Distribution: Australia • Threats: wildfire (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity, difficult to maintain because of its delicacy (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Picathartes gymnocephalus</i> White-necked Rockfowl	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Ghana, Ivory Coast, Liberia, Guinea, Sierra Leone • Threats: collecting for zoological display, forest clearance and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because it nests in colonies in caves or on rock faces (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Picathartes oreas</i> Grey-necked Rockfowl	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Cameroon, Gabon, Equatorial Guinea, Nigeria • Threats: forest clearance and hunting (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: difficult to maintain in captivity because it nests in colonies in caves or on rock faces (Farinato 2000); one female in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Zosterops albogularis</i> White-chested White-eye	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: last confirmed sighting, 1980 (Collar et al. 1994) • Distribution: Norfolk Island (Australia) • Threats: predation by introduced black rats, clearance of natural vegetation (Collar et al. 1994) 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lichenostomus melanops cassidix</i> Helmeted Honeyeater	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Population: about 100-150 in the wild (Erritzoe 1993) • Distribution: Australia 	<ul style="list-style-type: none"> • Keep: rare in captivity (Farinato 2000); no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Agelaius flavidus</i> Saffron-cowled Blackbird	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000) Population: declined steeply, range sharply contracted (Collar et al. 1994) Distribution: Brazil, Paraguay, Uruguay, Argentina Threats: habitat destruction (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Carduelis cucullata</i> Red Siskin	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Population: greatly declined, present numbers estimated in the high hundreds or low thousands (WWF 1997e) Distribution: Venezuela, Colombia Threats: capture in enormous numbers for the international bird trade because of its capacity to hybridize with canaries (Collar et al. 1994); excessive collecting and habitat changes (WWF 1997e) 	<ul style="list-style-type: none"> Keep: 17 males, 12 females, and 2 animals of unknown sex in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000); breeding stock of 1400 individuals in Germany (Doc. AC.15.9.2)
<i>Leucopsar rothschildi</i> Rothschild's Starling or Bali Mynah	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Population: 30 remain in the wild (AZA 1998a) Distribution: Indonesia Threats: continuing illegal poaching for the cage bird trade (Collar et al. 1994) 	<ul style="list-style-type: none"> Keep: at least 750 captive individuals in zoological facilities worldwide (AZA 1998a); 266 males, 295 females, and 114 animals of unknown sex in captivity (ISIS 2000) Breed: 84 offspring produced in past six months (ISIS 2000); one breeding operation with a stock of 668 individuals in Germany, breeding since 1998 (Doc. AC.15.9.2)

