

Total: 20.25 in 10 collections; most are presumed captive bred—see Key 6.

1989 Species total: 24.27 in 13 collections; most are presumed captive bred—see Key 6.

1990 Species total: 29.31 in 13 collections; most are presumed captive bred—see Key 6.

Stockbook held: see List of stockbooks and world registers.

***GREY'S ZEBRA** *Equus grevyi* IUCN(E)

1989: Abu Dhabi 2.4(2.3); Albuquerque USA 1.0(1.0); Amersfoort Ne 3.5(3.3); Amsterdam Ne 2.3(2.3); Askaniya-Nova USSR 1.1(1.1); Augsburg Ge 1.3; Banham GB 1.2(1.2); Baton Rouge USA 1.5(1.4); Berlin TP Ge 1.1(1.1); Berlin ZG Ge 1.2(1.2); Boston USA 1.3(1.3); Broome Austral 1.1(1.1); Brownsville USA 2.1(2.0); Budapest Hun 1.3(1.2); Cairo Egt 1.1; Chiba Jap 2.4(2.4); Chicago Br USA 1.5(1.4); Colorado USA 2.3(2.3); Dallas USA 1.3(1.3); Denver USA 2.2(2.2); Dvur Kralove Cz 4.18(4.17); Frankfurt Ge 1.4(1.3); Frejus Fr 1.0(1.0); Hamburg Ge 3.5(2.2); Hilvarenbeek Ne 3.5(3.4); Katowice Pol 4.1(3.0); Kobe Jap 1.1(1.1); Kyoto Jap 1.0(1.0); Leipzig Ge 1.3(1.2); Leningrad USSR 1.1(1.1); Los Angeles USA 1.3(1.3); Marwell GB 2.9(2.6); Miami MZ USA 1.0; Misaki Jap 1.2(1.2); Mulhouse Fr 1.1(1.1); Nanyuki Ken 7.21(3.6); Naples It 0.1; NY Bronx USA 3.6(3.4); NY Bronx SCSC USA 5.8(5.6); Nuremberg Ge 2.3(2.1); Oberwil Switz 2.3(2.3); Oklahoma USA 2.1(2.1); Ostrava Cz 2.2(2.2); Phoenix USA 1.2(1.0); Poznan Pol 1.2(1.2); Prague Cz 2.2(1.1); Pretoria SA 1.1(1.1); Ramat Gan Is 0.4(0.1); Rhenen Ne 2.2(2.2); Riga USSR 0.1(0.1); Romaneche-Thorins Fr 1.1(1.1); Rome It 0.2(0.2); Royan Fr 2.2(2.2); Sacramento USA 2.5(2.4); St Louis USA 1.3(1.3); St Paul USA 1.3(1.1); San Antonio USA 1.4(1.3); San Diego WAP USA 8.13(8.13); Sao Paulo Braz 1.3(1.3); Seoul Kor 1.3; Stuttgart Ge 4.6(4.6); Taipei Tai 1.2(1.2); Tallin USSR 1.2(1.2); Tampa USA (b); Tokyo Tama Jap 2.2(2.2); Toronto Can 3.5(3.4); Tripoli Libya 1.0; Tucson RP USA 1.0(1.1); Tunis Tunisia 1.0(1.0); Tyler USA 1.4(1.4); Vienna Aus 1.2(1.2); Whipsnade GB 3.7; Yulee USA 2.10(2.10).

Total: 135.25(119.188)+ in 78 collections.

Breeding loans from: Ashboro (at NY Bronx SCSC); Boston (at Midway and Oklahoma); Chicago LP (at Boston); Colorado (at Palm Desert); Columbus (at Dallas); Dallas (at Chicago Br); Marwell (at Chicago Br); NY Bronx (at Boston); Sacramento (at NY Bronx SCSC and Oklahoma); St Louis (at Chicago Br); NY Bronx (at NY Bronx SCSC); St Paul and Tyler; San Antonio (at Denver); San Diego WAP (at Oklahoma); Toronto (at San Diego); Yulee (at San Antonio).

Stockbook held: see List of stockbooks and world registers.

