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EDITED BY P. J. S. OLNEY

ASSISTANT EDITORS PAT ELLIS
BENEDICTE SOMMERFELT



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Angeles USA 1.2(1.2); Magdeburg Ge 1.2(1.2); Marwell GB 5.8(5.4); Miami MZ USA 1.2(1.2); Misaki Jap 2.2(2.2); Monroe USA 1.4(0.2); Morelia Mex 1.0(1.0); Nanyuki Ken 4.47(b); Naples It 0.1; New Orleans USA 1.0(1.0); NY Bronx 1.9(1.6); NY Bronx SCSC USA 5.8(5.7); Nuremberg Ge 1.3(1.1); Oberwil Switz 2.5(1.3); Oklahoma USA 1.5(0.3); Ostrava Cz 2.2(2.2); Paris PZ Fr 1.3(1.3); Pombia It 1.0; Poznan Pol 1.2(1.1); Prague Cz 1.1; Pretoria SA 1.1(1.1); Ramat-Gan Is 0.3; Rhenen Ne 1.3(1.2); Rome It 1.3(1.3); Royan Fr 2.2(1.1); Sacramento USA 1.3(1.2); St Louis USA 2.3(2.2); St Paul USA 1.5(1.5); San Antonio USA 2.7(0.4); San Diego WAP USA 6.13(4.8); Sao Paulo Braz 3.5(2.4); Seoul Kor 2.4; Stuttgart Ge 3.5(3.5); Takarazuka Jap 1.1(1.1); Tampa USA 2.23(1.22); Tokyo Tama Jap 1.3(1.3); Toronto Can 3.5(3.4); Tucson GR USA 1.2(0.1); Tyler USA 1.4(1.4); Vienna Aus 1.2(1.2); Whipsnade GB 1.5(1.5); Yokohama Jap 1.1(1.1); Yulee USA 2.5(2.5).

Total: 121.297(97.179 +) in 72 collections.

No data 1985: Columbus USA; San Diego USA.

Breeding loans from Cambridge Can (at Hilvarenbeek); Marwell (at Chicago Br); St Louis (at NY Bronx and NY Bronx SCSC).

Studbook held: see List of studbooks and world registers.

*HARTMANN'S MOUNTAIN ZEBRA

Equus zebra hartmannae IUCN(V)

Amsterdam Ne 1.2(1.2); Berlin E Ge 1.2(0.1); Berlin W Ge 1.1(1.1); Catskill USA 1.0(1.0); Dvur Kralove Cz 4.8(3.6); Gelsenkirchen Ge 1.2(1.2); Genk Bel 1.1(0.0); Johannesburg SA 1.2(1.2); Los Angeles USA 1.4(1.4); Madison USA 2.4(2.3); Marwell GB 2.7(2.7); Munich Ge 2.7(1.5); Oberwil Switz 1.4(1.2); Paris PZ Fr 2.5(2.5); Prague Cz 1.2(0.1); Pretoria SA 1.1(1.1); San Diego WAP USA 9.18(9.18); Santo Domingo Dom 0.5; Usti Cz 5.11(5.4); Veszprem Hun 1.0(1.0).

Total: 38.86(33.64) in 20 collections.

No data 1985: Kawasaki Jap.

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

Columbia USA 1.1; Los Angeles USA 3.2(2.2); Miami MZ USA 1.3(1.2); Morelia Mex 1.0; Tuxtla Mex 2.0(1.0); Yokohama Jap 1.0(1.0).

Total: 9.6(5.4) in 6 collections.

No data 1985: San Diego USA.

