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1.1(1.1); Eilat Hai-Bar Is 4.10; Nuremberg Ge 1.1(1.1); Oberwil Switz 2.2(1.2).
Species total: 16.30(10.19) in 7 collections.

Studbooks held for all Asian and African wild asses: see List of studbooks and world registers. Subspecific hybrids have not been included in the above listings.

•GREVY'S ZEBRA *Equus grevyi* IUCN(v)

Abu Dhabi 2.4(1.2); Albuquerque USA 2.1(2.1); Amersfoort Ne 1.4(0.1); Amsterdam Ne 2.4(2.2); Asheboro USA 2.2(1.0); Askaniya-Nova USSR 2.2(2.2); Berlin E Ge 1.1(1.1); Berlin W Ge 1.0(1.0); Boston USA 3.2(3.0); Brownsville USA 1.3(0.1); Buffalo USA 2.1; Catskill USA 5.10(4.10); Chester GB 1.4(1.2); Chicago Br USA 1.2(1.0); Chicago LP USA 1.1(1.1); Colorado USA 2.2(1.2); Dvur Kralove Cz 5.21(4.8); Frankfurt Ge 2.6(2.4); Hamburg Ge 2.5(1.2); Hilvarenbeek Ne 2.6(2.3); Hudson USA 1.2(1.0); Katowice Pol 2.1(1.0); Kobe Jap 2.2(1.2); Kyoto Jap 1.1; Laguna Hills USA 2.1(2.1); Leipzig Ge 1.2(1.0); Lesna Cz 1.2(1.0); Magdeburg Ge 1.1(1.1); Marwell GB 2.8(2.5); Milwaukee USA 2.2(2.2); Monroe USA 1.3(0.1); Naples Ir 1.1(1.1); New Orleans USA 1.3(1.3); NY Bronx USA 6.8(6.2); NY SCSC USA 2.5(2.5); Nuremberg Ge 1.3; Oberwil Switz 1.4(1.0); Oklahoma USA 1.5(0.3); Ostrava Cz 1.3(0.1); Paris PZ Fr 1.2(0.1); Poznan Pol 1.3(0.1); Prague Cz 1.2; Ramat-Gan Is 1.3; Rhenen Ne 3.3(3.3); Rome It 1.1; Royan Fr 1.1(1.1); Sacramento USA 1.2(0.1); St Louis USA 1.5(1.2); San Antonio USA 2.7(1.5); San Diego USA 1.2(1.1); San Diego WAP USA 5.13(4.6); Sao Paulo Braz 3.3(2.1); Stuttgart Ge 3.6(3.6); Takarazuka Jap 1.1(1.1); Tampa USA 6.17.1(6.17.1); Tokyo Tama Jap 1.2(1.2); Toledo USA 1.1; Toronto Can 2.3(2.3); Tucson GRZP USA 1.1; Vienna Aus 2.3(2.1).
Total: 109.219.1(81.121.1) in 60 collections.

No data 1980: Belo Horizonte Braz; Kano Nig; Miami CP USA 2.5(1.2); Nanyuki Ken 2.40(2.20) + c 30 in private collections at Catskill Fla USA, Longleaf GB and Midway Manor GB details of which are available from the studbook keeper.

Breeding loans from St Louis (at Chicago Br and NY SCSC).

Studbook held: see List of studbooks and world registers.

•HARTMANN'S MOUNTAIN ZEBRA *Equus zebra hartmannae* IUCN(v)

Aalborg Den 1.2(1.2); Amsterdam Ne 3.1(3.1); Askaniya-Nova USSR 0.1(0.1); Berlin E Ge 1.2; Berlin W Ge 2.2(1.2); Cairo Egt 1.1; Catskill USA 1.3(1.3); Dvur Kralove Cz 3.8(2.7); Erfurt Ge 1.2(0.2); Frejus Fr 1.1(1.1); Johannesburg SA 1.2; Kawasaki Jap 1.3(1.3); Laguna Hills USA 2.2(2.2); Los Angeles USA 2.2(1.1); Madison USA 2.3(2.2); Marwell GB 2.5(2.5); Munich Ge 1.7(0.5); Oberwil Switz 1.4; Oklahoma USA 0.1; Paris PZ Fr 2.3(2.3); Philadelphia USA 1.1(1.1); Pietermaritzburg SA 1.0; Prague Cz 1.2; Pretoria SA 1.1; San Diego WAP USA 2.10(2.8); Tunis Tun 0.1; Usti Cz 7.11(6.3); Whipsnade GB 1.2(0.1)†; Winnipeg Can 0.2(0.1); Zurich Switz 1.3(1.1).
Total: 43.88(29.55) in 30 collections.