***HARTMANN'S MOUNTAIN ZEBRA**

Equus zebra hartmannae IUCN(V)

1989: Amsterdam Ne 1.2; Berlin TP Ge 2.2(2.1); Berlin ZG Ge 1.3; Chiba Jap 0.2; Dvur Kralove Cz 5.9(5.8); Kawasaki Jap 3.3; Kings Mills USA 1.0; Lisbon Port 1.0; Litchfield Park USA 1.0; London ZSL GB 1.2; Los Angeles USA 1.0(1.0); Madison USA 1.5; Mallorca Sp 1.7; Marwell GB 1.13; Naples It 1.1; Prague Cz 1.3; Pretoria SA 1.1(1.0); San Diego USA 0.1; San Diego WAP USA 2.1.0; Santo Domingo Dom 4.0; Taipei Tai 2.2; Tripoli Libya 1.2; Tunis Tunisia 2.1.

Total: 34.71 in 23 collections; most are presumed captive bred—see Key 6.

1990: Amsterdam Ne 1.2; Berlin TP Ge 2.2(2.1); Berlin ZG Ge 1.3; Chiba Jap 0.2; Dvur Kralove Cz 7.10(7.9); Kawasaki Jap 3.2; Kings Mills USA 1.0; Lisbon Port 1.0; Litchfield Park USA 1.0; London ZSL GB 2.2; Los Angeles USA 2.1(1.0); Madison USA 1.4; Mallorca Sp 1.7; Marwell GB 2.12; Munich Ge 2.6(1.6); Naples It 1.0; Portland USA 1.4; Prague Cz 1.2; Pretoria SA 1.1(1.0); San Diego USA 0.1; San Diego WAP USA 3.10; Santo Domingo Dom 4.0; Taipei Tai 3.2; Tripoli Libya 1.1; Tunis Tunisia 2.1.

Total: 40.79 in 25 collections; most are presumed captive bred—see Key 6.

Stockbook held: see List of stockbooks and world registers.

***BAIRD'S TAPIR** *Tapirus bairdi* IUCN(V)

1989: Belize 0.1; Columbia USA 1.1(0.1); Los Angeles USA 1.1(1.1); Miami MZ USA 2.2(2.2);

Norfolk USA 1.0(1.0); San Diego USA 1.5; Santa Barbara USA 1.1(1.1); Yokohama KNP Jap 2.1(2.1).

Total: 9.12(7.6) in 8 collections.

1990: Belize 0.1; Columbia USA 1.1(0.1); Columbus USA 1.1(1.1); Los Angeles USA 2.1(2.1); Miami MZ USA 4.2(4.2); Moreira Mex 1.0; Norfolk USA 1.1(1.1); San Diego USA 2.5; Santa Barbara USA 1.1(1.1); Yokohama KNP Jap 2.1(2.1).

Total: 15.14(11.8) in 10 collections.

Stockbook held: see List of stockbooks and world registers.

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

1989: Aalborg Den 1.1(0.1); Amsterdam Ne 1.2(0.1); Antwerp Bel 1.1(1.0); Bangkok Thai 5.4; Berlin ZG Ge 1.1; Chiba Jap 1.0(1.0); Chicago Br USA 0.1(0.1); Chiangmai Thai 1.2; Cincinnati USA 1.1(1.1); Columbus USA 1.1(1.1); Copenhagen Den 1.2(1.2); Denver USA 1.1(1.1); Detroit USA 0.1(0.1); Dortmund Ge 1.1(1.1); Dresden Ge 1.1(1.1); Fukuoka Jap 1.2(1.2); Heidelberg Ge 1.2(1.2); Jakarta Indon 3.3; Katowice Pol 1.0; Lympe GB 1.2(1.0); Marwell GB 1.2(1.2); Melaka Mal 2.0; Memphis USA 1.1(1.1); Miami MZ USA 2.2(1.1); Milwaukee USA 1.1(1.0); Minneapolis USA 1.1(1.1); Mulhouse Fr 2.2(2.2); Nagoya Fr 2.1(2.1); NY Bronx USA 4.3(3.2); Nuremberg Ge 1.3(1.3); Oklahoma USA 1.1(1.1); Ostrava Cz 1.0; Philadelphia USA 1.2(1.2); Poznan Pol 1.0; Prague Cz 1.1; Pretoria SA 1.2(1.2); Rotterdam Ne 0.3(0.2); St Louis USA 2.2(1.1); San Diego USA 2.1; Sao Paulo Braz 0.1(0.1); Sapporo Jap 1.0(1.0); Shizuoka Jap 1.1(0.1); Singapore 2.4(1.2.4.1); Stuttgart Ge 1.2(1.2); Taipei Tai 0.1(0.1); Tampa LP USA 1.2(1.2); Tokyo Tama Jap 2.2(2.2); Toronto Can 2.2(2.2); Twycross GB 1.1(1.1); Vienna Aus 1.1(0.1); Washington NZP USA 1.1(1.1).

