

ORDER CARNIVORA

by W. Christopher Wozencraft

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COMMENTS: Recent studies on family level relationships have agreed in several key areas, among which are: (1) The sister group to the Carnivora is the †Creodonta. (2) The Recent Carnivora are organized into two monophyletic groups; Suborder Feliformia: felids, herpestids, hyaenids and viverrids; and Suborder Caniformia: canids, ursids, mustelids, odobenids, otariids, phocids, and procyonids. (3) The pinnipeds (otariids, odobenids, and phocids) are included within the suborder Caniformia; placing them in a separate Order would make the Carnivora paraphyletic (Flynn et al., 1988; Tedford, 1976; Wozencraft, 1989a; Berta, 1991).

Family Canidae Fischer, 1817. Mém. Soc. Imp. Nat. Moscow, 5:372.

COMMENTS: Conservation status and distribution reviewed by Ginsberg and Macdonald (1990). Reviewed by Langguth (1975) and Stains (1975). Revisions by Langguth (1969), Clutton-Brock et al. (1976), Van Gelder (1978), Berta (1987, 1988), Wayne and O'Brien (1987), and Wayne et al. (1987a, b, 1989) gave little support to the subfamilies recognized by Simpson (1945); therefore, no subfamilies are recognized here. Van Gelder's (1977b) hybridization criteria for generic classification resulted in the recognition of only a few genera, including some paraphyletic groups.

Alopex Kaup, 1829. Skizz. Entwickel. Gesch. Nat. Syst. Europ. Theirwelt, 1:85.

TYPE SPECIES: *Canis lagopus* Linnaeus, 1758, by monotypy (International Commission on Zoological Nomenclature, 1956a; Melville and Smith, 1987).

COMMENTS: Bobrinskii et al. (1965) considered *Alopex* a subgenus of *Vulpes*; Van Gelder (1978) considered it a subgenus of *Canis*.

Alopex lagopus (Linnaeus, 1758). Syst. Nat., 10th ed., 1:40.

TYPE LOCALITY: "alpihus Lapponicis, Sibiria," restricted by Thomas (1911a) to "Sweden (Lapland)."

DISTRIBUTION: Circumpolar, entire tundra zone of the Holarctic, including most of the Arctic islands.

SYNONYMS: *arctica* Oken, 1816; *argenteus* Billberg, 1827; *beringensis* Merriam, 1902; *beringianus* Cherski, 1920; *caerulea* Nilsson, 1820; *fuliginosus* Bechstein, 1799; *groenlandicus* Bechstein, 1799; *hallensis* Merriam, 1900; *innuitus* Merriam, 1902; *kenaiensis* Brass, 1911; *pribilofensis* Merriam, 1902; *spitzbergenensis* Barrett-Hamilton and Bonhote, 1898; *typicus* Barrett-Hamilton and Bonhote, 1898; *ungava* Merriam, 1902.

COMMENTS: Viable hybrids have been recorded between *Alopex lagopus* and *Vulpes vulpes* (Chiarelli, 1975).

Atelocynus Cabrera, 1940. Notas Mus. La Plata 5:14.

TYPE SPECIES: *Canis microtis* Sclater, 1883, by original designation.

COMMENTS: See comments under *Dusicyon*. Placed in *Atelocynus* by Cabrera (1931, 1958), Langguth (1975), Stains (1975), and Berta (1985, 1986, 1988). Van Gelder (1978) considered *Atelocynus* a subgenus of *Canis*.

Atelocynus microtis (Sclater, 1883). Proc. Zool. Soc. Lond., 1882:631 [1883].

TYPE LOCALITY: "Amazons," restricted by Hershkovitz (1957a) to "south bank of the Rio Amazonas, Pará, Brazil."

DISTRIBUTION: Amazonian Brazil, Peru, Ecuador, and Colombia; perhaps Bolivia, and a second, allopatric population in S Brazil, Paraguay and N Argentina (Ginsberg and Macdonald, 1990).

STATUS: IUCN - Insufficiently known.

SYNONYMS: *sclateri* J. A. Allen, 1905.

COMMENTS: Reviewed by Hershkovitz (1961a) and Berta (1986, Mammalian Species, 256).

Canis Linnaeus, 1758. Syst. Nat., 10th ed., 1:38.

TYPE SPECIES: *Canis familiaris* Linnaeus, 1758 (= *Canis lupus* Linnaeus, 1758) by Linnean tautonymy (Melville and Smith, 1987).

COMMENTS: Van Gelder (1978) included *Alopex*, *Atelocynus*, *Cerdocyon*, *Pseudalopex*, *Lycalopex*, *Dusicyon*, and *Vulpes* as subgenera. However, this arrangement is not currently employed by most mammalogists (Berta, 1987, 1988; Corbet, 1978c; Corbet and Hill, 1980; Gromov and Baranova, 1981; Hall, 1981; Wozencraft, 1989b).

Canis adustus Sundevall, 1847. Ofv. K. Svenska Vet.-Akad. Forhandl. Stockholm, 1846, 3:121 [1847].

TYPE LOCALITY: "Caffraria Interiore"; listed as "Magaliesberg" [South Africa] by Sclater (1900).

DISTRIBUTION: Open woodland and semi-arid grassland from Senegal to Ethiopia, south to N Namibia, N Botswana, Zimbabwe, Mozambique, and N South Africa. The W African population is largely "unknown" (Ginsberg and Macdonald, 1990).

SYNONYMS: *bweha* Heller, 1914; *centralis* Schwarz, 1915; *holubi* Lorenz, 1895; *kaffensis* Neumann, 1902; *lateralis* Sclater, 1870; *notatus* Heller, 1914; *studerii* Hilzheimer, 1906; *wunderlichi* Noack, 1897.

Canis aureus Linnaeus, 1758. Syst. Nat., 10th ed., 1:40.

TYPE LOCALITY: "oriente", restricted by Thomas (1911a) to "Benná Mts., Laristan, S. Persia" [Iran].

DISTRIBUTION: N and E Africa, south to Senegal, Nigeria, and Tanzania; SW Asia; SE Europe; Transcaucasia; C Asia; Iran; Afghanistan; S Asia to Thailand, including Sri Lanka.

STATUS: CITES - Appendix III (India).

SYNONYMS: *algirensis* Wagner, 1841; *anthus* Cuvier, 1820; *balcanicus* Brusina, 1892; *barbarus* H[amilton]. Smith, 1839; *bea* Heller, 1914; *caucasica* Kolenati, 1858; *cruesemanni* Matschie, 1900; *dalmatinus* Wagner, 1841; *doederleini* Hilzheimer, 1906; *ecsedensis* Kretzoi, 1947; *gallaensis* Lorenz, 1906; *graecus* Wagner, 1841; *grayi* Hilzheimer, 1906; *hadramauticus* Noack, 1896; *hungaricus* Ehik, 1938; *indicus* Hodgson, 1833; *kola* Wroughton, 1916; *lanka* Wroughton, 1916; *lupaster* Hemprich and Ehrenberg, 1833; *maroccanus* Cabrera, 1921; *mengesi* Noack, 1897; *minor* Mojsisovico, 1897; *moreotica* I. Geoffroy Saint-Hilaire, 1835; *naria* Wroughton, 1916; *nubianus* Cabrera, 1921; *riparius* Hemprich and Ehrenberg, 1832; *sacer* Hemprich and Ehrenberg, 1833; *senegalensis* H[amilton]. Smith, 1839; *somalicus* Lorenz, 1906; *soudanicus* Thomas, 1903; *studerii* Hilzheimer, 1906; *syriacus* Hemprich and Ehrenberg, 1833; *thooides* Hilzheimer, 1906; *tripolitanus* Wagner, 1841; *typicus* Kolenati, 1858; *variegatus* Cretzschmar, 1826; *vulgaris* Wagner, 1841.

Canis latrans Say, 1823. In James, Account Exped. Pittsburgh to Rocky Mtns, 1:168.

TYPE LOCALITY: "Engineer cantonment" reported at "latitude 41°25'N, and longitude...95°47'30'W" (p. XVIII, vol. 2). Reported in Honacki et al. (1982) as "U.S.A., Nebraska, Washington Co., Engineer Cantonment, about 12 mi. (19.2 km) S. E. Blair".

DISTRIBUTION: Originally may have occurred west of the Mississippi R., north to about 55°N, and south to Mexico City. Has extended its range north to N Alaska (USA), Northwest Territories, and Hudson Bay (Canada), approximately to 70°N, south to Costa Rica to approximately 10°N, and east to the Atlantic coast. Introduced in Florida and Georgia (Bekoff, 1977).

SYNONYMS: *cagottis* H[amilton]. Smith, 1839; *clepticus* Elliot, 1903; *dickeyi* Nelson, 1932; *estor* Merriam, 1897; *frustror* Woodhouse, 1850; *goldmani* Merriam, 1904; *hondurensis* Goldman, 1936; *impavidus* Allen, 1903; *jamesi* Townsend, 1912; *lestes* Merriam, 1897; *mearnsi* Merriam, 1897; *microdon* Merriam, 1897; *ochropus* Eschscholtz, 1829; *peninsulae* Merriam, 1897; *texensis* Bailey, 1905; *thamnos* Jackson, 1949; *umpquensis* Jackson, 1949; *vigilis* Merriam, 1897.

COMMENTS: Revised by Young (1951), and reviewed by Bekoff (1977, Mammalian Species, 79).

Canis lupus Linnaeus, 1758. Syst. Nat., 10th ed., 1:39.

TYPE LOCALITY: "Europæ sylvis, etjam frigidioribus", restricted by Thomas (1911a) to "Sweden".

DISTRIBUTION: Throughout the N hemisphere: North America south to 20°N in Oaxaca (Mexico); Europe; Asia, including the Arabian Peninsula and Japan, excluding Indochina and S India. Extirpated from most of the continental USA, Europe, and SE China and Indochina (Ginsberg and Macdonald, 1990).

STATUS: CITES - Appendix I (Indian, Pakistan, Bhutan, and Nepal populations); otherwise Appendix II. U.S. ESA - Endangered in the USA (48 conterminous States, except Minnesota) and Mexico; Threatened in Minnesota (USA). IUCN - Vulnerable.

SYNONYMS: *albus* Kerr, 1792; *alces* Goldman, 1941; *altaicus* Noak, 1911; *arabs* Pocock, 1934; *arctos* Pocock, 1935; *argunensis* Dybowski, 1922; *ater* Richardson, 1839; *baileyi* Nelson and Goldman, 1929; *banksianus* Anderson, 1943; *beothucus* G. M. Allen and Barbour, 1937; *bernardi* Anderson, 1943; *campestris* Dwigubski, 1804; *canadensis* de Blainville, 1843; *canus* de Selys Longchamps, 1839; *chanco* Gray, 1863; *columbianus* Goldman, 1941; *communis* Dwigubski, 1804; *coreanus* Abe, 1923; *crassodon* Halla, 1932; *cubanensis* Ognev, 1923; *deitanus* Cabrera, 1907; *desertorum* Bogdanov, 1992; *dybowski* Kerr, 1792; *ekloni* Przewalski, 1883; *familiaris* Linnaeus, 1758; *filchneri* Matschie, 1908; *flavus* Kerr, 1792; *fulvus* de Selys Longchamps, 1839; *fusca* Richardson, 1839; *gigas* Townsend, 1850; *griseoalbus* Baird, 1858; *hattai* Kishida, 1931; *hodophilax* Temminck, 1839; *hudsonicus* Goldman, 1941; *irremotus* Goldman, 1937; *italicus* Altobello, 1921; *japonicus* Nehring, 1883; *kamtschaticus* Dybowski, 1922; *karanorensis* Matschie, 1908; *knightii* Anderson, 1947; *kurjak* Bolkay, 1925; *labradorius* Goldman, 1937; *laniger* Hodgson, 1847; *ligoni* Goldman, 1937; *lupus-griseus* Sabine, 1823; *lycaon* Schreber, 1775; *mackenzii* Anderson, 1943; *major* Ogérien, 1863; *manningi* Anderson, 1943; *minor* Ogérien, 1863; *mogollonensis* Goldman, 1937; *monstrabilis* Goldman, 1937; *nubilus* Say, 1823; *occidentalis* Richardson, 1829; *orientalis* Wagner, 1841; *orion* Pocock, 1935; *pallipes* Sykes, 1831; *pambasileus* Elliot, 1905; *rex* Pocock, 1935; *signatus* Cabrera, 1907; *sticticus* Richardson, 1839; *tschiliensis* Matschie, 1908; *tundrarum* Miller, 1912; *turuchanensis* Ognev, 1923; *ungavensis* Comeau, 1940; *variabilis* Say, 1823; *youngi* Goldman, 1937.

COMMENTS: Reviewed by Mech (1974, Mammalian Species, 37). *C. familiaris* has page priority over *C. lupus* in Linnaeus (1758), but both were published simultaneously, and *C. lupus* has been universally used for this species.

Canis mesomelas Schreber, 1775. Die Säugethiere, 2(14):pl. 95[1775]; text, 3(21):370[1776], 586[1777].

TYPE LOCALITY: "Vorgebirge der guten Hofnung" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: Africa, south of the tropical rain-forest in the west and as far north as Ethiopia and Sudan in the east; two populations, (1) Angola across to mid-Mozambique and south; and (2) Ethiopia to Tanzania and northern most Zimbabwe east of Zaire (Ginsberg and Macdonald, 1990).

SYNONYMS: *achrotus* Thomas, 1926; *arenarum* Thomas, 1926; *elgonae* Heller, 1914; *mcmillani* Heller, 1914; *schmidti* Noack, 1897; *variegatoides* Smith, 1834.

Canis rufus Audubon and Bachman, 1851. Viviparous Quadrupeds of North America, 2:240.

TYPE LOCALITY: Not given. Restricted by Goldman (1937) to "15 miles west of Austin, Texas" [USA], based on accounts from Audubon and Bachman (1851).

DISTRIBUTION: SE and SC USA, from Florida to C Texas and north to S Indiana and Missouri.

STATUS: U.S. ESA - Endangered (except Dare, Tyrrell, Hyde, and Washington Counties, North Carolina, which have a nonessential experimental population); IUCN - Endangered.

SYNONYMS: *floridanus* Miller, 1912; *gregoryi* Goldman, 1937; *niger* Bartram, 1791.

COMMENTS: Reviewed and recognized by Paradiso and Nowak (1972, Mammalian Species, 22); also recognized by Paradiso (1968), Atkins and Dillion (1971), and Nowak (1979). The widely used name *C. niger* is invalid (International Commission on Zoological Nomenclature, 1957a). The validity of *rufus* as a full species was questioned by Clutton-Brock et al. (1976), due to the existence of natural hybrids with *lupus* and *latrans*. Natural hybridization may be a consequence of habitat disruption by man (Paradiso and Nowak, 1971). Nowak (1979) provided evidence for specific distinctness. All specimens examined by Wayne and Jenks (1991) had either a *lupus* or *latrans* mtDNA genotype.

- Canis simensis* Rüppell, 1840. Neue Wirbelt. Fauna Abyssin. Gehörig. Säugeth., 1:39, pl. 14.
 TYPE LOCALITY: "Wir beobachteten diesen wolfsartigen Hund in den Bergen von Simen..."
 [Ethiopia, mountains of Simen].
 DISTRIBUTION: C Ethiopia.
 STATUS: U.S. ESA and IUCN - Endangered.
 SYNONYMS: *sinus* Gervais, 1855; *walgie* Heuglin, 1863.
 COMMENTS: Sometimes placed in subgenus *Simenia* Gray, 1868.
- Cerdocyon H[amilton]*. Smith, 1839. Jardine's Natur. Libr., 9:259.
 TYPE SPECIES: *Canis azarae* Wied, 1824 (= *Canis Thous* Linnaeus, 1766) by subsequent designation (Thomas, 1914a).
- Cerdocyon thous* (Linnaeus, 1766). Syst. Nat., 12th ed., 1:60.
 TYPE LOCALITY: "Surinamo" [Surinam].
 DISTRIBUTION: Uruguay and N Argentina to lowlands of Bolivia, Venezuela; Colombia and Guyanas; Brazil except Amazonia.
 STATUS: CITES - Appendix II.
 SYNONYMS: *affinis* Marelli, 1931; *angulensis* Thomas, 1903; *apollinaris* Thomas, 1914; *aquilus* Bangs, 1898; *azarae* Wied, 1824; *brachyteles* de Blainville, 1843; *brasiliensis* Wied, 1824; *cancrivora* Brongniart, 1792; *fronto* Lönnberg, 1919; *fulvogriscus* Zukowsky, 1950; *germanus* G. M. Allen, 1923; *guaraxa* H[amilton]. Smith, 1829; *jucundus* Thomas, 1921; *lunaris* Thomas, 1914; *melampus* Wagner, 1841; *melanostomus* Wagner, 1843; *mimax* Thomas, 1914; *riograndensis* Ihering, 1911; *robustior* Lund, 1843; *rudis* Günther, 1879; *savannarum* Osgood, 1912; *tucumanus* Thomas, 1921; *vetulus* Studer, 1905.
 COMMENTS: Reviewed by Berta (1982, Mammalian Species, 186). Placed in *Cerdocyon* by Langguth (1975), Stains (1975), and Berta (1982); placed in subgenus *Canis* (*Cerdocyon*) by Van Gelder (1978).
- Chrysocyon H[amilton]*. Smith, 1839. Jardine's Natur. Libr., 9:241.
 TYPE SPECIES: *Canis jubatus* Desmarest, 1820 (= *Canis brachyurus* Illiger, 1815).
 COMMENTS: Recognized by Langguth (1975), Stains (1975), Van Gelder (1978), and Berta (1988).
- Chrysocyon brachyurus* (Illiger, 1815). Abh. Phys. Klasse K. Pruess. Akad. Wiss., 1804-1811:121.
 TYPE LOCALITY: Listed by Cabrera (1958) as "los esteros del Paraguay".
 DISTRIBUTION: NE Argentina; Paraguay; lowlands of Bolivia; Brazil from Rio Grande do Sul to Minas Gerais, Goiás and Mato Grosso.
 STATUS: CITES - Appendix II; U.S. ESA - Endangered; IUCN - Vulnerable.
 SYNONYMS: *campestris* Wied[-Neuwied], 1826; *cancrosa* Oken, 1816; *isodactylus* Ameghino, 1906; *jubatus* Desmarest, 1820; *vulpes* Larranaga, 1923.
 COMMENTS: See Dietz (1985, Mammalian Species, 234).
- Cuon* Hodgson, 1838. Ann. Mag. Nat. Hist., [ser. 1], 1:152.
 TYPE SPECIES: *Canis primaevus* Hodgson, 1838, by monotypy (Melville and Smith, 1987).
 COMMENTS: Placed in subfamily Simocyoninae Dawkins, 1868, by Simpson (1945) and Stains (1975).
- Cuon alpinus* (Pallas, 1811). Zoogr. Rosso-Asiat., 1:34.
 TYPE LOCALITY: "Udskoi Ostrog"; reported in Honacki et al. (1982) as "U.S.S.R., Amurskaya Obl., Udskii-Ostrog."
 DISTRIBUTION: Java; Sumatra; Malaysia; montane forest areas of the Indian peninsula and N Pakistan through Tibet and Xinjiang (Tian Shan and Altai—extinct); Indochina and China to Korea and Ussuri region (Russia), and mountains of S Siberia and N Mongolia.
 STATUS: CITES - Appendix II; U.S. ESA - Endangered; IUCN - Vulnerable.
 SYNONYMS: *clamitans* Heude, 1892; *dukhunensis* Sykes, 1831; *fumosus* Pocock, 1936; *grayiformes* Hodgson, 1863; *hesperius* Afanasiev and Zolotarev, 1935; *infuscus* Pocock, 1936; *javanicus* Desmarest, 1820; *laniger* Pocock, 1936; *lepturus* Heude, 1892; *primaevus* Hodgson, 1833; *rutilans* Blanford, 1839; *sumatrensis* Hardwicke, 1822.
 COMMENTS: Reviewed by Cohen (1978, Mammalian Species, 100).

Dusicyon H[amilton]. Smith, 1839. *Jardine's Natur. Libr.*, 9:248.

TYPE SPECIES: *Canis antarcticus* Bechstein, 1799 (= *C. australis* Kerr, 1792), by subsequent designation by Cabrera (1931).

COMMENTS: There has been general disagreement as to generic classification of the South American canids, with most of the disagreement centered on the species *australis*, *culpaeus*, *griseus*, *gymnocercus*, *microtis*, *sechurae*, *thous*, and *vetulus*. Van Gelder (1978) proposed placing these taxa into *Canis* and giving only subgeneric recognition. The other extreme is best represented by Cabrera (1931) who recognized 5 genera for this group. Langguth (1969) first followed Cabrera's classification, but later (1975) decided to group most taxa into *Canis*, because he felt differences were not sufficient to warrant generic distinctions. The phenetic approaches of Clutton-Brock et al. (1976) and Wayne and O'Brien (1987) confirmed the close similarities of these taxa. Berta's (1987, 1988) phylogenetic hypothesis is followed here.

Dusicyon australis (Kerr, 1792). In Linnaeus, *Anim. Kingdom*, p. 144.

TYPE LOCALITY: "America and Falkland islands."

DISTRIBUTION: Falkland Islands.

STATUS: IUCN - Extinct.

SYNONYMS: *antarcticus* Bechstein, 1799; *darwini* Thomas, 1914.

COMMENTS: Placed in *Dusicyon* by Cabrera (1931) and Berta (1987, 1988), and considered as a subgenus separate from other "foxes" (i.e., *culpaeus*, *griseus*, *gymnocercus*, and *sechurae*) by Langguth (1975) and Van Gelder (1978).

Lycaon Brookes, 1827. In Griffith et al., *Anim. Kingdom*, 5:151.

TYPE SPECIES: *Lycaon tricolor* Brookes, 1827 (= *Hyaena picta* Temminck, 1820) by monotypy (Melville and Smith, 1987).

COMMENTS: Placed in Simocyoninae Dawkins, 1868, by Simpson (1945) and Stains (1975).

Lycaon pictus (Temminck, 1820). *Ann. Gen. Sci. Phys.*, 3:54, pl. 35.

TYPE LOCALITY: "à la côte de Mosambique" [Mozambique].

DISTRIBUTION: Sub-Saharan Africa, except in the desert area of the north and the tropical rain-forest of the west. See Ginsberg and Macdonald (1990, fig. 6) for present status of population.

STATUS: U.S. ESA and IUCN - Endangered.

SYNONYMS: *cacondae* Matschie, 1915; *dieseneri* Matschie, 1915; *ebermaieri* Matschie, 1915; *fuchsi* Matschie, 1915; *gansseri* Matschie, 1915; *gobabis* Matschie, 1915; *hennigi* Matschie, 1915; *huebneri* Matschie, 1915; *kondooe* Matschie, 1915; *krebsi* Matschie, 1915; *lademanni* Matschie, 1915; *lalandei* Matschie, 1915; *langheldi* Matschie, 1915; *luchsingeri* Matschie, 1915; *lupinus* Thomas, 1902; *manguensis* Matschie, 1915; *mischlichii* Matschie, 1915; *prageri* Matschie, 1912; *richteri* Matschie, 1915; *ruppelli* Matschie, 1915; *ruwanae* Matschie, 1915; *sharicus* Thomas, 1907; *ssongeeae* Matschie, 1915; *stierlingi* Matschie, 1915; *styxi* Matschie, 1915; *taborae* Matschie, 1915; *takanus* Matschie, 1915; *tricolor* Brookes, 1827; *typicus* A. Smith, 1833; *venatica* Burchell, 1822; *windhorni* Matschie, 1915; *wintgensii* Matschie, 1915; *zedlitzi* Matschie, 1915; *zuluensis* Thomas, 1904.

Nyctereutes Temminck, 1839. *Tijdschr. Nat. Gesch. Physiol.*, 5:285.

TYPE SPECIES: *Canis viverrinus* Temminck, 1839 (= *Canis procyonoides* Gray, 1834).

Nyctereutes procyonoides (Gray, 1834). *Illustr. Indian Zool.*, 2:pl. 1.

TYPE LOCALITY: Unknown; restricted to "vicinity of Canton, China" by Allen (1938).

DISTRIBUTION: Ussuri region (Russia), Korea, China, Japan, and N Indochina.

SYNONYMS: *albus* Hornaday, 1904; *amurensis* Matschie, 1908; *koreensis* Mori, 1922; *orestes* Thomas, 1923; *sinensis* Brass, 1904; *stegmanni* Matschie, 1908; *ussuriensis* Matschie, 1908; *viverrinus* Temminck, 1839.

COMMENTS: See Ward and Wurster-Hill (1990, *Mammalian Species*, 358).

Otocyon Müller, 1836. *Arch. Anat. Physiol., Jahresber. Fortschr. Wiss.*, 1835:1 [1836].

TYPE SPECIES: *Otocyon caffer* Müller, 1836 (= *Canis megalotis* Desmarest, 1822), by monotypy (Melville and Smith, 1987).

Otocyon megalotis (Desmarest, 1822). Mammalogie, in Encyclop. Meth., 2(Suppl.):538.
TYPE LOCALITY: "le Cap de Bonne-Espérance" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: Allopatric south (Botswana, Namibia, South Africa) and east (Kenya, Ethiopia, Tanzania) African populations (Ginsberg and Macdonald, 1990).

SYNONYMS: *auritus* H[amilton]. Smith, 1840; *caffer* Müller, 1836; *canescens* Cabrera, 1910; *lalandi* Desmoulins, 1823; *steinhardti* Zukowsky, 1924; *virgatus* Miller, 1909.

Pseudalopex Burmeister, 1856. Erläut. Fauna Brasiliens, 24, pp. 44-54.

TYPE SPECIES: *Canis magellanicus* Gray, 1836 (= *Canis culpaeus* Molina, 1782), by subsequent designation by Cabrera (1931).

COMMENTS: See comments under *Dusicyon*. Although combining taxa included here with *Dusicyon* would not be in conflict with Berta (1987, 1988), her analyses suggested that other genera, now extinct, are more closely related to *Dusicyon*. Berta (1987, 1988) presented derived features that would support a single origin for those taxa recognized here in *Pseudalopex* (which would also agree with Cabrera, 1958 and Stains, 1975). A detailed comparative morphological study by Langguth (1969) caused him to conclude (1975:193) that *Pseudalopex* merited generic rank.

Pseudalopex culpaeus (Molina, 1782). Sagg. Stor. Nat. Chile, p. 293.

TYPE LOCALITY: "Chili" restricted by Cabrera (1931) to "the Santiago Province."

DISTRIBUTION: From Tierra del Fuego through the Andes of Chile and Argentina to the highlands of Bolivia, Peru, Ecuador, and Colombia.

STATUS: CITES - Appendix II.

SYNONYMS: *albigula* Philippi, 1903; *amblyodon* Philippi, 1903; *andina* Thomas, 1914; *chilensis* Kerr, 1792; *ferrugineus* Huber, 1925; *lycoides* Philippi, 1896; *magellanicus* Gray, 1836; *montanus* Prichard, 1902; *prichardi* Thomas, 1914; *reissii* Hilzheimer, 1906; *riveti* Trouessart, 1906; *smithersi* Thomas, 1914.

COMMENTS: Placed in *Pseudalopex* by Berta (1987, 1988); and in *Dusicyon* by Cabrera (1958). Considered in *Canis* (*Pseudalopex*) by Langguth (1975), Clutton-Brock et al. (1976), and Van Gelder (1978). Includes *culpaeolus* (part) and *inca* (part), mismatched skin and skull (Langguth, 1967).

Pseudalopex griseus (Gray, 1837). Mag. Nat. Hist. [Charlesworth's], 1:578.

TYPE LOCALITY: "Magellan", listed in Cabrera (1958) as "Costa del Estrecho de Magallanes" [Chile].

DISTRIBUTION: Atacama (Chile) and Santiago del Estero (Argentina) south to Tierra del Fuego.

STATUS: CITES - Appendix II; IUCN - Vulnerable.

SYNONYMS: *domeykoanus* Philippi, 1901; *fulvipes* Martin, 1837; *gracilis* Kraglievich, 1930; *lagopus* Molina, 1782; *maullinicus* Philippi, 1903; *patagonicus* Philippi, 1866; *rufipes* Philippi, 1901; *torquatus* Philippi, 1903; *zorrula* Thomas, 1921.

COMMENTS: Placed in *Pseudalopex* by Berta (1988) and *Dusicyon* by Cabrera (1958). Considered in *Canis* (*Pseudalopex*) by Langguth (1975), and Van Gelder (1978). Cabrera (1958) and Osgood (1943) considered *Vulpes fulvipes* distinct, however, Langguth (1969) presented data to support its inclusion.

Pseudalopex gymnocercus (Fischer, 1814). Zoognosia, 3:xi, 178.

TYPE LOCALITY: "Paraguay", restricted by Cabrera (1958) to "a los alrededores de Asunción."

DISTRIBUTION: Argentina, north of Rio Negro; Paraguay; Uruguay; S Brazil; E Bolivia.

STATUS: CITES - Appendix II.

SYNONYMS: *antiquus* Ameghino, 1889; *brasiliensis* Schinz, 1821; *cinereoargenteus* Larranaga, 1923; *entrierianus* Burmeister, 1861; *fossilis* H. Gervais and Ameghino, 1889; *protalopex* Lund, 1839.

COMMENTS: Placed in *Pseudalopex* by Berta (1988) and in *Dusicyon* by Cabrera (1958). Considered in *Canis* (*Pseudalopex*) by Langguth (1975) and Van Gelder (1978).

Pseudalopex sechurae (Thomas, 1900). Ann. Mag. Nat. Hist., ser. 7, 5:148.

TYPE LOCALITY: "Desert of Sechura, N.W. Peru. . . Sullana".

DISTRIBUTION: NW Peru and SW Ecuador.

STATUS: IUCN - Insufficiently known.

COMMENTS: Placed in *Pseudalopex* by Berta (1988) and in *Dusicyon* by Cabrera (1958). Considered in *Canis* (*Pseudalopex*) by Langguth (1975) and Van Gelder (1978).

Pseudalopex vetulus (Lund, 1842). K. Dansk. Vid. Selsk. Naturv. Math. Afhandl., 9:4.

TYPE LOCALITY: Listed by Cabrera (1958) as "Lagoa Santa, Minas Gerais" [Brazil].

DISTRIBUTION: C Brazilian Highlands in the States of Mato Grosso, Goiás, Minas Gerais, Bahia, and São Paulo.

STATUS: IUCN - Insufficiently known.

SYNONYMS: *azarae* Lund, 1839; *chilensis* Gray, 1868; *fulvicaudus* Lund, 1843; *parvidens* Mivart, 1890; *sladeni* Thomas, 1903; *urostictus* Mivart, 1890.

COMMENTS: Placed in *Pseudalopex* by Berta (1987, 1988); in *Dusicyon* (*Lycalopex*) by Cabrera (1958) (and implied by Stains, 1975); in *Lycalopex* by Langguth (1975); and considered in *Canis* (*Lycalopex*) by Van Gelder (1978).

Speothos Lund, 1839. Ann. Sci. Nat. Zool. (Paris), ser. 2, 11:224.

TYPE SPECIES: *Speothos pacivorus* Lund, 1839 (extinct).

COMMENTS: Berta and Marshall (1978) included *Icticyon*. Placed in Simocyoninae Dawkins, 1868, by Simpson (1945) and Stains (1975).

Speothos venaticus (Lund, 1842). K. Dansk. Vid. Selsk. Naturv. Math. Afhandl., 9:67.

TYPE LOCALITY: "Lagoa Santa" [Minas Gerais, Brazil].

DISTRIBUTION: Forested areas of Bolivia, Paraguay and Brazil (except the semiarid NE); E Peru; Ecuador; Colombia; Venezuela; Guyana; French Guiana; Surinam; Panama.

STATUS: CITES - Appendix I; IUCN - Vulnerable.

SYNONYMS: *baskii* Schinz, 1849; *melanogaster* Gray, 1846; *wingei* Ihering, 1911.

Urocyon Baird, 1857. Mammalia, in Repts. U.S. Expl. Surv., 8(1):121, 138.

TYPE SPECIES: *Canis virginianus* Schreber, 1775 (= *Canis cinereo argenteus* Schreber, 1775) by subsequent designation (Elliot, 1901; Melville and Smith, 1987).

COMMENTS: Considered a subgenus of *Vulpes* by Clutton-Brock et al. (1976).

Urocyon cinereoargenteus (Schreber, 1775). Die Säugethiere, 2(13):pl. 92[1775]; text: 3(21):361[1776].

TYPE LOCALITY: "Sein Vaterland ist Carolina und die Wärmeren Gegenden von Nordamerika, vielleicht auch Surinam."

DISTRIBUTION: North America from Oregon, Nevada, Utah, and Colorado in the West and the USA-Canadian border in the East through Central America to N Colombia and Venezuela.

SYNONYMS: *borealis* Merriam, 1903; *californicus* Mearns, 1897; *colimensis* Goldman, 1938; *costaricensis* Goodwin, 1938; *floridanus* Rhoads, 1895; *fraterculus* Elliot, 1896; *furvus* Allen and Barbour, 1923; *guatemalae* Miller, 1899; *inyoensis* Elliot, 1904; *madrensis* Burt and Hooper, 1941; *nigrirostris* Lichtenstein, 1850; *ocythous* Bangs, 1899; *orinomus* Goldman, 1938; *parvidens* Miller, 1899; *peninsularis* Huey, 1928; *pensylvanicus* Boddaert, 1784; *scottii* Mearns, 1891; *sequoiensis* Dixon, 1910; *texensis* Mearns, 1897; *townsendi* Merriam, 1899; *virginianus* Schreber, 1775.

COMMENTS: Reviewed by Fritzell and Haroldson (1982, Mammalian Species, 189). Placed in *Canis* (*Vulpes*) by Van Gelder (1978); Clutton-Brock et al. (1976) placed it in *Vulpes* (*Urocyon*).