No data 1980: Bojnice Cz; Okahandja Nam 4.8(2.2); Villiersdorp SA 2.1(1.1).

†all jointly owned with Marwell.

•BAIRD'S TAPIR *Tapirus bairdi* IUCN(e)

Atina It 1.1(1.1); Columbia USA 1.2; Los Angeles USA 2.0(1.0); Naples USA 1.0; Philadelphia USA 1.1(0.1)†; Salt Lake USA 1.0(1.0); San Diego USA 4.3(3.1); Tuxtla Mex 1.1.
Total: 12.8(6.3) in 8 collections.

No data 1980: Miami CP USA; Peking China.

†incl. 0.1 from San Diego.

•MALAYAN TAPIR *Tapirus indicus* IUCN(e)

Aalborg Den 1.2(0.1); Amsterdam Ne 2.3(1.2); Bangkok Thai 3.2(1.0); Berlin E Ge 0.2(0.1); Berlin W Ge 2.1; Chester GB 1.1; Chicago Br USA 1.1; Colorado USA 1.1; Columbus USA 1.0(1.0); Copenhagen Den 1.2(1.2); Dortmund Ge 2.2(2.2); Dresden Ge 1.1(1.1); Dvur Kralove Cz 1.0; Fukuoka Jap 1.1(1.0); Gelsenkirchen Ge 1.0(1.0); Hanover Ge 1.1; Heidelberg Ge 1.2(1.2); Jakarta Indon 3.2(1.1); Katowice Pol 1.1; Kuala Lumpur Mal 4.3(2.2); Legal Can 1.1(1.1)†; Leipzig Ge 1.0; Lesna Cz 1.1(1.0); Los Angeles USA 1.1(0.1); Milwaukee USA 1.1(1.0); Minneapolis USA 2.0(1.0); Monroe USA 1.1; Munich Ge 1.1(1.1); Nagoya Jap 1.1; NY Bronx USA 2.2(0.1); Nuremberg Ge 1.2(1.2); Oklahoma USA 1.1(1.1); Osaka Jap 1.1(1.1); Ostrava Cz 2.1(1.0); Philadelphia USA 1.0; Plock Pol 2.1(2.1); Prague Cz 1.2; Rangoon Burm 1.1; Rotterdam Ne 2.2(1.0); St Louis USA 4.2(3.0); San Diego USA 2.1(1.0); Sao Paulo Braz 1.1; Sendai Jap 1.0; Shizuoka Jap 1.1; Singapore 1.2(0.1); Stuttgart Ge 2.2(1.2); Surabaya Indon 1.1; Taipei Tai 0.1; Tokyo Tama Jap 2.2(1.1); Toronto Can 1.1; Twycross GB 1.2(0.1); Yokohama Jap 1.1(1.0).
Total: 71.65(32.28) in 52 collections.

No data 1980: Kobe Jap 1.2; Miami CP USA 1.1; Peking China 1.1; Yogyakarta Indon 2.

Breeding loan from London ZSL (at Chester).

•MOUNTAIN or WOOLLY TAPIR *Tapirus pinchaque* IUCN(e)

Los Angeles USA 1.3(0.2); Paris PZ Fr 1.0; Stuttgart Ge 1.2.
Total: 3.5(0.2) in 3 collections.

Breeding loan from Leipzig (0.1 at Stuttgart).

•INDIAN RHINOCEROS *Rhinoceros unicornis* IUCN(e)

Amsterdam Ne 1.1(1.0); Antwerp Bel 1.1(0.1); Basle Switz 2.2(1.1); Berlin E Ge 1.1(0.1); Berlin W Ge 2.2(2.2); Calcutta Ind 1.3(b); Cologne Ge 1.0; Delhi Ind 1.1; Hamburg Ge 1.1(1.1); Los Angeles USA 1.2(0.1); Lucknow Ind 0.1; Milwaukee USA 1.0(1.0); Nagoya Jap 1.1(1.0); NY Bronx USA 1.2(1.0); Philadelphia USA 2.1(1.1); Rome It 1.0; San Diego WAP USA 1.2(1.1); Sao Paulo Braz 1.0(1.0); Stuttgart Ge 2.2(2.2); Tokyo Tama Jap 1.1; Toronto Can 1.1(1.1); Washington NZP USA 1.1(0.1); Whipsnade GB 1.1(1.1).
Total: 26.27(15.14 +) in 23 collections.

No data 1980: Gauhati Ind 6.3; Hyderabad Ind 3.1(1.0); Kanpur Ind 1.1; Miami CP USA 1.1.

Breeding loan from Washington NZP (at NY Bronx).

Studbook held: see List of studbooks and world registers.