Total: 64.75(39.54) in 51 collections.

1990: Aalborg Den 1.1(0.1); Amsterdam Ne 1.1; Antwerp Bel 1.2(1.1); Bangkok Thai 3.3; Berlin ZG Ge 1.1; Chiba Jap 1.0(1.0); Chiangmai Thai 1.2; Cincinnati USA 1.1(1.1); Columbus USA 0.1(0.1); Copenhagen Den 1.2(1.2); Denver USA 1.1(1.1); Dortmund Ge 0.1(0.1); Dresden Ge 1.1(1.1); Fukuoka Jap 1.2(1.2); Heidelberg Ge 1.2(1.2); Katowice Pol 1.0; Lympe GB 1.3(1.1); Marwell GB 1.2(1.2); Memphis USA 1.1(1.1); Miami MZ USA 2.2(1.1); Milwaukee USA 1.1(1.0); Minneapolis USA 1.2(1.2); Mulhouse Fr 2.2(2.2); Munich Ge 1.2(1.2); Nagoya Jap 2.1(2.1); NY Bronx USA 4.3(3.2); Nuremberg Ge 1.3(1.3); Oklahoma USA 1.2(1.2); Ostrava Cz 1.0; Philadelphia USA 1.1(1.1); Prague Cz 1.1; Pretoria SA 1.1(1.1); Rotterdam Ne 1.3(1.2); St Louis USA 3.2(2.2); San Diego USA 2.3; Sao Paulo Braz 0.1(0.1); Sapporo Jap 1.0(1.0); Shizuoka Jap 2.1(1.1); Singapore 2.4(1.2.4.1); Stuttgart Ge 1.2(1.2); Taipei Tai 0.1(0.1); Tampa LP USA 1.1(1.1); Tokyo Tama Jap 2.1(2.1); Toronto Can 2.2(2.2); Twycross GB 1.1(1.1); Vienna Aus 1.1(0.1); Washington NZP USA 1.1(1.1).

Total: 58.72(41.54) in 47 collections.

Breeding loans from: Amsterdam (at Antwerp); Milwaukee (at Detroit and Toronto); Philadelphia (at Cincinnati and San Diego); Rotterdam (at Antwerp and Philadelphia); St Louis (at Chicago Br, Denver, Milwaukee and NY Bronx); Stuttgart (at Copenhagen).

Stockbook held: see List of stockbooks and world registers.

***MOUNTAIN or WOOLLY TAPIR** *Tapirus pinchaque* IUCN(V)

1989: Los Angeles USA 2.2(1.2); San Diego USA 1.2; Stuttgart Ge 1.1.

1990: Los Angeles USA 2.2(1.2); San Diego USA 2.1; Stuttgart Ge 1.1.

Breeding loan from: Cali (at San Diego).