*MALAYAN TAPIR *Tapirus indicus* IUCN(E)

Aalborg Den 1.1; Amsterdam Ne 1.2(0.1); Antwerp Bel 1.1(1.0); Arnhem Ne 1.0; Bangkok Thai 5.5; Bekebourne GB 2.1(2.0); Berlin W Ge 1.1; Chicago Br USA 1.0; Copenhagen Den 2.3(2.3); Dallas USA 1.0; Dortmund Ge 1.2(1.2); Dresden Ge 1.1(1.1); Fukuoka Jap 1.1(1.1); Heidelberg Ge 1.1(1.1); Katowice Pol 1.0; Kuala Lumpur Mal 3.4(2.3); Marwell GB 1.1(1.1); Memphis USA 1.2(1.2); Miami MZ USA 2.2(1.1); Milwaukee USA 1.1(1.1); Minneapolis USA 1.1(1.1); Mulhouse Fr 1.1(1.1); Munich Ge 2.1(2.1); Nagoya Jap 0.1(0.1); NY Bronx USA 1.3(0.2); Nuremberg Ge 1.2(1.1); Oklahoma

USA 1.1(0.1); Osaka Jap 0.1(0.1); Ostrava Cz 2.0(1.0); Philadelphia USA 1.1(1.1); Prague Cz 1.2(1.2); Pretoria SA 1.1(1.1); Rangoon Burm 1.0; Rome It 1.0; Rotterdam Ne 1.3(1.3); St Louis USA 2.2(1.1); San Diego WAP USA 1.0(1.0); Sao Paulo Braz 0.2(0.1); Sendai Jap 1.1; Seoul Kor 1.2; Shizuoka Jap 1.2(0.1); Singapore 1.4(0.2); Stuttgart Ge 1.2(1.2); Taipei Tai 0.1; Tokyo Tama Jap 1.3(1.3); Toronto Can 2.2(2.2); Twycross GB 1.2(1.2); Vienna Aus 1.1(0.1); West Orange USA 1.0; Yokohama Jap 1.1(1.0).

Total: 59.72(33.48) in 50 collections.

No data 1985: San Diego USA; Sapporo Jap.

Breeding loans from Antwerp (at Marwell and Mulhouse); Milwaukee (at Toronto); Monroe (at Oklahoma); Rotterdam (at Antwerp, Mulhouse and Philadelphia); St Louis (at Milwaukee).

Studbook held: see List of studbooks and world registers.

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

Los Angeles USA 4.2(3.2); Stuttgart Ge 1.1.

Total: 5.3(3.2) in 2 collections.

*INDIAN RHINOCEROS *Rhinoceros unicornis* IUCN(E)

Amsterdam Ne 1.0(1.0); Basle Switz 2.2(2.2); Berlin E Ge 1.1(1.0); Berlin W Ge 1.2(1.2); Bhubaneswar Ind 1.1; Bombay Ind 1.0; Calcutta Ind 2.2(1.0); Chandigarh Ind 1.1(1.1); Cologne Ge 1.0(1.0); Delhi Ind 2.1(0.1); Dvur Kralove Cz 1.1(1.1); Hamburg Ge 1.1(1.1); Kanpur Ind 2.2(2.1); Los Angeles USA 1.3(1.1); Milwaukee USA 1.0(1.0); Nagoya Jap 1.1(1.1); NY Bronx USA 3.2(3.0); Oklahoma USA 1.1(1.1); Philadelphia USA 1.1(0.1); Planckendael Bel 1.2(0.2); Rangoon Burm 1.1; Rotterdam Ne 1.0(1.0); San Diego WAP USA 2.2(2.2); Sao Paulo Braz 1.0(1.0); Seoul Kor 1.0; Stuttgart Ge 2.1(2.1); Tokyo Tama Jap 1.1; Toronto Can 1.1(1.1); Whipsnade GB 2.1(2.1).

Total: 38.31(28.20) in 29 collections.

No data 1985: San Diego USA; Trivandrum Ind.

Breeding loans from Hamburg (at Berlin W); Oklahoma (at NY Bronx); Stuttgart (at Rotterdam); Washington NZP (at Oklahoma and NY Bronx).

Studbook held: see List of studbooks and world registers.

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

Total: 165.199(55.49) in 119 collections.

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

Antwerp Bel 0.1; Dvur Kralove Cz 3.6(1.2); London ZSL GB 1.0; Rabat Moroc 1.1; San Diego WAP USA 1.0.

Total: 6.8(1.2) in 5 collections.

Species total: 171.207(56.50) in 121 collections.

Studbook held: see List of studbooks and world registers.

Erratum: 1.1 rhinoceroses at Abu Dhabi, reported in previous volumes as *C. s. cottoni*, are now considered to be *C. s. simum*.