SOUTHERN WHITE RHINOCEROS *Ceratotherium s. simum*

Aalborg Den 1.3; Abu Dhabi 1.1(0.1); Albuquerque USA 1.1; Antwerp Bel 2.2(1.0); Arnhem Ne 3.6; Asheboro USA 1.2(0.1); 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(1.0); Borås Swed 1.1; Brownsville USA 1.1; Burford GB 1.2; Calgary Can 1.1; Caracas Caricua Ven 1.1(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 1.1; Copenhagen Den 4.2(3.2); Dortmund Ge 1.1; Dresden Ge 1.1; Dublin Ire 1.1(1.1); Duisburg Ge 1.1; Dvur Kralove Cz 2.5(1.0); Edinburgh GB 1.2(0.1); El Paso USA 1.2(0.1); Emmen Ne 1.1; Fort Worth USA 1.1; Fresno USA 1.1; Fukuoka Jap 1.1; Gelsenkirchen Ge 2.0(1.0); Glasgow GB 2.0(2.0); Hanover Ge 1.1; Hilvarenbeek Ne 2.4(1.1); Honolulu USA 1.1; Houston USA 1.1; Jackson USA 1.2; Jacksonville USA 1.4(0.1); Jakarta Indon 1.1; Johannesburg SA 2.2; Kaliningrad USSR 1.1; Kansas USA 1.1; Katowice Pol 1.1; Kiev USSR 1.1; Kings Mills USA 5.3(1.0); Knoxville USA 1.4(b); Kobe Jap 1.1; Kolmarden Swed 1.1; Krefeld Ge 1.1; Laguna Hills USA 8.3(2.1); Leipzig Ge 1.1; Lesna Cz 1.1; Liberec Cz 0.1; Lisbon Por 1.1; Little Rock USA 1.1; London ZSL GB 0.1; Los Angeles USA 1.1; Louisville USA 1.1; Madison USA 1.1; Mallorca Sp 1.1; Memphis USA 1.1(0.1); Milwaukee USA 2.1; Monroe USA 1.1; Munich Ge 1.2; Munster Ge 3.1(2.0); New Orleans USA 2.2; Norfolk USA 1.1(1.1); Nuremberg Ge 1.1; Omaha USA 1.1; Osnabruck Ge 1.1(1.0); Ostrava Cz 1.1; Philadelphia USA 1.2(1.2); Phoenix USA 1.1(0.1); Pietermaritzburg SA 1.0; Pistoia It 1.1; Pittsburg USA 1.1(1.1); Prague Cz 1.2; Pretoria SA 7.7; Ramat-Gan Is 6.4(2.0); Rangoon Burm 1.1; Rio de Janeiro Braz 1.1; Rostov USSR 1.1; Rotterdam Ne 1.2; Salt Lake USA 1.1(1.1); San Antonio USA 2.2(1.0); San Diego USA 1.0(1.0); San Diego WAP USA 9.13(8.7); San Francisco USA 1.1; Santo Domingo Dom 3.2(1.0); Sao Paulo Braz 1.1; Sendai Jap 1.1; Sigeon Fr 1.1; Singapore 1.1; Surabaya Indon 1.1; Taipei Tai 2.2; Tampa USA 1.1; Thoisy Fr 3.1(3.1); Tokyo Ueno Jap 1.1; Toledo USA 1.1; Toronto Can 2.3(1.2); Tucson GRZP USA 1.1(1.1); Tunis Tun 3.2(1.0)†; Turin It 1.1; Villiersdorp SA 0.2; Whipsnade GB 5.13(3.6); Windsor GB 2.4; Winston USA 1.1(1.1); Zurich Switz 1.1.
Total: 170.195(45.36+) in 114 collections.

No data 1980: Alexandria Egt; Belo Horizonte Braz; Canton China 1.1; Gauhati Ind 1.0; Madrid Sp 2.3; Peking China 1.1; Prescott GB 4.1(1.0); San Jose USA.

Breeding loans from Hilvarenbeek (at Osnabruck); Jacksonville (at Kansas); NY Bronx (at New Orleans).

†misreported as Northern White Rhino in Vol. 20.

*NORTHERN WHITE RHINOCEROS *C. s. cottoni* IUCN(E)

Antwerp Bel 0.1; Dvur Kralove Cz 2.6(0.1); London ZSL GB 1.0; San Diego WAP USA 1.0.
Total: 4.7(0.1) in 4 collections.

No data 1980: Rabat, Maroc 1.1.

Studbook held: see List of studbooks and world registers.

