

census of rare animals in captivity

The purpose of the annual Rare Animal Census is not only to record which zoos have rare species in their collections, but also to help them draw up a co-ordinated, international breeding policy for rare animals. It is hoped that where one zoo has a single ♂ of a rare species and another a single ♀, inter-zoo matings or exchanges will be arranged, since it is vital for zoos to do their utmost to breed rare species in captivity. The various footnotes give an indication of the number of such schemes already in operation. In the case of some very rare species, seriously endangered in their habitats, zoos may well be able to safeguard their ultimate survival by long-term captive breeding programmes. Furthermore, biological and behavioural research conducted in zoos will give us a greater understanding of their requirements, both in captivity and in the wild. Another important consideration is that in future zoos will have to rely increasingly on zoo-bred animals to replenish stocks of rare animals listed on the following pages.

The census is based, as in previous years, on the IUCN *Red Data Book*†, with the addition of certain taxa which,

although not necessarily rare and endangered in the wild, are rare in zoos and of great interest to zoos (see Key (2) below). The IUCN lists also include a number of mammal and bird taxa (chimpanzee, wolf, Polar bear, leopard, jaguar, cheetah, Cereopsis goose, Swinhoe's pheasant) which, while threatened in their natural habitats, are relatively common in captivity and breed regularly. To conserve space, these have either been omitted altogether from the census, or only their total captive populations have been registered. Similarly, many reptile species designated rare by the IUCN are too numerous in captivity to be conveniently recorded and only the least commonly kept of these are here listed. It should be emphasised that their omission from this census in no way invalidates the urgency of instituting captive breeding programmes for their survival.

†Four volumes of the IUCN *Red Data Book* have been published relating to vertebrates—*Mammalia*, *Aves*, *Pisces* and *Amphibia & Reptilia*—and are obtainable from the Secretary-General, IUCN, 1110 Morges, Switzerland.

KEY TO CENSUS

1. All species listed by the IUCN (International Union for Conservation of Nature and Natural Resources) as being rare, or presumed rare, in the wild have been printed as follows:

*RED-CHEEKED IBIS *Geronticus eremita*
IUCN RARE

Mammal, reptile and amphibian species under threat have been further classified according to the categories Endangered (E), Vulnerable (V), Rare (R) and Indeterminate (I) designated in the latest editions of *Mammalia* and *Amphibia & Reptilia*.

2. All other species listed on the census are either strictly protected and seldom exported from their country of origin (e.g. all Australian and Madagascan animals) or are difficult to obtain from the wild for other reasons. These are not necessarily rare in the wild but they are rare in zoos and of great interest to zoos.

3. Zoos, bird parks, wildlife parks, research colonies and private individuals owning rare animals have all been listed alphabetically under the name of the town (or the nearest town) where the collection is kept. Addresses are given in the list of Zoos and Aquaria of the World in Vol. 16, pp. 261–329. Addresses of private collections and other non-zoo institutions not there listed may be obtained from the Yearbook office. The census

has in general confined itself to zoos only; where a studbook is in existence, the Studbook Keeper (see pp. 372–375) may be able to supply the names of additional owners of rare animals.

4. Regional Primate Research Centres in the United States are given the abbreviation RPRC.

5. In order to save space, sex of animals is denoted thus: one ♂ 1/0; one ♀ 0/1; one ♂, one ♀ and one sex unknown 1/1/1.

6. Figures in brackets indicate the number of specimens *currently on exhibition that were bred in captivity*. They were not necessarily bred by the zoo exhibiting them.

7. In cases where a zoo has failed to indicate how many of a species have been captive bred, but where the zoo is known to possess a breeding group of that species, the abbreviation (b) is used.

8. Where a zoo is believed to exhibit a certain species but has failed to return the 1976 census, it is listed together with the last available figures in the supplementary paragraph 'No data 1976'. This also applies to a few cases where the Editor had reason to suppose that information was inadvertently omitted from the 1976 census.

9. The census was compiled between January and

1/5(1/4); Winnipeg Can 3/5(2/4); Zurich Switz 2/4 (1/2).

Total: 51/120(23/53) in 36 collections.