CLASS REPTILIA

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Batagur baska</i> River Terrapin	<ul style="list-style-type: none"> Status: Critically Endangered (IUCN 2000); Endangered (ESA) Distribution: Bangladesh, Cambodia, India, Indonesia (Sumatra), Malaysia, Myanmar, Singapore (?), Thailand, Vietnam Threats: habitat destruction, illegal trade in Asian food markets (Pro Wildlife 2000) 	<ul style="list-style-type: none"> Keep: 17 males, 23 females, and 6 animals of unknown sex in captivity (ISIS 2000) Breed: breeding attempts in Madras Crocodile Bank (India) failed (Whitaker and Andrews 1997); no reported breeding by German private keepers (DGHT); no offspring produced in past six months (ISIS 2000)
<i>Clemmys muhlenbergi</i> Bog Turtle	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Threatened (ESA) Distribution: USA 	<ul style="list-style-type: none"> Keep: 33 males, 30 females, and 40 animals of unknown sex in captivity (ISIS 2000) Breed: 6 offspring produced in past six months (ISIS 2000)
<i>Geoclemys hamiltonii</i> Spotted Pond Turtle	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Bangladesh, India, Nepal (?), Pakistan Threats: overfishing, pollution, harvesting of eggs (Shrestha 1997), illegal trade in Asian food markets (Pro Wildlife 2000) 	<ul style="list-style-type: none"> Keep: 11 males, 22 females, and 87 animals of unknown sex in captivity (ISIS 2000) Breed: 41 offspring produced in past six months (ISIS 2000)
<i>Kachuga tecta</i> Indian Roofed Turtle	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Lower Risk (India, BCPP 1997); Endangered (India population, ESA) Distribution: Bangladesh, India, Nepal, Pakistan Threats: trade, fishing, human interference, habitat loss (BCPP 1997), illegal trade in Asian food markets (Pro Wildlife 2000) 	<ul style="list-style-type: none"> Keep: 1 male, 1 female, and 38 animals of unknown sex in captivity (ISIS 2000) Breed: captive breeding attempts at Madras Crocodile Bank (India) failed (Whitaker and Andrews 1997); in 1993 two, and in 1996 three captive bred hatchlings reported by German keepers (DGHT 1995, DGHT 1998); no offspring produced in past six months (ISIS 2000)
<i>Melanochelys tricarinata</i> Three-keeled Asian Turtle	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Bangladesh, India, Nepal (?) Threats: habitat modification, collection of eggs (Shrestha 1997) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Morenia ocellata</i> Burmese Peacock Turtle	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Myanmar Threats: illegal trade in Asian food markets (Pro Wildlife 2000) 	<ul style="list-style-type: none"> Keep: one male in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000)
<i>Terrapene coahuila</i> Aquatic Box Turtle	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Mexico Threats: illegal trade in Asian food markets (Pro Wildlife 2000) 	<ul style="list-style-type: none"> Keep: 18 males, 55 females, and 26 animals of unknown sex in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000); CITES Scientific Authority of Germany reports this species is regularly bred but does not list any breeding facilities (BfN 1999)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Geochelone nigra</i> Indefatigable Island Tortoise	<ul style="list-style-type: none"> • Status: <i>G. nigra</i>, Vulnerable (IUCN 2000); <i>G.n.abingdoni</i>, Extinct in the Wild (IUCN 2000); <i>G.n.becki</i>, Vulnerable (IUCN 2000); <i>G.n.chathamensis</i>, Vulnerable (IUCN 2000); <i>G.n.darwini</i>, Endangered (IUCN 2000); <i>G.n.ephippium</i>, Extinct in the Wild (IUCN 2000); <i>G.n.galapagoensis</i>, Extinct (IUCN 2000); <i>G.n.guntheri</i>, Endangered (IUCN 2000); <i>G.n.hoodensis</i>, Critically Endangered (IUCN 2000); <i>G.n.microphyes</i>, Vulnerable (IUCN 2000); <i>G.n.porteri</i>, Endangered (IUCN 2000); <i>G.n.vandenburghi</i>, Vulnerable (IUCN 2000); <i>G.n.vicina</i>, Endangered (IUCN 2000) • Distribution: Ecuador • Threats: highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 48 males, 45 females, and 110 animals of unknown sex in captivity (ISIS 2000); in 1965 all available adult specimens of the island Espanola were taken from the wild to a breeding center; incubation and rearing procedures have improved and reintroduction began in 1975 with the first successful breeding in the wild in 1991 (Cayot and Morillo 1997) • Breed: 4 offspring produced in past six months (ISIS 2000)
<i>Geochelone radiata</i> Radiated Tortoise	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Madagascar, Mauritius and Reunion (introduced) • Threats: highly sought through illegal trade (German Customs 2000), habitat destruction 	<ul style="list-style-type: none"> • Keep: 149 males, 96 females, and 282 animals of unknown sex in captivity (ISIS 2000) • Breed: 29 offspring produced in past six months (ISIS 2000); 22 captive bred specimens reported in 1993 by German private keepers (DGHT 1995)
<i>Geochelone yniphora</i> Angonoka Tortoise	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Madagascar • Threats: highly sought through illegal trade (German Customs 2000), habitat destruction, restricted distribution (Juvik et al. 1997) 	<ul style="list-style-type: none"> • Keep: 1 male and 2 females in captivity (ISIS 2000) • Breed: a captive breeding program in Madagascar made good progress (Juvik et al. 1997) producing more than 250 hatchlings, but the theft of 75 of young captive bred specimens in May 1996 severely set back the recovery program; no offspring produced in past six months (ISIS 2000)
<i>Gopherus flavomarginatus</i> Bolson Tortoise	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Mexico • Threats: habitat alteration (Trevino et al. 1997) 	<ul style="list-style-type: none"> • Keep: one male, one female, and 44 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity (German Customs 2000) • Breed: captive breeding is reported only from the Mapimi Biosphere Reserve in Mexico (Aguierre et al. 1997); no offspring produced in past six months (ISIS 2000)
<i>Psammobates geometricus</i> Geometric Tortoise	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000) • Distribution: South Africa • Threats: very limited distribution, habitat loss (Baard 1997) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); conservation measures in South Africa do not include captive breeding (Baard 1997)
Cheloniidae spp.	Each species as below	Each species as below
<i>Caretta caretta</i> Loggerhead Sea Turtle	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Threatened (ESA); Endangered (China Red List 1998) • Distribution: tropical and temperate areas of Atlantic Ocean, Indian Ocean, Mediterranean and Black Sea, Pacific Ocean • Threats: serious decline of nesting populations in throughout the Pacific from tremendous overharvest of eggs, direct harvest of adults and incidental mortality from fishing (USNMFS 2000); shrimp trawling, coastal development, pollution throughout range (USNMFS 2000) 	<ul style="list-style-type: none"> • Keep: 4 females and 11 animals of unknown sex are in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Chelonia mydas</i> Green Sea Turtle	<ul style="list-style-type: none"> • Status: Endangered except Mediterranean subpopulation is Critically Endangered (IUCN 2000); Threatened (except in breeding colonies and Pacific Coast of Mexico where it is Endangered), (ESA); Critically Endangered (China Red List 1998) • Distribution: tropical and temperate areas of Atlantic Ocean, Indian Ocean, Mediterranean and Black Sea, Pacific Ocean • Threats: greatest cause for decline is commercial harvest for eggs and food (USNMFS 2000); incidental catch during commercial shrimp trawling is a continuing source of mortality (USNMFS 2000) 	<ul style="list-style-type: none"> • Keep: 7 males, 8 females, and 15 animals of unknown sex are in captivity (ISIS 2000) • Breed: only hatchery and release activities are known (Islam et al. 1999); no offspring produced in past six months (ISIS 2000)
<i>Chelonia depressus</i> Flatback Sea Turtle	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Indian and Pacific Oceans 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Eretmochelys imbricata</i> Hawksbill Sea Turtle	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); Critically Endangered (China Red List 1998) • Distribution: tropical areas of Atlantic Ocean, Indian Ocean, Mediterranean and Black Sea, Pacific Ocean • Threats: international commerce in hawksbill shell (bekko) is the single most significant factor endangering populations around the globe (USNMFS 2000); poaching of eggs, development of nesting beaches and destruction of coral reefs (on which the species depends for food and shelter) (USNMFS 2000); illegal sales at Asian food markets (Wenjun <i>et al.</i> 1996) 	<ul style="list-style-type: none"> • Keep: 3 males, 2 females, and 5 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); in Cuba, only ranching is reported (EU-Delegation 1999); "No significant captive breeding for commercial purposes is known to occur within or without range states" (CITES COP11 Prop. 11.40)