BLACK RHINOCEROS *Diceros bicornis

IUCN(E)

Alma-Ata USSR 1.1(1.0); Atlanta USA 1.1; Bokesbourne GB 3.3(3.1); Berlin W Ge 2.3(1.1); Chester GB 2.1(2.1); Chicago Br USA 1.2(1.0); Chicago LP USA 1.1(1.1); Cincinnati USA 2.2(1.1); Colorado USA 1.1(1.1); Dallas USA 1.1; Delhi Ind 1.2(0.1); Denver USA 2.2(2.2); Detroit USA 2.1(1.0); Dvur Kralove Cz 3.5(3.3); Frankfurt Ge 1.1(1.1); Garden City USA 1.1; Granby Can 1.1; Hanover Ge 1.1(1.0); Hiroshima Jap 2.3(1.2); Johannesburg SA 1.0(1.0); Kagoshima Jap 1.0; Kansas USA 1.1(1.1); Kuala Lumpur Mal 1.0; Leipzig Ge 1.1; Lodz Pol 1.0; London ZSL GB 0.1; Los Angeles USA 2.4(1.1); Magdeburg Ge 2.2(1.1); Marwell GB 1.1; Miami MZ USA 1.2(1.0); Nagoya Jap 2.2(2.0); Naples It 1.1; Oklahoma USA 1.1(1.1); Osaka Jap 1.1(1.1); Perth Austral 0.1; Pretoria SA 1.0; Rome It 0.1(0.1); St Louis USA 1.2(0.1); San Antonio USA 1.1(0.1); San Diego WAP USA 2.1(2.1); San Francisco USA 1.1; Sao Leopoldo Braz 0.1(0.1); Sydney Austral 1.2(1.1); Tampa USA 1.1(0.1); Vienna Aus 1.0; Whipsnade GB 0.1; Wichita USA 1.1(1.1); Zurich Switz 2.3(1.1).
Total: 58.66(34.29) in 48 collections.

No data 1985: Colombo SL; Columbus USA; Lisbon Port; Mexico Chapultepec; San Diego USA.

Studbook held: see List of studbooks and world registers.

ARTIODACTYLA**GIANT FOREST HOG *Hylochoerus****meinertzhageni*

Monrovia Lib 0.1.

†not listed on questionnaire.

***BABIRUSA *Babyrousa babyrussa* IUCN(V)**

Antwerp Bel 3.5; Berlin W Ge 1.2; Copenhagen Den 1.1; Frankfurt Ge 1.1; Jersey GB 1.1; Leipzig Ge 1.1; Los Angeles USA 1.1; Nuremberg Ge 2.1; Rotterdam Ne 3.1; Stuttgart Ge 4.3; Surabaya Indon 16.13.6.
Total: 34.30.6 in 11 collections; all are presumed captive bred.

Breeding loans from Antwerp (at Copenhagen and Jersey); Bokesbourne (at Antwerp); Rotterdam (at Copenhagen); Stuttgart (at Frankfurt).

Studbook held: see List of studbooks and world registers.

PYGMY HIPPOPOTAMUS *Choeropsis*liberiensis* IUCN(V)

Aalborg Den 1.2; Adelaide Austral 1.3(1.3); Amsterdam Ne 0.1; Antwerp Bel 1.2(1.1); Arnhem Ne 1.2; Baltimore USA 1.2(0.2); Barcelona Sp 3.1; Basle Switz 3.2(3.2); Baton Rouge USA 1.1(1.1); Berlin E Ge 1.2(0.1); Berlin W Ge 1.3(1.3); Blair Drummond GB 0.2(0.2); Bratislava Cz 1.1(1.1); Bristol GB 1.3(1.2); Brownsville USA 1.2.1(0.1.1); Chicago Br USA 1.1(0.1); Cincinnati USA 0.1(0.1); Cleveland USA 1.2(0.1); Dallas USA 1.2(0.1); Debrecen Hun 0.1; Detroit USA 1.1(0.1); Duisburg Ge 2.3(0.1); Dvur Kralove Cz 3.2(2.2); Edinburgh GB 1.2(1.2); Edmonton Can 0.1(0.1); Fort Worth USA 1.1(0.1); Genk Bel 1.2(1.2); Halle Ge 1.1(1.1);