No data 1976: Pietermaritzburg SA 2/1(1/0); Stockbridge LCS USA 3/3(3/3); W Palm Bch LCS USA 2/4(b).

***MALAYAN TAPIR** *Tapirus indicus* IUCN (E)

Amsterdam Ne 2/2(1/1); Arnheim Ne 1/1(1/1); Bangkok Thai 1/1; Basle Switz 1/2(0/1); Berlin E Ge 1/3(1/1); Berlin W Ge 1/1(1/1); Bristol GB 1/2(0/1); Chester GB 1/0; Chicago Br USA 1/0; Colorado USA 1/2; Columbia USA 1/1; Columbus USA 1/1(1/0); Copenhagen Den 1/1(1/1); Dallas USA 1/0; Djakarta Indon 1/2(0/1); Dresden Ge 1/1(1/1); Dvur Kralove Cz 1/2(1/1); Edmonton AGF Can 1/2(1/2); Hanover Ge 1/1(0/1); Heidelberg Ge 1/3(0/1); Katowice Pol 1/1; Kuala Lumpur Mal 1/2; Leipzig Ge 1/0(1/0); Liberec Cz 1/1(1/1); London ZSL GB 1/1; Los Angeles USA 1/1; Miami CP USA 1/1; Milwaukee USA 3/1; Monroe USA 1/1(0/1); Nagoya Jap 1/1; NY Bronx USA 2/2; Nuremberg Ge 2/1(1/0); Osaka Jap 1/0(1/0); Ostrava Cz 1/1; Philadelphia USA 1/0; Prague Cz 1/1(1/1); Rangoon Burm 0/1; Rome It 1/1; Rotterdam Ne 2/2(1/1); St Louis USA 2/2(1/0); San Antonio USA 1/2(0/1); San Diego USA 1/2(1/2); Sao Paulo Braz 1/1; Sendai Jap 1/2(0/1); Shizuoka Jap 1/1; Singapore 1/1; Stuttgart Ge 1/1(0/1); Surabaja Indon 0/2; Tokyo Tama Jap 2/1(1/0); Toronto Can 1/2; Twycross GB 1/1; Vienna Aus 2/1(1/1).

Total: 59/66(19/24) in 52 collections.

No data 1976: Manchester GB 2/1(1/0).

***MOUNTAIN or WOOLLY TAPIR**

Tapirus pinchaque IUCN (E)

Brownsville USA 1/1; Leipzig Ge 0/1; Los Angeles USA 1/1; Paris PZ Fr 1/0; Stuttgart Ge 1/1.

Total: 4/4 in 5 collections.

***BAIRD'S TAPIR** *Tapirus bairdii* IUCN (E)

Columbia USA 1/0; Los Angeles USA 3/1(1/0); Mexico Chapultepec 1/1; Miami CP USA 1/1; Naples USA 1/0; NY Central Pk USA 1/1; Philadelphia USA 1/0; Rome It 1/1; San Diego USA 3/3(2/1); San Salvador El Sal 0/1; Tuxtla Mex 2/2(2/2); Waco USA 1/0.

Total: 16/11(5/3) in 12 collections.

No data 1976: Canal Zone 0/2.

***INDIAN RHINOCEROS**

Rhinoceros unicornis IUCN (E)

Amsterdam Ne 1/0(1/0); Antwerp Bel 1/1(0/1); Basle Switz 1/3(0/2); Berlin E Ge 1/1(1/0); Berlin W Ge 2/1(2/1); Bombay Ind 1/0; Calcutta Ind 1/2(0/1); Delhi Ind 1/1; Gauhati Ind 3/5(1/0); Gelsenkirchen Ge 1/0(1/0); Hamburg Ge 1/1(1/1); Hyderabad Ind 2/1; London ZSL GB 0/1; Los Angeles USA 1/2(0/1); Miami CP USA 1/1; Milwaukee USA 1/0(1/0); Mysore Ind 1/2(0/1); Nagoya Jap 1/1(1/0); NY Bronx

1/2(1/0); Paris PZ Fr 1/0(1/0); Peking China 1/0; Philadelphia USA 1/1; Rome It 1/0; San Diego WAP USA 1/1(1/1); Stuttgart Ge 2/1(2/1); Tokyo Tama Jap 2/1(1/0); Trivandrum Ind 1/0; Washington NZP USA 1/1(0/1); Whipsnade GB 0/1(0/1).