***INDIAN RHINOCEROS** *Rhinoceros unicornis* IUCN(E)

1989: Amsterdam Ne 1.0(1.0); Basle Switz 1.3(1.3); Berlin TP Ge 1.1(1.0); Berlin ZG Ge 1.2(1.1); Bhubaneswar Ind 1.1; Calcutta Ind 2.1(1.0); Chester GB 1.1(1.0); Chiangmai Thai 0.1; Cologne Ge 1.1(1.1); Dvur Kralove Cz 2.1(2.1); Hamburg Ge 1.1(1.1); Hyderabad Ind 1.0(1.0); Kanpur Ind 3.1(1.1); Los Angeles USA 2.1(1.1); Miami MZ USA 2.0(1.0); Mysore Ind 1.1; Nagoya Jap 1.1(1.0); NY Bronx USA 3.4(3.1); Oklahoma USA 1.1(0.1); Philadelphia USA 2.1(1.1); Planckendael Bel 2.2(2.2); Rotterdam Ne 1.0(1.0); San Diego USA 2.0(2.0); San Diego WAP USA 3.4(3.4); San Francisco USA 1.1; Sao Paulo Braz 1.0(1.0); Seoul Kor 1.0.1; Stuttgart Ge 2.1(2.1); Tampa LP USA 1.0(1.0); Tokyo Tama Jap 1.1; Toronto Can 1.1(1.1); Washington NZP USA 1.2(1.0); Whipsnade GB 2.1; Yokohama KNP Jap 1.1(1.1).

Total: 48.36(34.21) in 34 collections.

1990: Basle Switz 1.3(1.3); Berlin TP Ge 2.1(2.0); Berlin ZG Ge 1.2(1.1); Bhubaneswar Ind 1.1; Calcutta Ind 2.1(1.0); Chandigarh Ind 2.0.2; Chester GB 1.0(1.0); Chiangmai Thai 1.1; Cincinnati USA 1.0(1.0); Cologne Ge 1.1(1.1); Dvur Kralove Cz 1.1(1.1); Gauhati Ind 8.3(1.0.1.0.1); Hamburg Ge 1.1(1.1); Kanpur Ind (b); Liberec Cz 1.0(1.0); Los Angeles USA 2.1(1.1); Miami MZ USA 2.0(1.0); Mysore Ind 1.2; Nagoya Jap 1.1(1.0); NY Bronx USA 2.5(2.2); Nuremberg Ge 1.0(1.0); Oklahoma USA 0.1(0.1); Philadelphia USA 1.1(0.1); Planckendael Bel 2.2(2.2); Rotterdam Ne 1.0(1.0); San Diego USA 1.0; San Diego WAP USA 3.4(3.4); San Francisco USA 1.1; Sao Paulo Braz 1.0(1.0); Seoul Kor 1.0.1; Stuttgart Ge 2.1(2.1); Tampa LP USA 1.0(1.0); Tokyo Tama Jap 1.1; Toronto Can 2.1(2.1); Washington NZP USA 1.2(1.0) Whipsnade GB 3.1; Yokohama KNP Jap 1.1(1.1).

Total: 55.40(42.21.1.1)+ in 37 collections.

Breeding loans from: Miami MZ and Oklahoma (at NY Bronx); Philadelphia (at Cincinnati and Miami MZ); Washington NZP (at NY Bronx, Oklahoma and Toronto); Whipsnade (at Planckendael).

Stockbook held: see List of stockbooks and world registers.

***SUMATRAN RHINOCEROS** *Dicerorhinus sumatrensis* IUCN(E)

1989: Jakarta Indon 1.1; Los Angeles USA 0.1; Lympe GB 1.1; Melaka Mal 1.8(0.1); San Diego USA 0.1.

Total: 3.12(0.1) in 5 collections.

1990: Cincinnati USA 0.1; Dublin Ire 1.1(1.0); Los Angeles USA 0.1; Lympe GB 1.1; San Diego USA 0.1; Windsor GB 2.4.

Total: 4.9(1.0) in 6 collections.

Stadbook held: see List of stadbooks and world registers.

SOUTHERN WHITE or SQUARE-LIPPED RHINOCEROS *Ceratotherium s. simum*

1989 Total: 163.202(69.78) in 123 collections.

1990 Total: 151.197.2(62.72) in 121 collections.

*NORTHERN WHITE or SQUARE-LIPPED RHINOCEROS *C. s. cottoni* IUCN(E)

1989: Dvur Kralove Cz 4.6(1.2); Pistoia It 1.1; San Diego WAP USA 1.0.

1990: Dvur Kralove Cz 3.5(1.3); Frejus Fr 1.0(1.0); San Diego WAP USA 1.0.