<i>Lepidochelys kempii</i> Kemp's Ridley Sea Turtle	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: tropical and temperate areas of Atlantic Ocean • Threats: decline due to collection of eggs, fishing for juveniles and adults, killing adults for meat and other products, direct take for indigenous use, and incidental take by shrimp trawlers (USNMFS 2000) 	<ul style="list-style-type: none"> • Keep: 2 males, 1 female, and 4 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Lepidochelys olivacea</i> Olive Ridley Sea Turtle	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Threatened (except in breeding colonies and Pacific Coast of Mexico where it is Endangered, ESA), Critically Endangered (China Red List 1998) • Distribution: tropical and temperate areas of Atlantic, Indian and Pacific Oceans • Threats: direct harvest of adults and eggs, incidental capture in commercial fisheries, and loss of nesting habitat (USNMFS 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); only hatch and release activities are known (Islam <i>et al.</i> 1999)
<i>Dermochelys coriacea</i> Leatherback Sea Turtle	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); Critically Endangered (China Red List 1998) • Distribution: tropical, temperate and sub-polar areas of Atlantic Ocean, Indian Ocean, Mediterranean and Black Sea, Pacific Ocean • Threats: illegally sold in Asian food markets (Wenjun <i>et al.</i> 1996); by-catch (China Red List 1998) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Apalone ater</i> Cuatro Ciénegas Softshell	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Distribution: Mexico 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Aspideretes gangeticus</i> Indian Softshell Turtle	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Bangladesh, India, Nepal, Pakistan • Threats: illegally sold in Asian food markets (Wenjun <i>et al.</i> 1996); habitat destruction, overfishing (Shrestha 1997) 	<ul style="list-style-type: none"> • Keep: one female in captivity (ISIS 2000) • Breed: captive breeding at Madras Crocodile Bank is reported (Whitaker and Andrews 1997); no offspring produced in past six months (ISIS 2000)
<i>Aspideretes hurum</i> Indian Peacock Softshell Turtle	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Bangladesh, India • Threats: illegally sold in Asian food markets (Wenjun <i>et al.</i> 1996); habitat destruction (Shrestha 1997) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); captive breeding at Madras Crocodile Bank failed (Whitaker and Andrews 1997)
<i>Aspideretes nigricans</i> Black Softshell	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Distribution: Bangladesh • Threats: endemic to one pond in Bangladesh, reduction of potential nesting grounds, egg predation, infections (Ahsan 1997) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); no captive breeding program exists (Ahsan 1997)
<i>Pseudemys umbrina</i> Western Swamp Turtle	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: captive breeding program increased population from less than 50 in 1987 to over 130 by 1993 (Kuchling 1997) • Distribution: Australia • Threats: very limited distribution, habitat loss (Kuchling 1997) 	<ul style="list-style-type: none"> • Keep: 19 males, 15 females, and 155 animals of unknown sex in captivity (ISIS 2000) • Breed: captive breeding program increased population from less than 50 in 1987 to over 130 by 1993 (Kuchling 1997); 31 offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Alligator sinensis</i> Chinese Alligator	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); Endangered (China Red List 1998) • Distribution: China • Threats: collection of wild-caught adults to stock breeding farms is a serious conservation problem (Ross 1998); breeding stock of ARCCA originates from the wild (CITES-Notification No. 2000/010); limited distribution, habitat destruction (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 75 males, 52 females, and 46 animals of unknown sex in captivity (ISIS 2000) • Breed: several captive breeding centers in China produce several hundred hatchlings per year (Ross 1998); also bred in zoos and Rockefeller Wildlife Refuge in USA (Alderton 1992); 2 offspring produced in past six months (ISIS 2000); one CITES-approved breeding facility in China, "ARCCA", 3000 hatchlings (1995); more than 7 breeding operations with a stock of more than 8461 individuals in China, breeding since 1981 (Doc. AC.15.9.2)
<i>Caiman crocodilus apaporiensis</i> Apaporis River Caiman	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Restricted range, no data on population size • Distribution: Colombia (Apaporis River) • Threats: illegal leather products confiscated regularly (German Customs 2000); very restricted range, habitat loss (Ross 1998) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); no captive breeding reported (Ross 1998)
<i>Caiman latirostris</i> Broad-nosed Caiman (except the population of Argentina)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Argentina, Brazil, Bolivia, Paraguay, Uruguay • Threats: illegal leather products confiscated regularly (German Customs 2000); habitat destruction, illegal hunting (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 49 males, 160 females, and 23 animals of unknown sex in captivity (ISIS 2000) • Breed: only ranching activities in Argentina, while captive breeding is known only from University of Sao Paulo, Brazil, where the first breeding in captivity was successful (Ross 1998, Verdade and Sarkis 1998); no offspring produced in past six months (ISIS 2000)
<i>Melanosuchus niger</i> Black Caiman (except the population of Ecuador)	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) • Distribution: Bolivia, Colombia, Ecuador, French Guyana, Guyana, Peru • Threats: illegal leather products confiscated regularly (German Customs 2000); habitat destruction, illegal hunting (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 4 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: only a ranching program in Ecuador, experimental farming in Columbia and Bolivia (Ross 1998); captive breeding not successful (Sommerlad 1998); no offspring produced in past six months (ISIS 2000)
<i>Crocodylus acutus</i> American Crocodile	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: USA, Mexico, Caribbean, C. and S. America • Threats: habitat destruction, illegal hunting, collection of wild-caught adult breeders to stock farms (Ross 1998); breeding stock of "Tropical Fauna and Pizano" originate at least partially from the wild (CITES-Notification No. 2000/010) 	<ul style="list-style-type: none"> • Keep: 13 males, 19 females, and 35 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); farming has begun in five countries and ranching in Cuba (Ross 1998); CITES-approved breeding facilities: a) Colombia, "Pizano", 570 hatchlings (1998), 750 (1999); "Tropical Fauna", 250 hatchlings (1999); b) Honduras, "Finca La Sierra", 9260 offspring (1996)
<i>Crocodylus cataphractus</i> African Slender-snouted Crocodile	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); Endangered (ESA) • Distribution: W. and C. Africa • Threats: illegal leather products regularly confiscated (German Customs 2000); habitat destruction, illegal hunting (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 11 males, 11 females, and 22 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); no ranching or farming has been attempted yet (Ross 1998)
<i>Crocodylus intermedius</i> Orinoco Crocodile	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Orinoco River Basin (South America) • Threats: illegal leather products regularly confiscated (German Customs 2000); habitat destruction, illegal hunting, limited distribution (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 2 males and 2 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); captive breeding for reintroduction in Colombia, ranching with reintroduction and captive breeding in Venezuela with 1056 specimens in total (Ross 1998); bred at one USA zoo (Miami) (Alderton 1992)
<i>Crocodylus moreletii</i> Morelet's Crocodile	<ul style="list-style-type: none"> • Status: Lower Risk: Conservation Dependent (IUCN 2000); Endangered (ESA) • Distribution: Mexico, Belize, Guatemala • Threats: illegal leather products regularly confiscated (German Customs 2000); habitat destruction, illegal hunting (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 10 males, 10 females, and 24 animals of unknown sex in captivity (ISIS 2000) • Breed: commercial farming operations in Mexico, with at least one outside the natural habitat range, approved by the CITES-Secretariat in 1996 (Ross 1998); CITES-approved breeding facility in Mexico: <i>Crocodylus mexicanos</i>: approximately 3309 hatchlings; "C.P. Gonzalo Quintana Giordano", 730 saleable specimens (1998)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Crocodylus niloticus</i> Nile Crocodile (except the populations of Botswana, Ethiopia, Kenya, Madagascar, Malawi, Mozambique, South Africa, Uganda, Tanzania, Zambia and Zimbabwe)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Threatened (ESA) • Distribution: Africa, Middle East • Threats: stocking of captive breeding facilities with wild-caught animals (at one facility in Madagascar, all but 10 of 1,250 animals were captured from the wild (CITES-Notification 2000/010); cropping of wild animals in Malawi, Tanzania and Mozambique (Ross 1998); illegal leather products regularly confiscated (German Customs 2000); conflict with people (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 55 males, 33 females, and 38 animals of unknown sex in captivity (ISIS 2000) • Breed: 2 offspring produced in past six months (ISIS 2000); ranches in Zimbabwe, Botswana, Malawi, Mozambique and Zambia; some Zimbabwe ranches switched to farming, with 50% of the skin production capacity (Thorbjarnarson 1999); captive breeding occurs in Namibia (Kabisch 1997) and France (Tschirch 1996); CITES-approved breeding facilities: a) Madagascar, "Société Reptel", 2000-3000 hatchlings (from 1992); b) Mauritius, "Bioculture Ltd", no number of hatchlings reported; c) Namibia, "Crocodile Ranch", 477 (1988), 572 (1989), 640 (1990) hatchlings; more than 2 breeding operations with a stock of more than 340 individuals in China, breeding since 1997 (Doc. AC.15.9.2)