Total: 33/31(15/12) in 29 collections.

No data 1976: Madras Ind 1/0.

Breeding loan from Washington NZP (at NY Bronx).

SOUTHERN WHITE RHINOCEROS

Ceratotherium s. simum

Abu Dhabi 1/1; Alexandria Egt 1/0(1/0); Antwerp Bel 2/2(1/0); Arnheim Ne 3/8; Barcelona Sp 1/2; Baton Rouge USA 1/2; Berlin E Ge 1/1; Berlin W Ge 1/1; Birmingham USA 1/2; Blackpool GB 1/2; Bloemfontein SA 1/1; Boras Swed 1/1; Brownsville USA 1/1; Calgary Can 1/1; Catskill USA 1/1; Chester GB 1/1; Chicago Br USA 1/1; Cologne Ge 1/1; Columbia USA 1/2; Columbus USA 1/2(0/1); Copenhagen Den 2/3(1/1); Dortmund Ge 1/1; Doswell USA 8/8; Dresden Ge 1/1; Duisburg Ge 1/1; Dvur Kralove Cz 2/7; Edmonton AGF Can 1/1; Emmen Ne 1/1; Fort Worth USA 1/1; Fresno USA 1/1; Gauhati Ind 1/0; Glasgow GB 2/0; Hanover Ge 1/1; Hilvarenbeek Ne 1/4; Honolulu USA 1/1; Houston USA 1/1; Jackson USA 1/2; Jacksonville USA 2/3; Johannesburg SA 1/2; Kaliningrad USSR 1/1; Kansas USA 1/1; Katowice Pol 1/1; Kiev USSR 1/1; Kings Mills USA 6/2; Knoxville USA 1/2; Kolmarden Swed 1/1; Krefeld Ge 1/1; Laguna Hills LCS USA 8/8(1/1); Leipzig Ge 1/1; Little Rock USA 1/1; Longleat GB 3/3; Los Angeles USA 1/1; Louisville USA 1/1; Madrid Sp 1/1; Mallorca Sp 1/1; Milwaukee USA 1/2; Monroe USA 1/1; Munich Ge 1/2; Mysore Ind 1/1; New Orleans USA 2/2; Nuremberg Ge 1/1; Oklahoma USA 1/1; Omaha USA 1/1; Ostrava Cz 1/1; Peking China 1/1; Philadelphia USA 1/1(1/1); Phoenix USA 2/1; Pietermaritzburg NLP SA 1/2; Prague Cz 1/2; Pretoria SA 1/1; Ramat-Gan Is 4/4; Rangoon Burm 1/1; Rio de Janeiro Braz 1/1; Rockton Can 2/2; Rostov USSR 1/1; Rotterdam Ne 1/1; San Antonio USA 2/2(1/0); San Diego USA 2/0(2/0); San Diego WAP USA 5/14(2/2); San Francisco USA 1/1; Santo Domingo Dom 2/2; Sao Paulo Braz 1/1; Sendai Jap 1/1; Singapore 0/1; Tampa USA 1/1; Thoiry Fr 3/1; Tokyo Ueno Jap 1/1; Toledo USA 1/1; Toronto Can 2/2; Turin It 1/1; Villiersdorp SA 0/2; Whipsnade GB 5/13(2/1); Windsor GB 3/5; Winston USA 2/2(2/2); Zurich Switz 1/1.

Total: 144/181(14/9) in 95 collections.

No data 1976: Bandholm Den 1/1; Grand Prairie LCS USA 6/13(0/1); Lisbon Port 1/1; Maracaibo Ven 1/1; Memphis USA 1/0; Prescott GB 3/1; San Roque Sp 7/10; Sigan Fr 1/1; Stockbridge LCS USA 7/11; Tunis Tun 2/2; W Palm Bch LCS USA 9/14; Woburn GB 2/3.