Jackson USA 1.1(1.1); Johannesburg SA 1.3(1.3); Kaliningrad USSR 2.2(2.2); Kaunas USSR 1.2(1.2); Krefeld Ge 1.1(1.1); Kuala Lumpur Mal 1.2; Leipzig Ge 1.2(1.2); London ZSL GB 0.1(0.1); Madrid Sp 1.1(1.1); Marwell GB 0.1(0.1); Melbourne Austral 2.2(2.2); Memphis USA 0.1; Miami MZ USA 1.1(1.0); Monrovia Lib 2.2; Morelia Mex 1.1(0.1); Munich Ge 3.2(3.2); Munster Ge 2.1(2.1); Nagoya Jap 1.1(1.1); NY Bronx USA 2.4(2.4); Nuremberg Ge 1.1(1.1); Paris PZ Fr 0.1; Poznan Pol 2.2(1.2); Prague Cz 1.1(1.1); Pretoria SA 1.2(1.1); Rome It 1.1(1.0); Rostov USSR 1.1(1.0); Rotterdam Ne 0.2(0.2); St Louis USA 1.2(1.2); Salt Lake USA 1.2(1.2); San Antonio USA 0.2(0.2); San Diego WAP USA 1.3(1.3); San Jose USA 0.1(0.1); Seoul Kor 1.2; Singapore 1.3(1.3); Stuttgart Ge 1.2(1.2); Sydney Austral 1.3(0.3); Tokyo Ueno Jap 2.1(0.1); Toronto Can 1.2(1.2); Tucson GR USA 1.1(0.1); Usti Cz 2.2(2.2); Washington NZP USA 1.5(0.4); Whipsnade GB 1.5(1.5); Wroclaw Pol 1.0(1.0); Zurich Switz 1.1(1.0).

Total: 77.128.1(50.84.1) in 72 collections.

No data 1985: Columbus USA; Erfurt Ge; San Diego USA.

Breeding loans from Bristol (at Whipsnade); Chicago Br (at San Diego); Melbourne (at Adelaide); Philadelphia (at Tucson GR).

Studbook held: see List of studbooks and world registers.

***VICUGNA *Lama vicugna* IUCN(V)**

Amsterdam Ne 5.2; Antwerp Bel 5.1(4.1); Berlin W Ge 2.1; Frankfurt Ge 1.1; Halle Ge 1.0; Hanover Ge 2.4(2.3); Lima Peru 1.2(0.0); London ZSL GB 2.2; Munich Ge 3.2; Nagoya Jap 1.2; Paris Men Fr 1.0(0.0); Planckendael Bel 3.2; Pretoria SA 1.1; St John Can 0.1; Santiago Chile 2.0(0.0); Stuttgart Ge 1.1(1.0); Winnipeg Can 1.0; Yokohama Jap 1.1; Zurich Switz 4.6.

Total: 37.29 in 19 collections; most are presumed captive bred — see Key 6. Known hybrids at Catskill and Winnipeg have not been listed.

Breeding loans from Antwerp (at London ZSL); Frankfurt (at Stuttgart); Lodz (at Berlin W); Zurich (at Antwerp and London ZSL).

Studbook held: see List of studbooks and world registers.

LESSER MALAY CHEVROTAIN *Tragulus javanicus*

Aalborg Den 1.0; Amsterdam Ne 5.9.1(5.9.1); Bangkok Thai 4.7(1.3); Berne Switz 3.0(3.0); Copenhagen Den 2.1(2.1); Kuala Lumpur Mal 5.5(2.2); Singapore 1.1(0.1); Stuttgart Ge 1.0; Surabaya Indon (b); Zurich Switz 6.7(6.7).
Total: 28.30.1(19.23.1)+ in 10 collections.

Breeding loans from Berne (at Zurich); Copenhagen (at Aalborg); Zurich (at Copenhagen).

INDIAN CHEVROTAIN or MOUSE*DEER *Tragulus meminna**

Bhubaneswar Ind 2.2(1.1).

No data 1985: Colombo SL.