Stadbook held: see List of stadbooks and world registers.

*BLACK RHINOCEROS *Diceros bicornis* IUCN(E)

1989: Alma-Ata USSR 1.1(1.0); Berlin ZG Ge 3.4(1.2); Buenos Aires Arg 0.1(0.1); Cairo Egt 1.0; Chester GB 1.1(1.1); Chicago Br USA 2.3(2.2); Cincinnati USA 2.3(1.2); Colombo SL 0.1; Colorado USA 1.1(1.1); Columbus USA 1.0; Dallas USA 0.2; Denver USA 2.2(1.1); Detroit USA 1.1(1.1); Dvur Kralove Cz 4.5(4.3); Frankfurt Ge 1.0(1.0); Garden City USA 0.1; Hiroshima Jap (b); Lisbon Port 0.1; London ZSL GB 1.3(1.1); Los Angeles USA 2.4(1.2); Lympe GB 4.3(3.1); Miami MZ USA 2.5(2.2); Mysore Ind 3.3; Nagoya Jap 0.2(0.2); Naples It 1.1(1.0); Oklahoma USA 1.0(1.0); Osaka Jap 1.1(1.1); Portland USA 1.0(1.0); Ramat Gan Is 1.0; Rome It 0.1(0.1); St Louis USA 1.2(0.1); San Antonio USA 1.2(0.2); San Diego USA 2.2(1.0); San Diego WAP USA 4.2(4.1); San Francisco USA 1.2(0.1); Sao Leopoldo Braz 0.1(0.1); Sydney Austral 0.2(0.1); Taipei Tai 1.2(1.2); Tallin USSR 1.0; Tampa USA 1.0(1.0); Tyler USA 2.2(2.2); Vienna Aus 1.0; Wichita USA 1.1(1.0); Zurich Switz 1.3(1.1).

Total: 54.71(34.37)+ in 44 collections.

1990: Alma-Ata USSR 0.1; Atlanta USA 1.0(1.0); Berlin ZG Ge 3.4(1.2); Buenos Aires Arg 0.1(0.1); Chester GB 1.1(1.1); Chicago Br USA 2.3(2.2); Chicago LP USA 2.2; Cincinnati USA 1.0(1.0); Colombo SL 0.1; Colorado USA 1.1(1.1); Columbus USA 2.3(1.2); Dallas USA 1.3; Denver USA 3.2(2.1); Detroit USA 1.2(0.2); Dvur Kralove Cz 4.6(4.4); Fort Worth USA 2.1; Frankfurt Ge 2.1(1.0); Garden City USA 0.1; Hiroshima Jap 2.2(1.1); Lisbon Port 0.1; London ZSL GB 1.2(1.1); Los Angeles USA 2.4(1.2); Lympe GB 4.5(3.3); Miami MZ USA 2.3(2.1); Milwaukee USA 2.2(1.1); Mysore Ind 2.2; Nagoya Jap 1.2(1.2); Naples It 1.1(0.1); Oklahoma USA 0.1(0.1); Osaka Jap 1.1(1.1); Paignton GB 1.0(1.0); Portland USA

1.0(1.0); Rome It 0.1(0.1); St Louis USA 1.2(0.1); San Antonio USA 1.2(0.2); San Diego USA 2.3(1.0); San Diego WAP USA 3.2(3.1); San Francisco USA 1.1; Sao Leopoldo Braz 0.1(0.1); Sydney Austral 0.2(0.1); Taipei Tai 1.2(1.2); Tallin USSR 1.0; Tyler USA 2.2(2.2); Vienna Aus 1.0; Wichita USA 1.1(0.1); Zurich Switz 1.4(1.2).

Total: 61.83(35.45) in 46 collections.

Breeding loans from Boston (at Miami MZ); Chicago Br (at Columbus); San Diego WAP and Tyler; Cincinnati (at Chicago Br); Chicago LP; Columbus; San Diego; San Diego WAP and Tyler; Detroit (at St Louis, Tyler and Wichita); Frankfurt (at Zurich); Leipzig (Berlin ZG); Oklahoma (at Detroit); Paignton (at London ZSL); Sydney (at Berlin ZG); Zambabwe gov (at Dallas); Zurich (at Frankfurt and Tallin).