***NORTHERN WHITE RHINOCEROS**

C. s. cottoni IUCN (E)

Antwerp Bel 0/1; Dvur Kralove Cz 2/4; London ZSL GB 1/0; San Diego WAP USA 1/1.

Total: 4/6 in 4 collections.

No data 1976: Khartoum Sud 1/1; Prescott GB 0/1.

***BLACK RHINOCEROS** *Diceros bicornis*

IUCN (v)

Adelaide Austral 1/0; Alma-Ata USSR 1/1(1/0); Amsterdam Ne 0/1; Atlanta USA 1/1; Bangkok Thai 1/0; Bekesbourne GB 1/2(1/0); Berlin E Ge 0/1; Berlin W Ge 1/2; Boston USA 1/2; Bristol GB 1/1(1/0); Budapest Hun 0/1(0/1); Chester GB 1/1(1/1); Chicago Br USA 1/3; Cincinnati USA 2/2(1/1); Colombo SL 0/1; Colorado USA 1/2(0/1); Columbus USA 2/0(1/0); Dallas USA 1/1; Delhi Ind 1/1; Denver USA 2/2(1/1); Detroit USA 1/2(0/1); Dublin Ire 1/1(0/1); Duluth USA 1/0(1/0); Dvur Kralove Cz 3/7; Frankfurt Ge 1/1(0/1); Gauhati Ind 1/1; Grodno USSR 1/0; Hanover Ge 1/1(1/0); Hiroshima Jap 1/1; Jacksonville USA 1/1; Johannesburg SA 1/0(1/0); Kano Nig 1/0; Kobe Jap 1/1(1/0); Kuala Lumpur Mal 1/0; Leipzig Ge 1/1; Lodz Pol 1/0; London ZSL GB 0/2(0/1); Los Angeles USA 2/1(1/0); Magdeburg Ge 1/1; Maiduguri Nig 1/1; Mexico Chapultepec 1/1; Miami CP USA 1/1; Mysore Ind 2/2(1/1); Nagoya Jap 1/2; Nairobi Ken 3/0; Nanyuki Ken 1/0; Naples It 1/2(0/1); Oklahoma USA 2/2(2/1); Osaka Jap 0/2(0/1); Paignton GB 1/0(1/0); Peking China 0/3; Pretoria SA 1/0; Rome It 1/1(0/1); St Louis USA 1/2(0/1); San Antonio USA 1/1; San Diego USA 1/1(0/1); San Diego WAP USA 1/1(1/0); San Francisco USA 1/1; Sao Leopoldo Braz 1/0(1/0); Sydney Austral 2/2(1/1); Tampa USA 1/2(0/1); Teheran Iran 1/2(0/1); Toronto Can 1/2; Vienna Aus 1/0; Washington NZP USA 1/1; Whipsnade GB 1/1; Wichita USA 1/1(1/1); Wroclaw Pol 1/1; Zagreb Yug 1/1; Zurich Switz 1/3(0/1).

Total: 74/85(20/21) in 70 collections.

No data 1976: Asheboro USA 1/1; Cairo Egt 1/0; Granby Can 1/1; Lisbon Port 2/1(1/0); Memphis USA 1/2(0/2); Pittsburgh USA; Tel Aviv Is 1/1.

ARTIODACTYLA

***PYGMY HOG** *Sus salvanius* IUCN (1)

Gauhati Ind 1/3(0/2).

GIANT FOREST HOG *Hylochoerus*

meinertzhageni

Nairobi Ken 0/1.

BABIR USA *Babyrusa babyrussa*

Antwerp Bel 1/3(0/2); Bandung Indon 2/1; Djakarta Indon 2/1; Frankfurt Ge 1/1; Stuttgart Ge 1/1; Surabaja Indon 12/10(5/3).

Total: 19/17(5/5) in 6 collections.