<i>Crocodylus novaeguineae</i> <i>mindorensis</i> [<i>C. mindorensis</i>] Philippine Crocodile	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Philippines • Threats: illegal leather products regularly confiscated (German Customs 2000); habitat destruction, illegal hunting (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 4 males, 5 females, and 8 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); only ranching known to occur (Ross 1998)
<i>Crocodylus palustris</i> Mugger	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); <i>C. palustris palustris</i>, Endangered (IUCN 2000); Extinct in Bangladesh (Ross 1998) • Distribution: Bangladesh (ex?), Iran, India, Nepal, Pakistan, Sri Lanka • Threats: illegal leather products regularly confiscated (German Customs 2000); habitat destruction (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 2 males and one female <i>C. p. kimbula</i> and 2 male <i>C. p. palustris</i> in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); occasional captive breeding in Pakistan, a large-scale ranching and captive breeding project in India to restock natural populations ceased in 1994 because of lack of habitat in which to release offspring (Ross 1998)
<i>Crocodylus porosus</i> Saltwater Crocodile (except the populations of Australia, Indonesia and Papua New Guinea)	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Extinct (China Red List 1998); Endangered (except in Papua New Guinea, ESA) • Distribution: Southeast Asia, Australia, Papua New Guinea, Pacific Islands, USA (Palau) • Threats: habitat destruction, illegal hunting, collection of wild-caught adults to stock captive breeding farms (Ross 1998); all individuals of the Philippine captive breeding stock were taken from the wild (CITES-Notification No. 2000/010); the same is true for captive breeding facilities in Singapore; hybrids produced in captivity, if they escape or are released (<i>Golden Crocodile Agriculture LTD</i> and <i>Samutprakran</i> in Thailand produce hybrids); 5 of 7 CITES-listed facilities in Thailand do not state their annual production; illegal leather products regularly confiscated (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 18 males, 21 females, and 17 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); in Myanmar, annual production of a farm with 50 males and 70 females exceeds 1000 eggs; in the Philippines, a new farm has been established from wild-caught adults; in Australia, three farms combine captive breeding and ranching; ranching occurs in Papua New Guinea, Solomon Islands, Indonesia and Irian Jaya (Ross 1998); CITES-approved breeding facilities: a) Malaysia, "Sandakan Crocodile Farm", 287 hatchlings (1989); "Jong's Crocodile Farm", 50-100 skins; "Taman Buaya Langkawi", 2000 offspring (1997); b) Philippines, "RP Japan Crocodile Farming Institute", 819 in total (1988-1992); c) Singapore, "Simon Soh", 1800-2000 (<i>C. porosus</i> and <i>C. siamensis</i>); "Tan Gna Chua", 280 animals; "Lee Bak Kuan", 500 animals for export; "John Dan", 1000 animals; d) Thailand, "Samutprakran Crocodile Farm", no data on annual production; "Samphran Crocodile Farm", no data on annual production; "Sriracha Farm Ltd", no data on annual production; "Crocodile Farm Pataya Company", no data on annual production; "Prasit Farm", no data on annual production; "Utai Ratch Crocodile Farm", 15 400 hatchlings expected (no current data); "Golden Crocodile Agriculture" > 3000 specimens (<i>C. siamensis</i> and <i>C. porosus</i>); 5 breeding operations with a stock of more than 1927 individuals in China, breeding since 1996 (Doc. AC.15.9.2)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Crocodylus siamensis</i> Siamese Crocodile	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA); nearly extinct (Laos Red List, Salter 1993) • Distribution: Southeast Asia, Malay Peninsula • Threats: habitat destruction, illegal hunting (Ross 1998); hybrids produced in captivity, if they escape or are released (<i>Golden Crocodile Agriculture LTD</i> and <i>Samutprakran</i> in Thailand produce hybrids); 8 of 12 CITES-listed facilities in Thailand do not state their annual production; illegal leather products regularly confiscated (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 14 males, 13 females, and 44 animals of unknown sex in captivity (ISIS 2000) • Breed: 17 offspring produced in past six months (ISIS 2000); extensive captive breeding in Thailand and Cambodia, and to a lesser extent in Vietnam, Laos and Indonesia, as well as zoos in Russia and Japan; Thai captive population includes hybrids with <i>C. porosus</i> (Ross 1998); late maturity makes captive breeding difficult (Alderton 1992); CITES-approved breeding facilities: a) Cambodia, "Siem Reap Crocodile Farm", 1800 hatchlings (1998); "Thai Chay Crocodile Farm", 2000 hatchlings (1999); "Luon Nam Crocodile Farm", 600 hatchlings (1998); "Im Riem Crocodile Farm", 500 hatchlings (1998); "Keo Thay Crocodile Farm", 150 hatchlings (1998); "Long Saran Crocodile Farm", 850 hatchlings (1998); b) Singapore, "Simon Soh", 1800-2000 (<i>C. porosus</i> and <i>C. siamensis</i>); c) Thailand, "Samutprakran Crocodile Farm", no data on annual production; "Samphan Crocodile Farm", no data on annual production; "Wat Sing Crocodile Farm", no data on annual production; "Sriracha Farm Ltd.", no data on annual production; "Chonburi Crocodile Farm", no data on annual production; "Crocodile Farm Pataya Company", no data on annual production; "Prasit Farm", no data on annual production; "Kumpanat Farm", no data on annual production; "JR Farm", 10 000 hatchlings expected (no current data); "Utai Ratch Crocodile Farm", 15 400 hatchlings expected (no current data); "Wabin Crocodile Farm", 1800 specimens expected (no current data); "Golden Crocodile Agriculture", > 3000 specimens (<i>C. siamensis</i> and <i>C. porosus</i>); more than 2 breeding operations with stock of more than 5165 individuals in China, breeding since 1998 (CITES 1999)
<i>Osteolaemus tetraspis</i> West African Dwarf Crocodile	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); <i>O. t. tetraspis</i>, Endangered (ESA) • Distribution: Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Cote d'Ivoire, Dem. Republic of Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo, Uganda (?), Zaire • Threats: habitat destruction, uncontrolled hunting (Ross 1998); illegal leather products regularly confiscated (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 17 males, 21 females, and 44 animals of unknown sex (ISIS 2000) • Breed: 22 offspring produced in past six months (ISIS 2000); plans for captive breeding programs in Togo, Cameroon and Nigeria are not yet realized (Ross 1998); very rarely bred in private holdings (one hatchling reported in Germany) (DGHT 1999)
<i>Tomistoma schlegelii</i> False Gharial	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Extinct (China Red List 1998) • Distribution: Indonesia, Malaysia, Myanmar (?), Thailand (ex) • Threats: habitat destruction (Ross 1998) 	<ul style="list-style-type: none"> • Keep: 23 males, 27 females and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); only two breeding events in zoos at Bronx Zoo and Miami Metro Zoo (1985) (Sommerlad 1998), one farm in Thailand (<i>ibid</i>), and one Indonesian farm (Ross 1998)
<i>Gavialis gangeticus</i> Gharial	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA); virtually Extinct in Pakistan, Bhutan and Bangladesh, very rare in India and Nepal (Ross 1998) • Distribution: Bangladesh (ex), Bhutan (ex?), India, Myanmar (ex?), Nepal, Pakistan • Threats: habitat destruction, limited distribution (Ross 1998); illegal leather products regularly confiscated (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 11 males, 20 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); a combination of ranching and captive breeding established in India and in Nepal captive rearing is taking place (Ross 1998); captive breeding has occurred on several occasions (Alderton 1992)
Sphenodon spp.	Each species as below	Each species as below
<i>Sphenodon guntherii</i> Brother's Island Tuatara	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: New Zealand • Threats: habitat destruction, illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 8 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity because animals need very low temperatures (German Customs 2000). • Breed: no offspring produced in past six months (ISIS 2000), very late maturity