Stadbook held: see List of stadbooks and world registers.

ARTIODACTYLA

*BABIRUSA *Babirusa babirusa* IUCN(V)

1989: Antwerp Bel 7.6; Berlin ZG Ge 2.3; Copenhagen Den 1.1; Frankfurt Ge 1.1; Jakarta Indon 8.3(1.0); Jersey GB 3.2; Leipzig Ge 1.1; Los Angeles USA 1.1; Lympe GB 1.1; NY Bronx USA 4.2; Nuremberg Ge 2.2; Rotterdam Ne 3.5; Stuttgart Ge 3.3.

Total: 37.31 in 13 collections; most are presumed captive bred—see Key 6.

1990: Antwerp Bel 9.6; Bandung Indon 1.2(0.0); Berlin ZG Ge 1.3; Cincinnati USA 1.0; Copenhagen Den 1.1; Frankfurt Ge 1.1; Jakarta Indon (b); Jersey GB 3.3; Krefeld Ge 1.0(0.0); Leipzig Ge 1.1; Los Angeles USA 1.1.3; Lympe GB 2.1; NY Bronx USA 5.4(4.3); Nuremberg Ge 2.2; Rotterdam Ne 2.3; Stuttgart Ge 3.3.

Total: 34.31.3+ in 16 collections; most are presumed captive bred—see Key 6.

Breeding loans from Amsterdam (at Frankfurt); Antwerp (at Copenhagen); Los Angeles (at NY Bronx); Lympe (at Antwerp); Stuttgart (at Berlin ZG and Frankfurt).

Stadbook held: see List of stadbooks and world registers.

*PYGMY HIPPOPOTAMUS *Choeropsis liberiensis* IUCN(V)

1989: Aalborg Den 1.3(0.2); Adelaide Austral 1.2(1.2); Antwerp Bel 1.1(1.1); Arnhem Ne 2.3(1.1); Atina It 1.1(1.1); Barcelona Sp 3.1(2.0); Basle Switz 2.3(2.3); Baton Rouge USA 1.1(1.1); Berlin TP Ge 1.4(0.3); Berlin ZG Ge 2.2(2.2); Boston USA 1.1(1.1); Bratislava Cz 1.2(1.2); Bristol GB 1.1(1.0); Broome Austral 1.1(1.1); Brownsville USA 1.2(0.1); Chicago Br USA 1.1(1.1); Chicago LP USA 1.2; Colombo SL 1.1(1.0); Columbus USA 1.1(1.1); Dallas USA 1.1(0.1); Debrecen Hun 0.1; Duisburg Ge 2.2; Dvur Kralove Cz 2.3(2.3); Edinburgh GB 2.1(2.1); Gdansk Pol 1.1; Gelsenkirchen Ge 1.2(1.2); Halle Ge 1.1(1.1); Hilo USA 1.2(1.2); Hoyerswerda Ge 1.1; Jackson USA 1.1(1.1); Jacksonville USA 1.0(1.0); Jakarta Indon 1.0; Johannesburg SA 1.2(1.2); Kaliningrad USSR 2.2(2.2); Kaunas USSR 1.2(1.2); Krefeld Ge 1.1(1.1); Leipzig Ge 1.2(1.2); Madrid Sp 1.1(1.1); Marwell GB 1.1(1.1); Melbourne Austral 1.2(1.2); Miami MZ USA 0.1; Munster Ge 1.1(1.1); Nagoya Jap 1.1(1.1); Nairobi

Ken 1.3(1.3); NY Bronx USA 1.2(1.1); Nuremberg Ge 1.1(1.1); Olomouc Cz 0.1(0.1); Poznan Pol 3.3(2.3); Pretoria SA 1.3(1.3); Rome It 1.2(1.1); Rostov USSR 1.1(1.0); Rotterdam Ne 1.2(1.2); St Louis USA 1.2(1.2); San Antonio USA 0.2(0.2); San Diego USA 2.2; San Diego WAP USA 0.2(0.2); San Francisco USA 1.0(1.0); Seoul Kor 1.1; Singapore; Stuttgart Ge 1.1(1.1); Sydney Austral 1.3(1.3); Taipei Tai 2.2(2.2); Tashkent USSR 0.1(0.1); Tokyo Ueno Jap 1.1; Toronto Can 1.2(1.2); Tucson RP USA 1.1(1.1); Washington NZP USA 1.3(0.3); Whipsnade GB 1.4; Zurich Switz 1.2(1.1).