***PYGMY HIPPOPOTAMUS** *Choeropsis*

liberiensis IUCN (R)

Amsterdam Ne 2/3(2/2); Antwerp Bel 1/2(1/0); Arnhem Ne 2/3(1/1); Baltimore USA 2/3(1/1);

Barcelona Sp 1/1; Basle Switz 2/4(1/4); Berlin E Ge 1/1; Berlin W Ge 1/2(1/1(2/1)); Bristol GB 1/1(1/1); Brownsville USA 1/2(0/1); Budapest Hun 2/1(2/0); Catskill USA 1/2(1/1); Chester GB 1/1(0/1); Chicago Br USA 1/2(1/2); Cincinnati USA 1/2(0/1); Cleveland USA 1/2(0/2); Columbus USA 1/1(1/1); Copenhagen Den 2/1(1/1); Dallas USA 1/2(0/1); Duisburg Ge 2/2; Dvur Kralove Cz 2/3(1/1); Edinburgh GB 1/1; Erfurt Ge 1/0(1/0); Fort Worth USA 1/2(0/1); Honolulu USA 1/2(1/2); Jackson USA 1/0(1/0); Jacksonville USA 2/1(2/0); Johannesburg SA 1/1(1/1); Kaliningrad USSR 1/0(1/0); Leipzig Ge 2/2(1/1); Lichtenburg SA 1/2(1/2); Los Angeles USA 1/1; Melbourne Austral 1/2(1/2); Miami CP USA 1/4(0/3); Munich Ge 2/3(2/3); Nagoya Jap 1/1(1/0); Nairobi Ken 2/1(1/0); NY Bronx USA 1/4(1/4); NY Central Pk USA 0/1; Paris PZ Fr 1/2(1/0); Philadelphia USA 1/2(0/1); Poznan Pol 1/1(0/1); Prague Cz 1/1(1/1); Pretoria SA 3/3(3/3); Rangoon Burm 1/1; Rome It 0/1; Rotterdam Ne 1/2(1/2); St Louis USA 1/3(0/3); Salt Lake USA 1/1(1/1); San Antonio USA 1/2(0/2); San Diego USA 2/4(1/3); San Francisco USA 1/1(1/1); Stoneham USA 1/1(1/1); Stuttgart Ge 1/2(1/2); Sydney Austral 1/3(1/3); Tampa USA 0/1(0/1); Tokyo Ueno Jap 2/1(0/1); Toledo USA 0/1; Toronto Can 1/3(1/3); Washington NZP USA 2/6(1/4); Whipsnade GB 2/3(2/2); Zurich Switz 2/1(2/0).

Total: 77/115(148/77/1) in 62 collections.

No data 1976: Abidjan IC 1/0; Manchester GB 1/1; Memphis USA 2/2(1/1).

Breeding loan from Washington NZP (at Cincinnati).

***VICUNA** *Lama vicugna* IUCN (v)

Abu Dhabi 1/0(1/0); Amsterdam Ne 3/2(3/2); Antwerp Bel 7/5(7/3); Berlin W Ge 1/1(1/1); Bremerhaven Ge 1/0; Edmonton AGF Can 2/2(1/1); Frankfurt Ge 1/3(1/2); Gelsenkirchen Ge 2/0(2/0); Hanover Ge 1/1; Johannesburg SA 1/0(1/0); Lima Peru 0/1; Lodz Pol 2/1(2/1); Mallorca Sp 1/0; Munich Ge 1/1(1/1); Nuremberg Ge 1/0(1/0); Paris PZ Fr 1/0(1/0); Rotterdam Ne 1/0(1/0); San Diego USA 1/0(1/0); Sao Leopoldo Braz 1/0; Winnipeg Can 1/4(1/4); Zurich Switz 7/6(7/6).

Total: 37/27(32/21) in 21 collections.

No data 1976: Catskill USA 3/8(3/8).

Breeding loans from Munich (at Hanover) and Halle (a Lodz).

INDIAN CHEVROTAIN or MOUSE DEER

Tragulus meminna

Ahmedabad Ind 1/1; Calcutta Ind 0/1(0/1); Colombo SL 6(b); Delhi Ind 1/0; Hyderabad Ind 1/2; Mysore Ind 2/2.

Total: 5/6(0/1+) in 6 collections.

LESSER MALAY CHEVROTAIN

Tragulus javanicus

Amsterdam Ne 6/8(2(5/5/2)); Bandung Indon 2/2; Bangkok Thai 2/2; Berlin W Ge 1/2(1/2); Djakarta