Urocyon littoralis (Baird, 1857). Mammalia, in Repts. U.S. Expl. Surv., 8(1):143.

TYPE LOCALITY: "island of San Miguel, on the coast of California."

DISTRIBUTION: Islands off the Pacific coast of S California (USA).

STATUS: IUCN - Rare.

SYNONYMS: *catalinae* Merriam, 1903; *clementae* Merriam, 1903; *dickeyi* Grinnell and Linsdale, 1930; *santacruzae* Merriam, 1903; *santarosae* Grinnell and Linsdale, 1930.

COMMENTS: Placed in *Canis* (*Vulpes*) by Van Gelder (1978); Clutton-Brock et al. (1976) placed it in *Vulpes* (*Urocyon*). May be conspecific with *U. cinereoargenteus* (Stains, 1975; Van Gelder, 1978).

Vulpes Frisch, 1775. Das Natur-System der Vierfüßigen Thiere, p. 15.

TYPE SPECIES: *Canis vulpes* Linnaeus, 1758, by designation under the plenary powers (Melville and Smith, 1978).

SYNONYMS: *Fennecus* Desmarest, 1804.

COMMENTS: Although Frisch (1774[1775]) has been ruled a rejected work for nomenclatural purposes, *Vulpes* has been retained (International Commission on Zoological Nomenclature, 1979). Considered a subgenus of *Canis* by Van Gelder (1978); however, this arrangement is not currently employed by most mammalogists (Corbet, 1978c; Corbet and Hill, 1980; Gromov and Baranova, 1981; Hall, 1981; Wozencraft, 1989b). Includes *Fennecus*; see comments under *V. zerda* and *Urocyon*.

Vulpes bengalensis (Shaw, 1800). Gen. Zool. Syst. Nat. Hist., 1(2), Mammalia, p. 330.

TYPE LOCALITY: "Bengal."

DISTRIBUTION: India, Pakistan, S Nepal.

STATUS: CITES - Appendix III (India); IUCN - Indeterminate.

SYNONYMS: *chrysurus* Gray, 1837; *hodgsonii* Gray, 1837; *indicus* Hodgson, 1833; *kokree* Sykes, 1831; *rufescens* Gray, 1833; *xanthura* Gray, 1837.

Vulpes cana Blanford, 1877. J. Asiat. Soc. Bengal, 2:321.

TYPE LOCALITY: "Gwadar, Baluchistan", [Pakistan].

DISTRIBUTION: Turkmenistan, Afghanistan, NE Iran, Pakistan.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

Vulpes chama (A. Smith, 1833). S. Afr. Quart. J., 2:89.

TYPE LOCALITY: "Namaqualand and the country on both sides of the Orange river" [Namibia]; fixed by Shortridge (1942) as "Port Nolloth, Little Namaqualand."

DISTRIBUTION: Southern Africa, S Angola, and S of Zambia.

SYNONYMS: *caama* Smith, 1839; *hodgsoni* Noack, 1910; *variegatoides* Layard, 1861.

Vulpes corsac (Linnaeus, 1768). Syst. Nat., 12th ed., 3: appendix 223.

TYPE LOCALITY: "in campis magi deserti ab Jaco fluvio versus Irtim"; listed by Honacki et al. (1982) as "U.S.S.R., N. Kazakhstan, steppes between Ural and Irtysh rivers, near Petropavlovsk."

DISTRIBUTION: Kazakhstan, Russia, C Asia, Mongolia, Transbaikalia, NE China, N Afghanistan.

STATUS: IUCN - Insufficiently known.

SYNONYMS: *kalmikorum* Ognev, 1935; *nigra* Kastschenko, 1912; *scorodumovi* Bobrinskii, 1944; *turkmenica* Ognev, 1935.

Vulpes ferrilata Hodgson, 1842. J. Asiat. Soc. Bengal, 11:278.

TYPE LOCALITY: "brought from Lassa" [Tibet, China].

DISTRIBUTION: China: Tibet, Tsinghai, Kansu, and Yunnan; Nepal.

Vulpes pallida (Cretzschmar, 1826). In Rüppell, Atlas Reise Nordl. Afr., Zool. Säugeth., 1(2):33, pl. 11.

TYPE LOCALITY: "Kordofan" [Sudan].

DISTRIBUTION: Semiarid sahelian region of Africa from Senegal through Nigeria, Cameroon, and Sudan to Somalia.

STATUS: IUCN - Insufficiently known.

SYNONYMS: *edwardsi* Rochebrune, 1883; *harterti* Thomas and Hinton, 1921; *oertzeni* Matschie, 1910; *sabbar* Hemprich and Ehrenberg, 1832.

Vulpes rueppelli (Schinz, 1825). In G. Cuvier, Das Thierreich, 4:508.

TYPE LOCALITY: "Vatherland Dongola".

DISTRIBUTION: Arid areas of N Africa from Morocco to Somalia; Egypt; Sinai; Arabia; Iran; parts of Pakistan and Afghanistan.

STATUS: IUCN - Insufficiently known.

SYNONYMS: *caesia* Thomas, 1921; *cyrenaica* Festa, 1921; *famelicus* Cretzschmar, 1826; *sabaea* Pocock, 1934; *somaliae* Thomas, 1918; *zarudnyi* Birula, 1912.

Vulpes velox (Say, 1823). In James, Account of an Exped. from Pittsburgh to the Rocky Mtns, 1:487.

TYPE LOCALITY: "camp on the river Platte, at the fording place of the Pawnee Indians, twenty-seven miles below the confluence of the North and South, or Paduca Forks." [Camp on 20 June 1820 reported to be at 40°59'15"N (vol. 2)].

DISTRIBUTION: C North America from SE British Columbia, SC Alberta and SW Saskatchewan (Canada) to NW Texas (panhandle) and E New Mexico, east of Rockies (USA).

STATUS: U.S. ESA - Endangered as *V. v. hebes* (Canada populations) and as *V. macrotis mutica*.

SYNONYMS: *arizonensis* Goldman, 1931; *arsipus* Elliot, 1903; *devia* Nelson and Goldman, 1909; *hebes* Merriam, 1902; *macrotis* Merriam, 1888; *muticus* Merriam, 1902; *neomexicana* Merriam, 1902; *nevadensis* Goldman, 1931; *tenuirostris* Nelson and Goldman, 1931; *zinseri* Benson, 1938.

COMMENTS: Reviewed by Egoscue (1979, Mammalian Species, 122) and McGrew (1979, Mammalian Species, 123, as *V. macrotis*). Revised by Waithman and Roest (1977) and Dragoo et al. (1990). Blair et al. (1968), Lechleitner (1969), Bueler (1973), and Dragoo et al. (1990) considered *macrotis* and *velox* conspecific. Packard and Bowers (1970), Rohwer and Kilgore (1973), and Thornton and Creel (1975) (who found hybrids between *velox* and *macrotis* but concluded they were of reduced viability) retained both as species.

Vulpes vulpes (Linnaeus, 1758). Syst. Nat., 10th ed., 1:40.

TYPE LOCALITY: "Europa, Asia, Africa, antrafodiens," restricted by Thomas (1911a), to "Sweden (Upsala)."

DISTRIBUTION: Europe and continental Asia except the tundra; N India and peninsular Indochina; Japan; Palearctic Africa; N America as far south as Texas and New Mexico (USA), but absent in part of the Central Plains and the Arctic. Introduced to Australia; see Corbet and Hill (1980:93).

STATUS: CITES - Appendix III (India) as *V. v. griffithi*, *V. v. montana*, and *V. v. pusilla* (= *leucopus*).

SYNONYMS: *abietorum* Merriam, 1900; *acaab* Cabrera, 1916; *aegyptiacus* Sonnini, 1816; *alascensis* Merriam, 1900; *alba* Borkhausen, 1797; *algeriensis* Loche, 1858; *alopex* Blanford, 1881; *alpherakyi* Satunin, 1906; *alticola* Ognev, 1926; *anadyrensis* J. A. Allen, 1903; *anatolica* Thomas, 1920; *anubis* Hemprich and Ehrenberg, 1833; *arabica* Thomas, 1902; *atlantica* Wagner, 1841; *aurantioluteus* Matschie, 1907; *bangsi* Merriam, 1900; *barbarus* Shaw, 1800; *beringiana* Middendorff, 1875; *cascadensis* Merriam, 1900; *caucasica* Dinnik, 1914; *cinera* Bechstein, 1801; *communis* Burnett, 1830; *crucigera* Bechstein, 1789; *daurica* Ognev, 1931; *deletrix* Bangs, 1898; *dolichocrania* Ognev, 1926; *dorsalis* Gray, 1837; *eckloni* Jacobi, 1923; *flavescens* Gray, 1843; *fulvus* Desmarest, 1820; *griffithii* Blyth, 1854; *harrimani* Merriam, 1900; *himalaicus* Ogilby, 1836; *hoole* Swinhoe, 1870; *huli* Sowerby, 1923; *hypomelas* Wagner, 1841; *ichnusae* Miller, 1907; *indutus* Miller, 1907; *jakutensis* Ognev, 1923; *japonica* Gray, 1868; *kamtschadensis* Brass, 1911; *karagan* Erxleben, 1777; *kenaiensis* Merriam, 1900; *kiyomasai* Kishida and Mori, 1929; *krimeamontana* Brauner, 1914; *kurdistanica* Satunin, 1906; *ladacensis* Matschie, 1907; *leucopus* Blyth, 1854; *lineatus* Billberg, 1827; *lineiventer* Swinhoe, 1870; *lutea* Bechstein, 1801; *macrourus* Baird, 1852; *melanogaster* Bonaparte, 1832; *melanotus* Pallas, 1811; *meridionalis* Fitzinger, 1855; *montana* Pearson, 1836; *necator* Merriam, 1900; *nepalensis* Gray, 1837; *nigra* Borkhausen, 1797; *nigro-argenteus* Nillson, 1820; *nigrocaudatus* Billberg, 1827; *niloticus* Desmarest, 1820; *ochroxantha* Ognev, 1926; *palaestina* Thomas, 1920; *peculiosa* Kishida, 1924; *pennsylvanicus* Rhoads, 1894; *persicus* Blanford, 1875; *pusilla* Blyth, 1854; *regalis* Merriam, 1900; *rubricosa* Bangs, 1898; *schrencki* Kishida, 1924; *silaceus* Miller, 1907; *sitkaensis* Brass, 1911; *splendens* Thomas, 1902; *splendidissima* Kishida, 1924; *stepensis* Brauner, 1914; *tobolica* Ognev, 1926; *tschiliensis* Matschie, 1907; *ussuriensis* Dybowski, 1922; *vafra* Bangs, 1897; *variagatus* Billberg, 1827; *vulgaris* Oken, 1816; *vulpecula* Hemprich and Ehrenberg, 1833; *waddelli* Bonhote, 1906.

Vulpes zerda (Zimmermann, 1780). Geogr. Gesch. Mensch. Vierf. Thiere, 2:247.

TYPE LOCALITY: "Es bewohnt die Soara und andere Theile von Nordafrika hinter den Atlas, der Ritter Bruce behauptet, man fände es auch in tripolitanischen."

DISTRIBUTION: Morocco to Arabia.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *arabicus* Desmarest, 1804; *aurita* Meyer, 1793; *brucei* Desmarest, 1820; *cerdo* Gmelin, 1788; *denhamii* Boitard, 1842; *fennecus* Lesson, 1827; *saarensis* Skjöldebrand, 1777; *zaarensis* Gray, 1843.

COMMENTS: Placed in *Fennecus* by Stains (1975).

Family Felidae G. Fischer, 1817. *Mém. Soc. Imp. Nat. Moscow*, 5:372.

COMMENTS: Revised by Pocock (1917, 1951), Weigel (1961), Hemmer (1978), Král and Zima (1980), Kratochvíl (1982c), Groves (1982a), and Collier and O'Brien (1985). Some (Honacki et al., 1982; Van Gelder, 1977b) have followed Simpson (1945) and placed the majority of taxa in *Felis*, except for the large cats (*Panthera* and *Acinonyx*); however, this is not well supported by primary systematic studies and only poorly represents relationships below the family level. Although taxonomic disagreements appear at first to be considerable, most revolve around the recognition of categories at the generic versus the subgeneric level and interpretations of degrees of similarity.

Subfamily Acinonychinae Pocock, 1917. *Ann. Mag. Nat. Hist.*, ser. 8, 20:332.

COMMENTS: Type genus: *Acinonyx* Brookes, 1828.

Acinonyx Brookes, 1828. *Cat. Anat. Zool. Mus. J. Brookes*, London, p. 16, 33.

TYPE SPECIES: *Acinonyx Venator* Brookes, 1828 (= *Felis jubata* Schreber, 1775), by monotypy (International Commission on Zoological Nomenclature, 1956a; Melville and Smith, 1987).

SYNONYMS: *Cynaëlurus* Gloger, 1841; *Cynailurus* Wagler, 1830; *Cynofelis* Lesson, 1842; *Guepar* Boitard, 1842; *Guepardus* Duvernoy, 1834.

Acinonyx jubatus (Schreber, 1775). *Die Säugethiere*, 2(15):pl. 105[1775]; text 3(22):392[1777].

TYPE LOCALITY: "südliche Afrika; man bekömmt die Felle vom Vorgebirge der guten Hofnung" [South Africa, Cape Province, Cape of Good Hope].

DISTRIBUTION: Afghanistan, Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Egypt, Ethiopia, India, Iran, Iraq, Kenya, Libya, Malawi, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Pakistan, Saudi Arabia, Senegal, Somalia, South Africa, Sudan, Tadjikistan, Tanzania, Turkmenistan, Uganda, Western Sahara, Zaire, Zambia, Zimbabwe. Now restricted to N Iran and Sub-Saharan Africa, except rain forest and some areas in the south.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Endangered as *A. j. venaticus*, otherwise Vulnerable.

SYNONYMS: *fearonii* Smith, 1834; *fearonis* Fitzinger, 1869; *guttata* Hermann, 1804; *hecki* Hilzheimer, 1913; *lanea* Sclater, 1877; *megabalia* Heuglin, 1863; *ngorongorensis* Hilzheimer, 1913; *obergi* Hilzheimer, 1913; *raddei* Hilzheimer, 1913; *raineyi* Heller, 1913; *rex* Pocock, 1927; *senegalensis* Blainville, 1843; *soemmeringii* Fitzinger, 1855; *velox* Heller, 1913; *venatica* Griffith, 1821; *venator* Brookes, 1828; *wagneri* Hilzheimer, 1913.

COMMENTS: Placed in *Acinonyx* by Pocock (1917), Weigel (1961), Hemmer (1978), Král and Zima (1980), Kratochvíl (1982c), and Groves (1982a).

Subfamily Felinae Fischer, 1817. *Mém. Soc. Imp. Nat. Moscow*, 5:372.

COMMENTS: Type genus: *Felis* Linnaeus, 1758.

Caracal Gray, 1843. *List. Specimens Mamm. Coll. Brit. Mus.* p. 46.

TYPE SPECIES: *Caracal melanotis* Gray, 1843 (= *Felis caracal* Schreber, 1776), by monotypy.

SYNONYMS: *Urolynchus* Severtzov, 1858.

Caracal caracal (Schreber, 1776). *Die Säugethiere*, 3(16):pl. 110[1776]; text 3(24):413, 587[1777].

TYPE LOCALITY: "Vorgebirge der guten Hofnung", restricted by Allen (1924:281) to "Table Mountain, near Cape Town, South Africa".

DISTRIBUTION: Aden, Afghanistan, Algeria, Angola, Arabia, Botswana, Egypt, Ethiopia, Gabon, India, Iran, Iraq, Israel, Kenya, Kuwait, Libya, Malawi, Mauritania, Morocco, Mozambique, Namibia, Niger, Pakistan, Senegal, Somalia, South Africa, Sudan, Syria, Tanzania, Turkey, Turkmenistan, Uganda, Zaire, Zambia, Zimbabwe. See Stuart (1984) for distribution and status information.

STATUS: CITES - Appendix I as *Felis caracal* (Asian population); otherwise, Appendix II; IUCN - Rare as *F. c. michaelis*.

SYNONYMS: *aharonii* Matschie, 1912; *algira* Wagner, 1841; *bengalensis* Fischer, 1829; *berberorum* Matschie, 1892; *coloniae* Thomas, 1926; *corylinus* Matschie, 1912;

damarensis Roberts, 1926; *limpopoensis* Roberts, 1926; *lucani* Rochebrune, 1885; *medjerdae* Matschie, 1912; *melanotis* Gray, 1843; *michaelis* Heptner, 1945; *nubicus* Fischer, 1829; *poecilotis* Thomas and Hinton, 1921; *roothi* Roberts, 1926; *schmitzi* Matschie, 1912; *spatzi* Matschie, 1912.

COMMENTS: Allen (1924) discussed the authority and the type locality. Several recent studies (Groves, 1982a; Král and Zima, 1980) emphasized the closeness of this taxon to *Felis* and the separation of it from *Lynx* (*sensu* Simpson, 1945). Weigel (1961), Hemmer (1978), and Werdelin (1981), placed *caracal* in the monotypic *Caracal* (= *Urolynchus* of Kratochvíl, 1982c) followed here.

Catopuma Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:387.

TYPE SPECIES: *Felis moormensis* Hodgson, 1831 (= *Felis temminckii* Vigors and Horsfield, 1827), by monotypy.

SYNONYMS: *Badiofelis* Pocock, 1932.

Catopuma badia (Gray, 1874). Proc. Zool. Soc. Lond., 1874:322.

TYPE LOCALITY: "Borneo, Sarawak" [Malaysia].

DISTRIBUTION: Borneo.

STATUS: CITES - Appendix II; IUCN - Rare.

COMMENTS: This poorly known species was placed in *Catopuma* by Hemmer (1978) and Groves (1982a). Placed in the monotypic *Badiofelis* by Pocock (1932d:749), followed by Weigel (1961).

Catopuma temminckii (Vigors and Horsfield, 1827). Zool. J., 3:451.

TYPE LOCALITY: "Sumatra" [Indonesia].

DISTRIBUTION: Bangladesh, Burma, China (from Shaanxi and Jiangxi to the south), Indonesia (Sumatra), India, Cambodia, Laos, Malaysia, Nepal, Thailand, Vietnam.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Indeterminate.

SYNONYMS: *aurata* Blyth, 1863; *badiodorsalis* Howell, 1926; *bainsei* Sowerby, 1924; *dominicanorum* Sclater, 1898; *mitchelli* Lydekker, 1908; *moormensis* Hodgson, 1831; *nigrescens* Gray, 1863; *semenovi* Satunin, 1904; *tristis* Milne-Edwards, 1872.

COMMENTS: Placed in *Catopuma* by Hemmer (1978) and Groves (1982a). Placed in *Profelis* by Pocock (1932d), followed by Weigel (1961), Král and Zima (1980), and Kratochvíl (1982c).

Felis Linnaeus, 1758. Syst. Nat., 10th ed., 1:41.

TYPE SPECIES: *Felis catus* Linnaeus, 1758 (= *Felis silvestris* Schreber, 1775), by Linnean tautonymy (Melville and Smith, 1987).

SYNONYMS: *Catolynx* Severtzov, 1858; *Chaus* Gray, 1843; *Eremaelurus* Ognev, 1927; *Microfelis* Roberts, 1926; *Otailurus* Severtzov, 1858.

COMMENTS: Revised by Schwangart (1943), Pocock (1951), and Haltenorth (1953).

Felis bieti Milne-Edwards, 1892. Rev. Gen. Sci. Pures Appl., 3:671.

TYPE LOCALITY: "Batang á Tatsien-Lou", restricted by Pousargues (1898:358) to "environ de Tongolo et de Ta-tsien-lou" [China, Sichuan].

DISTRIBUTION: Endemic to the dry steppe from the eastern flanks of the Tibetan plateau in C China north to Nei Monggol; perhaps to Mongolia.

STATUS: CITES - Appendix II.

SYNONYMS: *chutuchta* Birula, 1917; *pallida* Büchner, 1893; *subpallida* Jacobi, 1922; *vellerosa* Pocock, 1943.

COMMENTS: Haltenorth (1953) suggested *chutuchta* and *vellerosa* belonged in *silvestris*.

Felis chaus Schreber, 1777. Die Säugethiere, 2(13):pl. 110.B[1777]; text, 3(24):414[1777].

TYPE LOCALITY: "wohnt in den sumpfigen mit Schilf bewachsenen oder bewaldeten Gegenden der Steppen um das kaspische Meer, und die in selbiges fallenden Flüsse. Auf der Nordseite des Terekflusses und der Festung Kislar . . . desto Hünfiger aber bey der Mündung der Kur . . ." Listed in Honacki et al. (1982) as "U.S.S.R., Dagestan, Terek River, N. of the Caucasus".

DISTRIBUTION: Afghanistan, Algeria, Arabia, Benin, Burma, China, Egypt, India, Iran, Iraq, Israel, Kenya, Malawi, Morocco, Mozambique, Nepal, Pakistan, Sri Lanka, Syria, Thailand, republics of the former USSR, Vietnam, Yemen, Zambia, Zimbabwe.

STATUS: CITES - Appendix II.

SYNONYMS: *affinis* Gray, 1830; *catolynx* Pallas, 1811; *chrysmelanotis* Nehring, 1902; *erythrotus* Hodgson, 1836; *fulvidina* Thomas, 1928; *furax* de Winton, 1898; *jacquemonti* Geoffroy, 1844; *kelaarti* Pocock, 1939; *kutas* Pearson, 1832; *libycus* Olivier, 1804; *nilotica* de Winton, 1898; *prateri* Pocock, 1939; *ruppelii* Brandt, 1832; *shawiana* Blanford, 1876; *typica* de Winton, 1898.

COMMENTS: *F. chaus* Gldenstdt, 1776, is invalid (Allen, 1920).

Felis margarita Loche, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:49.

TYPE LOCALITY: "environs de Ngonca (Sahara)" [Algeria].

DISTRIBUTION: Deserts in Algeria, Egypt, Iran, Libya, Morocco, Niger, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Tunisia, Turkmenistan, Uzbekistan, Yemen.

STATUS: CITES - Appendix II; U.S. ESA and IUCN - Endangered as *F. margarita scheffeli*.

SYNONYMS: *airensis* Pocock, 1938; *harrisoni* Hemmer, Grubb, and Groves, 1976; *margaritae* Trouessart, 1897; *margueritei* Trouessart, 1904; *meinertzhageni* Pocock, 1938; *scheffeli* Hemmer, 1974; *thinobius* Ognev, 1927.

COMMENTS: Revised by Schauenberg (1974) and Hemmer et al. (1976). *F. marginata* Gray, 1867, is an incorrect subsequent spelling. Pocock (1951) and Schauenberg (1974) included *Eremaelurus thinobia*, which was recognized as separate by Haltenorth (1953) and Weigel (1961), but see discussion by Hemmer et al. (1976). Krl and Zima (1980) suggested this species was closely related to *O. manul*.

Felis nigripes Burchell, 1824. Travels in Interior of Southern Africa, 2:592.

TYPE LOCALITY: Burchell (1824:509) implied the country of the "Bachapins", presumably in the capital, "the town of Litkun (Letrkoon)...27°.6'.44".[S]...24°.39'.27"[E]" [South Africa].

DISTRIBUTION: South Africa, Namibia, Botswana.

STATUS: CITES - Appendix I; U.S. ESA - Endangered.

SYNONYMS: *thomasi* Shortridge, 1931.

COMMENTS: Krl and Zima (1980) noted a distinctly different karotype from other *Felis*.

Felis silvestris Schreber, 1775. Die Sugethiere, 2(15):pl. 107[1775]; text 3(23):397[1777].

TYPE LOCALITY: Not given. Fixed by Haltenorth (1953) as "vielleicht Nordfrankreich". Listed by Pocock (1951) as "Germany".

DISTRIBUTION: Afghanistan, Algeria, Angola, Arabia, Botswana, Chad, China, Egypt, Ethiopia, France, Germany, Guinea, India, Iran, Iraq, Israel, Italy, Kazakhstan, Libya, Malawi, Mali, Mauritania, Morocco, Mozambique, Namibia, Pakistan, Poland, Senegal, South Africa, Spain, Sudan, Syria, Tanzania, Tunisia, Turkistan, United Kingdom, Zambia, Zimbabwe. Introduced to: Australia, Brazil, Canada, and Madagascar.

STATUS: CITES - Appendix II (the domestic cat, *Felis catus*, is specifically excluded from protection).

SYNONYMS: *agrius* Bate, 1906; *algericus* Fischer, 1829; *angorensis* Gmelin, 1788; *antiquorum* Fischer, 1829; *aureus* Kerr, 1792; *bouvieri* Rochebrune, 1883; *brevicaudata* Schinz, 1844; *brockmani* Pocock, 1944; *bubastis* Hemprich and Ehrenberg, 1832; *caeruleus* Erxleben, 1777; *caffra* A. Smith, 1826; *cafra* Desmarest, 1822; *caligata* Temminck, 1824; *catus* Linnaeus, 1758; *caucasicus* Satunin, 1905; *caudatus* Gray, 1874; *cretensis* Haltenorth, 1953; *cristata* Lataste, 1885; *cumana* Schinz, 1844; *cyrenarum* Ghigi, 1920; *daemon* Satunin, 1904; *domesticus* Erxleben, 1777; *euxina* Pocock, 1943; *ferox* Martorelli, 1896; *ferus* Erxleben, 1777; *foxi* Pocock, 1944; *grampia* Miller, 1907; *griselda* Thomas, 1926; *griseoflava* Zukowski, 1914; *gulata* Herman, 1804; *haussa* Thomas and Hinton, 1921; *hispanicus* Erxleben, 1777; *huttoni* Blyth, 1846; *iraki* Cheesman, 1920; *issikulensis* Ognev, 1930; *japonica* Fischer, 1829; *jordansi* Schwarz, 1930; *kozlovi* Satunin, 1905; *longiceps* Bechstein, 1800; *longipilis* Zukowsky, 1915; *lowei* Pocock, 1944; *lybica* Forster, 1780; *lybiensis* Kerr, 1792; *lynesi* Pocock, 1944; *macrothrix* Zukowsky, 1915; *madagascariensis* Kerr, 1792; *maniculata* Temminck, 1824; *matschiei* Zukowsky, 1914; *mauritana* Cabrera, 1906; *mediterranea* Martorelli, 1896; *megalotis* Mller, 1839; *mellandi* Schwann, 1904; *molisana* Altobello, 1921; *morea* Trouessart, 1904; *murgabensis* Zukowsky, 1914; *namaquana* Thomas, 1926; *nandae* Heller, 1913; *nesterovi* Birula, 1916; *nubiensis* Kerr, 1792; *obscura* Desmarest, 1822; *ocreata* Gmelin, 1791; *ornata* Gray, 1830; *pulchella* Gray, 1837; *pyrrhus* Pocock, 1944; *reyi* Lavauden, 1929; *ruber* Gmelin, 1788; *rubida* Schwann, 1904; *ruppelii* Schinz, 1825; *rusticana* Thomas, 1928; *salvanicola*

Dekeyser, 1950; *sarda* Lataste, 1885; *schnitnikovi* Birula, 1914; *servalina* Jardine, 1834; *shawiana* Blanford, 1876; *siamensis* Trouessart, 1904; *sinensis* Kerr, 1792; *striatus* Bechstein, 1800; *syriaca* Fischer, 1829; *taitae* Heller, 1913; *tartessia* Miller, 1907; *torquata* Blyth, 1863; *tralatitia* Fischer, 1829; *trapezia* Blackler, 1916; *tristrami* Pocock, 1944; *ugandae* Schwann, 1904; *vernayi* Roberts, 1932; *vulgaris* Fischer, 1829; *xanthella* Thomas, 1926.

COMMENTS: Revised by Ragni and Randi (1986), who included *libyca*, and by Haltenorth (1953), who included *chutuchta*, *libyca*, and *vellerosa*; however, *chutuchta* and *vellerosa* were placed in *bieti* in Pocock's (1951) revision, provisionally followed here. Includes *F. catus* (worldwide), which was domesticated from this species (Corbet, 1978c:181). Ellerman and Morrison-Scott (1951) argued that *lybica* Foster, 1780, was a *lapsus* for *libyca*; however, there is no clear internal evidence that the name was misspelled (Meester et al., 1986). Rosevear (1974), Ansell (1978), Smithers (1983), and Meester et al. (1986) retained *lybica* as separate from *silvestris*.

Herpailurus Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:390.

TYPE SPECIES: *Felis yagouarondi* Lacépède, 1809, by monotypy.

Herpailurus yagouarondi (Lacépède, 1809). In Azara, Voy. Am. Mérid., Atlas, 1809: pl. 10.

TYPE LOCALITY: "Paraguay", restricted by Hershkovitz (1951) to "Cayenne, French Guiana".

DISTRIBUTION: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Nicaragua, Panama, Paraguay, Peru, Mexico, Surinam, USA (Arizona and Texas), Venezuela.

STATUS: CITES - Appendix I (North and Central American populations); otherwise Appendix II. U.S. ESA - Endangered as *F. y. cacomitli*, *F. y. fossata*, *F. y. panamensis*, and *F. y. tolteca*; IUCN - Indeterminate.

SYNONYMS: *ameghinoi* Holmberg, 1898; *apache* Mearns, 1901; *cacomitli* Berlandier, 1859; *darwini* Martin, 1837; *eira* Desmarest, 1816; *eyra* Fischer, 1814; *fossata* Mearns, 1901; *melantho* Thomas, 1914; *panamensis* Allen, 1904; *tolteca* Thomas, 1898; *unicolor* Traill, 1819.

COMMENTS: Others have used *yagouarondi* É. Geoffroy Saint-Hilaire, 1803, or *yagouarondi* Desmarest, 1816, however, the former was never officially published (see Appendix I) and the latter is a junior synonym. Placed in *Herpailurus* by Weigel (1961), Hemmer (1978), and Kratochvíl (1982c).

Leopardus Gray, 1842. Ann. Mag. Nat. Hist., [ser. 1], 10:260.

TYPE SPECIES: *Leopardus griseus* Gray, 1842 (= *Felis pardalis* Linnaeus, 1758), by subsequent designation by Pocock (1916b:316).

SYNONYMS: *Margay* Gray, 1867; *Oncilla* Allen, 1919; *Oncoides* Severtzov, 1858; *Pardalis* Gray, 1867.

COMMENTS: Revised by Allen (1919a) and Pocock (1941b). Considered at the subgeneric level by Cabrera (1958), who also included *Oncifelis geoffroyi* and *O. guigna* (but not *O. colocolo*). Hemmer (1978) placed *tigrinus* in *Oncifelis*.

Leopardus pardalis (Linnaeus, 1758). Syst. Nat., 10th ed., 1:42.

TYPE LOCALITY: "America", restricted to "Mexico", by Thomas (1911a:136), further restricted by Allen (1919a:345) to "State of Vera Cruz".

DISTRIBUTION: N Argentina, Belize, E Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, E Peru, Surinam, Trinidad, USA (Arizona and Texas), Uruguay, Venezuela.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *aequatorialis* Mearns, 1902; *albescens* Pucheran, 1855; *armillatus* F. Cuvier, 1832; *brasiliensis* Schinz, 1844; *buffoni* Brass, 1911; *canescens* Swainson, 1838; *chati* Gray, 1827; *chibigouazou* Gray, 1827; *chibiguazu* Fischer, 1830; *costaricensis* Mearns, 1902; *griffithii* Fischer, 1830; *griseus* Gray, 1842; *hamiltoni* Fischer, 1830; *limitis* Mearns, 1901; *ludoviciana* Brass, 1911; *maracaya* Wagner, 1841; *maripensis* J. A. Allen, 1904; *mearnsi* J. A. Allen, 1904; *melanura* Ball, 1844; *mexicana* Kerr, 1792; *minus* Wilson, 1860; *mitis* F. Cuvier, 1820; *nelsoni* Goldman, 1925; *ocelot* Link, 1795; *pseudopardalis* Boitard, 1842; *pusea* Thomas, 1914; *sanctaemartae* J. A. Allen, 1904; *smithii* Swainson, 1838; *sonoriensis* Goldman, 1925; *steinbachi* Pocock, 1941; *tumatumari* J. A. Allen, 1915.

COMMENTS: Placed in *Leopardus* by Allen (1919a:345), Weigel (1961), Hemmer (1978), and Kratochvíl (1982c).

Leopardus tigrinus (Schreber, 1775). Die Säugethiere, 2(15):pl. 106[1775]; text, 3(23):396[1777].

TYPE LOCALITY: "südlichen Amerika", restricted by Allen (1919a:356), to "Cayenne" [French Guiana].

DISTRIBUTION: N Argentina, Brazil, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Paraguay, Peru, Surinam, Venezuela.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *andina* Thomas, 1903; *carrikeri* J. A. Allen, 1904; *caucensis* J. A. Allen, 1915; *elenae* J. A. Allen, 1915; *emerita* Thomas, 1912; *emiliae* Thomas, 1914; *geoffroyi* Elliot, 1872; *guttula* Hensel, 1872; *margay* Müller, 1776; *oncilla* Thomas, 1903; *pardinoides* Gray, 1867.

COMMENTS: Placed in *Leopardus* by Allen (1919a:345), Weigel (1961), and Kratochvíl (1982c); placed in *Oncifelis* (with *O. guigna* and *O. geoffroyi*) by Hemmer (1978). *L. tigrinus* shares a derived chromosomal number with *pardalis* and *wiedii* (Wurster-Hill, 1973). Includes *Felis pardinoides* (Cabrera, 1958:286); Allen (1919a:345) and Weigel (1961) considered *pardinoides* as distinct, but closely related to *tigrinus*.

Leopardus wiedii (Schinz, 1821). In G. Cuvier, Das Thierreich, 1:235.