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Sphenodon punctatus</i> Tuatara	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: New Zealand • Threats: habitat destruction, illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 19 males, 21 females, and 13 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity because animals need very low temperatures (German Customs 2000). • Breed: no offspring produced in past six months (ISIS 2000) very late maturity
Brachylophus spp.	Each species as below	Each species as below
<i>Brachylophus fasciatus</i> Fiji Banded Iguana	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Fiji, Tonga, Vanuatu (introduced) • Threats: one of the most expensive species in illegal trade, black market prices of up to USD35,000 per specimen (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 54 males, 25 females, and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months; in 1996, only six specimens reported as captive bred by private keepers in Germany (DGHT 1998); there are captive breeding facilities for reintroduction run by Canary Conservation Authorities (Wirth, pers. comm. 2000)
<i>Brachylophus vitiensis</i> Fiji Crested iguana	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Fiji • Threats: one of the most expensive species in illegal trade, black market prices of up to US\$35,000 per specimen (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 10 males and 4 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months; there are captive breeding facilities for reintroduction legalized by Canary Conservation Authorities (Wirth, pers. comm. 2000)
Cyclura spp.	Each species as below	Each species as below
<i>Cyclura carinata</i> Ground Iguana	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); both subspecies, Threatened (ESA) • Distribution: <i>C. c. bartschi</i>, Bahamas; <i>C. c. carinata</i>, Turks and Caicos Islands • Threats: predation by feral cats and dogs, feral livestock compete for food plants and alter habitats (WIISG 2000); highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: difficult to keep in captivity (German Customs 2000); no ISIS record (2000) • Breed: difficult to breed in captivity (German Customs 2000); no ISIS record (2000)
<i>Cyclura collei</i> Jamaican Iguana	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Jamaica • Population: fewer than 100 wild animals; rediscovered in 1990 (WIISG 2000) • Threats: human habitat alteration and destruction, exotic predators (mongooses, cats, stray dogs, feral pigs) (WIISG 2000); highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 37 males, 45 females, and 26 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity (German Customs 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Cyclura cornuta</i> Rhinoceros Iguana	<ul style="list-style-type: none"> • Status: <i>C. cornuta</i>, Vulnerable (IUCN 2000); <i>C.c.stejnegeri</i>, Endangered (IUCN 2000) • Distribution: <i>C. c. cornuta</i>, Dominican Republic, Haiti; <i>C. c. stejnegeri</i>, Puerto Rico (USA) • Threats: highly sought through illegal trade, very high black market prices (German Customs 2000); <i>C.c. cornuta</i>: habitat destruction, predation by feral dogs, cats, mongoose and pigs, illegal hunting for food and local trade, and international trade of wild animals from Haiti (WIISG 2000); and <i>C.c. stejnegeri</i>: predation of young iguanas by feral cats, feral pigs plunder nests, human disruption of nesting areas, and competition with goats for food plants (WIISG 2000) 	<ul style="list-style-type: none"> • Keep: for <i>C. cornuta</i>, 31 males, 25 females, and 15 animals of unknown sex in captivity; for <i>C. c. cornuta</i>, 27 males, 26 females, and 14 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity (German Customs 2000). • Breed: 7 <i>C. c. cornuta</i> and no <i>C. cornuta</i> offspring produced in past six months (ISIS 2000); in 1994, only 4 specimens reported as captive bred by private keepers in Germany (DGHT 1996)
<i>Cyclura cychlura</i> Rock Iguana	<ul style="list-style-type: none"> • Status: <i>C.cychlura</i>, Vulnerable (IUCN 2000) <i>C.c.figginsi</i>, Endangered (IUCN 2000); <i>Cc.inornata</i>, Endangered (IUCN 2000); <i>C.c. cychlura</i>, Threatened (ESA); <i>C.c. figginsi</i>, Threatened (ESA) • Distribution: <i>C.c. cychlura</i>, Bahamas; <i>C.c. figginsi</i>, Bahamas • Threats: <i>C.c.cychlura</i>: habitat loss, hunting, and predation by dogs and pigs; and <i>C.c. figginsi</i>: hunting and predation by dogs and rats 	<ul style="list-style-type: none"> • Keep: for <i>C.c. figginsi</i>, 3 males and 4 females in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Cyclura nubila</i> Cayman Island Iguana	Status: <i>C. nubila</i> , Vulnerable (IUCN 2000); <i>C.n.caymanensis</i> , Critically Endangered (IUCN 2000); <i>C.n.lewisi</i> , Critically Endangered (IUCN 2000); <i>C.n.caymanensis</i> , Threatened (ESA); <i>C. n. lewisi</i> , Endangered (ESA); <i>C.n. nubila</i> , Threatened (ESA) • Distribution: <i>C. n. caymanensis</i> , Little Cayman Island, Cayman Brac; <i>C. n. lewisi</i> , Grand Cayman Islands; <i>C. n. nubila</i> , Cuba • Threats: highly sought through illegal trade (German Customs 2000); <i>C. n. caymanensis</i> : habitat loss, introduced predators (dogs, cats, and pigs), and road casualties (WIISG 2000); <i>C. n. lewisi</i> : habitat loss, predation by dogs and cats, introduced cattle and road fatality (WIISG 2000); and <i>C. n. nubila</i> : habitat loss, predation by cats, dogs and pigs (WIISG 2000)	• Keep: for <i>C. n. caymanensis</i> , one male in captivity; for <i>C. n. lewisi</i> , 17 males, 12 females, and one animal of unknown sex in captivity, and for <i>C. n. nubila</i> , 9 males, 14 females, and 15 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity (German Customs 2000) • Breed: no <i>C. n. caymanensis</i> , one <i>C. n. lewisi</i> , and 2 <i>C. n. nubila</i> offspring produced in past six months (ISIS 2000); while captive breeding of <i>C. n. nubila</i> occurs occasionally in private holdings in the USA, in Germany it happened only twice (Schardt, 1998); in 1994, only 4 hatchlings were reported in Germany but none survived (DGHT 1996)
<i>Cyclura pinguis</i> Anegada Ground Iguana	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: British Virgin Islands • Threats: habitat loss, predation by dogs and cats, introduced browsers (goats, sheep, burros and cattle) (WIISG 2000)	• Keep: 1 individual of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Cyclura ricordi</i> Ricord's Iguana	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Dominican Republic • Threats: habitat loss, hunting, introduced predators and browsers, and road casualties (WIISG 2000) • Population: 2000-4000 (WIISG 2000)	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cyclura rileyi</i> San Salvador Rock Iguana	• Status: <i>C. rileyi</i> , Endangered (IUCN 2000); <i>C. r. cristata</i> , Critically Endangered (IUCN 2000); <i>C. r. rileyi</i> , Critically Endangered (IUCN 2000); <i>C. r. cristata</i> , Threatened (ESA); <i>C. r. rileyi</i> , Endangered (ESA) • Distribution: Bahamas • Threats: highly sought through illegal trade (German Customs 2000); <i>C. r. cristata</i> : habitat loss, hunting and introduced predators (rats, pigs and raccoon), illicit smuggling for the pet industry (WIISG 2000); and <i>C. r. rileyi</i> : habitat destruction in the past, moth larvae devastating cacti food source, and predation by introduced dogs, cats and rats (WIISG 2000)	• Keep: no ISIS record (2000); there is no legal captive bred stock known (Wirth, 2000); difficult to keep in captivity (German Customs 2000) • Breed: no ISIS record (2000)
<i>Sauromalus varius</i> St. Esteban Chuckwalla	• Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Mexico • Threats: highly sought through illegal trade, imports often falsely declared as <i>S. obesus</i> . (German Customs 2000)	• Keep: 29 males, 32 females, and 4 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity as it needs very high temperatures and is very shy (German Customs 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Gallotia simonyi</i> Giant Lizard	• Status: Critically Endangered (IUCN 2000); <i>G. s. simonyi</i> , Endangered (ESA) • Distribution: Canary Islands (Spain) • Threats: highly sought through illegal trade (German Customs 2000)	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Varanus bengalensis</i> Bengal Monitor	• Status: Not Listed (IUCN 2000); Endangered (ESA); Critically Endangered or Extinct (China Red List 1998); Rare (Laos Red List, Salter 1993) • Distribution: Afghanistan, Bangladesh, Bhutan (?), Cambodia (?), India, Indonesia, Iran, Iraq, Lao PDR (?), Malaysia, Myanmar, Pakistan, Sri Lanka, Thailand, Vietnam • Threats: hybridization (ISIS 2000); sales in Asian food markets (Wenjun <i>et al.</i> 1996); illegal trade is known from the USA (German Customs 2000)	• Keep: for <i>V. bengalensis</i> , 9 males, 9 females and 8 animals of unknown sex in captivity (ISIS 2000); for <i>V. b. bengalensis</i> , 2 males in captivity; for <i>V. b. nebulosus</i> , 4 males and 2 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Varanus flavescens</i> Yellow Monitor	• Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Bangladesh, India, Nepal, Pakistan • Threats: sales at Asian food markets (Lau <i>et al.</i> 1995, Fellowes & Hau 1997); sought by private collectors	• Keep: no ISIS record (2000); difficult to keep in captivity (German Customs 2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Varanus griseus</i> Desert Monitor	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Afghanistan, India, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Uzbekistan 	<ul style="list-style-type: none"> • Keep: difficult to keep in captivity (German Customs 2000); for <i>V. griseus</i>, 2 males, one female, and 14 animals of unknown sex in captivity, for <i>V. g. griseus</i>, 6 males, 10 females, and 11 animals of unknown sex in captivity, for <i>V. g. caspius</i>, 2 males and one animals of unknown sex in captivity, for <i>V. g. koniecznyi</i>, 1 male in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); difficult to breed in captivity (German Customs 2000)
<i>Varanus komodoensis</i> Komodo Dragon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Islands of Komodo, Padar, Rinca, Flores (Indonesia) • Threats: occasionally offered in illegal trade (Pro Wildlife, pers. com. 2000) 	<ul style="list-style-type: none"> • Keep: 32 males, 36 females, and 26 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Python molurus molurus</i> Indian Python	<ul style="list-style-type: none"> • Status: Species Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Bangladesh, India, Sri Lanka • Threats: sought through illegal trade, often falsely declared as <i>P.m. bivittatus</i> (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 20 males, 23 females, and 15 animals of unknown sex in captivity (ISIS 2000); difficult to keep in captivity because of its tremendous size (Preissler <i>in lit.</i> 2000) • Breed: 3 offspring produced in past six months (ISIS 2000); in 1996, 16 specimens registered as captive bred in Germany (DGHT 1998) yet CITES Scientific Authority of Germany listed no captive breeding facilities (BfN 1999); more than 10 breeding operations with a stock of more than 100 individuals in the UK (Doc. AC.15.9.2)
Acrantophis spp.	Each species as below	Each species as below
<i>Acrantophis dumerili</i> Dumeril's Ground Boa	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Madagascar, Reunion (introduced?) • Threats: habitat loss, highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 71 males, 82 females, and 46 animals of unknown sex in captivity (ISIS 2000) • Breed: easily bred in captivity (Wengler 1996); 14 offspring produced in past six months (ISIS 2000); in 1993, one specimen reported as captive bred in Germany (DGHT 1995), in 1995, 8 specimens (DGHT 1997), and in 1996, 13 specimens (DGHT 1998) yet CITES Scientific Authority of Germany listed no breeding facilities (BfN 1999); more than 50 breeding operations with stock of more than 300 individuals in UK (Doc.. AC.15.9.2)
<i>Acrantophis madagascariensis</i> Madagascar Ground Boa	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Madagascar • Threats: habitat loss, highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 41 males, 47 females, and 22 animals of unknown sex in captivity (ISIS 2000) • Breed: 8 offspring produced in past six months (ISIS 2000); umbrella organization of German reptile keepers, DGHT, states captive breeding is rare (Preissler <i>in lit</i> 2000); 14 specimens reported as captive bred in Germany (DGHT 1999) yet CITES Scientific Authority of Germany listed no breeding facilities (BfN 1999)
<i>Boa constrictor occidentalis</i> [<i>Constrictor constrictor occidentalis</i>] Argentine Boa	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: Argentina, Bolivia (?), Paraguay • Threats: highly sought through illegal trade, imports often falsely declared as <i>B.c. imperator</i> or <i>B.c. constrictor</i> (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 11 males, 11 females and 1 animal of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000); umbrella organization of German reptile keepers, DGHT, does not know of a single keeper of this species (Preissler <i>in lit.</i> 2000); in 1995, 8 specimens reported as captive bred in Germany (DGHT 1997), yet CITES Scientific Authority of Germany listed no breeding facilities (BfN 1999).
<i>Epicrates inornatus</i> Puerto Rican Boa	<ul style="list-style-type: none"> • Status: Lower Risk: Near Threatened (IUCN 2000); Endangered (ESA) • Distribution: Puerto Rico (USA) • Threats: illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 9 males, 11 females, and 13 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in as six months (ISIS 2000)
<i>Epicrates monensis</i> Tree Boa	<ul style="list-style-type: none"> • Status: <i>E. m. granti</i>, Endangered (IUCN 2000); <i>E. m. monensis</i>, Endangered (IUCN 2000); <i>E. m. granti</i>, Endangered (ESA); <i>E. m. monensis</i>, Threatened (ESA) • Distribution: <i>E. m. granti</i>, Virgin Islands (USA and UK); <i>E. m. monensis</i>, Puerto Rico (USA) • Threats: illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: for <i>E. morensis</i>, ome male and ome female in captivity, for <i>E. m. granti</i>, 22 males, 23 females, and 14 animals of unknown sex in captivity, for <i>E. m. morensis</i>, 2 males, one female, and 3 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Epicrates subflavus</i> Jamaican Boa	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000); Endangered (ESA) Distribution: Jamaica Threats: illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> Keep: 52 males, 47 females, and 19 animals of unknown sex in captivity (ISIS 2000) Breed: no offspring produced in past six months (ISIS 2000); in 1996, 10 specimens reported as captive bred by private keepers in Germany (DGHT 1998)
<i>Sanzinia madagascariensis</i> Madagascar Tree Boa	<ul style="list-style-type: none"> Status: Vulnerable (IUCN 2000) Distribution: Madagascar Threats: habitat loss, highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> Keep: 136 males, 129 females, and 41 animals of unknown sex in captivity (ISIS 2000) Breed: 2 offspring produced in past six months (ISIS 2000); in 1994, 3 specimens (only one survived) reported as captive bred by private keepers in Germany (DGHT 1996), 1 in 1995 (DGHT 1997), 1 in 1996 (DGHT 1998) and 8 in 1997 (DGHT 1999). yet CITES Scientific Authority of Germany reported one breeding facility with only 2 specimens currently held (BfN 1999); breeding stock of 5 individuals in South Africa, breeding since 1997 (Doc. AC.15.9.2)
<i>Bolyeria multocarinata</i> Round Island Boa	<ul style="list-style-type: none"> Status: Extinct (IUCN 2000); Endangered (ESA) Distribution: Mauritius 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Casarea dussumieri</i> Round Island Boa	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Mauritius Threats: highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> Keep: 4 males, 10 females, and 23 animals of unknown sex in captivity (ISIS 2000) Breed: 7 offspring produced in past six months (ISIS 2000); there is a breeding program at Jersey Island (UK) (Preissler. 2000); details on production capacity are not known (Wirth 2000); no other legal captive breeding stock is known
<i>Vipera ursinii</i> Viper (only European populations except former USSR)	<ul style="list-style-type: none"> Status: <i>V.u. moldavica</i>, Critically Endangered (IUCN 2000) Distribution: Austria (?), France, Greece, Hungary, Italy, Romania, Turkey, Ukraine Threats: illegal trade increasing (German Customs 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)