Total: 75.112(56.84)+ in 69 collections.

1990: Aalborg Den 1.2(0.2); Adelaide Austral 1.2(1.2); Antwerp Bel 1.1(1.1); Arnhem Ne 2.3(1.1); Atina It 1.1(1.1); Barcelona Sp 3.1(2.0); Basle Switz 2.3(2.3); Baton Rouge USA 1.1(1.1); Berlin TP Ge 1.4(0.3); Berlin ZG Ge 2.2(2.2); Boston USA 1.1(1.1); Bratislava Cz 1.2(1.2); Bristol GB 1.1(1.0); Broome Austral 1.1(1.1); Brownsville USA 1.3(0.2); Chicago Br USA 0.2(0.2); Chicago LP USA 1.2; Colombo SL 2.1; Dallas USA 1.1(0.1); Debrecen Hun 0.1; Duisburg Ge 2.2; Dvur Kralove Cz 3.3(3.3); Edinburgh GB 2.1(2.1); Gdansk Pol 1.1; Gelsenkirchen Ge 1.1(1.1); Hanover Ge 0.1; Hilo USA 1.2(1.2); Hoyerswerda Ge 1.1; Jackson USA 1.1(1.1); Johannesburg SA 1.2(1.2); Kaliningrad USSR 2.2(2.2); Kaunas USSR 2.1(2.1); Krefeld Ge 1.1(1.1); Legal Can 1.1(1.1); Leipzig Ge 2.2(2.2); Madrid Sp 1.1(1.1); Marwell GB 1.1(1.1); Melbourne Austral 1.2(1.2); Miami MZ USA 1.2(1.1); Montevideo PPR Urug 1.0(1.0); Morelia Mex 0.1; Munich Ge 1.2(1.2); Munster Ge 1.1(1.1); Nagoya Jap 1.1(1.1); Nairobi Ken 1.3(1.3); NY Bronx USA 1.2(1.1); Nuremberg Ge 0.1(0.1); Olomouc Cz 1.1(1.1); Poznan Pol 3.3(2.3); Pretoria SA 2.2(2.2); Rome It 1.2(1.1); Rostov USSR 1.0(1.0); Rotterdam Ne 1.3(1.3); St Louis USA 1.2(1.2); Salt Lake USA 1.1(1.1); San Antonio USA 0.2(0.2); San Diego USA 0.2; San Diego WAP USA 0.2(0.2); San Francisco USA 1.0(1.0); Seoul Kor 1.1; Singapore 2.2(2.2); Stuttgart Ge 1.1(1.1); Sydney Austral 1.3(1.3); Taipei Tai 2.2(2.2); Tallin USSR 0.1(0.1); Tashkent USSR 0.1(0.1); Tokyo Ueno Jap 1.1; Toronto Can 2.1(2.1); Tucson RP USA 1.1(1.1); Washington NZP USA 1.2(0.2); Whipsnade GB 1.4; Zurich Switz 1.1(1.0).

Total: 81.115(63.87) in 72 collections.

Breeding loans from Cirkell (at NY Bronx); Chicago Br (at Chicago LP and San Diego WAP); Chicago LP (at Chicago Br); Honolulu (at Hilo); Philadelphia (at Tucson RP); Zurich (at Chicago Br).

Stadbook held: see List of stadbooks and world registers.