TYPE LOCALITY: "Brasilien", restricted by Allen (1919a:357) to "northern Espirito Santo, Brazil", and further restricted by Cabrera (1958:290), to "Brasil, restringida al Morro de Arará, sobre el rio Mucurí, estado de Bafa".

DISTRIBUTION: N Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Surinam, USA (Texas), Uruguay, Venezuela.

STATUS: CITES - Appendix I; U.S. ESA - Endangered (from Mexico southward); IUCN - Vulnerable.

SYNONYMS: *amazonica* Cabrera, 1917; *andina* Allen, 1916; *boliviae* Pocock, 1941; *catenata* H. Smith, 1827; *cooperi* Goldman, 1943; *elegans* Lesson, 1830; *geoffroyi* Rochebrune, 1895; *glaucula* Thomas, 1903; *ludovici* Lönnberg, 1925; *macroura* Wied, 1823; *macrura* Hensel, 1872; *mexicana* Saussure, 1860; *nicaraguae* J. A. Allen, 1919; *oaxacensis* Nelson and Goldman, 1931; *pardictis* Pocock, 1941; *pirrensis* Goldman, 1914; *salvinia* Pocock, 1941; *sanctaemartae* Allen, 1906; *tigrinoides* Gray, 1842; *vigens* Thomas, 1904; *yucatanica* Nelson and Goldman, 1931.

COMMENTS: Placed in *Leopardus* by Weigel (1961), Hemmer (1978), and Kratochvíl (1982c). Allen (1919a) and Weigel (1961) suggested that *wiedii* (in part) may be conspecific with *tigrinus*; however, Hemmer (1978) considered differences between *wiedii* and *tigrinus* to warrant generic distinction.

Leptailurus Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:389.

TYPE SPECIES: *Felis serval* Schreber, 1776, by monotypy.

Leptailurus serval (Schreber, 1776). Die Säugethiere, 3(16):pl. 108[1776]; text 3(23):407[1777].

TYPE LOCALITY: "Ostindien und Tibet in gebirgegen Gegenden, vielleicht auch am Vorgebirge der guten Hofnung und dem heissern Afrika"; restricted by Allen (1924) to the "Cape region of South Africa".

DISTRIBUTION: Algeria, Angola, Benin, Botswana, Burundi, Cameroon, Central African Republic, Chad, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, N Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zaire, Zambia, Zimbabwe; formerly in Morocco.

STATUS: CITES - Appendix II; U.S. ESA - Endangered as *F. s. constantina*.

SYNONYMS: *algericus* Fischer, 1829; *beirae* Wroughton, 1910; *brachyura* Wagner, 1841; *capensis* Forster, 1781; *constantina* Forster, 1780; *faradjius* Allen, 1924; *ferrarii* de Beaux, 1924; *galeopardus* Desmarest, 1820; *hamiltoni* Roberts, 1931; *hindei* Wroughton, 1910; *ingridi* Lundholm, 1955; *kempi* Wroughton, 1910; *kivuensis* Lönnberg, 1919; *larseni* Thomas, 1913; *limpopoensis* Roberts, 1926; *liposticta* Pocock, 1907; *lonnbergi* Cabrera, 1910; *mababiensis* Roberts, 1932; *niger* Lönnberg, 1897; *ogilbyi* Schinz, 1844; *pantasticta* Pocock, 1907; *phillipsi* Allen, 1914; *pococki* Cabrera, 1910; *poliotricha* Pocock, 1907;

senegalensis Lesson, 1839; *servalina* Ogilby, 1839; *tanae* Pocock, 1944; *togoensis* Matschie, 1893.

COMMENTS: Placed in *Leptailurus* by Weigel (1961), Hemmer (1978), and Kratochvíl (1982c); Groves (1982a) considered *Leptailurus* a subgenus of *Felis*.

Lynx Kerr, 1792. In Linnaeus, Anim. Kingdom, 1:155.

TYPE SPECIES: *Felis lynx* Linnaeus, 1758; type species by absolute tautonymy (Melville and Smith, 1987).

SYNONYMS: *Cervaria* Gray, 1867; *Eucervaria* Palmer, 1903; *Lynchus* Jardine, 1834; *Lynceus* Gray, 1821; *Lyncus* Gray, 1825; *Pardina*; Kaup, 1829.

COMMENTS: Revised by Matyushkin (1979), Werdelin (1981), and García-Perea (1992), who recognized the generic status of *Lynx*; Groves (1982a) and Hemmer (1978) considered *Lynx* a subgenus of *Felis*.

Lynx canadensis Kerr, 1792. In Linnaeus, Anim. Kingdom, 1:157.

TYPE LOCALITY: "Canada"; listed in Miller (1912b) as "Eastern Canada".

DISTRIBUTION: Taiga zone of North America, south to C Utah and SW Colorado, NE Nebraska, S Indiana, and West Virginia (USA).

STATUS: CITES - Appendix II.

SYNONYMS: *mollipilosus* Stone, 1900; *subsolanus* Bangs, 1897.

COMMENTS: Considered distinct from *L. lynx* by Kurtén and Anderson (1980), Matyushkin (1979), Werdelin (1981), and García-Perea (1992). Weigel (1961) and Tumlison (1987) considered these taxa conspecific.

Lynx lynx (Linnaeus, 1758). Syst. Nat., 10th ed., 1:43.

TYPE LOCALITY: "Europæ sylvis and desertis", subsequently restricted by Thomas (1911a:136) to "Wennersborg, S. Sweden".

DISTRIBUTION: Taiga forests from Scandinavia through E Siberia and Sakhalin; from China (Gansu, Qinghai, Shaanxi, and Sichuan) through montane Europe (formerly widespread, now restricted to Balkans, Carpathians, Pyreneans [French side], and Alps; reintroduced to French Vosges and Jura Mt., Swiss Alps, Austria, and Yugoslavia).

STATUS: CITES - Appendix II.

SYNONYMS: *borealis* Thunberg, 1798; *carpathicus* Kratochvíl and Stollmann, 1963; *cervaria* Temminck, 1824; *dinniki* Satunin, 1915; *isabellina* Blyth, 1847; *kamensis* Satunin, 1904; *kozlovi* Fetisov, 1950; *lupulinus* Thunberg, 1825; *lyncula* Nilsson, 1820; *martinoi* Miric, 1978; *neglectus* Stroganov, 1962; *orientalis* Satunin, 1905; *stroganovi* Heptner, 1969; *tibetanus* Gray, 1863; *vulgaris* Kerr, 1792; *vulpinus* Thunberg, 1825; *wardi* Lydekker, 1904; *wrangeli* Ognev, 1928.

COMMENTS: Does not include *L. canadensis* or *L. pardina*, following Matyushkin (1979), García-Perea (1992), and Werdelin (1981). Includes *isabellina* (Gao, in Gao, 1987:336). Reviewed by Tumlison (1987, Mammalian Species, 269, as *Felis lynx*).

Lynx pardinus (Temminck, 1827). Monogr. Mamm., 1:116.

TYPE LOCALITY: "Portugal, puisque le commerce reçoit des peaux préparées de Lisbonne, et que M. le baron de Vionénil tua, en 1818, sur les bords du Tage, à dix lieues de Lisbonne".

DISTRIBUTION: SW Spain and Portugal.

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

SYNONYMS: *pardella* Miller, 1907.

COMMENTS: Given specific status by Matyushkin (1979), García-Perea (1992), and Werdelin (1981); however Weigel (1961) and Tumlison (1987) considered *pardinus* conspecific with *L. lynx*.

Lynx rufus (Schreber, 1777). Säugethiere, 3(25):pl. 109.B[1777]; text 3(24):412[1777].

TYPE LOCALITY: "Provinz New York in Amerika".

DISTRIBUTION: S British Columbia to Nova Scotia (Canada), south to Oaxaca (Mexico).

STATUS: CITES - Appendix II. U.S. ESA - Endangered as *Felis rufus escuinapae*.

SYNONYMS: *baileyi* Merriam, 1890; *californicus* Mearns, 1897; *eremicus* Mearns, 1897; *escuinapae* Allen, 1903; *fasciatus* Rafinesque, 1817; *floridanus* Rafinesque, 1817; *gigas* Bangs, 1897; *maculata* Horsfield and Vigors, 1829; *montanus* Rafinesque, 1817; *oaxacensis* Goodwin, 1963; *oculeus* Bangs, 1899; *pallescens* Merriam, 1899; *peninsularis*

Thomas, 1898; *superiorensis* Peterson and Downing, 1952; *texensis* Allen, 1895; *uinta* Merriam, 1902.

Oncifelis Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:386.

TYPE SPECIES: *Felis geoffroyi* d'Orbigny and Gervais, 1842, by monotypy.

SYNONYMS: *Dendrailurus* Severtzov, 1858; *Lynchailurus* Severtzov, 1858; *Noctifelis* Severtzov, 1858; *Pajeros* Gray, 1867.

COMMENTS: Although there is general agreement as to the monophyletic nature of this genus, some have chosen to emphasize the distinctiveness of *O. colocolo* and placed it in monotypic *Lynchailurus*. Cabrera (1958) suggested that *O. geoffroyi* and *O. guigna* were more closely related to taxa considered here under *Leopardus* rather than to *O. colocolo*, which he placed in a separate subgenus. Hemmer (1978) also included *L. tigrinus* in this genus.

Oncifelis colocolo (Molina, 1782). Sagg. Stor. Nat. Chile, p. 295.

TYPE LOCALITY: "che abitano i boschi del Chili", restricted by Osgood (1943) to "Province of Valparaiso" [Chile].

DISTRIBUTION: Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Peru, Uruguay.

SYNONYMS: *albescens* Fitzinger, 1869; *braccata* Cope, 1889; *budini* Pocock, 1941; *crepoi* Cabrera, 1957; *crucina* Thomas, 1901; *garleppi* Matschie, 1912; *huina* Pocock, 1941; *munoi* Ximénez, 1961; *neumayeri* Matschie, 1912; *pajeros* Desmarest, 1816; *pampa* Schinz, 1831; *pampanus* Gray, 1867; *passerum* Sclater, 1871; *steinbachi* Pocock, 1941; *thomasi* Lönnberg, 1913.

COMMENTS: The validity of *colocolo* was questioned by Osgood (1943), with the next available name that of *pajeros* Desmarest, 1816 (used by Weigel, 1961; Hemmer, 1978; Král and Zima, 1980; and Kratochvíl, 1982c). However, Wolffsohn (1908) and Cabrera (1940, 1958) defended the original description.

Oncifelis geoffroyi (d'Orbigny and Gervais, 1844). Bull. Sci. Soc. Philom. Paris, 1844:40.

TYPE LOCALITY: "des rives du Rio Negro, en Patagonie".

DISTRIBUTION: Argentina, Andean Bolivia, S Paraguay, S Brazil, Uruguay.

STATUS: CITES - Appendix I.

SYNONYMS: *euxanthus* Pocock, 1940; *himalayanus* Gray, 1843; *leucobaptus* Pocock, 1940; *macdonaldi* Marelli, 1932; *melas* Bertoni, 1914; *paraguae* Pocock, 1940; *pardoides* Gray, 1867; *salinarum* Thomas, 1903; *warwickii* Gray, 1867.

COMMENTS: Revised by Pocock (1940b) and reviewed by Ximenez (1975, Mammalian Species, 54, as *Felis geoffroyi*). Placed in *Oncifelis* by Allen (1919a), Weigel (1961), Hemmer (1978), Král and Zima (1980), and Kratochvíl (1982c). Ximenez (1975) followed Cabrera (1958), and placed *geoffroyi* in subgenus *Leopardus* of *Felis*. Includes *F. pardoides* (Cabrera, 1958:280).

Oncifelis guigna (Molina, 1782). Sagg. Stor. Nat. Chile, p. 295.

TYPE LOCALITY: "Chili", restricted by Thomas (1903:240) to "Valdivia" [Chile].

DISTRIBUTION: Argentina and Chile.

STATUS: CITES - Appendix II.

SYNONYMS: *guina* Philippi, 1870; *molinae* Osgood, 1943; *santacruzensis* Artayeta, 1950; *tigrillo* Schinz, 1844.

COMMENTS: Placed in *Oncifelis* by Weigel (1961) and Hemmer (1978). Placed in subgenus *Leopardus* of *Felis* by Cabrera (1958).

Oreailurus Cabrera, 1940. Notas Mus. La Plata 5(29):16.

TYPE SPECIES: *Felis jacobita* Cornalia, 1865, by original designation.

Oreailurus jacobita (Cornalia, 1865). Mem. Soc. Ital. Sci. Nat., 1:3.

TYPE LOCALITY: "Bolivia, circa Potosi et Humacuaca in montibus sat elevatis"; further clarified by Cabrera (1958:297) as "Sur del departamento boliviano de Potosi, cerca de la frontera argentina, entre Potosi y Humahuaca".

DISTRIBUTION: NW Argentina, SE Bolivia, NE Chile, S Peru.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Rare.

COMMENTS: Placed in *Oreailurus* by Cabrera (1940), Weigel (1961), and Hemmer (1978). Later, Cabrera (1958:297) reconsidered *Oreailurus* as a subgenus of *Felis*.

Otocolobus Brandt, 1842. Bull. Sci. Acad. Imp. Sci. St. Petersburg, 9:col. 38.

TYPE SPECIES: *Felis manul* Pallas, 1776, by original designation.

SYNONYMS: *Trichaelurus* Satunin, 1905.

COMMENTS: Palmer (1904:487) and Allen (1938) believed that *Otocolobus* Severtzov, 1858, was a junior homonym of *Otocolobus* Brandt, 1844, a subgenus of *Sciuridae*, and suggested using *Trichaelurus* Satunin, 1905. Brandt apparently reassigned the generic name in 1844 after his initial use for a felid in 1842.

Otocolobus manul (Pallas, 1776). Reise Prov. Russ. Reichs., 3:692.

TYPE LOCALITY: "Frequens in rupestribus, apricis totius Tatariae Mongoliaeque desertae". Listed in Honacki et al. (1982) as "U.S.S.R., S.W. Transbaikalia, Buryat. Mongolsk. A.S.S.R.; S. of Lake Baikal, Kulusutai".

DISTRIBUTION: Steppe and semidesert from Caspian Sea to Kashmir, Transbaikalia, Mongolia, and C China, north to Inner Mongolia and east to Hopei.

STATUS: CITES - Appendix II.

SYNONYMS: *ferrugineus* Ognev, 1928; *mongolicus* Satunin, 1905; *nigripictus* Hodgson, 1842; *satuni* Lydekker, 1907.

COMMENTS: Revised by Pocock (1907), Birula (1913, 1916), Ognev (1935), and Schwangart (1936).

Prionailurus Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:387.

TYPE SPECIES: *Felis pardochrous* Hodgson, 1844 (= *Felis bengalensis* Kerr, 1792), by original designation.

SYNONYMS: *Ictailurus* Severtzov, 1858; *Mayailurus* Imaizumi, 1967; *Viverriceps* Gray, 1867; *Zibethailurus* Severtzov, 1858.

COMMENTS: Although there is little dispute that these four taxa are distinct and represent a single monophyletic group, some have chosen to emphasize their distinctiveness by placing them in monotypic genera.

Prionailurus bengalensis (Kerr, 1792). In Linnaeus, Anim. Kingdom, 1:151.

TYPE LOCALITY: "Bengal" [India].

DISTRIBUTION: Afghanistan, Bangladesh, Burma, Cambodia, China, India, Indonesia, Japan (Tsushima and Iriomote Isls), Korea, Laos, Malaysia, Nepal, Pakistan, Philippine Isls, Taiwan, Thailand, republics of the former USSR, and Vietnam.

STATUS: CITES - Appendix I as *Felis bengalensis bengalensis* (except for Chinese population); otherwise Appendix II. U.S. ESA - Endangered; IUCN - Endangered as *F. iriomotensis*.

SYNONYMS: *alleni* Sody, 1949; *anastasiae* Satunin, 1905; *borneoensis* Brongersma, 1935; *chinensis* Gray, 1837; *elliotti* Gray, 1842; *euptilura* Elliot, 1871; *horsfieldi* Gray, 1842; *ingrami* Bonhote, 1903; *iriomotensis* Imaizumi, 1967; *javanensis* Desmarest, 1816; *manchurica* Mori, 1922; *microtis* Milne-Edwards, 1872; *minuta* Temminck, 1827; *nipalensis* Horsfield and Vigors, 1829; *pardochrous* Hodgson, 1844; *raddei* Trouessart, 1904; *reevesii* Gray, 1843; *ricketti* Bonhote, 1903; *scripta* Milne-Edwards, 1872; *sumatrana* Horsfield, 1821; *tenasserimensis* Gray, 1867; *tingia* Lyon, 1908; *trevelyani* Pocock, 1939; *undata* Radde, 1862; *wagati* Gray, 1867.

COMMENTS: Placed in *Prionailurus* by Pocock (1917), Weigel (1961), Hemmer (1978), Groves (1982a), and Kratochvíl (1982c). Includes *euptilura* following Allen (1939) and Gao (in Gao, 1987). Heptner (1971) and Gromov and Baranova (1981), considered *euptilura* a distinct species; however, Gao (in Gao, 1987) pointed out that Heptner compared Russian specimens with those from Southeast Asia, whereas when intervening Chinese populations are included, his distinctions do not hold. Includes *minuta* following Chasen (1940). Imaizumi (1967) described *Mayailurus iriomotensis*, but his key characters are polymorphic in *bengalensis* (Glass and Todd, 1977; Petzsch, 1970). Groves (1982a) believed that *iriomotensis* warranted species level recognition.

Prionailurus planiceps (Vigors and Horsfield, 1827). Zool. J., 3:449.

TYPE LOCALITY: "Sumatra" [Indonesia].

DISTRIBUTION: Peninsular Thailand and Malaysia; Indonesia (Sumatra, Borneo).

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Indeterminate.

COMMENTS: Placed in *Prionailurus* by Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a).

- Prionailurus rubiginosus* (I. Geoffroy Saint-Hilaire, 1831). In Bélanger (ed.), Voy. Indes Orient., Mamm., 3(Zoologie):140.
 TYPE LOCALITY: "bois de lataniers qui couvrent une hauteur voisine de Pondichéry" [India, Pondicherry].
 DISTRIBUTION: India and Sri Lanka (see Chakraborty, 1978).
 STATUS: CITES - Appendix I (Indian population), otherwise Appendix II; IUCN - Insufficiently known.
 SYNONYMS: *koladivinus* Deraniyagala, 1956; *phillipsi* Pocock, 1939.
 COMMENTS: Placed in *Prionailurus* by Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a).
- Prionailurus viverrinus* (Bennett, 1833). Proc. Zool. Soc. Lond., 1833:68.
 TYPE LOCALITY: "from the continent of India".
 DISTRIBUTION: Bangladesh, Burma, S China, India, Indonesia, Malaysia, Nepal, Pakistan, Sri Lanka, Taiwan, Thailand, and Vietnam.
 STATUS: CITES - Appendix II.
 SYNONYMS: *bennettii* Gray, 1867; *himalyanus* Jardine, 1834; *rizophoreus* Sody, 1936; *viverriceps* Hodgson, 1836.
 COMMENTS: Placed in *Prionailurus* by Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a).
- Profelis Severtzov*, 1858. Revue Mag. Zool. Paris, ser. 2, 10:386.
 TYPE SPECIES: *Felis celidogaster* Temminck, 1827 (= *Felis aurata* Temminck, 1827), by monotypy.
- Profelis aurata* (Temminck, 1827). Monogr. Mamm., 1:120.
 TYPE LOCALITY: "Nous ne savons pas au juste dans quelle partie du globe a été trouvé"; fixed by Van Mensch and Van Bree (1969) to "probably the coastal region of Lower Guinea (Between Cross River and River Congo. . .)".
 DISTRIBUTION: N Angola, Burundi, Cameroon, Central African Republic, Gabon, Gambia, Ghana, Kenya, Liberia, Nigeria, Rwanda, Sierra Leone, Uganda, S Zaire.
 STATUS: CITES - Appendix II.
 SYNONYMS: *celidogaster* Temminck, 1827; *chalybeata* H[amilton]. Smith, 1827; *chrysothrix* Temminck, 1827; *cottoni* Lydekker, 1906; *maka* Van Saceghem, 1942; *neglecta* Gray, 1838; *rutilus* Waterhouse, 1843.
 COMMENTS: Revised by Van Mensch and Van Bree (1969). Placed in *Profelis* by Pocock (1917), Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a). Král and Zima (1980) placed in *Felis*.
- Puma* Jardine, 1834. Natur. Libr., 2:266.
 TYPE SPECIES: *Felis concolor* Jardine, 1834, by original designation.
- Puma concolor* (Linnaeus, 1771). Mantissa Plantarum, 2:522.
 TYPE LOCALITY: "Brassilia", restricted by Goldman (in Young and Goldman, 1946:200); to "Cayenne region, French Guiana".
 DISTRIBUTION: Argentina, Belize, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Guatemala, Guyana, Mexico, Nicaragua, Panama, Paraguay, Peru, Surinam, USA, Venezuela.
 STATUS: CITES - Appendix I as *F. c. coryi*, *F. c. costaricensis*, and *F. c. cougar*; otherwise Appendix II. U.S. ESA - Endangered as *F. c. coryi*, *F. c. costaricensis*, and *F. c. cougar*. IUCN - Endangered as *F. c. coryi* and *F. c. cougar*.
 SYNONYMS: *acrocodia* Goldman, 1943; *anthonyi* Nelson and Goldman, 1931; *araucanus* Osgood, 1943; *arundivaga* Hollister, 1911; *aztecus* Merriam, 1901; *bangsi* Merriam, 1901; *borbensis* Nelson and Goldman, 1933; *browni* Merriam, 1903; *cabrerae* Pocock, 1940; *californica* May, 1896; *capricornensis* Goldman and Young, 1946; *coryi* Bangs, 1899; *costaricensis* Merriam, 1901; *cougar* Kerr, 1792; *floridana* Cory, 1896; *greeni* Nelson and Goldman, 1931; *hippolestes* Merriam, 1897; *hudsoni* Cabrera, 1957; *improcera* Philipps, 1912; *incarum* Nelson and Goldman, 1929; *kaibabensis* Nelson and Goldman, 1931; *mayensis* Nelson and Goldman, 1929; *missoulensis* Goldman, 1943; *nigra* Jardine, 1834; *olympus* Merriam, 1897; *oregonensis* Rafinesque, 1832; *osgoodi* Nelson and Goldman, 1943; *patagonica* Merriam, 1901; *pearsoni* Thomas, 1901; *puma*

Molina, 1782; *punensis* Housse, 1950; *schorgeri* Jackson, 1955; *soasoaranna* Lesson, 1842; *soderstromii* Lönnberg, 1913; *stanleyana* Goldman, 1938; *sucuacuara* Liais, 1872; *vancouverensis* Nelson and Goldman, 1932; *wavula* Lesson, 1842; *youngi* Goldman, 1936.

COMMENTS: Reviewed by Currier, 1983 (Mammalian Species, 200, as *Felis concolor*). Placed in *Puma* by Pocock (1917), Weigel (1961), Hemmer (1978), and Kratochvíl (1982c).

Subfamily Pantherinae Pocock, 1917. Ann. Mag. Nat. Hist. ser. 8, 20:332.

COMMENTS: Type genus: *Panthera* Oken, 1816. Pocock's (1917) original classification for this subfamily placed *Neofelis* in the Felinae.

Neofelis Gray, 1867. Proc. Zool. Soc. Lond., 1867:265.

TYPE SPECIES: *Felis macrocelis* Horsfield, 1825 (= *Felis nebulosa* Griffith, 1821), by subsequent designation by Pocock (1917:343).

COMMENTS: Placed in Pantherinae by Hemmer (1978) and Weigel (1961). Placed in Neofelinae by Kratochvíl (1982c).

Neofelis nebulosa (Griffith, 1821). Gen. Particular Descrip. Vert. Anim. (Carn.), p. 37, pl.

TYPE LOCALITY: "brought from Canton" [China, Guangdong: Guangzhou].

DISTRIBUTION: Burma, Cambodia, China, India, Indonesia, Malaysia, Nepal, Taiwan, Thailand, and Vietnam.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *brachyurus* Swinhoe, 1862; *diardi* Cuvier, 1823; *macrocelis* Horsfield, 1825; *macrosceloides* Hodgson, 1853.

COMMENTS: Placed in *Neofelis* by Pocock (1917), Weigel (1961), Hemmer (1978), and Kratochvíl (1982c). Groves (1982a) placed in *Panthera*.

Panthera Oken, 1816. Lehrb. Naturgesch., ser. 3, 2:1052.

TYPE SPECIES: *Felis pardus* Linnaeus, 1758, by subsequent designation by Allen (1902:378).

SYNONYMS: *Jaguaris* Severtzov, 1858; *Leo* Oken, 1816; *Leonina* Grevé, 1894; *Pardotigris* Kretzoi, 1929; *Pardus* Fitzinger, 1868; *Tigris* Oken, 1816.

COMMENTS: Revised by Hemmer (1966, 1968, 1974). *Panthera* Oken, 1816, has been ruled available (International Commission on Zoological Nomenclature, 1985c). Includes *Tigris* following Pocock (1916b). Van Gelder (1977b:13) included *Panthera* as a synonym of *Felis*.

Panthera leo (Linnaeus, 1758). Syst. Nat., 10th ed., 1:41.

TYPE LOCALITY: "Africa", restricted by Allen (1924:222) to "the Barbary coast region of Africa, or, more explicitly, Constantine, Algeria".

DISTRIBUTION: Present (except in tropical rain forests) in Botswana, Ethiopia, India, Kenya, Malawi, Mali, Mozambique, Namibia, Senegal, Somalia, South Africa, Sudan, Uganda, Zambia, and Zimbabwe. Formerly present but now extinct in Algeria, Arabia, Egypt, Greece, Iran, Iraq, Israel, Libya, Morocco, Pakistan, and Tunisia.

STATUS: CITES - Appendix I as *P. l. persica*; otherwise Appendix II. U.S. ESA and IUCN - Endangered as *P. l. persica*.

SYNONYMS: *adusta* Pocock, 1927; *africanus* Brehm, 1829; *asiaticus* Jardine, 1834; *azandicus* Allen, 1924; *barbaricus* Meyer, 1826; *barbarus* Fischer, 1829; *bengalensis* Bennett, 1829; *bleyenberghi* Lönnberg, 1914; *capensis* Fischer, 1829; *gambianus* Gray, 1843; *gojratensis* Smee, 1833; *hollisteri* Allen, 1924; *indicus* de Blainville, 1843; *kamptzi* Matschie, 1900; *krugeri* Roberts, 1929; *maculatus* Huevelmans, 1955; *massaicus* Neumann, 1900; *melanochaitus* H. Smith, 1842; *nigra* Loche, 1858; *nobilis* Gray, 1867; *nubicus* Blainville, 1843; *nyanzae* Heller, 1913; *persicus* Meyer, 1826; *roosevelti* Heller, 1913; *sabakiensis* Lönnberg, 1905; *senegalensis* Meyer, 1826; *somaliensis* Noack, 1891; *suahelicus* Neumann, 1900; *vernayi* Roberts, 1948; *webbiensis* Zukowsky, 1964.

COMMENTS: Revised by Pocock (1930c). Placed in *Panthera* by Pocock (1930c), Weigel (1961), Kratochvíl (1982c), Hemmer (1978), and Groves (1982a).

Panthera onca (Linnaeus, 1758). Syst. Nat., 10th ed., 1:42.

TYPE LOCALITY: "America meridionali", fixed by Thomas (1911a:136) to "Pernambuco" [Brazil].

DISTRIBUTION: N Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, El Salvador, French Guiana, Guatemala, Guyana, Honduras, S Mexico, Nicaragua, Panama, Paraguay, Peru, Surinam, Venezuela; formerly in USA (Arizona, California, New Mexico, Texas).

STATUS: CITES - Appendix I; U.S. ESA - Endangered (from Mexico southward); IUCN - Vulnerable.

SYNONYMS: *alba* Fitzinger, 1869; *antiqua* Ameghino, 1889; *arizonensis* Goldman, 1932; *boliviensis* Nelson and Goldman, 1933; *centralis* Mearns, 1901; *coxi* Nelson and Goldman, 1933; *fossilis* Ameghino, 1889; *goldmani* Mearns, 1901; *hernandesii* Gray, 1858; *jaguapara* Liais, 1872; *jaguar* Link, 1795; *jagurete* Liais, 1872; *jaguatyrica* Liais, 1872; *madeirae* Nelson and Goldman, 1933; *major* Fischer, 1830; *mexicanae* Hagmann, 1908; *milleri* Nelson and Goldman, 1933; *minor* Fischer, 1830; *nigra* Erxleben, 1777; *notialis* Hollister, 1914; *onssa* Ihering, 1911; *onza* Brehm, 1876; *palustris* Ameghino, 1888; *paraguensis* Hollister, 1914; *paulensis* Nelson and Goldman, 1933; *peruviana* de Blainville, 1843; *proplatensis* Ameghino, 1904; *ramsayi* Miller, 1930; *ucayalae* Nelson and Goldman, 1933; *veraecrucis* Nelson and Goldman, 1933.

COMMENTS: Revised by Nelson and Goldman (1933) and Pocock (1939b). Placed in *Panthera* by Pocock (1939b), Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a). Reviewed by Seymour (1989, Mammalian Species, 340).

Panthera pardus (Linnaeus, 1758). Syst. Nat., 10th ed., 1:41.

TYPE LOCALITY: "Indiis", fixed by Thomas (1911a:135), as "Egypt"; see discussion by Pocock (1930a).

DISTRIBUTION: Afghanistan, Algeria, Angola, Arabia, Botswana, Burma, Cameroon, Central African Republic, Chad, China, Congo, Egypt, Ethiopia, Gabon, Guinea-Bissau, India, Indonesia (Java), Iran, Iraq, Kenya, Korea, Liberia, Laos, Malawi, Malaysia, Mauritania, Morocco, Mozambique, Namibia, Nepal, Niger, Nigeria, Pakistan, Senegal, Sierra Leone, Somalia, South Africa, Sri Lanka, Sudan, Tanzania, Thailand, Tunisia, Turkey, Uganda, republics of the former USSR, Vietnam, Zaire, Zambia, and Zimbabwe.

STATUS: CITES - Appendix I; U.S. ESA - Endangered (except in Africa, in the wild, south of, and including Gabon, Congo, Zaire, Uganda, and Kenya, where this species is Threatened). IUCN - Threatened.

SYNONYMS: *adersi* Pocock, 1932; *adusta* Pocock, 1927; *antinorii* de Beaux, 1923; *antiquorum* Fitzinger, 1868; *barbarus* de Blainville, 1839; *bedfordi* Pocock, 1930; *brockmani* Pocock, 1932; *centralis* Lönnberg, 1917; *chinensis* Gray, 1867; *chui* Heller, 1913; *ciscaucasicus* Satunin, 1914; *delacouri* Pocock, 1930; *fontanierii* A. M. Edwards, 1867; *fortis* Heller, 1913; *fusca* Meyer, 1794; *grayi* Trouessart, 1904; *hanensis* Matschie, 1907; *iturensis* J. A. Allen, 1924; *japonensis* Gray, 1862; *jarvisi* Pocock, 1932; *kotiya* Deraniyagala, 1956; *leopardus* Schreber, 1777; *longicaudata* Valenciennes, 1856; *melanotica* Günther, 1885; *melas* G. Cuvier, 1809; *millardi* Pocock, 1930; *minor* Matschie, 1895; *nanopardus* Thomas, 1904; *niger* Fitzinger, 1868; *nimr* Hemprich and Ehrenberg, 1833; *orientalis* Schlegel, 1857; *palearia* Cuvier, 1832; *perniger* Hodgson, 1863; *poecilura* Valenciennes, 1856; *poliopardus* Brehm, 1863; *puella* Pocock, 1932; *reichenowi* Cabrera, 1918; *ruwenzorii* Camerano, 1906; *saxicolor* Pocock, 1927; *shortridgei* Pocock, 1932; *sindica* Pocock, 1930; *suahelicus* Neumann, 1900; *tulliana* Valenciennes, 1856; *variegata* Wagner, 1841; *varius* Gray, 1843; *villosa* Bonhote, 1903; *vulgaris* Oken, 1816.

COMMENTS: Revised by Pocock (1930a, b, 1932c). Placed in *Panthera* by Pocock (1930a), Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a).

Panthera tigris (Linnaeus, 1758). Syst. Nat., 10th ed., 1:41.

TYPE LOCALITY: "Asia", fixed by Thomas (1911a:135) as "Bengal" [India].

DISTRIBUTION: Bangladesh, Bhutan, Burma, China, Laos, India, Indonesia (Sumatra), Korea, Malaysia, Nepal, Thailand, Vietnam, and republics of the former USSR. Formerly found in Afghanistan, Pakistan, Iran, and Indonesia (Java and Bali).

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

SYNONYMS: *altaica* Temminck, 1844; *amoyensis* Hilzheimer, 1905; *amurensis* Dode, 1871; *balica* Schwarz, 1912; *corbetti* Mazak, 1968; *corensis* Brass, 1904; *lecoqi* Schwarz, 1916; *longipilis* Fitzinger, 1868; *mandshurica* Baykov, 1925; *mikadoi* Satunin, 1915; *mongolica* Lesson, 1842; *nigra* Lesson, 1842; *regalis* Gray, 1842; *septentrionalis* Satunin, 1904; *sondaica* Temminck, 1844; *striatus* Severtzov, 1858; *styani* Pocock, 1929; *sumatrae*

Pocock, 1929; *sumatrana* de Blainville, 1839; *trabata* Schwarz, 1916; *virgata* Illiger, 1815.

COMMENTS: Revised by Pocock (1929), and Mazák (1979, 1981 [Mammalian Species, 152]). Placed in *Panthera* by Pocock (1929), Weigel (1961), Hemmer (1978), Kratochvíl (1982c), and Groves (1982a).