CLASS AMPHIBIA

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
Nectophrynooides spp.	Each species as below	Each species as below
<i>Nectophrynooides asperginus</i> African Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution, known only from Udzungwa Mountains (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Nectophrynooides cryptus</i> African Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Nectophrynooides minutus</i> African Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution, only known from the type locality at Ulugara Mountains (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Nectophrynooides tornieri</i> African Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution: Usambara, Uluguru and Uzungwe Mountains (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Nectophrynooides viviparus</i> African Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution: mountains of C and SW Tanzania (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
<i>Nectophrynooides wendyae</i> [<i>N. occidentalis</i> , <i>N. mirei</i> , <i>N. liberiensis</i>] Mt. Nimba Viviparous Toad	<ul style="list-style-type: none"> Status: Endangered (IUCN 2000); Endangered (ESA) Distribution: Tanzania Threats: small distribution, known only from type locality at Uzungwe Mountains 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
Altiphrynooides spp.	Each species as below	Each species as below
<i>Altiphrynooides malcomi</i> [<i>Nectophrynooides malcomi</i>] Ethiopian Viviparous Toad	<ul style="list-style-type: none"> Status: Not Listed (IUCN 2000); Endangered (ESA) Distribution: Ethiopia (Bale Province) Threats: small distribution (AMNH 2000) 	<ul style="list-style-type: none"> Keep: no ISIS record (2000) Breed: no ISIS record (2000)
Nimbaphrynooides spp.	Each species as below	Each species as below