*BLACK RHINOCEROS *Diceros bicornis* IUCN(V)

Adelaide Austral 1.0; Alma-Ata USSR 1.1(1.0); Bangkok

Thai 1.0; Berlin W Ge 1.3; Bristol GB 0.1; Budapest Hun 0.1(0.1); Buenos Aires Arg 0.1(0.1); Buffalo USA 1.2; Cairo Egt 1.0; Chester GB 1.0(1.0); Chicago Br USA 0.3; Cincinnati USA 3.2(1.1); Colombo SL 1.1; Colorado USA 1.2(0.1); Columbus USA 1.1(0.1); Dallas USA 1.1; Delhi Ind 1.1; Denver USA 2.2(1.1); Detroit USA 1.2(0.1); Dvur Kralove Cz 2.6(2.2); Frankfurt Ge 1.1(1.1); Grodno USSR 1.0; Hanover Ge 1.1(1.0); Hiroshima Jap 2.2(1.1); Johannesburg SA 1.0(1.0); Kagoshima Jap 1.1; Kuala Lumpur Mal 1.0; Leipzig Ge 1.1; Lisbon Port 2.2(1.1); Lodz Pol 1.0; London ZSL GB 2.1(1.0); Los Angeles USA 1.2(1.1); Lympne GB 2.2(2.0); Magdeburg Ge 2.1(1.0); Memphis USA 0.1(0.1); Mexico Chapultepec 1.1; Nagoya Jap 2.3(1.1); Naples It 1.2(0.1); Oklahoma USA 1.2(1.1); Osaka Jap 1.1(1.1); Paignton GB 1.0(1.0); Perth Austral 0.1; Pretoria SA 0.1; Rome It 1.1(0.1); St Louis USA 1.2(0.1); San Antonio USA 1.1(0.1); San Diego USA 1.1; San Diego WAP USA 1.2(1.1); San Francisco USA 2.1(1.0); Sao Leopoldo Braz 0.1(0.1); Sydney Austral 1.2(1.2); Tampa USA 1.1; Vienna Aus 1.0; Washington NZP USA 1.1(1.1); Whipsnade GB 1.2(1.1); Wichita USA 0.1(0.1); Wroclaw Pol 1.0; Zurich Switz 3.3(1.1).
Total: 62.75(26.29) in 58 collections.

No data 1980: Gauhati Ind 1.1; Kano Nig; Maiduguri Nig 0.2; Miami CP USA 2.1(1.0); Peking China 0.3; St Felicien Can 1.1.

Breeding loans from Jacksonville (0.1 at Columbus); Leningrad (1.0 at Grodno).

Studbook held: see List of studbooks and world registers.

ARTIODACTYLA

*PYGMY HOG *Sus salvanius* IUCN(E)

Zurich Switz 5.0(5.0)†.

No data 1980: Gauhati Ind 2.3(b).

†incl. 3.0 from Jersey.

*BABIRUSA *Babirusa babirusa* IUCN(V)

Antwerp Bel 1.2(0.2); Berlin W Ge 1.1(1.1); Frankfurt Ge 2.1(1.1); Jakarta Indon 2.3(0.1); Nuremberg Ge 1.1(1.1); Poznan Pol 2.2(2.2); Rotterdam Ne 2.1(2.1); Stuttgart Ge 4.4; Surabaya Indon 11.12(8.7).

Total: 26.27(15.16) in 9 collections.

Breeding loans from Stuttgart (1.1 at Frankfurt).

*PYGMY HIPPOPOTAMUS *Choeropsis liberiensis* IUCN(V)

Aalborg Den 1.1(0.0); Adelaide Austral 0.1; Amsterdam Ne 1.1(1.0); Antwerp Bel 1.1(1.0); Arnhem Ne 1.5(0.3); Atina It 0.1; Baltimore USA 1.3(0.3); Barcelona Sp 3.1(2.0); Basle Switz 1.5; Baton Rouge USA 1.1; Berlin E Ge 1.3(0.2); Berlin W Ge 1.3; Brownsville USA 1.2; Budapest Hun 2.1(1.1); Catskill USA 1.0; Chicago Br USA 1.2; Cincinnati USA 1.3(1.2); Cleveland USA 1.2(0.1); Columbus USA 1.1; Copenhagen Den 2.1(1.1); Dallas USA 1.2(0.1); Detroit USA 1.1(0.1); Duisburg Ge 2.4(0.2); Dvur Kralove Cz 4.4(3.3); Edinburgh GB 1.0; Erfurt Ge 1.1; Fort Worth USA 2.2(1.1); Fresno USA 1.1; Gelsenkirchen Ge 0.1; Halle Ge 1.1; Hanover Ge 1.1(0.0); Honolulu USA 1.2; Ibadan Univ Nig 1.0; Jackson USA 1.1; Jacksonville USA 1.2(1.1); Jakarta Indon 0.1; Johannesburg SA 1.3; Krefeld Ge 1.1; Leipzig Ge 3.2; Melbourne Austral 2.3; Memphis