Pardofelis Severtzov, 1858. Rev. Mag. Zool. Paris, ser. 2, 10:387.

TYPE SPECIES: *Felis marmorata* Martin, 1837, by monotypy.

COMMENTS: There is considerable controversy over the correct placement of this genus.

Hemmer (1978), Král and Zima (1980), Groves (1982a), and Kratochvíl (1982c) suggested a close relationship with *Panthera*. Pocock (1932d) and Weigel (1961) suggested a relationship with felines while recognizing similarities with *Panthera*. It is perhaps best considered *incertae sedis*.

Pardofelis marmorata Martin, 1837. Proc. Zool. Soc. Lond., 1836:108 [1837].

TYPE LOCALITY: "Java or Sumatra" [Indonesia], restricted by Robinson and Kloss (1919a:261), to "Sumatra".

DISTRIBUTION: N India and Nepal to Vietnam, Thailand, Malaysia, Sumatra, and Borneo; S China.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Indeterminate.

SYNONYMS: *charltoni* Gray, 1846; *dosul* Hodgson, 1863; *duvaucelli* Hodgson, 1863; *longicaudata* Blainville, 1843; *ogilbii* Hodgson, 1847.

COMMENTS: Revised by Pocock (1932d). Placed in *Pardofelis* by Pocock (1932d), Weigel (1961), Král and Zima (1980), Kratochvíl (1982c), Hemmer (1978), and Groves (1982a).

Uncia Gray, 1854. Ann. Mag. Nat. Hist., ser. 2, 14:394.

TYPE SPECIES: *Felis irbis* Ehrenberg, 1830 (= *Felis uncia* Schreber, 1775), by subsequent designation (Palmer, 1904:710).

COMMENTS: Revised by Pocock (1916b).

Uncia uncia (Schreber, 1775). Die Säugethiere, 2(14):pl. 100[1775]; text, 3(22):386-7[1777].

TYPE LOCALITY: "Barbarey, Persien, Ostindien, und China", restricted by Pocock (1930b:332) to "Altai Mountains". Ognev (1962c:221) disagreed and restricted the locality to "Kopet-Dagh Mountains...the southern slopes of these mountains adjacent to Iran".

DISTRIBUTION: Afghanistan, Bhutan, China, India, Mongolia, Nepal, Pakistan, republics of the former USSR.

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

SYNONYMS: *irbis* Ehrenberg, 1830; *schneideri* Zukowsky, 1950; *uncioides* Horsfield, 1855.

COMMENTS: Revised by Pocock (1930b). Placed in *Uncia* by Pocock (1930b), Weigel (1961), Kratochvíl (1980c), and Heptner and Naumov (1967). Placed in *Uncia* and reviewed by Hemmer (1972, Mammalian Species, 20).

Family Herpestidae Bonaparte, 1845. Cat. Meth. Mamm. Europe, p. 3.

SYNONYMS: Mungotidae Pocock, 1916.

COMMENTS: Type genus: *Herpestes* Illiger, 1811 (Melville and Smith, 1987). For separation of taxa included here from Viverridae (after Simpson, 1945), see comments under Viverridae.

Subfamily Galidiinae Gray, 1865. Proc. Zool. Soc. London, 1864:508 [1865].

Galidia I. Geoffroy Saint-Hilaire, 1837. C. R. Acad. Sci. Paris, 5:580.

TYPE SPECIES: *Galidia elegans* I. Geoffroy Saint-Hilaire, 1837, by monotypy.

Galidia elegans I. Geoffroy Saint-Hilaire, 1837. C. R. Acad. Sci. Paris, 5:581.

TYPE LOCALITY: "Madagascar".

DISTRIBUTION: Endemic to Madagascar.

SYNONYMS: *afra* Kerr, 1792.

- Galidictis* I. Geoffroy Saint-Hilaire, 1839. Mag. Zool., Mamm. Art. No. 5, p. 33, footnote, 37.
 TYPE SPECIES: *Mustela striata* I. Geoffroy Saint-Hilaire, 1837 (= *Viverra fasciata* Gmelin, 1788) by original designation.
 COMMENTS: Gregory and Hellman (1939) separated *Galidictis* from other galidiines and placed it in the Viverridae.
- Galidictis fasciata* (Gmelin, 1788). In Linnaeus, Syst. Nat., 13th ed., 1:92.
 TYPE LOCALITY: Erroneously listed by Gmelin as "in India".
 DISTRIBUTION: Endemic to Madagascar.
 STATUS: IUCN - Indeterminate.
 SYNONYMS: *eximius* Pocock, 1915; *ornatus* Pocock, 1915; *rufa* Grandidier, 1869; *striata* I. Geoffroy Saint-Hilaire, 1839; *vittatus* Schinz, 1844.
- Galidictis grandidieri* Wozencraft, 1986. J. Mammal., 67:561.
 TYPE LOCALITY: "Madagascar".
 DISTRIBUTION: Known only from the spiny desert of SW Madagascar.
 STATUS: IUCN - Insufficiently known.
 COMMENTS: *G. grandidiensis* Wozencraft, 1986 was emended to *G. grandidieri* by Wozencraft (1987).
- Mungotictis* Pocock, 1915. Ann. Mag. Nat. Hist., ser. 8, 16:120.
 TYPE SPECIES: *Galidictis vittatus* Gray, 1848 (= *Galidia decemlineata* Grandidier, 1867).
- Mungotictis decemlineata* (A. Grandidier, 1867). Rev. Mag. Zool. Paris, ser. 2, 19:85.
 TYPE LOCALITY: "à la côte ouest de Madagascar" (pg. 84).
 DISTRIBUTION: Endemic to Madagascar.
 STATUS: IUCN - Vulnerable.
 SYNONYMS: *lineatus* Pocock, 1915; *substriatus* Pocock, 1915; *vittatus* Gray, 1848.
- Salanoia* Gray, 1865. Proc. Zool. Soc. Lond., 1864:523 [1865].
 TYPE SPECIES: *Galidia concolor* I. Geoffroy Saint-Hilaire, 1837.
- Salanoia concolor* (I. Geoffroy Saint-Hilaire, 1837). C. R. Acad. Sci. Paris, 5:581.
 TYPE LOCALITY: "Madagascar".
 DISTRIBUTION: Endemic to Madagascar.
 STATUS: IUCN - Insufficiently known.
 SYNONYMS: *olivacea* I. Geoffroy Saint-Hilaire, 1839; *unicolor* I. Geoffroy Saint-Hilaire, 1837.
 COMMENTS: Geoffroy Saint-Hilaire (1839) noted that his first listed species name, *unicolor*, was a typographical error and should have been *concolor* (Coetzee, 1977b:35).
- Subfamily Herpestinae** Bonaparte, 1845. Cat. Meth. Mamm. Europe, p. 3.
 COMMENTS: Type genus: *Herpestes* Illiger, 1811 (Melville and Smith, 1987). Thomas (1882) proposed a separate monotypic subfamily (Surcatinae) for *Suricata*. Wozencraft (1989b) placed *Crossarchus*, *Cynictis*, *Dologale*, *Helogale*, *Liberiictis*, *Mungos*, *Paracynictis*, and *Suricata* in the Mungotinae but gave no supporting rationale. Fredga's (1972) analysis of chromosomes would support Wozencraft's Mungotinae (with the inclusion of *Bdeogale* and *Ichneumia*). The phylogenetic analysis of allozyme data by Taylor et al. (1991) also supported *Cynictis*, *Suricata*, and *Helogale* as a monophyletic group.
- Atilax* F. G. Cuvier, 1826. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat. Mammifères, pt. 3, 5(54), "Vansire," 2 pp.
 TYPE SPECIES: *Herpestes paludinosus* G. [Baron] Cuvier, 1829, by original designation (Melville and Smith, 1987).
 COMMENTS: Fredga's (1972) comparative chromosome study of mongooses suggested that recognition of *Atilax* as distinct from *Herpestes* would make *Herpestes* paraphyletic. However, allozyme data support *Atilax* as the first early offshoot of the main herpestine branch (Taylor et al., 1991).
- Atilax paludinosus* (G.[Baron] Cuvier, 1829). Regn. Anim., Nouv. ed., 1:158.
 TYPE LOCALITY: "une grand des marais du Cap" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: Algeria, Angola, Botswana, Cameroon, Equatorial Guinea, Ethiopia, Gabon, Ivory Coast, Liberia, Malawi, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Uganda, Zaire, and Zambia.

SYNONYMS: *atilax* Wagner, 1841; *galera* Schreber, 1777; *macrodon* Allen, 1924; *mitis* Thomas, 1902; *mordax* Thomas, 1912; *nigerianus* Thomas, 1912; *paludosus* Gray, 1865; *pluto* Temminck, 1853; *robustus* Gray, 1864; *rubellus* Thomas and Wroughton, 1908; *rubescens* Hollister, 1912; *spadiceus* Cabrera, 1921; *transvaalensis* Roberts, 1933; *urinatrix* Smith, 1829; *vansire* F. Cuvier, 1826; *voangshire* Zimmermann, 1777.

Bdeogale Peters, 1850. Spenersche Z., 25 June, 1850 (unpaginated).

TYPE SPECIES: *Bdeogale crassicauda* Peters, 1852; by subsequent designation by Thomas (1882) (Melville and Smith, 1987).

COMMENTS: Matschie (1895), Pocock (1916a), Coetzee (1977b), Kingdon (1977), and Meester et al. (1986) included *Galeriscus* Thomas, 1894. Rosevear (1974) believed that no one had advanced any "reasoned argument" for combining *Galeriscus* with *Bdeogale*, and followed Schouteden (1945) and Hill and Carter (1941) who considered them distinct; all have agreed that *jacksoni* and *nigripes* are sister groups.

Bdeogale crassicauda Peters, 1852. Monatsb. K. Preuss. Akad. Wiss., Berlin, 1852:81.

TYPE LOCALITY: "Africa orient., Tette, Boror, 17-18° Lat. austr". (pg. 82). Restricted by Moreau et al. (1946:410) to "Tette" [Mozambique].

DISTRIBUTION: Kenya, Malawi, C Mozambique, Tanzania (incl. Zanzibar), S and E Zambia, NE Zimbabwe.

STATUS: IUCN - Endangered as *B. c. omnivora*.

SYNONYMS: *omnivora* Heller, 1913; *puisa* Peters, 1852; *tenuis* Thomas and Wroughton, 1908.

COMMENTS: Reviewed by Taylor (1987, Mammalian Species, 294) and revised by Sale and Taylor (1970).

Bdeogale jacksoni (Thomas, 1894). Ann. Mag. Nat. Hist., ser. 6, 13:522.

TYPE LOCALITY: "Mianzini, Masailand, 8000 feet" (pg. 523). Restricted by Moreau et al.

(1946:410) to "Mianzini. . . a few miles E.S.E. of Naivasha and on the southern end of the Kinangop Plateau. . . 9000 ft" [Kenya].

DISTRIBUTION: C Kenya, SE Uganda.

STATUS: IUCN - Insufficiently known.

COMMENTS: Rosevear (1974) placed *jacksoni* in *Galeriscus*. Kingdon (1977) considered *jacksoni* conspecific with *nigripes*; however, Rosevear (1974) and Coetzee (1977b) noted skull and skin differences.

Bdeogale nigripes Pucheran, 1855. Rev. Mag. Zool. Paris, 7(2):111.

TYPE LOCALITY: "Gubon" [Gabon].

DISTRIBUTION: Nigeria to N Angola.

COMMENTS: Rosevear (1974) placed *nigripes* in *Galeriscus*. Kingdon (1977) considered *jacksoni* conspecific with *nigripes*; however, Rosevear (1974) and Coetzee (1977b) noted skull and skin differences.

Crossarchus F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat. Mammifères, pt. 3, 5(47), "le Mangué" 3 pp., 1 pl.

TYPE SPECIES: *Crossarchus obscurus* F. G. Cuvier, 1825, by original designation (Melville and Smith, 1987).

COMMENTS: Revised by Goldman (1984). Placed in *Mungos* by Hill and Carter (1941). Van Rompaey and Colyn (1992) presented a key to the species.

Crossarchus alexandri Thomas and Wroughton, 1907. Ann. Mag. Nat. Hist., ser. 7, 19:373.

TYPE LOCALITY: "from Banzyville, Ubanghi" [= Mobayi, Zaire, 4°N, 21°11'E (Goldman, 1984)].

DISTRIBUTION: Central African Republic, Congo, Uganda, Zaire.

SYNONYMS: *minor* Goldman, 1984.

Crossarchus ansorgei Thomas, 1910. Ann. Mag. Nat. Hist., ser. 8, 5:195.

TYPE LOCALITY: "Dalla Tando" [= Angola, Ndala Tando, 9°18'S, 14°54'E (Goldman, 1984)].

DISTRIBUTION: N Angola, SE Zaire.

SYNONYMS: *nigricolor*.

COMMENTS: Reviewed by Van Rompaey and Colyn (1992, *Mammalian Species*, 402).

Crossarchus obscurus F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, *Hist. Nat. Mammifères*, pt. 3, 5(47), "Mangue" 3 pp.

TYPE LOCALITY: "côtes occidentales de l'Afrique, et vraisemblablement des parties qui sont au midi de la Gambie" restricted by Cuvier (1829:158) to "Sierra Leone".

DISTRIBUTION: Benin, Cameroon, Central African Republic, Ghana, Ivory Coast, Liberia, Malawi, Nigeria, Sierra Leone.

SYNONYMS: *platycephalus* Goldman, 1984; *somaticus* Thomas, 1895.

COMMENTS: Goldman (1984, 1987) separated central (*C. platycephalus*) from western (*C. obscurus*) African populations based on phenetic differences in skull proportions. Wozencraft (1989b) argued for consideration of these populations as conspecific. Reviewed by Goldman (1987, *Mammalian Species*, 290).

Cynictis Ogilby, 1833. *Proc. Zool. Soc. Lond.*, 1833:48.

TYPE SPECIES: *Cynictis steedmanni* Ogilby, 1833 (= *Herpestes penicillatus* G. Cuvier, 1829).

Cynictis penicillata (G. [Baron] Cuvier, 1829). *Regn. Anim., Nouv. ed.*, 1:158.

TYPE LOCALITY: "du Cap", restricted by Roberts (1951:151) to "Uitenhage, C.P." [South Africa].

DISTRIBUTION: S Angola, Botswana, Namibia, South Africa, SW Zimbabwe.

SYNONYMS: *bechuanae* Roberts, 1932; *brachyura* Roberts, 1924; *bradfieldi* Roberts, 1924; *cinderella* Thomas, 1927; *coombsi* Roberts, 1929; *intensa* Schwann, 1906; *kalaharica* Roberts, 1932; *karasensis* Roberts, 1938; *lepturus* Smith, 1839; *levaillantii* Smith, 1829; *ogilbyi* Smith, 1834; *pallidior* Thomas and Schwann, 1904; *steedmanni* Ogilby, 1833; *typicus* Smith, 1834.

COMMENTS: Revised by Lundholm (1955b).

Dologale Thomas, 1926. *Ann. Mag. Nat. Hist.*, ser. 9, 17:183.

TYPE SPECIES: *Crossarchus dybowskii* Pousargues, 1893, by original designation.

COMMENTS: Revised by Hayman (1936). Although originally placed in *Crossarchus*, most since Hayman (1936) believed this genus to be the sister group to *Helogale*; Allen (1924) identified some specimens of this taxon as *Helogale hirtula robusta*.

Dologale dybowskii (Pousargues, 1893). *Bull. Soc. Zool. Fr.*, 18:51.

TYPE LOCALITY: "Ubangi, Congo Belge", restricted by Moreau et al. (1945:410) to "on the Upper Kemo, a tributary to the north of the Ubangi, about 6°17'N, 19°12'E" [Central African Republic].

DISTRIBUTION: Central African Republic, S Sudan, W Uganda, NE Zaire.

SYNONYMS: *nigripes* Kershaw, 1924; *robusta* Allen, 1924.

COMMENTS: Pousargues (1894) later redescribed the species in detail.

Galerella Gray, 1865. *Proc. Zool. Soc. Lond.*, 1864:564 [1865].

TYPE SPECIES: *Herpestes ochraceus* Gray, 1849 (= *Herpestes sanguineus* Rüppell, 1836) by original designation.

COMMENTS: Revised by Lynch (1981), Watson and Dippenaar (1987), Watson (1990), and Taylor et al. (1991) who considered these taxa a monophyletic group. Crawford-Cabral (1989a:2) regarded these taxa as a "superspecies with several allospecies." These taxa are provisionally separated from *Herpestes (sensu lato)* following these revisions and reviews by Rosevear (1974), Ansell (1978), Smithers (1983), and Meester et al. (1986) (see discussion under *Herpestes*).

Galerella flavescens (Bocage, 1889). *J. Sci. Math. Phys. Nat. Lisboa*, ser 12, 1:179.

TYPE LOCALITY: "Benguella", [Angola].

DISTRIBUTION: S Angola, C and N Namibia.

SYNONYMS: *annulatus* Lundholm, 1955; *nigratus* Thomas, 1928; *shortridgei* Roberts, 1932.

COMMENTS: Included in *sanguinea* by Taylor (1975). The form *flavescens* was not mentioned in Meester et al. (1986) or Watson and Dippenaar's (1987) revision; Crawford-Cabral (1989a) considered *nigratus* conspecific with *flavescens*, the senior synonym. Meester et al. (1986) listed *nigratus* as a synonym of *G. pulverulenta*.

Galerella pulverulenta (Wagner, 1839). Gelehrte. Anz. I.K. Bayer. Akad. Wiss., München., 9:426.

TYPE LOCALITY: "Kap" [Cape of Good Hope, South Africa].

DISTRIBUTION: South Africa, south of 27°S latitude (Bronner, 1990).

SYNONYMS: *apiculatus* Gray, 1865; *basuticus* Roberts, 1936; *caffra* Smith, 1826; *lasti* Wroughton, 1907; *maritimus* Roberts, 1919; *ratlamuchi* Thomas, 1929; *ruddi* Rhomas, 1903; *rufescens* Lorenz, 1898.

COMMENTS: Revised by Lynch (1981) and Watson and Dippenaar (1987), who removed *annulata* and *shortridgei* (considered here as *incertae sedis*) and *nigrata* (placed here in *flavescens*) from *pulverulenta*; although Meester et al. (1986) did not. Crawford-Cabral (1989a) included these taxa with *flavescens*.

Galerella sanguinea (Rüppell, 1836). Neue Wirbelt. Fauna Abyssin. Gehörig. Säugeth., 1:27.

TYPE LOCALITY: "Kordofan" [Sudan].

DISTRIBUTION: Angola, Benin, Botswana, Burkina Faso, Cameroon, Cape Verde Isls, Central African Republic, Congo, Equatorial Guinea, Ethiopia, Ghana, Ivory Coast, Kenya, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

SYNONYMS: *auratus* Thomas and Wroughton, 1908; *badius* Smith, 1838; *bocagei* Thomas and Wroughton, 1905; *bradfieldi* Roberts, 1932; *bruneoochracea* Matschie, 1914; *caldatus* Thomas, 1927; *canus* Wroughton, 1907; *caurinus* Thomas, 1926; *cauui* Smith, 1836; *condradsii* Matschie, 1914; *dasilvai* Roberts, 1938; *dentifer* Heller, 1913; *elegans* Matschie, 1914; *emini* Matschie, 1914; *ererensis* Matschie, 1914; *erlangeri* Matschie, 1914; *erongensis* Roberts, 1946; *flaviventris* Matschie, 1914; *fulvidior* Thomas, 1904; *fuscus* Rüppell, 1835; *galbus* Wroughton, 1909; *galinieri* Guérin and Ferret, 1847; *gracilis* Rüppell, 1835; *granti* Gray, 1864; *ignitoides* Roberts, 1932; *ignitus* Roberts, 1913; *iodoprymnus* Heuglin, 1861; *kalaharicus* Roberts, 1932; *kaokoensis* Roberts, 1932; *khanensis* Roberts, 1932; *lancasteri* Roberts, 1932; *lefebvrei* Desmurs and Prévost, 1850; *lundensis* Monard, 1935; *marae* Matschie, 1914; *melanura* Martin, 1836; *mossambica* Matschie, 1914; *mustela* Schwarz, 1935; *mutgigella* Rüppell, 1835; *mutscheltschela* Heuglin, 1877; *neumanni* Matschie, 1894; *ngamiensis* Roberts, 1932; *nigricaudatus* I. Geoffroy Saint-Hilaire, 1839; *ochraceus* Gray, 1849; *ochromelas* Pucheran, 1855; *okavangensis* Roberts, 1932; *orestes* Heller, 1911; *ornatus* Peters, 1852; *parvipes* Hollister, 1916; *perfulvidus* Thomas, 1904; *phoenicurus* Thomas, 1912; *proteus* Thomas, 1907; *punctulatus* Gray, 1849; *ratlamuchi* Smith, 1836; *rendilis* Lönnberg, 1912; *ruasae* Matschie, 1914; *ruficauda* Heuglin, 1877; *saharae* Thomas, 1925; *schimperii* Matschie, 1914; *swinnyi* Roberts, 1913; *talboti* Thomas and Wroughton, 1907; *turstigi* Matschie, 1914; *ugandae* Wroughton, 1909; *upingtoni* Shortridge, 1934; *venatica* Gray, 1865; *zombae* Wroughton, 1907.

COMMENTS: This enigmatic group, reviewed by Taylor (1975), is represented by several allopatric populations (A situation similar to the *Genetta genetta* complex where they are recognized as conspecific). Watson and Dippenaar (1987), in their revision, argued for the separation of *nigratus* Thomas, 1928 (= *flavescens*), and *swalius* Thomas, 1926, and considered *swinnyi* Roberts, 1913, as *incertae sedis* (included here), although their study did not include representative samples from NE and W Africa. It is believed that *swinnyi* has been extirpated from the type locality (Watson, in litt.). Taylor (1989) suggested that the allopatric *ochraceus* from Somalia warrants full specific status. Certainly, these studies suggests that a thorough revision, inclusive of all of the African forms of *sanguinea* is badly needed.

Galerella swalius (Thomas, 1926). Proc. Zool. Soc. Lond., 1926:292.

TYPE LOCALITY: "Great Brukaros Mountain, 3500'" [Namibia].

DISTRIBUTION: S and C Namibia.

COMMENTS: Included in *sanguinea* by Meester et al. (1989) and Taylor (1975).

Helogale Gray, 1862. Proc. Zool. Soc. Lond., 1861:308 [1862].

TYPE SPECIES: *Herpestes parvulus* Sundevall, 1846, by subsequent designation by Thomas (1882) (Melville and Smith, 1987).

COMMENTS: The number of taxa ascribed to this genus is provisional. Ellerman et al. (1953) recognized 7 species, Allen (1939) listed eleven. The acceptance here of two, follows

Coetzee (1977b). The range of *H. hirtula* is included within that of *H. parvula*.

Helogale hirtula Thomas, 1904. Ann. Mag. Nat. Hist., ser. 7, 14:97.

TYPE LOCALITY: "Gabridehari, 60 mi West of Gerlogobi", restricted by Moreau et al. (1946:410) to "south-east Ethiopia (Ogaden) at about 7°0'N, 45°20'E". Further restricted by Yalden et al. (1980) to "Gabridehari (=Gabredarre, Kebridar) 6°45'N, 44°17'E".

DISTRIBUTION: S Ethiopia, S and C Somalia, N and C Kenya.

SYNONYMS: *ahlselli* Lönnberg, 1912; *annulata* Drake-Brockman, 1912; *lutescens* Thomas, 1911; *powelli* Drake-Brockman, 1912.

Helogale parvula (Sundevall, 1847). Ofv. K. Svenska Vet.-Akad. Forhandl. Stockholm, 1846, 3(4):121 [1847].

TYPE LOCALITY: "Caffraria superiore, juxta tropicum", restricted by Roberts (1951) to "Zoutpansberg" [South Africa].

DISTRIBUTION: Angola, Botswana, Ethiopia, Gambia, Kenya, Malawi, Mozambique, Namibia, Somalia, South Africa, Sudan, Tanzania, Uganda, Zaire, Zambia.

SYNONYMS: *affinis* Hollister, 1916; *atkinsoni* Thomas, 1897; *bradfieldi* Roberts, 1928; *brunetta* Thomas, 1926; *brunnula* Thomas and Schwann, 1906; *ivori* Thomas, 1919; *macmillani* Thomas, 1906; *mimetra* Thomas, 1926; *nero* Thomas, 1928; *ochracea* Thomas, 1910; *parvus* Hollister, 1912; *ruficeps* Kershaw, 1922; *rufula* Thomas, 1910; *undulatus* Peters, 1852; *varia* Thomas, 1902; *vetula* Thomas, 1911; *victorina* Thomas, 1902.

Herpestes Illiger, 1811. Prodr. Syst. Mamm. Avium., p. 135.

TYPE SPECIES: *Viverra ichneumon* Linnaeus, 1758, by absolute tautonymy, through the replaced name *Ichneumon* Lacépède, 1799 (Melville and Smith, 1987).

COMMENTS: Revised by Pocock (1919, 1937, 1941a) and Bechthold (1939). Coetzee (1977b) and Hayman (in Sanderson, 1940) included *Xenogale* (see discussion under *naso*). Allen (1924), considered only *ichneumon* in this genus and separated *sanguineus* and *pulverulentus* into *Galerella*; for support, he contrasted the large *ichneumon* with the smaller *sanguineus-pulverulentus* complex and reported proportional differences in measurements of skeleton and skull. His rationale has been repeated, in some cases verbatim, by Rosevear (1974), Ansell (1978), Smithers (1983), Meester et al. (1986), and Watson and Dippenaar (1987). Taylor et al. (1991) presented an allozyme analysis and argued for generic recognition, however, they did not include Asiatic *Herpestes*, and their consensus tree made the placement of the *sanguineus/pulverulentus* clade equivocal. Fredga's (1972) comparative chromosome analysis looked at variation including Asiatic and African *Herpestes*, and based on this, recognition of *Galerella* would make *Herpestes* paraphyletic. Comparison of measurements from Allen (1924), Rosevear (1974), and Smithers (1983) for African forms, and Bechthold (1939) and Pocock (1941a) for Asiatic forms reveals that the large morphological gaps originally identified by Allen (1924), dissolve when Asiatic species are included. Ellerman et al. (1953) and Wozencraft (1989b) suggested that differences between these taxa and other *Herpestes* are less than those found within *Herpestes*. Morphological criteria similar to that used by Allen (1924) have mostly been used at the specific level in other carnivores. Although the case is not strong, many recent authors have recognized *Galerella* and this is provisionally followed here (see comments under *Galerella*).

Herpestes brachyurus Gray, 1837. Proc. Zool. Soc. Lond., 1836:88 [1837].

TYPE LOCALITY: "Indian Islands", restricted by Kloss (1917) to "Borneo", however, Thomas (1921c) believed it to be from "Malacca". Pocock, in Chasen (1940), believed the type to be a "Malayan Race".

DISTRIBUTION: S India, Indonesia (Borneo, Sumatra), Malaysia, Philippine Isls, Singapore, Sri Lanka, Vietnam.

SYNONYMS: *ceylanicus* Nevill, 1887; *ceylonicus* Thomas, 1924; *dyacorum* Thomas, 1921; *flavidens* Kelaart, 1852; *fulvescens* Kelaart, 1851; *fusca* Waterhouse, 1838; *hosei* Jentink, 1903; *javanensis* Bechthold, 1936; *maccarthiae* Gray, 1851; *palawanus* Allen, 1910; *parvus* Jentink, 1895; *phillipsi* Thomas, 1924; *rafflesii* Anderson, 1875; *rajah* Thomas, 1921; *rubidior* Pocock, 1937; *siccatus* Thomas, 1924; *sumatrius* Thomas, 1921.

COMMENTS: Bechthold (1939), followed here, included *hosei* and *fusca*, and listed characteristics suggesting that in some respects, *semitorquatus* was intermediate between *brachyurus* and *urva*; this was followed by Medway (1977). Bechthold (1939) believed that *fusca* (*sensu stricto*) is most closely related to far-eastern *brachyurus* forms and considered them conspecific (both forms are short tailed mongooses); however, he gave features of the skull and pelage (used elsewhere at the specific level, i.e., *edwardsii* vs. *javanicus*) that distinguished the S India/Sri Lankan populations from those of SE Asia. Here they are provisionally treated as allopatric subspecies. Schwarz (1947) believed *semitorquatus* to be a red color morph of the dark *brachyurus*, although he did not address the most distinguishing feature of the collared mongoose - the collar - present in *semitorquatus* and absent in *brachyurus*. Medway (1977), followed by Payne et al. (1985), recognized *hosei* based on differences in the shape of the coronoid process of the mandible.

Herpestes edwardsii (E. Geoffroy Saint-Hilaire, 1818). *Descrip. de L'Egypte*, 2:139.

TYPE LOCALITY: "Indes orientales".

DISTRIBUTION: Afghanistan, Bahrain, India, Indonesia, Iran, Japan, Kuwait, Malaya (introduced; Wells, 1989), Nepal, Pakistan, Saudi Arabia, Sri Lanka. Populations believed to be introductions on Ryukyu Isls, Mauritius, and Reunion Isl (Corbet and Hill, 1980).

STATUS: CITES - Appendix III (India).

SYNONYMS: *andersoni* Murray, 1884; *carnaticus* Thomas, 1921; *elliotti* Wroughton; *ferrugineus* Blanford, 1874; *fimbriatus* Temminck, 1853; *frederici* Desmarest, 1823; *griseus* E. Geoffroy Saint-Hilaire 1818; *lanka* Wroughton, 1915; *malaccensis* Fischer, 1829; *moerens* Wroughton, 1915; *montanus* Bechthold, 1936; *mungo* Blanford, 1888; *nyula* Hodgson, 1836; *pallens* Ryley, 1914; *pallidus* Wagner, 1841; *pondiceriana* Gervais, 1841; *ruddi* Thomas, 1903.

Herpestes ichneumon (Linnaeus, 1758). *Syst. Nat.*, 10th ed., 1:43.

TYPE LOCALITY: "in Ægypto ad ripas Nili,...in India primario; mansuescit", restricted by Thomas (1911a) to "Egypt".

DISTRIBUTION: Algeria, Angola, Botswana, Cameroon, Chad, Egypt, Ethiopia, Gambia, Ghana, Gibraltar, Guinea, Israel, Italy, Ivory Coast, Jordan, Kenya, Lebanon, Liberia, Lybia, Malawi, Morocco, Mozambique, Niger, Portugal, Rwanda, Senegal, Sierra Leone, South Africa, Spain, Sudan, Syria, Tanzania, Togo, Tunisia, Turkey, Uganda, Zaire, Zambia.

SYNONYMS: *aegyptiae* Tiedemann, 1808; *angolensis* Bocage, 1890; *bennettii* Gray, 1837; *cafra* Gmelin, 1788; *centralis* Lönnberg, 1917; *dorsalis* Gray, 1864; *egypti* Tiedemann, 1808; *ferruginea* Seabra, 1909; *funestus* Osgood, 1910; *grandis* Thomas, 1890; *griseus* Smuts, 1832; *lademanni* Matschie, 1914; *mababiensis* Roberts, 1932; *madagascarensis* Smith, 1834; *major* Geoffroy Saint-Hilaire 1818; *nems* Kerr, 1792; *numidianus* Gray, 1865; *numidicus* Cuvier, 1834; *parvidens* Lönnberg, 1908; *pharaon* Lacépède, 1799; *sabiensis* Roberts, 1926; *sangronizi* Cabrera, 1924; *widdringtonii* Gray, 1842.

Herpestes javanicus (E. Geoffroy Saint-Hilaire, 1818). *Descrip. de L'Egypte*, 2:138.

TYPE LOCALITY: "Java".

DISTRIBUTION: Afghanistan, Bangladesh, Bhutan, Burma, Cambodia, China, India, Indonesia, Malaysia, Nepal, Pakistan, Thailand, Vietnam. Introduced to Cuba, Dominican Republic, Fiji Isls, Hawaiian Isls, Jamaica, Japan, Puerto Rico, Surinam, West Indies, and many other tropical regions.

STATUS: CITES - Appendix III (India) as *H. auropunctatus*.

SYNONYMS: *auropunctata* Hodgson, 1836; *birmanicus* Thomas, 1886; *exilis* Gervais, 1841; *helvus* Ryley, 1914; *incertus* Kloss, 1917; *nepalensis* Gray, 1837; *pallipes* Blyth, 1845; *peninsulae* Schwarz, 1910; *perakensis* Kloss, 1917; *persicus* Gray, 1864; *rubrifrons* Allen, 1909; *rutilus* Gray, 1861; *siamensis* Kloss, 1917.

COMMENTS: Bechthold (1939), Pocock (1941a), and Lekagul and McNealey (1977) included *Mangusta auropunctata*. Wells (1989) discussed the situation for the morphotypes in Indochina. Reviewed by Nellis (1989, *Mammalian Species*, 342, as *H. auropunctatus*).

Herpestes naso de Winton, 1901. *Bull. Liverpool Mus.*, 3:35.

TYPE LOCALITY: "Cameroon River, West Africa" [Cameroon].

DISTRIBUTION: Cameroon, Congo, Equatorial Guinea, Gabon, Kenya, Niger, Tanzania, Zaire.

SYNONYMS: *microdon* Allen, 1919.

COMMENTS: Placed in *Xenogale* by Allen (1919b), and followed by Rosevear (1974) and Ansell (1978). This taxon, and *ichneumon*, which is generally recognized as its sister taxon (Allen, 1919b; Rosevear, 1974; Hayman, in Sanderson, 1940), can be distinguished principally by proportional differences of the interorbital region (Rosevear, 1974). Hayman (in Sanderson, 1940), Wenzel and Haltenorth (1972), and Coetzee (1977b) did not feel these differences were sufficient to warrant generic distinction, as did Allen (1919b), and Rosevear (1974). Recognition of *Xenogale* would make *Herpestes* paraphyletic.