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Nimbaphrynoides liberiensis</i> [<i>Nectophrynoides liberiensis</i>] Mt. Nimba Viviparous Toad	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Liberia • Threats: small distribution: Mt. Nimba (AMNH 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Nimbaphrynoides occidentalis</i> [<i>Nectophrynoides occidentalis</i>] African Viviparous Toad	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Ivory Coast, Guinea • Threats: small distribution: Mt. Nimba (AMNH 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
Spinophrynoides spp.	Each species as below	Each species as below
<i>Spinophrynoides osgoodi</i> [<i>Nectophrynoides osgoodi</i> , <i>Bufo osgoodi</i>] African Viviparous Toad	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Ethiopia (Bale and Sidamo Provinces) • Threats: small distribution (AMNH 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Atelopus varius zeteki</i> Panamanian Golden Frog	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Panama 	<ul style="list-style-type: none"> • Keep: one <i>A. varius</i> male in captivity (ISIS 2000) • Breed: in general, genus <i>Atelopus</i> is difficult to breed in captivity (Wirth 2000); no offspring produced in past six months (ISIS 2000)
<i>Bufo periglenes</i> Mt. Verde Toad	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Population: Probably extinct in the wild • Distribution: Costa Rica 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Bufo superciliaris</i> Cameroon Toad	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: Equatorial Africa 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: private keeping is not known (Wirth 2000); no ISIS record (2000)
<i>Dyscophus antongilii</i> Tomato Frog	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000) • Distribution: Madagascar • Threats: habitat loss, highly sought through illegal trade (German Customs 2000) 	<ul style="list-style-type: none"> • Keep: 64 males, 43 females, and 174 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
Andrias spp.	Each species as below	Each species as below
<i>Andrias japonicus</i> Japanese Giant Salamander	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: Japan 	<ul style="list-style-type: none"> • Keep: 9 males, 7 females, and 4 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Andrias davidianus</i> Chinese Giant Salamander	<ul style="list-style-type: none"> • Status: Data Deficient (IUCN 2000); Critically Endangered (China Red List 1998); Endangered (ESA) • Distribution: China • Threats: sale at pet shops (Lau et al. 1995) and food markets in SE Asia (Wenjun et al. 1996) 	<ul style="list-style-type: none"> • Keep: in 1996, 101 captive bred specimens registered in Germany (DGHT 1998); 6 males, 5 females, and 7 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
CLASS PISCES		
SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
Latimeria spp.	Each species as below	Each species as below
<i>Latimeria chalumnae</i> Coelacanth	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Population: no estimates of the current population available, although a marked decline in the Comoros population has been recorded over the last 6 years (WCMC 2000) • Distribution: Comoros, South Africa • Threats: fishing (inadvertantly snagged on lines and killed), capture for museum specimens and trophies (WCMC 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000); no coelacanths in captivity, none of the specimens brought to the surface in 1991 survived the decrease in water pressure for more than a few hours (WCMC 2000) • Breed: no ISIS record (2000)
<i>Latimeria menadoensis</i> Coelacanth	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000); "must be assumed endangered" (CITES 2000) • Population: only two specimens have been captured to date, population trend unknown (CITES Prop. 2000) • Threats: fishing (inadvertantly snagged on lines and killed), one of the most sought-after fishes by collectors and scientists (CITES 2000) 	<ul style="list-style-type: none"> • Keep: no living coelacanths in captivity (CITES Prop. 11.50); no ISIS record (2000) • Breed: no captive breeding known; no ISIS record (2000)
<i>Acipenser brevirostrum</i> Shortnose Sturgeon	<ul style="list-style-type: none"> • Status: Vulnerable (IUCN 2000); Endangered (ESA) • Distribution: USA, Canada (Atlantic coast) • Threats: over fishing, reach sexual maturity at between 6-25 years, have a limited number of spawning grounds (TRAFFIC 1996) 	<ul style="list-style-type: none"> • Keep: there are 4 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Acipenser sturio</i> Common Sturgeon	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000) • Distribution: Albania (ex?), Belgium (ex?), Estonia (ex?), Finland (ex?), France, Georgia, Germany (ex?), Greece (ex?), Hungary (ex?), Ireland (ex?), Italy (ex?), Morocco Ex?), Netherlands, Norway (ex?), Poland (ex?), Portugal (ex?), Romania (ex?), Russia (ex?), Spain, Sweden (ex?), Switzerland (ex?), Turkey, Ukraine (ex?), United Kingdom, Yugoslavia (ex?) • Threats: dramatic decline due to recent increases in legal and illegal sturgeon fishing (TRAFFIC 1998); data on catches difficult to obtain and often non-existent or untrustworthy (TRAFFIC 1996) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Scleropages formosus</i> Asian Bonytongue	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Brunei, Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam 	<ul style="list-style-type: none"> • Keep: 8 animals of unknown sex in captivity (ISIS 2000) • Breed: no offspring produced in past six months (ISIS 2000)
<i>Chasmistes cujus</i> Cui-ui	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Probarbus jullieni</i> Ikan Temoleh Minnow	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Thailand, Cambodia, Vietnam, Malaysia, Laos 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pangasianodon gigas</i> Giant Catfish	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Thailand • Threats: over-fishing (Anonymous 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Cynoscion macdonaldi</i> Totoaba	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: Mexico • Threats: illegal and incidental fishing and loss of spawning grounds (USBR 1999) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); introduced into the Salton Sea, California, on 3 occasions during the period 1950-1956 for sport fishing; stock was obtained from San Felipe, Mexico; introduction failed to produce a viable population (Dill and Cordone 1997)

CLASS INSECTA

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Ornithoptera alexandrae</i> Queen Alexandra's Birdwing Butterfly	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: endemic to small lowland rainforest area in the Northern Province of Papua New Guinea • Threats: illegal collecting of adult specimens from the wild, and their illegal trade (IUCN 1985) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); wild-collected larvae have been reared in cages by the Provincial Wildlife Office in Popondetta (IUCN 1985); <i>O. alexandrae</i> difficult to breed in captivity due to physical size and adult flight behavior; need to be able to fly for long distances and males, in particular, fly high and can often be observed moving above the 40 m canopy of primary forest; flight enclosures would have to be abnormally large to provide sufficient volume (Parsons 2000)
<i>Papilio chikae</i> Luzon Peacock Swallowtail Butterfly	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: endemic to Luzon (Philippines) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Papilio homerus</i> Homerus Swallowtail Butterfly	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Population: one population already extinct, two remaining populations probably genetically isolated, each locality only a few square km of forest (IUCN 1985) • Distribution: Jamaica • Threats: poaching and illegal international trade; one pair of wings in good condition fetches about USD1500 on the international black market (Thompson 2000) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000); reared in captivity with some difficulty (IUCN 1983)
<i>Papilio hospiton</i> Corsican Swallowtail Butterfly	<ul style="list-style-type: none"> • Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: Corsica and Sardinia, extremely localized (IUCN 1985) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)