*VICUGNA *Lama vicugna* IUCN(V)

1989: Amsterdam Ne 1.2; Antwerp Bel 3.1; Berlin TP Ge 1.1; Berlin ZG Ge 5.3; Chiba Jap 1.0; Frankfurt Ge 2.1; Gelsenkirchen Ge 0.2; Give Den 3.0; Halle Ge 1.0; Kuwait 0.1; Lima Peru 22.19(8.6); London ZSL GB 3.2; Marwell GB 1.1; Nagoya Jap 1.1; Paris Men Fr 1.0; Planckendael Bel 2.3(2.2); Pretoria SA 1.0; Stuttgart Ge 0.2; Szeged Hun 2.0;

Thetford GB 1.0; Winnipeg Can 1.0; Yokohama KNP Jap 1.1; Zurich Switz 4.8.

Total: 57.48 in 23 collections; most are presumed captive bred—see Key 6.

1990: Amsterdam Ne 2.2; Antwerp Bel 2.1; Berlin TP Ge 2.1; Berlin ZG Ge 2.2; Chiba Jap 1.0; Cologne Ge 2.0; Frankfurt Ge 1.2; Gelsenkirchen Ge 0.2; Give Den 3.0; Hanover Ge 1.3; La Plata Arg (b); Lima Peru 26.23(12.11); London ZSL GB 1.2; Marwell GB 1.1; Munich Ge 1.2; Nagoya Jap 1.1; Paris Men Fr 1.0; Planckendael Bel 2.3(2.2); Pretoria SA 1.0; Stuttgart Ge 1.4; Szeged Hun 2.0; Thetford GB 1.0; Winnipeg Can 1.0; Yokohama KNP Jap 1.1; Zurich Switz 5.12.

Total: 61.62+ in 25 collections; most are presumed captive bred—see Key 6.

Breeding loans from Amsterdam (at Berlin ZG); Antwerp (at Amsterdam and London ZSL); Berlin ZG (at Stuttgart); Hanover (at Berlin ZG); Lodz (at Berlin ZG); London ZSL (at Thetford); Zurich (at Antwerp, Berlin ZG, London ZSL and Planckendael).

Stadbook held: see List of stadbooks and world registers.

LESSER MALAY CHEVROTAIN *Tragulus javanicus*

1989: Aalborg Den 2.1; Amsterdam Ne 8.4.1; Arnhem Ne 2.0; Bangkok Thai 5.4; Berne Switz 4.3; Chonburi Thai 5.7(3.4); Copenhagen Den 1.3; Frankfurt Ge 1.2; Jakarta Indon (b); Melaka Mal 2.3; Rotterdam Ne 3.3; Stuttgart Ge 1.2; Zurich Switz 6.2.

Total: 40.34.1+ in 13 collections; most are presumed captive bred—see Key 6.

1990: Aalborg Den 3.2; Amsterdam Ne 6.4.2; Arnhem Ne 3.0; Bandung Indon 2.0; Bangkok Thai 5.4; Berne Switz 3.2; Chonburi Thai 3.6(2.4); Copenhagen Den 3.4; Frankfurt Ge 1.2.1; Jakarta Indon (b); Rotterdam Ne 3.3.2; Stuttgart Ge 1.2; Zurich Switz 6.2.

Total: 39.31.7+ in 13 collections; most are presumed captive bred—see Key 6.

Breeding loans from Amsterdam (at Copenhagen and Frankfurt); Antwerp (at Frankfurt); Berne (at Zurich); Zurich (at Amsterdam, Copenhagen and Frankfurt).

INDIAN CHEVROTAIN or MOUSE DEER *Tragulus memina*

1989: Bhubaneswar Ind 1.0; Colombo SL 23(1).

1990: Colombo SL (18).

LARGER MALAY CHEVROTAIN *Tragulus napu*

1989: Bangkok Thai 2.2.1; Cincinnati USA 1.5; Milwaukee USA 1.1; Minneapolis USA 1.3; NY Bronx USA 8.18; Philadelphia USA 0.1; San Diego USA 2.0; Washington NZP USA 1.0.

Total: 16.30.1 in 8 collections; all are presumed captive bred.

1990: Bangkok Thai 2.2.2; Cincinnati USA 1.6.1; Milwaukee USA 1.1; Minneapolis USA 2.4; NY Bronx USA 6.15; Philadelphia USA 0.1; San Diego USA 2.0; Singapore 6.5.8(4.3.1).