Herpestes palustris Ghose, 1965. Proc. Zool. Soc. Calcutta, 18:174.

TYPE LOCALITY: "Nalbani (c 8 km east of Calcutta), North Salt Lake, 24-Parganas district, West Bengal, India".

DISTRIBUTION: India: West Bengal.

COMMENTS: Wenzel and Haltenorth (1972) speculated that this taxon may be conspecific with *auropunctatus* (= *javanicus*); whereas Ewer (1973), based on Ghose's observation that *palustris* can emit scent similar to *urva* speculated on such a relationship to *urva*.

Herpestes semitorquatus Gray, 1846. Ann. Mag. Nat. Hist., [ser. 1], 18:211.

TYPE LOCALITY: "Borneo" [Mainland opposite Labuan (= Brunei)].

DISTRIBUTION: Indonesia (Borneo and Sumatra).

SYNONYMS: *uniformis* Robinson and Kloss, 1919.

COMMENTS: Schwarz (1947) concluded that *semitorquatus* was a red color morph of the dark *brachyurus*, see comments under *brachyurus*. Placed in subgenus *Urva* by Bechthold (1939).

Herpestes smithii Gray, 1837. Mag. Nat. Hist. [Charlesworth's], 1:578.

TYPE LOCALITY: Not given. Thomas (1923) suggested that it was from the "Bombay Region" but this was questioned by Pocock (1937).

DISTRIBUTION: India, Sri Lanka.

STATUS: CITES - Appendix III (India).

SYNONYMS: *canens* Thomas, 1921; *elliotti* Blyth, 1851; *jerdonii* Gray, 1864; *monticolus* Jerdon, 1867; *rubiginosus* Kelaart, 1852; *rusanus* Thomas, 1921; *thysanurus* Wagner, 1841; *torquatus* Kelaart, 1852; *zeylanus* Thomas, 1921.

Herpestes urva (Hodgson, 1836). J. Asiat. Soc. Bengal, 5:238.

TYPE LOCALITY: "Central and Northern Regions" [Nepal].

DISTRIBUTION: Burma, China, India, Laos, Malaysia (Wells and Francis, 1988), Nepal, Taiwan, Thailand, Vietnam.

STATUS: CITES - Appendix III (India).

SYNONYMS: *annamensis* Bechthold, 1936; *cancrivora* Hodgson, 1837; *formosanus* Bechthold, 1936; *fusca* Gray, 1830; *hanensis* Matschie, 1907; *sinensis* Bechthold, 1936.

Herpestes vitticollis Bennett, 1835. Proc. Zool. Soc. Lond., 1835:67.

TYPE LOCALITY: "in forests about twenty miles inland from Kolun or Quilon, in the Travancore country" [India].

DISTRIBUTION: S India, Sri Lanka.

STATUS: CITES - Appendix III (India).

SYNONYMS: *inornatus* Pocock, 1941; *rubiginosus* Wagner, 1841.

Ichneumia I. Geoffroy Saint-Hilaire, 1837. Ann. Sci. Nat. Zool. (Paris), 8(2):251.

TYPE SPECIES: *Herpestes albicaudus* G. [Baron] Cuvier, 1829, by designation of Geoffroy Saint-Hilaire (1839) (Melville and Smith, 1987).

Ichneumia albicauda (G. [Baron] Cuvier, 1829). Regn. Anim., Nouv. ed., 21:158.

TYPE LOCALITY: "l'Afrique australe et le Sénégal".

DISTRIBUTION: Angola, Botswana, Burkina Faso, Central African Republic, Ghana, Ivory Coast, Kenya, Mozambique, Namibia, Niger, Nigeria, Oman, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Yemen, Zaire, Zambia, Zimbabwe.

SYNONYMS: *abuudan* Fitzinger and Heuglin, 1866; *albescens* I. Geoffroy Saint-Hilaire 1839; *almodovari* Cabrerra, 1902; *dialeucos* Hollister, 1916; *ferox* Heller, 1913; *grandis* Thomas, 1890; *haagneri* Roberts, 1924; *ibeanus* Thomas, 1904; *leucurus* Hemprich and

Ehrenberg, 1833; *loandae* Thomas, 1904; *loempo* Temminck, 1853; *nigricauda* Pucheran, 1855.

COMMENTS: Reviewed by Taylor (1972, Mammalian Species, 12).

Liberiictis Hayman, 1958. Ann. Mag. Nat. Hist., ser. 13, 1:449.

TYPE SPECIES: *Liberiictis kuhni* Hayman, 1958, by original designation.

Liberiictis kuhni Hayman, 1958. Ann. Mag. Nat. Hist., ser. 13, 1:449.

TYPE LOCALITY: "Kpeaplay, north-east Liberia, about 6°36'N, 8°30'W".

DISTRIBUTION: Liberia and Ivory Coast (Taylor, in litt.).

STATUS: IUCN - Endangered.

COMMENTS: Reviewed by Goldman and Taylor (1990, Mammalian Species, 348).

Mungos E. Geoffroy Saint-Hilaire and F. G. Cuvier, 1795. Mag. Encyclop., 2:184, 187.

TYPE SPECIES: Not given; *Viverra mungo* Gmelin, 1788, designated by Muirhead (1819) (Melville and Smith, 1987).

COMMENTS: Allen (1919b) discussed the nomenclatural history of this name.

Mungos gambianus (Ogilby, 1835). Proc. Zool. Soc. Lond., 1835:102.

TYPE LOCALITY: "Gambia".

DISTRIBUTION: Gambia, Ghana, Ivory Coast, Niger, Nigeria, Senegal, Sierra Leone, Togo.

Mungos mungo (Gmelin, 1788). In Linnaeus, Syst. Nat., 13th ed., 1:84.

TYPE LOCALITY: "Bengala, Persia, aliisque asiae", restricted by Ogilby (1835:101) to "Gambia". However, Thomas (1882) believed it to be in the eastern part of South Africa, Cape Prov., as did Roberts (1929).

DISTRIBUTION: Angola, Botswana, Burundi, Cameroon, Central African Republic, Chad, Ethiopia, Guinea-Bissau, Kenya, Malawi, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Somalia, South Africa, Sudan, Tanzania, Uganda, Zaire, Zambia, Zimbabwe.

SYNONYMS: *adailensis* Heuglin, 1861; *bororensis* Roberts, 1929; *colonus* Heller, 1911; *damarensis* Zukowsky, 1956; *fasciatus* Desmarest, 1823; *gothneh* Heuglin and Fitzinger, 1866; *grisonax* Thomas, 1926; *leucostethicus* Heuglin and Fitzinger, 1866; *macrosus* Lydekker, 1907; *macrurus* Thomas, 1907; *mandjarum* Schwarz, 1915; *ngamiensis* Roberts, 1932; *pallidipes* Roberts, 1929; *rossi* Roberts, 1929; *senescens* Thomas and Wroughton, 1907; *somalicus* Thomas, 1895; *taenianotus* Smith, 1834; *talboti* Thomas and Wroughton, 1908; *zebra* Rüppell, 1835; *zebroides* Lönnerberg, 1908.

Paracynictis Pocock, 1916. Ann. Mag. Nat. Hist., ser. 8, 17:177.

TYPE SPECIES: *Cynictis selousi* de Winton, 1896, by original designation (Melville and Smith, 1987).

Paracynictis selousi (de Winton, 1896). Ann. Mag. Nat. Hist., ser. 6, 18:469.

TYPE LOCALITY: "found on a grassy heap under a tree, EssexVale, Matabeleland. . . near Bulawayo" [Zimbabwe].

DISTRIBUTION: Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe.

SYNONYMS: *bechuanae* Roberts, 1932; *ngamiensis* Roberts, 1932; *sengaani* Roberts, 1931.

Rhynchogale Thomas, 1894. Proc. Zool. Soc. Lond., 1894:139.

TYPE SPECIES: *Rhinogale melleri* Gray, 1865, by monotypy through the replaced name *Rhinogale* Gray, 1865.

Rhynchogale melleri (Gray, 1865). Proc. Zool. Soc. Lond., 1864:575 [1865].

TYPE LOCALITY: "from a ravine on the outskirts of the Otto Estate, near Mbwani, about 2½ miles west of Kilosa, Tanganyika Territory" [Tanzania] (pg. 79).

DISTRIBUTION: Malawi, Mozambique, South Africa, Tanzania, Zaire, Zambia, Zimbabwe.

SYNONYMS: *caniceps* Kershaw, 1924; *langi* Roberts, 1938.

Suricata Desmarest, 1804. Tabl. Méth. Hist. Nat., in Nouv. Dict. Hist. Nat., 24:15.

TYPE SPECIES: *Suricata capensis* Desmarest, 1804 (= *Viverra suricatta* Erxleben, 1777), by monotypy (Melville and Smith, 1987).

Suricata suricatta Schreber, 1776. Die Säugethiere, pl. 117 [1776].

TYPE LOCALITY: Listed as "Cape of Good Hope" by Meester et al. (1986), restricted by Thomas and Schwann (1905:133) to "Deelfontein" [South Africa].

DISTRIBUTION: Angola, Namibia, South Africa, S Botswana.

SYNONYMS: *capensis* Desmarest, 1804; *hahni* Thomas, 1927; *hamiltoni* Thomas and Schwann, 1905; *lophurus* Thomas and Schwann, 1905; *marjoriae* Bradfield, 1936; *namaquensis* Thomas and Schwann, 1905; *surakatta* Smith, 1826; *tetradactyla* Pallas 1778; *typicus* Smith, 1834; *viverrina* Desmarest, 1819; *zenik* Scopoli, 1786.

Family Hyaeidae Gray, 1821. London Med. Repos., 15:302.

COMMENTS: Type genus: *Hyaena* Brünnich, 1771, by original designation. Reviewed by Ronnefeld (1969) and revised by Werdelin and Solounias (1991).

Subfamily Hyaeinae Gray, 1821. London Med. Repos., 15:302.

COMMENTS: Type genus: *Hyaena* Brünnich, 1771, by original designation. Mivart (1882) was first to restrict the subfamily to taxa considered here.

Crocota Kaup, 1828. Oken's Isis. Encyclop. Zeit, 21(11), column 1145.

TYPE SPECIES: *Canis crocuta* Erxleben, 1777, by original designation.

COMMENTS: Antedated by *Crocota* Meigen, 1800 (an insect), but this name has been suppressed (International Commission on Zoological Nomenclature, 1962).

Crocota crocuta (Erxleben, 1777). Syst. Regni Anim., 1:578.

TYPE LOCALITY: "Guinea, Aethiopia, ad caput bonae spei in terrae rupiumque caueis", restricted by Cabrera (1911:95) to "Senegambia".

DISTRIBUTION: Angola, Botswana, Cameroon, Ethiopia, Gabon, Gambia, Guinea, Kenya, Malawi, Mauritania, Mozambique, Namibia, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

SYNONYMS: *capensis* Desmarest, 1817; *colvini* Lydekker, 1844; *crocuta* A. Smith, 1826; *cuvieri* Boitard, 1842; *encrita* Smith, 1827; *felina* Lydekker, 1844; *fisi* Heller, 1914; *fortis* Allen, 1924; *gariensis* Matschie, 1900; *germinans* Matschie, 1900; *habessynica* Blainville, 1844; *kibonotensis* Lönnberg, 1905; *leontiewi* Satunin, 1905; *maculata* Thunberg, 1811; *moltei* Matschie, 1900; *nyasae* Cabrera, 1911; *nzoyae* Cabrera, 1911; *panganensis* Lönnberg, 1905; *rufa* Desmarest, 1817; *rufopicta* Cabrera, 1911; *sivalensis* Falconer and Cautley, 1868; *spelaea* Goldfuss, 1823; *thierryi* Matschie, 1900; *thomasi* Cabrera, 1911; *togoensis* Matschie, 1900; *ultima* Matsumoto, 1915; *venustula* Ewer, 1954; *weissmanni* Trouessart, 1904; *wissmanni* Matschie, 1900.

COMMENTS: Revised by Matthews (1939).

Hyaena Brünnich, 1771. Zool. Fundamenta, p. 34, 42, 43.

TYPE SPECIES: *Canis hyaena* Linnaeus, 1758, by original designation.

COMMENTS: Revised by Pocock (1934c). *Hyaena* Brisson, 1762, is unavailable (International Commission on Zoological Nomenclature, 1955). See comments under *Parahyaena* for exclusion of *brunnea* here.

Hyaena hyaena (Linnaeus, 1758). Syst. Nat. 10th ed., 1:40.

TYPE LOCALITY: "India", restricted by Thomas (1911a:134) to "Benna Mts., Laristan, S. Persia".

DISTRIBUTION: Afghanistan, Algeria, Egypt, Ethiopia, India, Iran, Iraq, Israel, Kenya, Libya, Mali, Morocco, Nepal, Nigeria, Pakistan, Saudia Arabia, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, republics of the former USSR, Yemen.

STATUS: U.S. ESA and IUCN - Endangered as *H. h. barbara*.

SYNONYMS: *antiquorum* Temminck, 1820; *barbara* de Blainville, 1844; *bergeri* Matschie, 1910; *bilkiewiczzi* Satunin, 1905; *bokcharensis* Satunin, 1905; *dubbah* Meyer, 1793; *dubia* Schinz, 1821; *fasciata* Thunberg, 1820; *hienomelas* Matschie, 1900; *hyaenomelas* Desmarest, 1820; *indica* de Blainville, 1844; *orientalis* Tiedemann, 1808; *rendilis* Lönnberg, 1912; *satunini* Matschie, 1910; *schillingsi* Matschie, 1900; *striata* Zimmerman, 1777; *suilla* Filippi, 1853; *sultana* Pocock, 1934; *sultana* Pocock, 1934; *syriaca* Matschie, 1900; *virgata* Ogilby, 1840; *vulgaris* Desmarest, 1820; *zarudnyi* Satunin, 1905.

COMMENTS: Reviewed by Rieger (1981, Mammalian Species, 150).

Parahyaena Hendey, 1974. *Ann. S. Afr. Mus.*, 63:149.

TYPE SPECIES: *Hyaena brunnea* Thunberg, 1820.

COMMENTS: Some have considered *Hyaena* to include *brunnea*, however, this would be a paraphyletic group among extant (Werdelin and Solounias, 1991) and/or fossil taxa (Galiano and Frailey, 1977; Hendey, 1974).

Parahyaena brunnea (Thunberg, 1820). *K. Svenska Vet.-Acad. Handl. Stockholm*, p. 59.

TYPE LOCALITY: "Goda Hopps Udden; Södra Afrika" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: Botswana, Mozambique, Namibia, Orange Free State, South Africa, Zimbabwe.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *fusca* Geoffroy Saint-Hilaire, 1825; *makapani* Toerien, 1952; *melampus* Pocock, 1935; *striata* Smith, 1826; *villosa* Smith, 1827.

COMMENTS: Reviewed by Mills (1982, *Mammalian Species*, 194, as *Hyaena brunnea*).

Subfamily Protelinae I. Geoffroy Saint-Hilaire, 1851. *Cat. Méth. Coll. Mamm. Ois. (Mus. Hist. Nat. Paris):xiv*.

COMMENTS: Type genus: *Proteles* I. Geoffroy Saint-Hilaire, 1824, by original designation (Melville and Smith, 1987). Ronnefeld (1969) and Meester et al. (1986) placed *Proteles* in a separate family.

Proteles I. Geoffroy Saint-Hilaire, 1824. *Bull. Sci. Soc. Philom. Paris*, 1824:139.

TYPE SPECIES: *Proteles lalandii* I. Geoffroy Saint-Hilaire, 1824 (= *Viverra cristata* Sparrman, 1783), by original designation (Melville and Smith, 1987).

Proteles cristatus (Sparrman, 1783). *Resa Goda-Hopps-Udden. I.*, 1783:581.

TYPE LOCALITY: English translation (Sparrman, 1786) of original locality: "Agter-Bruntjes hoogte...which takes in the upper part of Kleine Visch-rivier, and is separated from Camdebo by Bruntjes hoogtens..."; listed in Allen (1939) as "Near Little Fish River, Somerset East, Cape Colony" [South Africa].

DISTRIBUTION: Angola, Botswana, Central African Republic, Egypt, Ethiopia, Kenya, Mozambique, Namibia, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe.

STATUS: CITES - Appendix III (Botswana).

SYNONYMS: *canescens* Shortridge and Carter, 1938; *harrisoni* Rothschild, 1902; *hyenoides* Desmarest, 1822; *lalandii* I. Geoffroy Saint-Hilaire, 1824; *pallidior* Cabrera, 1910; *septentrionalis* Rothschild, 1902; *termes* Heller, 1913; *transvaalensis* Roberts, 1932; *typicus* A. Smith, 1833.

COMMENTS: Reviewed by Koehler and Richardson (1990, *Mammalian Species*, 363).

Family Mustelidae Fischer, 1817. *Mém. Soc. Imp. Nat. Moscow*, 5:372.

COMMENTS: For review of subfamily relationships, see Muizon (1982b) and Wozencraft (1989a). Conservation status of family reviewed by Schreiber et al. (1989).

Subfamily Lutrinae Bonaparte, 1838. *Nuovi Ann Sci. Nat.*, 2:111.

COMMENTS: Revised by Pocock (1941a), van Zyll de Jong (1972, 1987, 1991a), and Pohle (1920). Reviewed by Harris (1968) and I. I. Sokolov (1973). Foster-Turley et al. (1990) reviewed the conservation status and distribution of otters.

Amblonyx Rafinesque, 1832. *Atlantic Journal and Friend of Knowledge*, 1(2):62.

TYPE SPECIES: *Lutra concolor* Rafinesque, 1832 (= *Lutra cinerea* Illiger, 1815).

SYNONYMS: *Leptonyx* Lesson, 1842; *Micraonyx* J.A. Allen, 1919.

COMMENTS: Osgood (1932), Ellerman and Morrison-Scott (1951), Coetzee (1977b), and Meester et al. (1986) considered *Amblonyx* Rafinesque, 1832, as congeneric with *Aonyx*; here separated based on Harris (1968), van Zyll de Jong (1972, 1987), and Medway (1977).

Amblonyx cinereus (Illiger, 1815). *Abh. Phys. Klasse K. Preuss. Akad. Wiss.*, 1804-1811:99 [1815].

TYPE LOCALITY: "Batavia" [Indonesia, Java, Jakarta].

DISTRIBUTION: India, Bangladesh, Burma, S China and Hainan Isl; Taiwan; Indochina to Indonesia (Sumatra, Java, Borneo); Philippines (Palawan Isl).

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *concolor* Rafinesque, 1832; *indigitatus* Hodgson, 1839; *leptonyx* Horsfield, 1823; *nirnai* Pocock, 1940; *sikimensis* Horsfield, 1855; *swinhoei* Gray, 1867.

Aonyx Lesson, 1827. *Manuel de Mammalogie*, p. 157.

TYPE SPECIES: *Aonyx Delalandi* Lesson, 1827 (= *Lutra capensis* Schinz, 1821) by subsequent designation (Palmer, 1904).

SYNONYMS: *Anahyster* Murray, 1860; *Paraonyx* Hinton, 1921.

COMMENTS: Osgood (1932), Ellerman and Morrison-Scott (1951), and Coetzee (1977b) considered *Amblonyx* Rafinesque, 1832, as congeneric; here separated based on Harris (1968), Medway (1977), and van Zyll de Jong (1972, 1987). There is little question that *capensis* and *concolor* are sister species.

Aonyx capensis (Schinz, 1821). In G. Cuvier, *Das Tierreich*, 1:211.

TYPE LOCALITY: "Capischer otter. . . Afrika" [South Africa, Cape Province].

DISTRIBUTION: Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Ethiopia, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

STATUS: CITES - Appendix II.

SYNONYMS: *angolae* Thomas, 1908; *calaboricus* Murray, 1860; *coomsi* Roberts, 1926; *delalandi* Lesson, 1827; *gambianus* Gray, 1865; *helios* Heller, 1913; *hindei* Thomas, 1905; *inunguis* F. G. Cuvier, 1823; *lenoiri* Rochebrune, 1888; *meneleki* Thomas, 1902; *poensis* Waterhouse, 1838.

Aonyx concolor Lönnberg, 1910. *Ark. Zool.*, 7(9):1.

TYPE LOCALITY: "Lower Congo." [Zaire]

DISTRIBUTION: Angola, Cameroon, Central African Republic, Gabon, Kenya, Nigeria, Rwanda, Uganda, Zaire.

STATUS: CITES - Appendix I; U.S. ESA - Endangered as *A. (Paraonyx) concolor microdon*.

SYNONYMS: *microdon* Pohle, 1920; *philippsi* Hinton, 1921.

COMMENTS: Considered a distinct species by Pohle (1920) and van Zyll de Jong (1987). Perret and Aellen (1956) included *Paraonyx philippsi* Hinton, 1921, and *Aonyx microdon* Pohle, 1920; however, Harris (1968) listed these as distinct.

Enhydra Fleming, 1822. *Philos. Zool.*, 2:187.

TYPE SPECIES: *Mustela lutris* Linnaeus, 1758, by monotypy (Melville and Smith, 1987).

SYNONYMS: *Enydris* Lichtenstein, 1827; *Latax* Gloger, 1827; *Sutra* Elliot, 1874.

Enhydra lutris (Linnaeus, 1758). *Syst. Nat.*, 10th ed., 1:45.

TYPE LOCALITY: "Asia et America septentrionali," restricted by Thomas (1911a), to "Kamtchatka", then by Roest (1973), to "the east central coast of Kamchatka, opposite the Commander Islands." [Russia].

DISTRIBUTION: Russia (Sakhalin Isl, Kurile Isls, Commander Isls, Kamchatka), Canada, USA (Aleutian Isls, and S Alaska to California). Formerly in Mexico (Baja California) and Japan (coastal Hokkaido).

STATUS: CITES - Appendix I as *E. l. nereis*; otherwise Appendix II. U.S. ESA - Threatened as *E. l. nereis*.

SYNONYMS: *aterrima* Pallas, 1811; *gracilis* Bechstein, 1800; *kamtschatica* Dybowski, 1922; *kenyoni* Wilson, 1990; *marina* Steller, 1751; *nereis* Merriam, 1904; *orientalis* Oken, 1816; *stelleri* Lesson, 1827.

COMMENTS: Reviewed by Roest (1973), Davis and Lidicker (1975), Wilson et al. (1991), and Estes (1980, *Mammalian Species*, 133).

Lontra Gray, 1843. *Ann. Mag. Nat. Hist.*, [ser. 1], 11:118.

TYPE SPECIES: *Lutra canadensis* Gray, 1843.

SYNONYMS: *Latax* Gray, 1843; *Lataxina* Gray, 1843; *Nutria* Gray, 1865.

COMMENTS: Van Zyll de Jong (1972, 1987, 1991a) argued that the New World otters represent a single radiation and questioned whether *Lutra (sensu stricto)* or *Aonyx*

was the closest sister group. There has been no published work to refute his hypothesis, although it has not received general acceptance. Hall (1981) chose not to question the monophyletic nature of the group, but to lower it to the subgeneric rank, feeling that the characters were not sufficient enough to warrant generic distinction. Regardless of the "morphological gap" between the monophyletic New World otters and the Old World otters, if *Lutra* (*sensu stricto*) is the closest sister group, then inclusion within *Lutra* could be maintained. However, if, as van Zyll de Jong (1987) suggested, *Aonyx* is the closest outgroup, then recognition at the generic level is necessary.

Lontra canadensis (Schreber, 1777). Die Säugethiere, 3(18):pl. 126.B[1776], text: 3(26):457, 588(index)[1777] (First occurrence of name on pg. 588)

TYPE LOCALITY: "Der Fischotter ...Europa überall gemein, ... Einwohner des nordlichen Theils von Asien, bis nach Kamatschatka hinaus, und ...Persian hinunter, und von Nordamerika." Miller (1912b:113) listed the type locality as "Eastern Canada".

DISTRIBUTION: Most of North America south to Arizona, Texas, and Florida.

STATUS: CITES - Appendix II.

SYNONYMS: *americana* Wyman, 1847; *atterima* Elliot, 1901; *brevipilosus* Grinnell, 1914; *californica* Baird, 1857; *chimo* Anderson, 1945; *degener* Bangs, 1898; *destructor* Barnston, 1863; *evexa* Goldman, 1935; *hudsonica* Merriam, 1899; *interior* Swenk, 1920; *kodiacensis* Goldman, 1935; *lataxina* F. G. Cuvier, 1823; *mira* Goldman, 1935; *mollis* Gray, 1843; *nexa* Goldman, 1935; *optiva* Goldman, 1935; *pacifica* Grinnell, 1933; *paranensis* Elliot, 1901; *periclyzomae* Elliot, 1905; *preblei* Goldman, 1935; *rhoadsii* Cope, 1897; *sonora* Rhoads, 1898; *texensis* Goldman, 1935; *vaga* Bangs, 1898; *vancouverensis* Goldman, 1935; *yukonensis* Goldman, 1935.

Lontra felina (Molina, 1782). Sagg. Stor. Nat. Chile, p. 284.

TYPE LOCALITY: "Chili" [Chile].

DISTRIBUTION: West coast of South America from N Peru to Straits of Magellan.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *brachydactyla* Wagner, 1841; *californica* Gray, 1837; *chilensis* Bennet, 1832; *cinerea* Thomas, 1908; *peruensis* Pohle, 1920; *peruviensis* Gervais, 1841.

COMMENTS: Placed in *Lontra* by van Zyll de Jong (1972, 1987).

Lontra longicaudis (Olfers, 1818). In Eschwege, J. Brasilien, Neue Bibliothek Reisenb., 15(2):233.

TYPE LOCALITY: "Brasilien."

DISTRIBUTION: Mexico, Central America, W South America south to Peru, E South America south to Uruguay.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable as *L. l. longicaudis*.

SYNONYMS: *annectens* Major, 1897; *colombiana* J. A. Allen, 1904; *emerita* Thomas, 1908; *enudris* Cuvier, 1823; *fusco-rufa* Gray, 1865; *incarum* Thomas, 1908; *insularis* Cuvier, 1823; *latidens* J. A. Allen, 1908; *latifrons* Nehring, 1887; *lutris* Larrañaga, 1923; *mesopetes* Cabrera, 1924; *mitis* Thomas, 1908; *paraensis* Burmeister, 1861; *parilina* Thomas, 1914; *platensis* Waterhouse, 1838; *pratensis* Gerrard, 1862; *repanda* Goldman, 1914; *solitaria* Wagner, 1842.

COMMENTS: Van Zyll de Jong (1972) included *annectens*, *enudris*, *incarum*, *mesopetes*, and *platensis*; however, Pohle (1920), Cabrera (1958), and Harris (1968) recognized these taxa as distinct species. These taxa, often referred to as the *annectens*-group were chiefly distinguished by variation in the shape of the rhinarium; van Zyll de Jong's (1972) analysis suggested that these should be considered conspecific.

Lontra provocax (Thomas, 1908). Ann. Mag. Nat. Hist., ser. 8, 1:391.

TYPE LOCALITY: "south of Lake Nahuel Huapi, Patagonia." [Argentina]

DISTRIBUTION: Patagonia (C and S Chile, W Argentina).

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *huidobria* Gray, 1847.

COMMENTS: Placed in *Lontra* by van Zyll de Jong (1987).

Lutra Brünnich, 1771. Zool. Fundamenta, p. 34, 42.

TYPE SPECIES: *Mustela lutra* Linnaeus, 1758.

SYNONYMS: *Barangia* Gray, 1865; *Hydrictis* Pocock, 1921; *Lutronectes* Gray, 1867.

COMMENTS: Some have used *Lutra* Brisson, 1762, which was ruled unavailable (International Commission on Zoological Nomenclature, 1955). Pocock (1921c, 1941a) recognized *Lutrogale* Gray, 1865, and *Hydrictis* Pocock, 1921. Harris (1968) and van Zyll de Jong (1987; 1991a) considered *lutra*, *maculicollis*, and *sumatrana* to represent a single monophyletic group; furthermore, van Zyll de Jong's analysis supported separation of *perspicillata* from other *Lutra*, which is followed here. Van Zyll de Jong (1972) referred New World otters to *Lontra* (see comment therein), and although this has not been followed by some recent checklists (Corbet and Hill, 1991; Hall, 1981; Honacki, et al., 1982), van Zyll de Jong's hypothesis has not been refuted.

Lutra lutra (Linnaeus, 1758). Syst. Nat., 10th ed., 1:45.

TYPE LOCALITY: "Europæ aquis dulcibus, fluviis, flagnis, piscinis," subsequently restricted by Thomas (1911a) to "Upsala" [Sweden].

DISTRIBUTION: Eurasia (excl. tundra and desert): Afghanistan, Albania, Algeria, Austria, Bangladesh, Belgium, Bulgaria, China, Czechoslovakia, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, India, Indonesia, Iraq, Ireland, Israel, Italy, Japan, Jordan, Korea, Laos, Lithuania, Malaysia, Mongolia, Morocco, Norway, Pakistan, Poland, Portugal, Scotland, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Tunisia, Turkey, republics of the former USSR, Vietnam, and Yugoslavia.

STATUS: CITES - Appendix I; IUCN - Vulnerable as *L. l. lutra*.

SYNONYMS: *amurensis* Dybowski, 1922; *angustifrons* Lataste, 1885; *aureventer* Blyth, 1863; *aurobrunneus* Hodgson, 1839; *baicalensis* Dybowski, 1922; *barang* F. G. Cuvier, 1823; *ceylonica* Pohle, 1920; *chinensis* Gray, 1837; *fluviatilis* Leach, 1816; *hanensis* Matschie, 1907; *indica* Gray, 1837; *intermedia* Pohle, 1920; *japonica* Nehring, 1887; *kamtschatica* Dybowski, 1922; *kutab* Schinz, 1844; *marinus* Billberg, 1827; *meridionalis* Ognev, 1931; *monticolus* Hodgson, 1839; *nair* F. G. Cuvier, 1823; *nepalensis* Gray, 1865; *nippon* Imaizumi and Yoshiyuki, 1989; *nudipes* Melchior, 1834; *oxiana* Birula, 1915; *piscatoria* Kerr, 1792; *roensis* Ogilby, 1834; *seistanica* Birula, 1912; *sinensis* Trouessart, 1897; *splendida* Cabrera, 1906; *stejnegeri* Goldman, 1936; *vulgaris* Erxleben, 1777; *whiteleyi* Gray, 1867.

COMMENTS: Imaizumi and Yoshiyuki (1989) considered Japanese otters a distinct species (*L. nippon*).

Lutra maculicollis Lichtenstein, 1835. Arch. Naturgesch., 1:89.

TYPE LOCALITY: "Kafferlandes am östlichen Abhänge der Bambusberge." Listed in Honacki et al. (1982) as "Namibia, Orange River, Bambusbergen" [According to US Board of Geographic Names gazetteer, Bamboesberg Mts are in South Africa, at 31°30'S 26°20'E].

DISTRIBUTION: Subsaharan Africa, except east coast and SW African deserts, including: Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Ethiopia, Gabon, Ivory Coast, Kenya, Liberia, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia.

STATUS: CITES - Appendix II.

SYNONYMS: *chobiensis* Roberts, 1932; *grayii* Gerrard, 1862; *kivuana* Pohle, 1920; *matschiei* Cabrera, 1903; *mutandae* Hinton, 1921; *nilotica* Thomas, 1911.

COMMENTS: Pocock (1921c) and Cabrera (1929) placed *maculicollis* in the monotypic *Hydrictis*; however, Ansell (1978) and Harris (1968) considered *Hydrictis* a subgenus (see comments under *Lutra*). Van Zyll de Jong (1987) placed as sister groups *L. perspicillata* and (*L. lutra*+*L. sumatrana*). Pohle (1920) placed *maculicollis* in subgenus *Lutra*.

Lutra sumatrana (Gray, 1865). Proc. Zool. Soc. Lond., 1865:123.)

TYPE LOCALITY: "Sumatra (Raffles); Malacca (B.M.)," restricted by Pocock (1941a) to "Sumatra."

DISTRIBUTION: Indonesia (Sumatra, Borneo), Cambodia, Malaysia, Thailand, Vietnam.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *lovii* Günther, 1876.

Lutrogale Gray, 1865. Proc. Zool. Soc. Lond., 1865:127.

TYPE SPECIES: Not designated.

COMMENTS: See comments under *Lutra*. Consideration here as a separate genus is consistent with Pohle (1920), Pocock (1941a), and Van Zyll de Jong (1987).

Lutrogale perspicillata (I. Geoffroy Saint-Hilaire, 1826). In Bory de Saint-Vincent, Dict. Class. Hist. Nat. Paris, 9:519.

TYPE LOCALITY: "Sumatra" [Indonesia].

DISTRIBUTION: Afghanistan, Bangladesh, China, India, Indonesia (Sumatra, Java, and Borneo), Iraq, Malaysia, Nepal, Pakistan, Thailand, Vietnam.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *elliotti* Anderson, 1878; *macrodus* Gray, 1865; *simung* Lesson, 1827; *sindica* Pocock, 1940; *tarayensis* Hodgson, 1839.

COMMENTS: Pocock (1941a), Davis (1978), and van Zyll de Jong (1972) placed *perspicillata* in the monotypic *Lutrogale*, considered a subgenus by Pohle (1920); see comments under *Lutra*. Van Zyll de Jong's (1987) analysis placed as sister groups *L. maculicollis* and (*L. lutra*+*L. sumatrana*).

Pteronura Gray, 1837. Mag. Nat. Hist. [Charlesworth's], 1:580.

TYPE SPECIES: *Pteronura sambachii* Gray, 1837 (= *Mustela brasiliensis* Gmelin, 1788), by monotypy. (Melville and Smith, 1987).