CLASS BIVALVA

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
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SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Conradilla caelata</i> Birdwing Pearlymussel	• Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Dromus dromas</i> Dromedary Pearlymussel	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma curtisi</i> [<i>Epioblasma florentina curtisi</i>] Curtis Pearlymussel	• Status: <i>E. f. curtisi</i> , Critically Endangered (IUCN 2000); <i>E. f. curtisi</i> , Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma florentina</i> Yellow Blossom	• Status: <i>E.f. curtisi</i> , Critically Endangered (IUCN 2000); <i>E.f. walkeri</i> , Critically Endangered (IUCN 2000); <i>E.f. florentina</i> , Extinct (IUCN 2000); <i>E. f. curtisi</i> , Endangered (ESA); <i>E. f. florentina</i> , Endangered (ESA), <i>E.f. walkeri</i> , Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma sampsoni</i> Sampson's Pearlymussel	• Status: Extinct (IUCN 2000) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma sulcata perobliqua</i> [<i>Epioblasma obliquata perobliqua</i>] White Catpaw	• Status: <i>E. obliquata perobliqua</i> , Critically Endangered (IUCN 2000); <i>E. obliquata perobliqua</i> , Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma torulosa gubernaculum</i> Green Blossom	• Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma torulosa torulosa</i> Tubercled Blossom	• Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma turgidula</i> Turgid Blossom	• Status: Extinct (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Epioblasma walkeri</i> [<i>Epioblasma florentina walkeri</i>] Tan Riffleshell	• Status: Not Listed (IUCN 2000); <i>E. florentina walkeri</i> , Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Fusconaia cuneolus</i> Fine-rayed Pigtoe	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Fusconaia edgariana</i>	• Status: Not Listed (IUCN 2000) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lampsilis higginsii</i> Higgin's Eye	• Status: Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lampsilis orbiculata orbiculata</i>	• Status: Not Listed (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lampsilis satur</i>	• Status: Lower Risk: Near Threatened (IUCN 2000) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Lampsilis virescens</i> Alabama Lampmussel	• Status: Critically Endangered (IUCN 2000) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Plethobasus cicatricosus</i> White Wartyback	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Plethobasus cooperianus</i> Orangefoot Pimpleback	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Pleurobema plenum</i> Rough Pigtoe	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Potamilus capax</i> Fat Pocketbook	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Quadrula intermedia</i> Cumberland Monkeyface	• Status: Lower Risk: Least Concern (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Quadrula sparsa</i> Appalachian Monkeyface	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Toxolasma cylindrellus</i> Pale Lilliput	• Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA	• Keep: no ISIS record (2000) • Breed: no ISIS record (2000)

SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
<i>Unio nicliniana</i>	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: USA 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Unio tampicoensis</i> <i>tecomatensis</i>	<ul style="list-style-type: none"> • Status: Not Listed (IUCN 2000) • Distribution: USA 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
<i>Villosa trabalis</i> Cumberland Bean	<ul style="list-style-type: none"> • Status: Critically Endangered (IUCN 2000); Endangered (ESA) • Distribution: USA 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)
CLASS GASTROPODA		
SPECIES	POPULATION STATUS	DIFFICULTY KEEPING OR BREEDING
Achatinella spp. Oahu Tree Snails	<ul style="list-style-type: none"> • Status: 24 extant species, all Critically Endangered (IUCN 2000); 15 species and 2 subspecies, Extinct (IUCN 2000); Endangered (ESA) • Distribution: Hawaiian Islands (USA) 	<ul style="list-style-type: none"> • Keep: no ISIS record (2000) • Breed: no ISIS record (2000)

ADDITIONAL INFORMATION REGARDING THE CAPTIVE KEEPING AND BREEDING OF CETACEAN SPECIES ON APPENDIX I

No captive specimens exist for most cetacean species on CITES Appendix I. The exceptions are *Lipotes vexillifer* where one male was recorded living in captivity as recently as 1995, and possibly *Sotalia fluviatilis*, *Sousa chinensis*, *Neophocaena phocaenoides*, *Platanista minor*, where captive specimens have been known to have existed. ISIS lists no Appendix I cetacean species on its breeding records. Therefore establishment of any captive populations can only be the direct result of taking from the wild, with continued capture of animals from the wild necessary to maintain a viable genetic line.

Neonatal mortality, natural abortion and still-birth are the main contributors to low reproductive success in captive cetacean (CFTW 1994). For example, Sweeney (1986a) found that 50% of dolphin calves born in captivity died within their first year (CFTW 1994).

All cetaceans on Appendix I should be considered 'difficult to breed or keep in captivity' for the following reasons:

Regarding reproduction (Macdonald 1985):

- long birth intervals, reproducing only once every 1 to 5 years (species dependent)
- few offspring produced, usually giving birth to only single offspring
- lengthy time to sexual maturity, maturation is reached at between 4 and 26 years (species dependent)
- long gestation period, between 10 and 16 months (species dependent)
- long lactation period, between 10 and 24 months for Odontoceti (toothed whales) and 5 and 7 months for Mysticeti (baleen whales)

Regarding feeding (MacDonald 1985):

- Mysticeti consume up to 3 to 4% of their body weight per day (species dependent)
- Odontocete consume up to 3 to 10% of their body weight per day (species dependent)
- Mysticeti have highly specialized feeding methods, including bottom feeding (*Eschrichtius robustus*), and herding and breaching (*Megaptera novaeangliae*)

Regarding containment:

- Achieving and maintaining the correct chlorination levels is difficult and incorrect chlorination levels can result in: the formation of chloramines which irritate the skin, eyes and affect the sense of smell; an increase in the oxidizing effect of the water causing burning to the skin; abnormally high fungal densities resulting from removal of bacteria, destruction of natural microflora, and the inactivation of antimicrobial substances secreted by the skin by chlorination (*Candida albicans* is responsible for the majority of sublethal and lethal fungal infections in captive dolphins; there is little evidence to suggest this occurs in the wild) (CFTW 1994)
- Basic hematology and biochemistry parameters are altered for several reasons including stress of captivity, routine medication such as worming, and diet (Mayer 1998)
- Gastric ulceration has clear clinical significance in captive cetacean (Sweeney 1986b)
- Confinement has profound effects on many aspects of cetacean physiology (WDSC 2000)
- Body size makes creating and maintaining the size of enclosure required to house a breeding group of cetacean problematic. This is particularly true for Appendix I listed species of families Balaenidae, Balaenopteridae, Eschrichtiidae, Physeteridae, and Ziphiidae which range in size from 7.5m *Hyperoodon planifrons* to 27m *Balaenoptera musculus* (Macdonald 1985). Under United Kingdom legislation on the keeping of cetacean in captivity, minimum enclosure dimensions per animal must be: Minimum Horizontal Dimension (MHD) = 2 times body length and Minimum Vertical Dimension (MVD) = 2 times body length of species contained (MHD may be reduced by 20% in one direction providing that the same percentage increase is added to the MHD at the 90 degree angle, depths may be varied by up to 20% of the MVD to provide a minimum average enclosure depth) (Secretary of State 1981)

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