SYNONYMS: *Pterura* Wiegmann, 1839; *Saricovia* Zimmermann, 1777.

Pteronura brasiliensis (Gmelin, 1788). In Linnaeus, Syst. Nat., 13th ed., 1:93.

TYPE LOCALITY: "in fluviis americae meridionalis"; Cabrera (1958:274) restricted to "rió São Francisco, en la orilla correspondiente al estado de Alagoas", Brazil.

DISTRIBUTION: Argentina, Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Vulnerable.

SYNONYMS: *lupina* Thomas, 1889; *nitens* Olfers, 1818; *paraguensis* Schinz, 1821; *paranensis* Rengger, 1830; *paroensis* Lesson, 1842; *sambachii* Schinz, 1844; *sanbachii* Wiegmann, 1838.

COMMENTS: See lengthy comments by Harris (1968) concerning the correct identity of the type, the confusion in published synonymies, and the type locality.

Subfamily Melinae Bonaparte, 1838. Nuovi Ann Sci. Nat., 2:111.

COMMENTS: Reviewed by Long (1978) and Long and Killingley (1983). Revised by Pocock (1921b, d, 1941a), Petter (1971), and Wozencraft (1989a), who suggested that this may not be a monophyletic group. Pocock recognized as subfamilies, and Petter as tribes, four groups: (1) *Meles*, *Arctonyx*; (2) *Melogale*; (3) *Mydaus*; and (4) *Taxidea*. Pocock (1920b), Long (1981), and Wozencraft (1989b) argued for the separation of *Taxidea* into a monotypic subfamily, *Taxidiinae*, which would be consistent with the phylogenetic hypotheses referred to above and which will be followed here. Petter (1971), Radinsky (1973), and Schmidt-Kittler (1981) suggested that *Mydaus* may be the sister group to *Mephitinae*. Its placement in this subfamily is provisional.

Arctonyx F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat.

Mammifères, pt. 3, 5(51), "Bali-saur", 2 pp.

TYPE SPECIES: *Arctonyx collaris* F. G. Cuvier, 1825.

SYNONYMS: *Trichomanis* Hubrecht, 1891.

COMMENTS: Revised by Pocock (1940a).

Arctonyx collaris F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat. Mammifères, pt. 3, 5(51), "Bali-saur", 2 pp.

TYPE LOCALITY: "dans les montagnes qui séparent le Boutan de l'Indoustan."

DISTRIBUTION: Widespread in China; ranges from Assam (India) and Burma to Indochina, Thailand, Sumatra, and probably Perak in Malaya.

SYNONYMS: *albogularis* Blyth, 1853; *consul* Pocock, 1940; *dictator* Thomas, 1910; *isonyx* Horsfield, 1856; *leucolaemus* Milne-Edwards, 1867; *obscurus* Milne-Edwards, 1871; *taraiyensis* Hodgson, 1863; *taxoides* Blyth, 1853.

Meles Boddaert, 1785. Elench. Anim., 1:45.

TYPE SPECIES: [*Ursus*] *Meles* Linnaeus, 1758.

Meles meles (Linnaeus, 1758). Syst. Nat., 10th ed., 1:48.

TYPE LOCALITY: "Europa inter rimas rupium et lapidum," restricted by Thomas (1911a) to "Upsala" [Sweden].

DISTRIBUTION: Scandinavia to S Siberia, south to Israel; Iraq; China, Korea, and Japan; and on Ireland, Britain, Crete, and Rhodes.

SYNONYMS: *aberrans* Stroganov, 1962; *alba* Gmelin, 1788; *altaicus* Kastschenko, 1901; *amurensis* Schrenk, 1858; *anakuma* Temminck, 1844; *arcalus* Miller, 1907; *arenarius* Satunin, 1895; *blanfordi* Matschie, 1902; *britannicus* Satunin, 1906; *canescens* Blanford, 1875; *caninus* Billberg, 1827; *caucasicus* Ognev, 1926; *chinensis* Gray, 1868; *communis* Billberg, 1827; *danicus* Degerbøl, 1933; *europaeus* Desmarest, 1816; *hanensis* Matschie, 1907; *heptneri* Ognev, 1931; *leptorhynchus* Milne-Edwards, 1867; *leucurus* Hodgson, 1847; *maculata* Gmelin, 1788; *marianensis* Graells, 1897; *melanogenys* J. A. Allen and Andrews, 1913; *minor* Satunin, 1905; *raddei* Kastschenko, 1901; *rhodius* Festa, 1914; *schrenkii* Nehring, 1891; *severzovi* Heptner, 1940; *sibiricus* Kastschenko, 1900; *siningensis* Matschie, 1907; *talassicus* Ognev, 1931; *tauricus* Ognev, 1926; *taxus* Boddaert, 1785; *tianschanensis* Hayninger-Huene, 1910; *tsingtanensis* Matschie, 1907; *typicus* Barrett-Hamilton, 1899; *vulgaris* Tiedemann, 1808.

COMMENTS: Although Ognev (1931) considered *leptorhynchus* (including *amurensis*) a distinct species; most have considered *meles* and *leptorhynchus* conspecific (Allen, 1938; Ellerman and Morrison-Scott, 1951; Novikov, 1956; Stroganov, 1962; Long and Killingley, 1983). Baryshnikov and Potapova (1990) suggested that *M. meles* and *M. anakuma* are not conspecific.

Melogale I. Geoffroy Saint-Hilaire, 1831. In Bélanger (ed.), Voy. Indes Orient., 3(Zoologie):129, pl. 5. [issued 13 March 1831].

TYPE SPECIES: *Melogale personata* I. Geoffroy Saint-Hilaire, 1831.

SYNONYMS: *Helictis* Gray, 1831; *Nesictis* Thomas, 1922.

COMMENTS: There is uncertainty as to the total number of species in this genus. Most recent authors tend to consider *everetti* and/or *orientalis* as conspecific with *personata*; however, Pocock (1941a), Everts (1968), Long (1978, 1981), and Long and Killingley (1983) supported the recognition of these populations as distinct. As Long and Killingley pointed out, there is no published information to refute Pocock's (1941a) revision.

Melogale everetti (Thomas, 1895). Ann. Mag. Nat. Hist., ser. 6, 15:331-332.

TYPE LOCALITY: "Mount Kina Balu, N. Borneo, about 4000 ft."

DISTRIBUTION: Borneo.

STATUS: IUCN - Insufficiently known.

COMMENTS: Medway (1977) included *everetti* in *orientalis*; however, see comments under genus.

Melogale moschata (Gray, 1831). Proc. Zool. Soc. Lond., 1831:94.

TYPE LOCALITY: "China," restricted by Allen (1929) to "Canton, Kwangtung Province, South China, where the original specimen was secured by John Reeves."

DISTRIBUTION: India (Naga Hills near Manipur, Assam), to Taiwan; Hainan Isl, C and SE China, N Laos, and N Vietnam.

SYNONYMS: *ferreo-griseus* Hilzheimer, 1905; *millsi* Thomas, 1922; *modesta* Thomas, 1922; *sorella* G. M. Allen, 1929; *subaurantiaca* Swinhoe, 1862; *taxilla* Thomas, 1925.

Melogale orientalis (Horsfield, 1821). Zool. Res. Java., plate and 4 pages of text.

TYPE LOCALITY: "limited...to...south of Mountain Prahū, between the two principal cones of the central part of Java, the Mountain Sumbing, and...Teggā, ...Baggūlen and Banyumas...to Gowong in the east." [Indonesia, Java].

DISTRIBUTION: Java (Indonesia).

STATUS: IUCN - Insufficiently known.

SYNONYMS: *fusca* Gúerin, 1835; *maccourus* Temminck, 1824.

Melogale personata I. Geoffroy Saint-Hilaire, 1831. In Bélanger (ed.) Voy. Indes Orient., 3(Zoologie):137, pl. 5.[issued 13 March 1831].

TYPE LOCALITY: "environs de Rangoun" [Burma].

DISTRIBUTION: Nepal through India (Assam) and most of Indochina, including peninsular Thailand and Malaysia.

SYNONYMS: *laotum* Thomas, 1922; *nipalensis* Hodgson, 1836; *orientalis* Blanford, 1888; *pierrei* Bonhote, 1903; *tonquinia* Thomas, 1922.

Mydaus F. G. Cuvier, 1821. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat.

Mammifères, pt. 2, 3(27), "Telagon", 2 pp.

TYPE SPECIES: *Mydaus meliceps* F. G. Cuvier, 1821 (= *Mephitis javanensis* Desmarest, 1820).

SYNONYMS: *Suillotaxus* Lawrence, 1939.

COMMENTS: Lawrence (1939) believed that differences in dentition and pelage warranted separation of these taxa into separate, monotypic genera (i.e., *Suillotaxus marchei*, *Mydaus javanensis*). These differences parallel those found within the genus *Melogale* (Long and Killingley, 1983). This genus is provisionally placed in Melinae (see comments therein), its position may be better considered as *incertae sedis*.

Mydaus javanensis (Desmarest, 1820). Mammalogie, in Encycl. Meth., I:187

TYPE LOCALITY: "l'île de Java." [Indonesia, Java].

DISTRIBUTION: Indonesia (Java, Borneo, Sumatra and the Natuna Isls) and Malaysia (Borneo).

SYNONYMS: *lucifer* Thomas, 1902; *luciferoides* Lönnberg and Mjöberg, 1925; *meliceps* Cuvier, 1821.

Mydaus marchei (Huet, 1887). Le Naturaliste, ser. 2, 9(13):149-151.

TYPE LOCALITY: "l'île Palaouan" [Philippine Islands, Palawan].

DISTRIBUTION: Philippine Isls (Palawan and Calamian Isls).

SYNONYMS: *schadenbergii* Jentink, 1895.

COMMENTS: Referred to the genus *Suillotaxus* by Lawrence (1939). *Suillotaxus* was considered a subgenus of *Mydaus* by Long (1978, 1981).

Subfamily Mellivorinae Gray, 1865. Proc. Zool. Soc. Lond., 1865:103.

COMMENTS: Type genus *Mellivora* Storr, 1780. Wozencraft (1989b) placed *Mellivora* in the Mustelinae.

Mellivora Storr, 1780. Prodr. Meth. Mamm., p. 34, Tabl. A.

TYPE SPECIES: *Viverra ratel* Sparrmann, 1778 (= *Viverra capensis* Schreber, 1776), by designation (Sclater, 1900); (Melville and Smith, 1987).

SYNONYMS: *Lipotus* Sundevall, 1843; *Melitoryx* Gloger, 1841; *Ratellus* Gray, 1827; *Ratelus* Bennett, 1830; *Ursitaxus* Hodgson, 1835.

Mellivora capensis (Schreber, 1776). Die Säugethiere, 3(18):pl. 125[1776]; text, 3(26):450[1777].

TYPE LOCALITY: "Vorgebirge der guten Hofnung" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: Savanna and steppe from Nepal, E India and Turkmenistan west to Lebanon, south of the Mediterranean to South Africa.

STATUS: CITES - Appendix III (Ghana and Botswana).

SYNONYMS: *abyssinica* Hollister, 1910; *brockmani* Wroughton and Cheesman, 1920; *buchanani* Thomas, 1925; *concinna* Thomas and Wroughton, 1907; *cottoni* Lydekker, 1906; *inauritus* Hodgson, 1836; *indicus* Kerr, 1792; *leuconota* Sclater, 1867; *maxwelli* Thomas, 1923; *mellivorus* Cuvier, 1798; *pumilio* Pocock, 1946; *ratel* Sparrmann, 1778; *ratelus* Fraser, 1862; *sagulata* Hollister, 1910; *signata* Pocock, 1909; *typicus* Smith, 1833; *vernayi* Roberts, 1932; *wilsoni* Cheesman, 1920.

Subfamily Mephitinae Bonaparte, 1845. Cat. Meth. Mamm. Europe, p. 1.

Conepatus Gray, 1837. Mag. Nat. Hist. [Charlesworth's], 1:581.

TYPE SPECIES: *Conepatus humboldtii* Gray, 1837, by monotypy (Melville and Smith, 1987).

SYNONYMS: *Marputius* Gray, 1837; *Oryctogale* Merriam, 1902; *Ozolictis* Gloger; *Thiosmus* Lichtenstein, 1838.

COMMENTS: Revised by Kipp (1965), who studied an extensive series of southern South American specimens and could not recognize distinctive groups among them based on skull morphology, and only two groups based on pelage coloration.

Conepatus chinga (Molina, 1782). Sagg. Stor. Nat. Chile, p. 288.

TYPE LOCALITY: "Chili," restricted by Cabrera (1958) to "alrededores de Valparaíso." [Chile].

DISTRIBUTION: Chile, Peru, N Argentina, Bolivia, Uruguay, S Brazil.

SYNONYMS: *ajax* Thomas, 1913; *arequipae* Thomas, 1898; *budini* Thomas, 1919; *calurus* Thomas, 1919; *chilensis* Link, 1795; *chinghe* Bechstein, 1800; *chorensis* Thomas, 1902; *dimidiata* Fischer, 1814; *enuchus* Thomas, 1927; *feuillei* Gervais, 1841; *furcata* Wagner, 1841; *gibsoni* Thomas, 1910; *hunti* Thomas, 1903; *inca* Thomas, 1900; *mapurito* Tschudi, 1844; *mendosus* Yepes, 1939; *monzoni* Aplin, 1894; *pampanus* Thomas, 1921; *porcinus* Thomas, 1902; *rex* Thomas, 1898; *suffocans* Burmeister, 1879; *vittata* Larrañaga, 1923.

COMMENTS: Kipp (1965) considered *rex* as conspecific; however, it was listed as separate by Osgood (1943) and Cabrera (1958).

Conepatus humboldtii Gray, 1837. Mag. Nat. Hist. [Charlesworth's], 1:581.

TYPE LOCALITY: "Magellan Straits." [Chile].

DISTRIBUTION: NE Argentina and Paraguay south to the Straits of Magellan.

STATUS: CITES - Appendix II.

SYNONYMS: *castaneus* d'Orbigny and Gervais, 1847; *gaucho* Thomas, 1927; *patachonica* Burmeister, 1859; *patagonica* Lichtenstein, 1836; *proteus* Thomas, 1902.

COMMENTS: Kipp (1965) considered *castaneus* as conspecific; Cabrera (1958) considered it separate.

Conepatus leuconotus (Lichtenstein, 1832). Darst. Säugeth., text: "*Mephitis leuconota*" [not paginated], pl. 44. fig. 1.

TYPE LOCALITY: "oberen Lauf des Rio Alvarado" [Mexico, Veracruz, Rio Alvarado].

DISTRIBUTION: S Gulf coast of Texas (USA), south along coast to Vera Cruz (Mexico).

SYNONYMS: *texensis* Merriam, 1902.

COMMENTS: May be only subspecifically distinct from *mesoleucus* (Hall, 1981).

Conepatus mesoleucus (Lichtenstein, 1832) Darst. Säugeth., text: "*Mephitis mesoleuca*" [not paginated] pl. 44, fig. 2.

TYPE LOCALITY: "Legend von Chico in Mexico" [Mexico, Hidalgo, near El Chico].

DISTRIBUTION: Arizona, Colorado, Texas (USA), south to Nicaragua.

STATUS: IUCN - Indeterminate as *C. m. telmalestes*.

SYNONYMS: *figginsi* Miller, 1925; *filipensis* Merriam, 1902; *fremonti* Miller, 1933; *mearnsi* Merriam, 1902; *nelsoni* Goldman, 1922; *nicaraguae* J. A. Allen, 1910; *pediculus* Merriam, 1902; *sonoriensis* Merriam, 1902; *telmalestes* Bailey, 1905; *venaticus* Goldman, 1922.

COMMENTS: May be conspecific with *leuconotus* (Hall, 1981).

Conepatus semistriatus (Boddaert, 1784). Elench. Anim., 1:84.

TYPE LOCALITY: "Mexico"; Cabrera (1958) listed the type locality as "Minas de Montuosa, cerca de Pamplona, departamento del norte de Santander, Colombia".

DISTRIBUTION: Veracruz, Tabasco, and Yucatan (Mexico) to Peru and E Brazil.

SYNONYMS: *amazonica* Lichtenstein, 1838; *bahiensis* Ihering, 1911; *chilensis* Gray, 1865; *conepatl* Gmelin, 1788; *gumillae* Lichtenstein, 1836; *mapurito* Gmelin, 1788; *putorius* Mutis, 1770; *quitensis* Humboldt, 1812; *taxinus* Thomas, 1924; *trichurus* Thomas, 1905; *tropicalis* Merriam, 1902; *westermanni* Reinhardt, 1856; *yucatanicus* Goldman, 1943; *zorilla* Fischer, 1829; *zorino* Thomas, 1901.

Mephitis E. Geoffroy Saint-Hilaire and G. [Baron] Cuvier, 1795. Mag. Encyclop., 2:187.

TYPE SPECIES: *Viverra mephitis* Schreber, 1776.

SYNONYMS: *Chincha* Lesson, 1842; *Leucomitra* Howell, 1901.

Mephitis macroura Lichtenstein, 1832. Darst. Säugeth., text: "*Mephitis macroura*," [not paginated], pl. 46.

TYPE LOCALITY: "Gebirgs-Gegenden nordwestlich von der Stadt Mexico." [Mexico, mountains NW of Mexico City].

DISTRIBUTION: S Arizona, S New Mexico, and W Texas (USA), through Mexico to Costa Rica.

SYNONYMS: *concolor* Gray, 1865; *edulis* Coues, 1877; *eximius* Hall and Dalquest, 1950; *mexicana* Gray, 1837; *milleri* Mearns, 1897; *richardsoni* Goodwin, 1957; *vittata* Lichtenstein, 1832.

Mephitis mephitis (Schreber, 1776). Die Säugethiere, 3(17):pl. 121[1776], text, 3(26):444, 588 (index)[1777].

TYPE LOCALITY: "Amerika".

DISTRIBUTION: SW Northwest Territories to Hudson Bay and S Quebec (Canada), south to Florida (USA), N Tamaulipas, N Durango, and N Baja California (Mexico).

SYNONYMS: *americana* Desmarest, 1818; *avia* Bangs, 1898; *bivirgata* H[amilton]-Smith, 1842; *dentata* Brass, 1911; *elongata* Bangs, 1895; *estor* Merriam, 1890; *fetidissima* Boitard, 1842; *foetulenta* Elliot, 1899; *frontata* Coues, 1875; *holzneri* Mearns, 1897; *hudsonica* Richardson, 1829; *major* Howell, 1901; *mesomelas* Lichtenstein, 1832; *minnesotae* Brass, 1911; *newtonensis* Brown, 1908; *nigra* Peale and Palisot de Beauvois, 1796; *notata* Howell, 1901; *occidentalis* Baird, 1858; *olida* Boitard, 1842; *platyrhina* Howell, 1901; *putida* Boitard, 1842; *scrutator* Bangs, 1896; *spissigrada* Bangs, 1898; *varians* Gray, 1837.

COMMENTS: Reviewed by Wade-Smith and Verts (1982, Mammalian Species, 173).

Spilogale Gray, 1865. Proc. Zool. Soc. Lond., 1865:150.

TYPE SPECIES: *Mephitis interrupta* Rafinesque, 1820 (= [*Viverra*] *putorius* Linnaeus, 1758) by monotypy (Melville and Smith, 1987).

COMMENTS: Revised by Van Gelder (1959).

Spilogale putorius (Linnaeus, 1758). Syst. Nat., 10th ed., 1:44.

TYPE LOCALITY: "America septentrionali" restricted by Thomas (1911a), to "South Carolina." [USA].

DISTRIBUTION: SW Canada east to Minnesota and S Pennsylvania (USA); south to Costa Rica.

SYNONYMS: *ambigua* Mearns, 1897; *angustifrons* Howell, 1902; *bicolor* Gray, 1837; *gracilis* Merriam, 1890; *interrupta* Rafinesque, 1820; *larvatus* Hodgson, 1849; *leucoparia* Merriam, 1890; *lucasona* Merriam, 1890; *microdon* Howell, 1906; *mupurita* Müller, 1776; *olympica* Elliot, 1899; *phenax* Merriam, 1890; *putida* Cuvier, 1798; *quaterlinearis* Winans, 1859; *ringens* Merriams, 1890; *saxatalis* Merriam, 1890; *striata* Shaw, 1800; *tenuis* Howell, 1902; *texensis* Merriam, 1890; *tibetanus* Horsfield, 1851; *zorilla* Schreber, 1776.

COMMENTS: Mead (1968) argued that *S. p. gracilis* and "possibly" *leucoparia* are reproductively isolated from eastern populations and therefore should be considered distinct species; both were included by Van Gelder (1959).

Spilogale pygmaea Thomas, 1898. Proc. Zool. Soc. Lond., 1897:898 [1898].

TYPE LOCALITY: "Rosario, Sinaloa, W. Mexico."

DISTRIBUTION: Sinaloa to Oaxaca (Mexico).

COMMENTS: Ewer (1973) argued that *pygmaea* is conspecific with *putorius*.

Subfamily Mustelinae Fischer, 1817. Mém. Soc. Imp. Nat. Moscow, 5:372.

Eira C. E. H[amilton]. Smith, 1842. Jardine's Natur. Libr., 35:201.

TYPE SPECIES: *Mustela barbara* Linnaeus, 1758.

SYNONYMS: *Galera* Gray, 1843 (preoccupied by *Galera* Browne, 1789); *Gulo* Lichtenstein, 1825; *Mustela* Schinz, 1821; *Tayra* Oken, 1816 (invalid, see International Commission on Zoological Nomenclature, 1956b); *Viverra* Traill, 1821.

Eira barbara (Linnaeus, 1758). Syst. Nat., 10th ed., 1:46.

TYPE LOCALITY: "Brasilia," restricted by Lönnberg (1913) to "Pernambuco."

DISTRIBUTION: Sinaloa and Tamaulipas (Mexico), south to Argentina, including: Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Venezuela, Argentina, Belize, Bolivia, Surinam, and Trinidad.

STATUS: CITES - Appendix III (Honduras).

SYNONYMS: *bimaculata* Martinez, 1873; *biologiae* Thomas, 1900; *brunnea* Thomas, 1907; *canescens* Lichtenstein, 1825; *gulina* Schinz, 1821; *ilya* H[amilton]. Smith, 1842; *irara* J. A. Allen, 1904; *kriegi* Krumbiegel, 1942; *leira* F. Cuvier, 1849; *madeirensis* Lönnberg, 1913; *peruana* Nehring, 1886; *poliocephalus* Traill, 1821; *senex* Thomas, 1900; *senilis* J.A. Allen, 1913; *sinuensis* Humboldt, 1812; *tucumana* Lönnberg, 1913.

COMMENTS: Reviewed by Thomas (1900) and Lönnberg (1913).

Galictis Bell, 1826. Zool. J., 2:552.

TYPE SPECIES: *Viverra vittata* Schreber, 1776, by original designation.

SYNONYMS: *Grison* Oken, 1816 (invalid, see International Commission on Zoological Nomenclature, 1956b); *Grisonella* Thomas, 1912; *Grisonia* Gray, 1865; *Gulo* Desmarest, 1820; *Mustela* Bechstein, 1800.

Galictis cuja (Molina, 1782). Sagg. Stor. Nat. Chile, p. 291.

TYPE LOCALITY: "Chili" restricted by Thomas (1912) to "S. Chili (Temuco)"; Cabrera (1958) restricted the locality to "alrededores de Santiago" [Chile]. Honacki et al. (1982) listed the type locality for *G. c. furax* Thomas, 1912.

DISTRIBUTION: Argentina, Bolivia, Peru, Brazil, Chile, Paraguay.

SYNONYMS: *albifrons* Larrañaga, 1923; *barbara* Hudson, 1903; *brasiliensis* D'Orbigny, 1838; *chilensis* Ihering, 1886; *furax* Thomas, 1907; *huronax* Thomas, 1921; *luteolus* Thomas, 1907; *melinus* Thomas, 1912; *quiqui* Molina, 1782; *ratellina* Thomas, 1921; *shiptoni* Thomas, 1926.

Galictis vittata (Schreber, 1776). Säugethiere, 3(18):pl. 124[1776], text, 3(26):418, 447[1777].

TYPE LOCALITY: "Surinam".

DISTRIBUTION: San Luis Potosi and Veracruz (Mexico) to Peru and S Brazil, at lower elevations, including: Argentina, Bolivia, Colombia, Costa Rica, Guatemala, Guyana, Panama, and Venezuela.

STATUS: CITES - Appendix III (Costa Rica).

SYNONYMS: *allamandi* Bell, 1841; *andina* Thomas, 1903; *brasiliensis* Thunberg, 1820; *canaster* Nelson, 1901; *crassidens* Nehring, 1885; *gujanensis* Bechstein, 1800; *intermedia* Lund, 1845.

COMMENTS: Krumbiegel (1942) included *allamandi*.

Gulo Pallas, 1780. Spicil. Zool., 14:25.

TYPE SPECIES: *Gulo sibiricus* Pallas, 1780 (= [*Mustela*] *gulo* Linnaeus, 1758), by absolute tautonymy (Melville and Smith, 1987).

COMMENTS: Corbet (1978c) attributed *Gulo* to Storr, 1780. *Gulo* Frisch, 1775, is invalid (International Commission on Zoological Nomenclature, 1954b).

Gulo gulo (Linnaeus, 1758). Syst. Nat., 10th ed., 1:45.

TYPE LOCALITY: "alpinus Lapponiæ, Ruffiæ, Sibiriae, sylvis vastissimis", restricted by Thomas (1911a) to "Lapland".

DISTRIBUTION: Holarctic taiga and S tundra, south to 50°N (Eurasia) and 37°N (North America).

STATUS: IUCN - Vulnerable.

SYNONYMS: *arcticus* Desmarest, 1820; *arctos* Kaup, 1829; *auduboni* Matschie, 1918; *bairdi* Matschie, 1918; *biedermanni* Matschie, 1918; *borealis* Nilsson, 1820; *hylaesus* Elliot, 1905; *kamtschaticus* Dybowski, 1922; *katschenakensis* Matschie, 1918; *luscus* Linnaeus, 1758; *luteus* Elliot, 1904; *niediecki* Matschie, 1918; *sibirica* Pallas, 1780; *vancouverensis* Goldman, 1935; *vulgaris* Oken, 1816; *wachei* Matschie, 1918.

COMMENTS: Degerbøl (1935) and Kurtén and Rausch (1959) demonstrated that *gulo* and *luscus* are conspecific.

Ictonyx Kaup, 1835. Das Tierreich in Seinen Hauptformen, 1:352.

TYPE SPECIES: *Ictonyx capensis* Kaup, 1835 (= *Bradypus striatus* Perry, 1810) (Melville and Smith, 1987).

SYNONYMS: *Ictidonyx* Agassiz, 1846; *Ictomys* Roberts, 1936; *Poecilictis* Thomas and Hinton, 1920; *Rhabdogale* Wiegmann, 1838; *Zorilla* I. Geoffroy Saint-Hilaire, 1826.

COMMENTS: There is considerable controversy over the correct name for this genus (Herschkovitz, 1955b; Van Gelder, 1966). *Zorilla* Oken, 1816, is invalid (International Commission on Zoological Nomenclature, 1956b). *Zorilla* Geoffroy Saint-Hilaire, 1826, was suppressed under the plenary powers for the purposes of the Principle of Priority (International Commission on Zoological Nomenclature, 1967). Rosevear (1974) strongly suggested, and Dekeyser (1955) and Niethammer (1987a) argued that *Poecilictis* Thomas and Hinton, 1920, and *Ictonyx* are congeneric. The principal skull features used to erect the new genus by Thomas and Hinton (1920) could not be supported when a more extensive series of specimens was measured (Rosevear, 1974).

Ictonyx libyca (Hemprich and Ehrenberg, 1833). Symb. Phys. Mamm., vol. 1, pt. 2, sig. K, verso.

TYPE LOCALITY: "Libyae" [Libya].

DISTRIBUTION: Fringes of the Sahara Desert from Morocco and Egypt on the north, and from Mauretania and N Nigeria to Sudan on the south.

SYNONYMS: *frenata* Sundevall, 1843; *multivittata* Wagner, 1841; *oralis* Thomas and Hinton, 1920; *rothschildi* Thomas and Hinton, 1920; *vaillantii* Loche, 1856.

Ictonyx striatus (Perry, 1810). Arcana, Mus. Nat. Hist., Signature Y, Fig. [41][1810].

TYPE LOCALITY: "South America". This is clearly in error and Hollister (1915) fixed the type locality as "Cape of Good Hope". [South Africa].

DISTRIBUTION: Senegal to SE Egypt and Ethiopia, south to South Africa, including: Botswana, Kenya, Malawi, Namibia, Nigeria, South Africa, Sudan, Tanzania, Uganda, and Zimbabwe.

SYNONYMS: *africana* Lichtenstein, 1838; *albescens* Heller, 1913; *arenarius* Roberts, 1924; *capensis* A. Smith, 1826; *elgonis* Granvik, 1924; *erythraea* de Winton, 1898; *ghansiensis* Roberts, 1932; *giganteus* Roberts, 1932; *intermedia* Anderson and de Winton, 1902; *kalaharicus* Roberts, 1932; *lancasteri* Roberts, 1932; *limpopoensis* Roberts, 1917; *maximus* Roberts, 1924; *mustelina* Wagner, 1841; *nigricaudus* Roberts, 1932; *orangiae* Roberts, 1924; *ovamboensis* Roberts, 1951; *pondoensis* Roberts, 1924; *pretoriae* Roberts, 1924; *senegalensis* Fischer, 1829; *shoae* Thomas, 1906; *shortridgei* Roberts, 1932; *sudanicus* Thomas and Hinton, 1923; *variegata* Lesson, 1842; *zorilla* Smuts, 1832.

Lyncodon Gervais, 1845. In d'Orbigny, Dict. Univ. Hist. Nat., 4:685.

TYPE SPECIES: *Mustela patagonica* Blainville, 1842.

Lyncodon patagonicus (de Blainville, 1842). Osteogr. Mamm., pt. 10(Viverra):1.

TYPE LOCALITY: Listed in Cabrera (1958) as "cercañas del río Negro." [Argentina].

DISTRIBUTION: Argentina and S Chile.

SYNONYMS: *anticola* Burmeister, 1869; *lujanensis* Ameghino, 1889; *quiqui* Burmeister, 1861.

Martes Pinel, 1792. Actes Soc. Hist. Nat. Paris, 1:55.

TYPE SPECIES: *Martes domestica* Pinel, 1792 (= *Mustela foina* Erxleben, 1777).

SYNONYMS: *Charronia* Gray, 1865; *Lamprogale* Ognev, 1928; *Mustela* Blasius, 1857; *Pekania* Gray, 1865; *Zibellina* Kaup, 1829.

Martes americana (Turton, 1806). In Linnaeus, Gen. Syst. Nat., 1:60.

TYPE LOCALITY: "North America".

DISTRIBUTION: Alaska and Canada south to N California, south in the Sierra Nevada and Rocky Mtns to 35°N.

SYNONYMS: *abieticola* Preble, 1902; *abietinoides* Gray, 1865; *actuosa* Osgood, 1900; *atrata* Bangs, 1897; *boria* Elliot, 1905; *brumalis* Bangs, 1898; *caurina* Merriam, 1890; *humboldtensis* Grinnell and Dixon, 1926; *huro* F. Cuvier, 1823; *kenaiensis* Elliot, 1903; *leucopus* Kuhl, 1820; *martinus* Ames, 1874; *nesophila* Osgood, 1901; *origenes* Rhoads, 1902; *sierrae* Grinnell and Storer, 1916; *vancouverensis* Grinnell and Dixon, 1926; *vulpina* Rafinesque, 1819.

COMMENTS: May be conspecific with *martes*, *melampus*, and *zibellina* (Anderson, 1970; Hagmeier, 1961). See Clark et al. (1987, Mammalian Species, 289).

- Martes flavigula* (Boddaert, 1785). Elench. Anim., 1:88.
 TYPE LOCALITY: Not given; fixed by Pocock (1941a) as "Nepal".
 DISTRIBUTION: Primorski Krai (Russia); Korea; China, west along Himalayan foothills to NW Pakistan; isolates in S India, SE Asia, Taiwan, Sumatra, Java, and Borneo.
 STATUS: CITES - Appendix III (India); U.S. ESA - Endangered as *M. f. chrysospila*; IUCN - Indeterminate as *M. f. chrysospila*.
 SYNONYMS: *aterrima* Pallas, 1811; *chrysogaster* Hamilton-Smith, 1842; *chrysospila* Swinhoe, 1866; *quadricolor* Shaw, 1800; *hardwickei* Horsfield, 1828; *henricii* Westermann, 1851; *indochinensis* Kloss, 1916; *lasiotis* Gray, 1850; *leucocephalus* Gray, 1865; *leucotis* Bechstein, 1800; *melina* Kerr, 1792; *melli* Matschie, 1922; *peninsularis* Bonhote, 1901; *quadricolor* Shaw, 1800; *typica* Bonhote, 1901; *yuenshanensis* Shih, 1930.
- Martes foina* (Erxleben, 1777). Syst. Regni Anim., 1:458.
 TYPE LOCALITY: "Europa inque Persia", listed by Miller (1912b) as "Germany."
 DISTRIBUTION: From Spain to S and C Europe, through Caucasus Mtns, to the Altai (Russia, Kazakhstan), Mongolia, and Himalayas; adjacent China; islands of Corfu, Crete and Rhodes.
 STATUS: CITES - Appendix III (India) as *M. f. intermedia*.
 SYNONYMS: *domestica* Pinel, 1792; *intermedia* Severtzov, 1873; *leucolachnaea* Blanford, 1879; *mediterranea* Barrett-Hamilton, 1898; *rosanowi* Martino, 1917; *toufoeus* Wroughton, 1919.
- Martes gwatkinsii* Horsfield, 1851. Cat. Mamm. Mus. E. India Co. p. 90.
 TYPE LOCALITY: "Madras" [India].
 DISTRIBUTION: S India.
 STATUS: CITES - Appendix III (India); IUCN - Indeterminate.
 COMMENTS: Included in *Martes flavigula* by Honacki et al. (1982) and Corbet (1978c); however, separated by Bonhote (1901b), Pocock (1936a, 1941a), Ellerman and Morrison-Scott (1951), and Anderson (1970).
- Martes martes* (Linnaeus, 1758). Syst. Nat., 10th ed., 1:46.
 TYPE LOCALITY: "sylvis antiquis", restricted by Thomas (1911a) to "Upsala" [Sweden].
 DISTRIBUTION: Britain and Ireland; N and W Europe to W Siberia, south to Sicily, Sardinia, Corsica, the Elburz Mtns (Iran), and the Caucasus Mtns.
 SYNONYMS: *abietum* Gray, 1865; *henricii* Westermann, 1851; *sylvatica* Nilsson, 1820; *sylvestris* Oken, 1816; *vulgaris* Griffith, 1827.
 COMMENTS: May be conspecific with *americana*, *melampus*, and *zibellina* (Anderson, 1970; Hagmeier, 1961).
- Martes melampus* (Wagner, 1841). In Schreber, Die Säugethiere., Suppl., 2:229.
 TYPE LOCALITY: "Japan".
 DISTRIBUTION: Japan (Honshu, Kyushu, Shikoku, Tsushima, introduced on Sado Isl); Korea.
 STATUS: IUCN - Indeterminate as *M. m. tsuensis*.
 SYNONYMS: *japonica* Gray, 1865; *melanopus* Gray, 1865.
 COMMENTS: May be conspecific with *americana*, *martes* and *zibellina* (Anderson, 1970; Hagmeier, 1961). Heptner and Naumov (1967) included Japanese and Korean *melampus* in *zibellina*.
- Martes pennanti* (Erxleben, 1777). Syst. Regni Anim., 1:470.
 TYPE LOCALITY: "in America boreali, vulgaris vicitans quadrupedibus minoribus." Listed by Miller and Rehm (1901) as "Eastern Canada."
 DISTRIBUTION: Yukon to E Quebec (Canada), NW USA, Sierra Nevadas, N Rocky Mtns, Great Lakes Region, New England, to North Carolina (USA).
 SYNONYMS: *canadensis* Schreber, 1778; *columbiana* Goldman, 1935; *melanorhyncha* Boddaert, 1784; *nigra* Turton, 1802; *pacifica* Rhoads, 1898; *piscator* Shaw, 1800; *varietas* Richardson, 1829.
 COMMENTS: Reviewed by Powell (1981, Mammalian Species, 156).
- Martes zibellina* (Linnaeus, 1758). Syst. Nat., 10th ed., 1:46.
 TYPE LOCALITY: "asia septentrionali," restricted by Thomas (1911a) to "N. Asia." Restricted by Ognev (1935) to "Tobol'skuyu gub. v ee severnoi chasti" ["northern part of Tobol'sk Province" (1962c translation)] [Russia].

DISTRIBUTION: Ural Mtns to Siberia, Kamchatka, Sakhalin (Russia); Mongolia; Sinkiang and NE China; N Korea; Hokkaido (Japan); originally west to N Scandinavia and W Poland.

SYNONYMS: *brachyura* Temminck, 1844.

COMMENTS: Reviewed by Pavlinin (1966). May be conspecific with *americana*, *martes*, and *melampus* (Anderson, 1970; Hagmeier, 1961). Heptner and Naumov (1967) included Japanese and Korean *melampus* in *zibellina*.

Mustela Linnaeus, 1758. Syst. Nat., 10th ed., 1:45.

TYPE SPECIES: [*Mustela*] *Putorius* Linnaeus, 1758.

SYNONYMS: *Grammogale* Cabrera, 1940; *Lutreola* Wagner, 1841; *Putorius* Cuvier, 1817; *Vison* Gray, 1843.

COMMENTS: Revised by Hall (1951) and Youngman (1982). Youngman (1982) recognized 5 subgenera: *Putorius* (*putorius*, *eversmannii*, *nigripes*); *Lutreola* (*lutreola*, *sibirica*, *nudipes*, *lutreolina*, and perhaps *strigidorsa*); *Mustela* (*erminea*, *nivalis*, *altaica*, *frenata*); *Vison* (*vison*); and *Grammogale* (*africana*, *felipei*). Some have chosen to elevate these groupings to generic status; because of the lack of any comprehensive phylogenetic approach to this problem, they are provisionally recognized here as valid subgenera.

Mustela africana Desmarest, 1818. Nouv. Dict. Hist. Nat., Nouv. ed., 9:376.

TYPE LOCALITY: "Africa", type locality is in error, fixed by Cabrera (1958) as "arrabales de Belem, la antigua Pará." [Brazil]

DISTRIBUTION: Amazon Basin in Brazil, Ecuador, and Peru.

SYNONYMS: *paraensis* Goeldi, 1897; *stolzmanni* Taczanowski, 1881.

COMMENTS: Youngman (1982) placed *africana* in subgenus *Grammogale*. Izor and de la Torre (1978) suggested that *africana* and *felipei* form a monophyletic group. Cabrera (1958) considered *Grammogale* a valid genus.

Mustela altaica Pallas, 1811. Zoogr. Rosso-Asiat., 1:98.

TYPE LOCALITY: "qui alpes altaicas adibunt" [Altai Mtns].

DISTRIBUTION: E Kazakhstan, S and SE Siberia, Primorski Krai (Russia); Mongolia; Tibet, W and N China; Korea.

STATUS: CITES - Appendix III (India).

SYNONYMS: *alpina* Gebler, 1823; *astutus* Milne-Edwards, 1870; *birulai* Ognev, 1928; *longstaffi* Wroughton, 1911; *raddei* Ognev, 1928; *sacana* Thomas, 1914; *temon* Hodgson, 1857.

COMMENTS: Youngman (1982) placed *altaica* in the subgenus *Mustela*; however, Ognev (1935) considered *sibirica* and *altaica* closely related.

Mustela erminea Linnaeus, 1758. Syst. Nat., 10th ed., 1:46.

TYPE LOCALITY: "Europa and Asia frigidior; hyeme praefertim in alpinis regionibus nivea".

DISTRIBUTION: Circumboreal, tundra and forested regions of Palearctic, south to the Pyrenees, alpine Slovenia, Alps, Caucasus, W Himalayas, and Xinjiang (China); N Mongolia, N China; and C Honshu (Japan); and, in the Nearctic south to C California, N New Mexico, N Iowa and Maryland (USA). Introduced to New Zealand.

STATUS: CITES - Appendix III (India).

SYNONYMS: *alascensis* Merriam, 1896; *algericus* Thomas, 1895; *anguinae* Hall, 1932; *angustidens* Brown, 1908; *arcticus* Merriam, 1896; *audax* Barrett-Hamilton, 1904; *bangsi* Hall, 1945; *celenda* Hall, 1944; *cigognanii* Bonaparte, 1838; *fallenda* Hall, 1945; *ferghanae* Thomas, 1895; *gulosa* Hall, 1945; *haidarum* Preble, 1898; *herminea* Oken, 1816; *hibernicus* Thomas and Barrett-Hamilton, 1895; *imperii* Barrett-Hamilton, 1904; *initis* Hall, 1944; *invicta* Hall, 1945; *kadiacensis* Merriam, 1896; *kaneii* G. M. Allen, 1914; *labiata* Degerbøl, 1935; *leptus* Merriam, 1903; *lymani* Hollister, 1912; *microtis* J. A. Allen, 1903; *mortigena* Bangs, 1913; *muricus* Bangs, 1899; *nippon* Cabrera, 1913; *olympica* Hall, 1945; *polaris* Barrett-Hamilton, 1904; *pusilla* DeKay, 1842; *richardsonii* Bonaparte, 1838; *rixosa* Svihla and Svihla, 1932; *salva* Hall, 1944; *seclusa* Hall, 1944; *semplei* Sutton and Hamilton, 1932; *streatori* Merriam, 1896; *vulgaris* Griffith, 1827; *whiteheadi* Wroughton, 1908.

COMMENTS: Revised by Eger (1990). Reviewed by C. M. King (1983, Mammalian Species, 195). Youngman (1982) placed *erminea* in the subgenus *Mustela*.

Mustela eversmannii Lesson, 1827. Manuel de Mammalogie, p. 144.

TYPE LOCALITY: "trouvé...entre Orembourg et Bukkara," restricted by Stroganov (1962:338) to "basseinu sredneyo techeniya r. Iлека, ...r. Bol'shoi Khobdy" [Russia, Orenburg Obl., S of Orenburg, mouth of Khobda River, a tributary of Ilek River.]

DISTRIBUTION: Steppes and subdeserts of E Europe, and republics of the former USSR; Mongolia; W, C and NE China.

SYNONYMS: *larvatus* Hodgson, 1849; *lineiventer* Hollister, 1913; *tiarata* Hollister, 1913.

COMMENTS: Reviewed by Kostro (1948), Heptner (in Heptner and Naumov, 1967), and Anderson (1977). Youngman (1982) placed *eversmannii* in the subgenus *Putorius*. Anderson (1977) and Kurtén and Anderson (1980) suggested that *nigripes* and *eversmannii* may be conspecific. Pocock (1936b) and Ellerman and Morrison-Scott (1966) considered *eversmannii* and *putorius* conspecific; however, Ognev (1931), Stroganov (1962), and Heptner (in Heptner and Naumov, 1967), recognized them as distinct species.

Mustela felipei Izor and de la Torre, 1978. J. Mammal., 59:92.

TYPE LOCALITY: "Santa Marta, elevation 2,700 m, near San Agustin, Huila, Colombia".

DISTRIBUTION: The type locality and Cauca, Colombia (two localities separated by 70 km, on opposite sides of Cordillera Central).

COMMENTS: Izor and de la Torre (1978) suggested that *africana* and *felipei* form a monophyletic group. Youngman (1982) placed *felipei* in subgenus *Grammogale*.

Mustela frenata Lichtenstein, 1831. Darst. Säugeth., text: "Das gezäumte Wiesel" [not paginated], and plate 42.

TYPE LOCALITY: "der Nähe von Mexico".

DISTRIBUTION: S Canada to Venezuela and Bolivia, excluding the SW deserts of the USA.

SYNONYMS: *aequatorialis* Coues, 1877; *affinis* Gray, 1874; *agilis* Tschudi, 1844; *alleni* Merriam, 1896; *altifrontalis* Hall, 1936; *arizonensis* Mearns, 1891; *arthuri* Hall, 1927; *aureoventris* Gray, 1864; *boliviensis* Hall, 1938; *brasilienis* Sevestianoff, 1813; *cicognanii* Henninger, 1921; *costaricensis* Goldman, 1912; *effera* Hall, 1936; *fusca* DeKay, 1842; *goldmani* Merriam, 1896; *gracilis* Brown, 1908; *helleri* Hall, 1935; *inyoensis* Hall, 1936; *jelskii* Taczanowski, 1881; *latirostra* Hall, 1936; *leucoparia* Merriam, 1896; *longicauda* Bonaparte, 1838; *macrophonus* Elliot, 1905; *macrura* Taczanowski, 1874; *meridana* Hollister, 1914; *mexicanus* Coues, 1877; *munda* Grinnell, 1933; *mundus* Bangs, 1899; *neomexicanus* Barber and Cockerell, 1898; *nevadensis* Hall, 1936; *nicaraguae* Allen, 1916; *nigriauris* Hall, 1936; *notius* Bangs, 1899; *noveboracensis* Emmons, 1840; *occisor* Bangs, 1899; *olivacea* Howell, 1913; *oregonensis* Merriam, 1896; *oribusus* Bangs, 1899; *panamensis* Hall, 1932; *peninsulae* Rhoads, 1894; *perdus* Merriam, 1902; *perotae* Hall, 1936; *primulina* Jackson, 1913; *pulchra* Hall, 1936; *richardsonii* Baird, 1858; *saturatus* Merriam, 1896; *spadix* Bangs, 1896; *texensis* Hall, 1936; *tropicalis* Merriam, 1896; *washingtoni* Merriam, 1896; *xanthogenys* Gray, 1843.

COMMENTS: Youngman (1982) placed *frenata* in the subgenus *Mustela*.

Mustela kathiah Hodgson, 1835. J. Asiat. Soc. Bengal, 4:702.

TYPE LOCALITY: "Kachar region" [Nepal].

DISTRIBUTION: Himalayas from N Pakistan through Nepal to Burma; S and E China; Indochinese Peninsula.

STATUS: CITES - Appendix III (India).

SYNONYMS: *auriventer* Hodgson, 1837; *caporiaccoi* de Beaux, 1935; *dorsalis* Trouessart, 1895; *tsaidamensis* Hilzheimer, 1910;

Mustela lutreola (Linnaeus, 1761). Fauna Suecica, 2nd ed., p. 5.

TYPE LOCALITY: "Finlandiae aquolis", restricted by Matschie (1912) to "Südwest-Finnland."

DISTRIBUTION: NE Spain, France; throughout Europe to the Irtysh and Ob Rivers (Russia, Kazakhstan).

STATUS: IUCN - Vulnerable.

SYNONYMS: *alba* de Sélys Longchamps, 1839; *albica* Matschie, 1912; *alpinus* Ogérien, 1863; *armorica* Matschie, 1912; *biedermanni* Matschie, 1912; *binominata* Ellerman and Morrison-Scott, 1951; *borealis* Novikov, 1939; *budina* Matschie, 1912; *caucasica* Novikovi, 1939; *cylipena* Matschie, 1912; *europaeae* Homeyer, 1879; *fulva* Kerr, 1792; *glogeri* Matschie, 1912; *hungarica* Ehik, 1932; *minor* Erxleben, 1977; *novikovi* Ellerman

- and Morrison-Scott, 1951; *taivana* Thomas, 1913; *transsylvanica* Ehik, 1932; *turovi* Kuznetsov and Novikov, 1939; *varina* Matschie, 1912; *wyborgensis* Matschie, 1912.
 COMMENTS: Youngman (1982) placed *lutreola* in subgenus *Lutreola*. Revised by Matschie (1912), Novikov (1939), and Youngman (1982; 1990, Mammalian Species, 362). Occasional hybrids occur between *lutreola* and *putorius* (Youngman, 1982).
- Mustela lutreolina* Robinson and Thomas, 1917. Ann. Mag. Nat. Hist., ser. 8, 20:261-262.
 TYPE LOCALITY: "Tjibodas, West Java, 5500'"; identified by Van Bree and Boeady (1978) as "6°44'S 107°00'E".
 DISTRIBUTION: Indonesia (Java, Sumatra).
 STATUS: IUCN - Insufficiently known.
 COMMENTS: Revised by Van Bree and Boeady (1978). Ellerman and Morrison-Scott (1966) implied, and Novikov (1956) and Corbet (1978c) believed *lutreolina* and *sibirica* conspecific; however this has not been supported by primary studies (Van Bree and Boeady, 1978). Youngman (1982) placed *lutreolina* in the subgenus *Lutreola*.
- Mustela nigripes* (Audubon and Bachman, 1851). Viviparous Quadrupeds of North America, 2:297.
 TYPE LOCALITY: "lower waters of the Platte River", restricted by Hayden (1863:138) to "Fort Laramie" [Wyoming, USA].
 DISTRIBUTION: Formerly, S Alberta and Saskatchewan (Canada) south to Arizona, Oklahoma, and NW Texas (USA). Viable populations now only in captivity.
 STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.
 COMMENTS: Reviewed by Hillman and Clark (1980, Mammalian Species, 126) and Anderson (1977). Youngman (1982) placed *nigripes* in the subgenus *Putorius*. Anderson (1977) and Kurtén and Anderson (1980) suggested that *nigripes* and *eversmannii* may be conspecific.
- Mustela nivalis* Linnaeus, 1766. Syst. Nat., 12th ed., 1:69.
 TYPE LOCALITY: "Westrobothnia" [Sweden].
 DISTRIBUTION: The Palearctic (excl. Ireland, the Arabian Peninsula, and Arctic Isls); Japan; the Nearctic in Alaska (USA), Canada, and USA, south to Wyoming and North Carolina. Introduced to New Zealand; see Corbet and Hill (1980).
 SYNONYMS: *africana* Gray, 1865; *albipes* Mina Palumbo, 1868; *alleghehiensis* Rhoads, 1901; *alpinus* Burg, 1920; *atlas* Barrett-Hamilton, 1904; *boccamela* Bechstein, 1800; *campestris* Jackson, 1913; *caraftensis* Kishida, 1936; *caucasicus* Barrett-Hamilton, 1900; *corsicanus* Cavazza, 1908; *dinniki* Satunin, 1907; *dombrowskii* Matschie, 1901; *eskimo* Stone, 1900; *fulva* Mina Palumbo, 1868; *gale* Pallas, 1811; *galinthias* Bate, 1906; *italicus* Barrett-Hamilton, 1900; *kamtschatica* Dybowski, 1922; *major* Fatio, 1905; *meridionalis* Costa, 1869; *minor* Nilsson, 1820; *minutus* Pomel, 1853; *monticola* Cavazza, 1908; *mosanensis* Mori, 1927; *namiyei* Kuroda, 1921; *nikolskii* Smirnov, 1899; *numidicus* Pucheran, 1855; *pallidus* Barrett-Hamilton, 1900; *punctata* Domaniewski, 1926; *pusillus* Fatio, 1869; *pygmaeus* J. A. Allen, 1903; *rixosus* Bangs, 1896; *russelliana* Thomas, 1911; *siculus* Barrett-Hamilton, 1900; *stoliczkana* Blanford, 1877; *subpalmata* Hemprich and Ehrenberg, 1833; *tonkinensis* Björkegren, 1942; *trettau* Kleinschmidt, 1937; *typicus* Barrett-Hamilton, 1900; *vulgaris* Erxleben, 1777; *yesoidsuna* Kishida, 1936.
 COMMENTS: Reviewed by Reichstein (1957) and van Zyll de Jong (1992), who considered *Putorius rixosus* and *Mustela nivalis* conspecific. Youngman (1982) placed *nivalis* in the subgenus *Mustela*.
- Mustela nudipes* Desmarest, 1822. Mammalogie, in Encycl. Meth., 2(Suppl.):537.
 TYPE LOCALITY: "L'île de Java". Locality is in error, fixed by Robinson and Kloss (1919b) as "West Sumatra" [Indonesia].
 DISTRIBUTION: Thailand, Malaysia, Indonesia (Sumatra, Java, Borneo).
 SYNONYMS: *leucocephalus* Gray, 1865.
 COMMENTS: Pocock (1941a) believed *strigidorsa* and *nudipes* to be closely related. Youngman (1982) placed *nudipes* in the subgenus *Lutreola*.
- Mustela putorius* Linnaeus, 1758. Syst. Nat., 10th ed., 1:46.
 TYPE LOCALITY: "inter Europae rupes et lapidum acervos", restricted by Thomas (1911a) to "Scania, S. Sweden."
 DISTRIBUTION: Europe (excluding Ireland and most of Scandinavia), east to the Ural Mtns.

SYNONYMS: *ambigua* Mearns, 1897; *angustifrons* Howell, 1902; *bicolor* Gray, 1837; *gracilis* Merriam, 1890; *interrupta* Rafinesque, 1820; *larvatus* Hodgson, 1849; *leucoparia* Merriam, 1890; *lucasona* Merriam, 1890; *microdon* Howell, 1906; *mupurita* Müller, 1776; *olympica* Elliot, 1899; *phenax* Merriam, 1890; *putida* Cuvier, 1798; *quaterlinearis* Winans, 1859; *ringens* Merriams, 1890; *saxatalis* Merriam, 1890; *striata* Shaw, 1800; *tenuis* Howell, 1902; *texensis* Merriam, 1890; *tibetanus* Horsfield, 1851; *zorilla* Schreber, 1776.

COMMENTS: Reviewed by Heptner (in Heptner and Naumov, 1967). Probable ancestor of domestic ferret, *furo* (Rempe, 1970; Volobuev, 1971). Youngman (1982) placed *putorius* in the subgenus *Putorius*. Pocock (1936b) and Ellerman and Morrison-Scott (1966) considered *eversmannii* and *putorius* conspecific; however, Ognev (1931), Stroganov (1962), and Heptner (in Heptner and Naumov, 1967), recognized them as distinct species.

Mustela sibirica Pallas, 1773. Reise Prov. Russ. Reichs., 2:701.

TYPE LOCALITY: "Sibiriae montanis, sylvis densissimis", restricted by Pocock (1941a) to "Vorposten Tigerazkoi, near Usstkomegorsk, W. Altai," based on Pallas (1773:570). Listed in Honaki et al. (1982) as "U.S.S.R., E. Kazakhstan, vic. of Ust-Kamenogorsk, Tigeretskoie."

DISTRIBUTION: Russia (Tataria, Dalnevostochny Rayon), Ural Mtns, Siberia; Pakistan east to N Burma; N Thailand; Taiwan; China; Korea; Japan; introduced to Sakhalin, Russia.

STATUS: CITES - Appendix III (India).

SYNONYMS: *asaii* Kuroda, 1943; *australis* Satunin, 1911; *canigula* Hodgson, 1842; *charbinensis* Lowkashkin, 1934; *coreanus* Domaniewski, 1926; *dauidianus* Milne-Edwards, 1872; *fontainierii* Milne-Edwards, 1871; *hamptoni* Thomas, 1921; *hodgsoni* Gray, 1843; *horsfieldii* Blyth, 1843; *humeralis* Blyth, 1842; *itatsi* Temminck, 1844; *katsurai* Kishida, 1931; *major* Hilzheimer, 1910; *manchurica* Brass, 1911; *melli* Matschie, 1922; *miles* Barrett-Hamilton, 1904; *moupinensis* Milne-Edwards, 1868; *natsi* Temminck, 1844; *noctis* Barrett-Hamilton, 1904; *peninsulae* Kishida, 1931; *quelpartis* Thomas, 1908; *sho* Kuroda, 1924; *sibirica* Pallas, 1773; *stegmanni* Matschie, 1907; *subhemachalanus* Hodgson, 1837; *tafeli* Hilzheimer, 1910; *taivana* Thomas, 1913.

COMMENTS: Youngman (1982) placed *sibirica* in the subgenus *Lutreola*. Ognev (1935) considered *altaica* and *sibirica* closely related. Ellerman and Morrison-Scott (1966) implied, and Novikov (1956) and Corbet (1978c) believed *lutreolina* and *sibirica* conspecific; however this has not been supported by primary studies (Van Bree and Boeadi, 1978).

Mustela strigidorsa Gray, 1855. Proc. Zool. Soc. Lond., 1853:191 [1855].

TYPE LOCALITY: Not given. Gray (1853) based the type description on a manuscript given to him by Hodgson. Horsfield (1855) later fixed the type locality as, "the Sikim Hills of Tarai." [India, Sikkim].

DISTRIBUTION: Nepal east through Burma, Yunnan (China) and Thailand to Laos.

COMMENTS: Youngman (1982) suggested that *strigidorsa* belonged in subgenus *Lutreola*.

Mustela vison Schreber, 1777. Die Säugethiere, 3(19):pl. 127.B[1777]; text, 3(26):463[1777].

TYPE LOCALITY: "Man findet das Vison in Canada un Pensilvanien".

DISTRIBUTION: North America from Alaska and Canada through all of USA except SW deserts. Introduced to Iceland, NC Europe, British Isls, Norway, Belarussia, Baltic States, Spain, and Siberia.

SYNONYMS: *antiquus* Loomis, 1911; *borealis* Brass, 1911; *energumenos* Bangs, 1896; *evagor* Hall, 1932; *evergladensis* Hamilton, 1948; *ingens* Osgood, 1900; *lacustris* Preble, 1902; *letifera* Hollister, 1915; *lowii* Anderson, 1945; *lutensis* Bangs, 1898; *lutrocephala* Harlan, 1825; *macrodon* Prentiss, 1903; *melampeplus* Elliot, 1903; *mink* Peale and Palisot de Beauvois, 1796; *minx* Turton, 1800; *nesolestes* Heller, 1909; *nigrescens* Audubon and Bachman, 1854; *rufa* Smith, 1858; *vulgivagus* Bangs, 1895; *winingus* Baird, 1857.

COMMENTS: Manville (1966) demonstrated that *macrodon* is conspecific, although Kurtén and Anderson (1980) recognized it as a distinct species. Hall (1951), Heptner and Yurgenson (1967), and Hollister (1913a) considered *vison* closely related to *lutreola*, however analyses by Graphodatskii et al. (1976) and Youngman (1982) supported

vison to be one of the earliest offshoots of the *Mustela* lineage. Youngman (1982) placed *vison* in the subgenus *Vison*.

Poecilogale Thomas, 1883. Ann. Mag. Nat. Hist., ser. 5, 11:370.

TYPE SPECIES: *Zorilla albinucha* Gray, 1864, by monotypy (Melville and Smith, 1987).

Poecilogale albinucha (Gray, 1864). Proc. Zool. Soc. Lond., 1864:69, plate X.

TYPE LOCALITY: "it was without any habitat". Fixed by Coetzee (1977b) as "Cape Colony".

DISTRIBUTION: South Africa, Zimbabwe, Mozambique, Botswana, Namibia, Malawi, Zambia, Angola, Zaire, Rwanda, Burundi, Uganda, Tanzania, Kenya.

SYNONYMS: *africana* Peters, 1865; *bechuanae* Roberts, 1931; *doggetti* Thomas and Schwann, 1904; *flavistriata* Bocage, 1865; *lebombo* Roberts, 1931; *transvaalensis* Roberts, 1926.

Vormela Blasius, 1884. Ber. Naturforsch Ges. Bemberg, 13:9.

TYPE SPECIES: *Mustela sarmatica* Pallas, 1771 (= *Mustela peregusna* Gldenstdt, 1770), by original designation (Melville and Smith, 1987).

Vormela peregusna (Gldenstdt, 1770). Nova Comm. Imp. Acad. Sci. Petropoli, 14(1):441.

TYPE LOCALITY: "habitat in campis apricis desertis Tanaicensibus". Listed in Honacki et al. (1982) as "U.S.S.R., Rostov Obl., steppes at lower Don River."

DISTRIBUTION: Steppes and deserts of SE Europe, Caucasus, Kazakhstan, Middle Asia; SW Asia (excl. Arabia); N China and S Mongolia.

STATUS: IUCN - Vulnerable.

SYNONYMS: *alpherakii* Birula, 1910; *euxina* Pocock, 1936; *koshewnikowi* Satunin, 1910; *negans* Miller, 1910; *ornata* Pocock, 1936; *peregusna* Gldenstdt, 1770; *sarmatica* Pallas, 1771; *syriaca* Pocock, 1936; *tedschenika* Satunin, 1910;

Subfamily Taxidiinae Pocock, 1920. Proc. Zool. Soc. London, 1920:424.

COMMENTS: Type genus: *Taxidea* Waterhouse (1838). See comments under Melinae for rationale in separating this taxon from old world "badgers."

Taxidea Waterhouse, 1839. Proc. Zool. Soc. Lond., 1838:154 [1839].

TYPE SPECIES: *Ursus Meles labradorius* Gmelin, 1788 (= *Ursus taxus* Schreber, 1777), by original designation. (Melville and Smith, 1987).

SYNONYMS: *Taxus* Say, 1823.

Taxidea taxus (Schreber, 1777). Sugethiere, 3(26):pl. 142[1778], text, 3(26):520[1777].

TYPE LOCALITY: "Er wohnt in Labrador und um die Hudsonsbay," restricted by Long (1972), to "Carman, Manitoba." [Canada].

DISTRIBUTION: SW Canada, British Columbia, Alberta, Saskatschewan, Manitoba, Ontario, to Baja California and Puebla (Mexico), east to Lake Ontario.

SYNONYMS: *americanus* Boddaert, 1784; *apache* Schantz, 1948; *berlandieri* Baird, 1858; *californica* Gray, 1865; *dacotensis* Schantz, 1946; *halli* Schantz, 1951; *hallorani* Schantz, 1949; *infusca* Thomas, 1898; *iowae* Schantz, 1947; *jacksoni* Schantz, 1945; *jeffersonii* Harlan, 1825; *kansensis* Schantz, 1950; *labradorius* Gmelin, 1788; *littoralis* Schantz, 1949; *marylandica* Gidley and Gaxin, 1933; *merriami* Schantz, 1950; *montanus* Richardson, 1829; *neglecta* Mearns, 1891; *nevadensis* Schantz, 1949; *obscurata* de Beaux, 1924; *papagoensis* Skinner, 1943; *phippsi* Figgins, 1918; *robusta* Hay, 1921; *sonoriensis* Goldman, 1939; *sulcata* Cope, 1878.

COMMENTS: Reviewed by Long (1972; 1973, Mammalian Species, 26).

Family Odobenidae Allen, 1880. U.S. Geol. and Geog. Surv. Territ., 12:ix, 5.

COMMENTS: Trichecidae Gray, 1821 and Rosmaridae Gill, 1866 are invalid (International Commission on Zoological Nomenclature, 1959). Considered as a subfamily of Otariidae by Mitchell and Tedford (1973), Tedford (1976), Hall (1981), Berta and Demr (1986), Barnes (1989), and Wozencraft (1989a, b); however, Wyss (1987) and Berta (1991) contended that this would make the otariids paraphyletic.

Odobenus Brisson, 1762. Regne Anim., 2nd ed., p. 30.

TYPE SPECIES: *Odobenus odobenus* Brisson, 1762 (= *Phoca rosmarus* Linnaeus, 1758).

COMMENTS: Although the names in Brisson (1762) are invalid, *Odobenus* has been retained (International Commission on Zoological Nomenclature, 1957e).

Odobenus rosmarus (Linnaeus, 1758). Syst. Nat., 10th ed., 1:38.

TYPE LOCALITY: "intra Zonam arcticam Europae, Asiae, Americae".

DISTRIBUTION: Arctic seas: south as far as New England (USA), Great Britain, Scandinavia, Pribilof Isls, and Honshu (Japan) at least occasionally.

STATUS: CITES - Appendix III (Canada); IUCN - Insufficiently known as *O. r. laptevi*.

SYNONYMS: *arcticus* Pallas, 1811; *cookii* Fremerij, 1831; *divergens* Illiger, 1815; *obesus* Illiger, 1815; *orientalis* Dybowski, 1922.

COMMENTS: Reviewed by Fay (1985, Mammalian Species, 238).

Family Otariidae Gray, 1825. Ann. Philos., n.s., 10:340.

COMMENTS: Reviewed by Allen (1880), Repenning et al. (1971), Mitchell and Tedford (1973), J. E. King (1983), Berta and Deméré (1986), and Barnes (1989). Does not include *Odobenus*, which was included in a monotypic subfamily (Odobeninae) by Mitchell and Tedford (1973), Tedford (1976), Hall (1981), Barnes (1989), and Wozencraft (1989a, b); however, see Wyss (1987) and Berta (1991) who are followed here. Berta and Deméré (1986) separated *Arctocephalus* and *Callorhinus* into the Arctocephalinae. Repenning et al. (1971), Repenning and Tedford (1977), and others argued against the recognition of subfamilies.

Arctocephalus E. Geoffroy Saint-Hilaire and F. Cuvier, 1826. In F. Cuvier, Dict. Sci. Nat., 39:553 [1826].

TYPE SPECIES: "*Phoca ursina*" (= *Phoca pusilla* Schreber, 1777; not *Phoca ursina* Linnaeus, 1758; Allen, 1905 discussed confusion in designation of type species).

COMMENTS: Reviewed by King (1954) and Repenning et al. (1971) who included *Arctophoca* Peters, 1867. Van Gelder (1977b) considered *Zalophus* and *Arctocephalus* congeneric.

Arctocephalus australis (Zimmermann, 1783). Geogr. Gesch. Mensch. Vierf. Thiere, 3:276.

TYPE LOCALITY: Zimmermann (1783) based the name on the "Falkland Isle Seal" of Pennant (1781), however, he added that it "Wohnt um Juan Fernandez, und über haupt in dortigen Meeren." [Falkland Isls, UK].

DISTRIBUTION: Coasts of South America from Lima (Peru) to Rio de Janeiro (Brazil); Falkland Isls.

STATUS: CITES - Appendix II.

SYNONYMS: *brachydactyla* Philippi, 1892; *falclandicus* Nahrung, 1887; *falklandica* Desmarest, 1817; *gracilis* Nehring, 1887; *grayi* Scott, 1873; *hauvillii* Lesson, 1827; *latirostris* Gray, 1872; *leucostoma* Philippi, 1892; *lupina* Molina, 1782; *nigrescens* Gray, 1850; *philippi* Philippi, 1892; *porcina* Molina, 1782; *shawii* Lesson, 1828; *ursinus* Gray, 1843.

COMMENTS: Scheffer (1958) included *galapagoensis* Heller, 1904; but this was not followed by Repenning et al. (1971) or J. E. King (1983).

Arctocephalus forsteri (Lesson, 1828). In Bory de Saint-Vincet (ed.), Dict. Class. Hist. Nat. Paris, 13:421.

TYPE LOCALITY: Scheffer (1958) restricted the type locality to "Dusky Sound, New Zealand."

DISTRIBUTION: New Zealand and nearby subantarctic isls; S and W Australia.

STATUS: CITES - Appendix II.

Arctocephalus galapagoensis Heller, 1904. Proc. Calif. Acad. Sci., ser. 3, 3(7):245.

TYPE LOCALITY: "Wenman Island" [Ecuador, Galapagos Isls].

DISTRIBUTION: Specimens recorded only from Galapagos Isls [Ecuador].

STATUS: CITES - Appendix II.

COMMENTS: Repenning et al. (1971) supported recognition at the specific level, followed by J. E. King (1983); however, Scheffer (1958) considered *galapagoensis* conspecific with *australis*, which would be the most closely related taxon. Reviewed by Clark (1975, Mammalian Species, 64).

Arctocephalus gazella (Peters, 1875). Monatsb. K. Preuss. Akad. Wiss. Berlin, 1875:393, 396.

TYPE LOCALITY: "von Seehunden aus Kerguelenland". Restricted by Scheffer (1958) to "Anse Betsy (49°09'S, 70°11'E)."

DISTRIBUTION: Islands south of Antarctic convergence (Kerguelen, S Sandwich, S Orkney, Heard, Bouver, S Georgia, S Shetland Isls).

STATUS: CITES - Appendix II.

COMMENTS: Reviewed by King (1959a, b). Peters' (1875) original description, based on two specimens, was considered by Allen (1880) as invalid (*nomen nudum*). A year later Peters (1876) learned the second specimen came from St. Paul or Amsterdam Island and gave it the name *Otaria (Arctophoca) elegans*. Allen (1892) and King (1959b) considered these as subspecific populations. Placed in *Arctocephalus* by Repenning et al. (1971).

Arctocephalus philippii (Peters, 1866). Monatsb. K. Preuss. Akad. Wiss. Berlin, 1866:276, pl. 2a, b, c.

TYPE LOCALITY: "Insel Juan Fernandez". Listed by Scheffer (1958) as "Isla Más a Tierra, Islas Juan Fernández, Chile".

DISTRIBUTION: Specimens recorded from Juan Fernandez and San Felix Isls (Chile).

STATUS: CITES - Appendix II; IUCN - Vulnerable.

SYNONYMS: *argentata* Philippi, 1871; *aurita* Tschudi, 1844.

Arctocephalus pusillus (Schreber, 1775). Die Säugethiere, 2(13):pl. 85[1775]; text, 3(17):314 [1776].

TYPE LOCALITY: Unknown. "Diese Gattung findet sich in den levantischen, und nach dem Herrn Grafen von Büffon, im indischen Meere"; discussion of type locality in Allen (1880).

DISTRIBUTION: SW Africa from Angola to Algoa Bay; SE Australia; Tasmania.

STATUS: CITES - Appendix II.

SYNONYMS: *antarctica* Thunberg, 1811; *compressa* Gray, 1874; *delalandii* Gray, 1859; *doriferus* Wood Jones, 1925; *nivosus* Gray, 1868; *parva* Boddaert, 1785; *peronii* Desmarest, 1820; *schisthyperoes* Turner, 1868; *tasmanicus* Scott and Lord, 1926.

COMMENTS: Repenning et al. (1971) and J. E. King (1983) included *doriferus* Wood-Jones, 1925; however, Scheffer (1958) considered it a distinct species.

Arctocephalus townsendi Merriam, 1897. Proc. Biol. Soc. Wash., 11:175.

TYPE LOCALITY: "Guadalupe Island, off Lower California. . . collected on the beach on west side of Guadalupe." [Mexico]

DISTRIBUTION: Guadalupe Isl (Mexico), Channel Isls (California, USA).

STATUS: CITES - Appendix I; U.S. ESA - Threatened; IUCN - Vulnerable.

COMMENTS: Formerly included in *Arctophoca*; see Repenning et al. (1971). Considered conspecific with *philippii* by Scheffer (1958).

Arctocephalus tropicalis (Gray, 1872). Proc. Zool. Soc. Lond., 1872:653, 659.

TYPE LOCALITY: "North coast of Australia." This is in error, fixed by King (1959b) to "'Australasian sea'...to include the islands of St. Paul and Amsterdam as these are the islands nearest to Australia...".

DISTRIBUTION: Islands north of Antarctic Convergence (Tristan, Gough, Marion, Crozet, Amsterdam, Macquarie Isls).

STATUS: CITES - Appendix II.

Callorhinus Gray, 1859. Proc. Zool. Soc. Lond., 1859:359.

TYPE SPECIES: *Arctocephalus ursinus* Gray, 1859 (= *Phoca ursina* Linnaeus, 1758), by original designation.

Callorhinus ursinus (Linnaeus, 1758). Syst. Nat., 10th ed., 1:37.

TYPE LOCALITY: "in Camschatcæ maritimus inter Asiam and Americam proximam, primario in infula Beringri," restricted by Thomas (1911a) to "Bering Island."

DISTRIBUTION: North Pacific, in Okhotsk and Bering Seas; Commander and Pribilof Isls (Russia), south to Japan, Shantung (China), and S California (USA).

SYNONYMS: *alascanus* Jordan and Clark, 1898; *californianus* Gray, 1866; *curilensis* Jordan and Clark, 1898; *cynocephala* Walbaum, 1792; *mimica* Tilesius, 1835.

Eumetopias Gill, 1866. Proc. Essex Inst. Salem, 5:7.

TYPE SPECIES: "*Otaria californiana* Lesson., = *Arctocephalus monterienis* Gray." (= *Phoca jubata* Schreber, 1776).

COMMENTS: For a discussion of the type, see Scheffer (1958).

Eumetopias jubatus (Schreber, 1776). Die Säugethiere, text, 3(17):300[1776]; 3(17):pl. 83.B[1776].

TYPE LOCALITY: "...Aufenthalt in dem nördlichen Theil des stillen Meeres...westlichen Küste von Amerika... östlichen von Kamtschatka...Inseln...Küsten unter dem 56ten Grade der Breite liegen." [N part of the Pacific. Russia, Commander and Bering Isls].

DISTRIBUTION: N Pacific, from Hokkaido (Japan) to S California (USA).

STATUS: U.S. ESA - Threatened.

SYNONYMS: *marinus* Steller, 1751; *monteriensis* Gray, 1859; *stellerii* Lesson, 1828.

COMMENTS: Scheffer (1958) pointed out that *jubata* Forster, 1775, is invalid. Reviewed by Loughlin et al. (1987, Mammalian Species, 283).

Neophoca Gray, 1866. Ann. Mag. Nat. Hist., ser. 3, 18:231.

TYPE SPECIES: *Arctocephalus lobatus* Gray, 1828 (= *Otaria cinerea* Péron, 1816).

COMMENTS: Sivertsen (1954) and Scheffer (1958) considered *Neophoca* congeneric with *Phocarcos*; however, it was retained as separate by J. E. King (1960, 1983), Rice (1977), and Barnes (1989).

Neophoca cinerea (Péron, 1816). Voy. Decouv. Terres. Austral., 2:54.

TYPE LOCALITY: "L'île Decrès" [Australia, South Australia, Kangaroo Isl].

DISTRIBUTION: Houtmans Abrolhos (Western Australia) to Kangaroo Isl (South Australia).

SYNONYMS: *albicollis* Péron, 1816; *australis* Quoy and Gaimard, 1830; *forsteri* Wood Jones, 1992 (not Lesson, 1828); *hookeri* Gray, 1844; *lobatus* Gray, 1828; *williamsi* McCoy, 1877.

COMMENTS: Allen (1880:203-204) questioned the validity of the type description. Reviewed by Ling (1992, Mammalian Species, 392).

Otaria Péron, 1816. Voy. Decouv. Terres. Austral., 2:37.

TYPE SPECIES: *Otaria leonina* Péron, 1816 (= *Phoca byroni* de Blainville, 1820).

Otaria byronia (de Blainville, 1820). J. Phys. Chim. Hist. Nat. Arts Paris, 91:300.

TYPE LOCALITY: "the island of Tinian...située à l'est des Philippines ou par le 15° de latitude méridionale et le 215° de long. méridionale de Greenwich." This is an error, as there are no sea lions on these islands, fixed by Scheffer (1958) as "it probably came from the Strait of Magellan or Islas Juan Fernández" based on Allen (1905) and Hamilton (1934).

DISTRIBUTION: South American coasts from Peru to Uruguay; Falkland Isl; occasionally north to coast of Brazil.

SYNONYMS: *chilensis* Müller, 1841; *chonotica* Philippi, 1892; *flavescens* Shaw, 1800; *fluva* Philippi, 1892; *godeffroyi* Peters, 1866; *hookeri* Sclater, 1866; *leonina* Molina, 1782; *minor* Gray, 1874; *molossina* Lesson and Garnot, 1826; *pernettyi* Lesson, 1828; *pygmaea* Gray, 1874; *rufa* Philippi, 1892; *scont* Boddaert, 1784; *ulloae* Tschudi, 1844; *uraniae* Lesson, 1827; *velutina* Philippi, 1892.

COMMENTS: *Phoca flavescens* Shaw, 1800, was described based on a juvenile specimen in the Leverian Museum from the "Magellanic Straits" [Chile]. His description, as stated, does not fit any known otariid from this region (Allen, 1880, 1905). Cabrera (1940) believed that the description was sufficient to distinguish it from *Arctocephalus*, the only other possibility; based on the molting of young pups. King (1978) who reviewed the controversy, pointed out that at molting stage, the size of the pup would exclude it from Shaw's (1800) description.

Phocarcos Peters, 1866. Monatsb. K. Preuss. Akad. Wiss. Berlin, 1866:269.

TYPE SPECIES: *Otaria hookeri* (*Arctocephalus Hookeri* Gray, 1844).

COMMENTS: Sivertsen (1954) and Scheffer (1958) considered *Phocarcos* congeneric with *Neophoca*, however, it was retained as separate by J. E. King (1960, 1983), Rice (1977), and Barnes (1989).

Phocarcos hookeri (Gray, 1844). Zool. Voy. H.M.S. "Erebus" and "Terror," 1:4.

TYPE LOCALITY: "Falkland Islands and Cape Horn." Locality in error; fixed by Clark (1873) as "Auckland Islands. . . between 800 and 900 miles S. of Tasmania, in lat. 50°48'S., long. 166°42'E." [New Zealand]

DISTRIBUTION: Subantarctic islands of New Zealand.

Zalophus Gill, 1866. Proc. Essex Inst. Salem, 5:7.

TYPE SPECIES: "*Otaria Gilliespii* Macbain", 1858 (= *Otaria californiana* Lesson, 1828).

COMMENTS: Included in *Arctocephalus* by Van Gelder (1977b). Mohr (1952) reported successful matings between *Arctocephalus pusillus* and *Z. californianus*.

Zalophus californianus (Lesson, 1828). In Bory de Saint-Vincet (ed.), Dict. Class. Hist. Nat. Paris, 13:420.

TYPE LOCALITY: "les rochers dans le voisinage de la baie San-Francisco sont ordinairement couverts de lion marins." [USA, California, San Francisco Bay].

DISTRIBUTION: N Pacific from near the Mexico-Guatemala border to British Columbia (Canada); Japan; Galapagos Isls (Gallo-Reynosa and Solorzano-Velasco, 1991).

STATUS: IUCN - Extinct? as *Z. c. japonicus*.

SYNONYMS: *gillespii* M'Bain, 1858; *japonica* Peters, 1866; *lobatus* Jentink, 1892; *philippii* Allen, 1905; *wollebaeki* Sivertsen, 1953.

Family Phocidae Gray, 1821. London Med. Repos., 15:297.

COMMENTS: Reviewed by Chapskii (1955), Scheffer (1958), J. E. King (1966, 1983), Hendeby (1972), Muizon (1982a), and Wyss (1989). Muizon (1982a), and Wyss's (1988) phylogenetic analyses agreed on three areas: 1) The monophyletic nature of two groups they refer to as the Lobodontini (*Hydrurga*, *Leptonychotes*, *Lobodon*, and *Ommatophoca*), and the Phocinae (*Erignathus*, *Cystophora*, *Halichoerus*, and *Phoca*), 2) The lobodonts, along with *Monachus* and *Mirounga* have been traditionally referred to as the Monachinae (kept by Muizon), however, they both suggested that this group may be paraphyletic, 3) Because of the "unsettled" nature of these taxa, no subfamilies are recognized at this time.

Cystophora Nilsson, 1820. Skand. Faun. Dagg. Djur., 1:382.

TYPE SPECIES: *Cystophora borealis* Nilsson, 1820 (= *Phoca cristata* Erxleben, 1777).

COMMENTS: Revised by King (1966).

Cystophora cristata (Erxleben, 1777). Syst. Regni Anim., 1:590.

TYPE LOCALITY: "Habitat in Groenlandia australiori et Newfoundland". [S Greenland and Newfoundland].

DISTRIBUTION: N Atlantic and Arctic oceans, from Newfoundland (Canada) to S Greenland, Svalbard and Novaya Zemlya (Russia); occasionally south to Portugal and Florida (USA).

SYNONYMS: *borealis* Nilsson, 1820; *dimidiata* Rüppell, 1842.

COMMENTS: Reviewed by Kovacs and Lavigne (1986, Mammalian Species, 258).

Erignathus Gill, 1866. Proc. Essex Inst. Salem, 5:5.

TYPE SPECIES: *Phoca barbata* Fabricius, 1791 (= *Phoca barbata* Erxleben, 1777).

Erignathus barbatus (Erxleben, 1777). Syst. Regni Anim., 1:590.

TYPE LOCALITY: "ad Scotiam atque Groelandiam australiorem, vulgaris circa Islandiam" [North Atlantic, S Greenland].

DISTRIBUTION: Circumpolar Arctic seas (Canada, Greenland, Japan, Norway, USA, republics of the former USSR), south to Hokkaido (Japan) and Newfoundland.

SYNONYMS: *albigena* Pallas, 1811; *lepechenii* Lesson, 1828; *leporina* Lepechin, 1778; *nautica* Pallas, 1811; *parsonii* Lesson, 1828.

Halichoerus Nilsson, 1820. Skand. Faun. Dagg. Djur., 1:376.

TYPE SPECIES: *Halichoerus griseus* Nilsson, 1820 (= *Phoca grypus* Fabricius, 1791).

COMMENTS: Mohr (1952) described successful mating in captivity between *Phoca hispida* and *Halichoerus grypus*.

Halichoerus grypus (Fabricius, 1791). Skr. Nat. Selsk. Copenhagen, 1(2):167.

TYPE LOCALITY: Listed by Scheffer (1958) as "Greenland".

DISTRIBUTION: Temperate and subarctic waters around Britain, Canada (Newfoundland area), Iceland, Greenland, Norway, Russia (Kola Peninsula), and Baltic Sea.

SYNONYMS: *atlantica* Nehring, 1886; *baltica* Nehring, 1886; *griseus* Nilsson, 1820; *halichoerus* Thienemann, 1824; *macrorhynchus* Hornschuch and Schilling, 1851; *pachyrhynchus* Hornschuch and Schilling, 1851.

Hydrurga Gistel, 1848. *Naturgesch. des Thierreichs*, p. xi.

TYPE SPECIES: *Phoca leptonyx* de Blainville, 1820.

COMMENTS: Replacement name for preoccupied *Stenorhynchus* E. Geoffroy Saint-Hilaire and F. Cuvier, 1826.

Hydrurga leptonyx (de Blainville, 1820). *J. Phys. Chim. Hist. Nat. Arts Paris*, 91:298.

TYPE LOCALITY: "des environs des îles Falckland ou Malouines" [Falkland Isls (UK)].

DISTRIBUTION: Circumpolar, in southern oceans (Antarctica, Australia, Chile, Kerguelen Islands, South Sandwich Isls, Falkland Isls, southern Africa, New Zealand).

SYNONYMS: *homei* Lesson, 1828.

Leptonychotes Gill, 1872. *Smithson. Misc. Coll.*, 11:70.

TYPE SPECIES: *Otaria weddellii* Lesson, 1826, by monotypy.

COMMENTS: Replacement name for *Leptonyx* Gray, 1837, which is preoccupied by *Leptonyx* Swainson, 1821.

Leptonychotes weddellii (Lesson, 1826). *Bull. Sci. Nat. Geol.*, 7:437.

TYPE LOCALITY: "sur les côtes des Orcades australes, situées sour 60 degrés 37 minutes de lat" [South Orkney Isl (Br. Antarct. Trust Terr.)].

DISTRIBUTION: Coastal fast ice areas of Antarctic continent and adjacent islands; occasionally north to South America, Australia, and New Zealand.

SYNONYMS: *leopardina* Hamilton, 1839.

COMMENTS: Reviewed by Stirling (1971, *Mammalian Species*, 6) and Kooyman (1981).

Lobodon Gray, 1844. *Zool. Voy. H.M.S. "Erebus" and "Terror,"* 1:2.

TYPE SPECIES: *Phoca carcinophaga* Hombron and Jacquinot, 1842.

Lobodon carcinophagus (Hombron and Jacquinot, 1842). *In Dumont d'Uville, Voy. Pole Sud., Zool., Atlas Mammifères*, pl. 10 [1842], vol. 3: *Mammifères et Oiseaux*, p. 27 [1853].

TYPE LOCALITY: "capturé sur les glaces du Pole Sud, entre les îles Sandwich et les îles Powels, à 150 lieues de distance de chacune de ces îles." [Scotia Sea (midway between South Orkney and South Sandwich Isls) (Br. Antarct. Trust Terr.)].

DISTRIBUTION: Antarctic seas, frequently on pack ice around Antarctic Continent, limited records from New Zealand, Australia, Tasmania, and Argentina.

SYNONYMS: *serridens* Owen, 1843.

Mirounga Gray, 1827. *In Griffith et al., Anim. Kingdom*, 5:179.

TYPE SPECIES: *Phoca proboscidea* Péron, 1816 (= *Phoca leonina* Linnaeus, 1758).

COMMENTS: Revised by King (1966). Ling and Bryden (1992) provided a key to the species.

Mirounga angustirostris (Gill, 1866). *Proc. Essex Inst. Salem*, 5:13.

TYPE LOCALITY: "California" restricted by Poole and Schantz (1942) to "St. Bartholomews Bay, lower California, Mexico." Clarified by Scheffer (1958) as "Bahía Tórtola (= Bahía San Bartolomé) 27°39'N, 114°51'W, Baja California, Mexico".

DISTRIBUTION: SE Alaska to California (USA) and Baja California (Mexico).

Mirounga leonina (Linnaeus, 1758). *Syst. Nat.*, 10th ed., 1:37.

TYPE LOCALITY: "ad polum Antarcticum" restricted by Thomas (1911a) to "Juan Fernandez", further restricted by Hamilton (1940) as "Isla Mas a Tierra" [Chile].

DISTRIBUTION: Subantarctic islands, including Macquarie, Kerguelen, S Georgia Isls.

STATUS: CITES - Appendix II.

SYNONYMS: *ansonii* de Blainville, 1820; *ansonina* de Blainville, 1820; *coxii* Desmarest, 1817;

crosetensis Lydekker, 1909; *dubia* Fischer, 1829; *elephantina* Gray, 1844; *falclandicus*

Lydekker, 1909; *falklandica* Peters, 1875; *kerguelensis* Peters, 1875; *macquariensis*

Lydekker, 1909; *patagonica* Gray, 1827; *proboscidea* Peron, 1816; *resima* Peron, 1816.

COMMENTS: Reviewed by Ling and Bryden (1992, *Mammalian Species*, 391).

Monachus Fleming, 1822. *Philos. Zool.*, 2:187.

TYPE SPECIES: *Phoca monachus* Hermann, 1779.

COMMENTS: Revised by King (1956). Wyss (1988) suggested that this may be a paraphyletic group.

Monachus monachus (Hermann, 1779). *Beschaf. Berlin Ges. Naturforsch. Fr.*, 4:501.

TYPE LOCALITY: King (1956) listed the locality as "captured in the autumn of 1777 in the Dalmation Sea at Ossero." [Yugoslavia].

DISTRIBUTION: Mediterranean and Black Seas; NW Africa to Cape Blanc.

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

SYNONYMS: *albiventer* Boddaert, 1785; *altantica* Gray, 1854; *bicolor* Shaw, 1800; *byronii* Desmarest, 1820; *hermannii* Lesson, 1828; *leucogaster* Peron, 1817; *mediterraneus* Nilsson, 1838.

Monachus schauinslandi Matschie, 1905. *Sitzb. Ges. Naturf. Fr. Berlin*, 1905:258.

TYPE LOCALITY: "Laysan ist eine kleine Koralleinsel, nordwestlich der Sandwich-Inseln" [USA, Laysan Isl, 25°50'N, 171°50'W].

DISTRIBUTION: NW Hawaiian Isls, from Nihoa to Kure.

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

Monachus tropicalis (Gray, 1850). *Cat. Spec. Mamm. Coll. Br. Mus.*, Part 2(Seals), p. 28.

TYPE LOCALITY: "Jamaica" restricted by King (1956) to "Pedro Cays, 80 km. south of Jamaica".

DISTRIBUTION: Caribbean Sea and Yucatan.

STATUS: CITES - Appendix I; U.S. ESA - Endangered; IUCN - Extinct?.

SYNONYMS: *antillarum* Gray, 1849.

COMMENTS: "Extinct since the early 1950's" (Kenyon, 1977).

Ommatophoca Gray, 1844. *Zool. Voy. H.M.S. "Erebus" and "Terror,"* 1:3.

TYPE SPECIES: *Ommatophoca Rossii* Gray, 1844, by monotypy.

Ommatophoca rossii Gray, 1844. *Zool. Voy. H.M.S. "Erebus" and "Terror,"* 1:3.

TYPE LOCALITY: "Antarctic ocean", restricted by Barrett-Hamilton (1902) to "pack ice, north of Ross Sea 68°S, 176°E".

DISTRIBUTION: Circumpolar, Antarctic pack ice, particularly King Haakon VII Sea.

Phoca Linnaeus, 1758. *Syst. Nat.*, 10th ed., 1:37.

TYPE SPECIES: *Phoca vitulina* Linnaeus, 1758, by tautonomy.

COMMENTS: Burns and Fay (1970), Rice (1977), McDermid and Bonner (1975), Gromov and Baranova (1981), J. E. King (1983), and Wyss (1988) considered *Phoca*, *Pusa*, *Histriophoca*, and *Pagophilus* a monophyletic group. However, Muizon (1982a) suggested that *Histriophoca* and *Pagophilus* may be more closely related to *Cystophora* than to *Phoca* (*sensu stricto*). Burns and Fay (1970) and McDermid and Bonner (1975) argued that these differences should be recognized only at the subgeneric level which is followed here.

Phoca caspica Gmelin, 1788. *In Linnaeus, Syst. Nat.*, 13th ed., 1:64.

TYPE LOCALITY: "in mari, praesertim septentrionali, etiam Pacifico et Caspico" [Caspian Sea].

DISTRIBUTION: Caspian Sea.

COMMENTS: Placed in *Pusa* Scopoli, 1777, followed by Scheffer (1958).

Phoca fasciata Zimmermann, 1783. *Geogr. Gesch. Mensch. Vierf. Thiere*, 3:277.

TYPE LOCALITY: "Wohnt um die Kurilischen Inseln" [Russia, Kurile Isls].

DISTRIBUTION: Okhotsk, W Bering, Chukchiand Japan Seas.

SYNONYMS: *equestris* Pallas, 1831.

COMMENTS: Reviewed by Burns and Fay (1970). Placed in *Histriophoca* Gill, 1873 by Scheffer (1958) and Muizon (1982a)

Phoca groenlandica Erxleben, 1777. *Syst. Regni Anim.*, 1:588.

TYPE LOCALITY: "in Groenlandia et Newfoundland."

DISTRIBUTION: N Atlantic and Arctic oceans from E Canada to the White Sea (Russia).

SYNONYMS: *albicauda* Desmarest, 1822; *albini* Alessandrini, 1851; *dorsata* Pallas, 1811; *leucopla* Thienemann, 1824; *oceanica* Lepechin, 1778; *semilunaris* Boddaert, 1785.
 COMMENTS: Placed in *Pagophilus* Gray, 1844, followed by Scheffer (1958) and Muizon (1982a).

Phoca hispida Schreber, 1775. Die Säugethiere, 2(13):pl. 86[1775]; text, 3(17):312[1776].

TYPE LOCALITY: "Man fängt ihn auf den Küsten von Grönland und Labrador".

DISTRIBUTION: Arctic Ocean, Okhotsk, Bering, and Baltic Seas; Finland (Saimaa Lake); Russia (Ladoga Lake); Canda (Nettilling Lake, Baffin Isl).

STATUS: IUCN - Endangered as *P. h. saimensis*.

SYNONYMS: *annellata* Nilsson, 1820; *beaufortiana* Anderson, 1943; *birulai* Smirnov, 1929; *botnica* Gmelin, 1788; *foetida* Fabricius, 1776; *gichigensis* Allen, 1902; *krascheninikovi* Naumov and Smirnov, 1936; *ladogensis* Nordquist, 1899; *octonata* Kutorga, 1839; *pomororum* Smirnov, 1929; *pygmaea* Zukowsky, 1914; *saimensis* Nordquist, 1899; *soperi* Anderson, 1943.

COMMENTS: Placed in *Pusa* Scopoli, 1777, followed by Scheffer (1958). Mohr (1952) described successful mating in captivity between *Phoca hispida* and *Halichoerus grypus*.

Phoca largha Pallas, 1811. Zoogr. Rosso-Asiat., 1:113.

TYPE LOCALITY: "quam quod observetur tantum ad orientale littus Camtschatcae", Shaughnessy and Fay (1977) listed as "Eastern coast of Kamchatka" [Russia].

DISTRIBUTION: Associated with pack ice in coastal N Pacific, Bering and Okhotsk Seas, Aleutian Isls; south to Kiangsu (China) and Japan.

SYNONYMS: *chorisi* Lesson, 1828; *macrodens* Allen, 1902; *nummularis* Temminck, 1847; *ochotensis* Allen, 1902; *petersi* Mohr, 1941; *pribilofensis* Allen, 1902; *tigrina* Lesson, 1827.

COMMENTS: Scheffer (1958) considered *largha* as conspecific with *vitulina*; however, Shaughnessy and Fay (1977) and J. E. King (1983) separated the two.

Phoca sibirica Gmelin, 1788. In Linnaeus, Syst. Nat., 13th ed., 1:64.

TYPE LOCALITY: "Baikal et Orom" [Lake Baikal and Lake Oron (=Ozero Oron), U.S.S.R.].

DISTRIBUTION: Endemic to Lake Baikal (Russia).

SYNONYMS: *baicalensis* Dybowski, 1873; *oronensis* Dybowski, 1922.

COMMENTS: Placed in *Pusa* Scopoli, 1777, followed by Scheffer (1958). Reviewed by Thomas et al. (1982, Mammalian Species, 188).

Phoca vitulina Linnaeus, 1758. Syst. Nat., 10th ed., 1:38.

TYPE LOCALITY: "in mari Europæo" restricted by Thomas (1911a) to "Mari Bothnico et Baltico", however, presently it does not occur in the Gulf of Bothnia (Bobrinski et al., 1944).

DISTRIBUTION: Kurile Isls and Kamchatka (Russia); south to Kiangsu (China); Alaska to Mexico; Greenland and E Canada to NE USA; Iceland; Britain and Europe; Seal Lakes, Ungava Peninsula (Canada); Iliamna Lake, Alaska (USA).

STATUS: IUCN - Vulnerable as *P. v. stejnegeri*.

SYNONYMS: *antarcticus* Peale, 1848; *californica* Gray, 1866; *canina* Pallas, 1811; *concolor* DeKay, 1842; *geronimensis* Allen, 1902; *insularis* Belkin, 1964; *kurilensis* McLaren, 1966; *linnaei* Lesson, 1828; *littorea* Thienemann, 1824; *mellonae* Doult, 1942; *pealii* Gill, 1866; *pribilofensis* Allen, 1902; *richardii* Gray, 1873; *scopulicola* Thienemann, 1824; *thienemannii* Lesson, 1828; *variegata* Nilsson, 1820.

COMMENTS: The position of *stejnegeri* Allen, 1902, remains uncertain; Scheffer (1958) placed in *largha* Pallas, 1811; J. E. King (1983) placed in *vitulina* Linnaeus, 1758; and Shaughnessy and Fay (1977) suggested *incertae sedis*.

Family Procyonidae Gray, 1825. Ann. Philos., n.s., 10:339.

COMMENTS: Revised by Hollister (1915), Pocock (1921a), Baskin (1982, 1989), and Decker and Wozencraft (1991). Does not include *Ailurus* or *Ailuropoda*, following information presented in Davis (1964), Todd and Pressman (1968), Sarich (1976), Ginsburg (1982), Wozencraft (1989b), and Decker and Wozencraft (1991); however, Hollister (1915), Gregory (1936), Thenius (1979), and Flynn et al. (1988) considered *Ailurus* in the Procyonidae.

Subfamily Potosinae Trouessart, 1904. Cat. Mamm. Viv. Foss. 1:183.

COMMENTS: Type genus: *Potos* E. Geoffroy Saint-Hilaire and G. [Baron] Cuvier, 1795, by original designation.

Bassaricyon J. A. Allen, 1876. Proc. Acad. Nat. Sci. Philadelphia, 28:20, pl. 1.

TYPE SPECIES: *Bassaricyon Gabbii* J. A. Allen, 1876, by original designation.

COMMENTS: Reviewed by Poglayen-Neuwall (1965). Several workers have suggested that the several named forms of *Bassaricyon* are conspecific (Decker and Wozencraft, 1991; Ewer, 1973; Hall and Kelson, 1959; Stains, 1967; Wozencraft, 1989b); but supporting systematic work is lacking.

Bassaricyon alleni Thomas, 1880. Proc. Zool. Soc. Lond., 1880:397.

TYPE LOCALITY: "Sarayacu, on the Bobonasa river, Upper Pastasa river", [Ecuador].

DISTRIBUTION: Ecuador east of the Andes, and Peru to Cuzco Prov.; Bolivia; possibly into Venezuela.

Bassaricyon beddardi Pocock, 1921. Ann. Mag. Nat. Hist., ser. 9, 7:231.

TYPE LOCALITY: "Bastrica woods, Essequibo River, British Guiana".

DISTRIBUTION: Guyana, and possibly adjacent Venezuela and Brasil.

COMMENTS: A renaming of *alleni* Sclater, 1895 (not Thomas, 1880). Cabrera (1958) erroneously listed *Bassaricyon beddardi* as *Bassariscus beddardi*.

Bassaricyon gabbii J. A. Allen, 1876. Proc. Acad. Nat. Sci. Philadelphia, 28:21.

TYPE LOCALITY: "Costa Rica," restricted by Allen (1908) to "Talamanca".

DISTRIBUTION: C Nicaragua, Costa Rica, Panama, W Colombia, W Ecuador.

STATUS: CITES - Appendix III (Costa Rica).

SYNONYMS: *medius* Thomas, 1909; *orinomus* Goldman, 1912; *richardsoni* J. A. Allen, 1908; *siccatus* Thomas, 1927.

Bassaricyon lasius Harris, 1932. Occas. Pap. Mus. Zool., Univ. Michigan, 248:3.

TYPE LOCALITY: "Estrella de Cartago, Costa Rica. This locality is six to eight miles south of Cartago near the source of the Rio Estrella, at an altitude of about 4,500 feet."

DISTRIBUTION: Known only from the type locality.

Bassaricyon pauli Enders, 1936. Proc. Acad. Nat. Sci. Philadelphia, 88:365.

TYPE LOCALITY: "Between Rio Chiriqui Viejo and Rio Colorado, on a hill known locally as Cerro Pando, elevation 4800 feet, about ten miles from El Volcan, Province de Chiriqui, R. de Panama."

DISTRIBUTION: Known only from the type locality.

Potos E. Geoffroy Saint-Hilaire and F. G. Cuvier, 1795. Mag. Encyclop., 2:187.

TYPE SPECIES: *Viverra caudivolvula* Schreber, 1777 (= *Lemur flavus* Schreber, 1774), by original designation.

COMMENTS: Hernandez-Camacho (1977) placed *Potos* in Cercopithecidae Bonaparte, 1838.

Potos flavus (Schreber, 1774). Die Säugethiere, 1(9):pl. 42[1774]; text, p.

187[189](index)[1774].

TYPE LOCALITY: "Er ist, der Sage nach, auf den Gebirgen in Jamaica einheimisch"; restricted by Thomas (1902b), to "Surinam". Ford and Hoffmann (1988) discussed the confusion over the name and type locality.

DISTRIBUTION: S Tamaulipas and Guerrero (possibly Michoacan), Mexico through Guatemala, Belize, Nicaragua, Costa Rica, and Panama, to the Mato Grosso of Brazil and N South American (Colombia, Venezuela, Guyana, Surinam, Ecuador, Peru, and Bolivia).

STATUS: CITES - Appendix III (Honduras).

SYNONYMS: *arborensis* Goodwin, 1938; *aztecus* Thomas, 1902; *bothi* Goodwin, 1957; *brachyotus* Schinz, 1844; *brachyotus* Martin, 1836; *brasiliensis* Ihering, 1911; *campechensis* Nelson and Goldman, 1931; *caucensis* J. A. Allen, 1904; *caudivolvula* Schreber, 1777; *chapadensis* J. A. Allen, 1904; *chiriquensis* Allen, 1904; *dugesii* Villa, 1944; *guerrerensis* Goldman, 1915; *isthmicus* Goldman, 1913; *lepida* Illiger, 1815; *mansuetus* Thomas, 1914; *megalotus* Martin, 1836; *meridensis* Thomas, 1902; *modestus*

Lönnerberg, 1921; *nocturna* Wied[-Neuwied], 1826; *potto* Müller, 1776; *prehensilis* Kerr, 1792; *simiasciurus* Schreber, 1774; *tolimensis* J. A. Allen, 1913.

COMMENTS: Revised by Kortlucke (1973) and Hernandez-Camacho (1977). Reviewed by Ford and Hoffmann (1988, Mammalian Species, 321), Cabrera (1958), and Husson (1978).

Subfamily Procyoninae Gray, 1825. Ann. Philos., n.s., 10:339.

COMMENTS: Type genus: *Procyon* Storr, 1780.

Bassariscus Coues, 1887. Science, 9:516.

TYPE SPECIES: *Bassariscus astutus*, by monotypy through the replaced name *Bassariscus astuta* Lichtenstein, 1830 (Melville and Smith, 1987).

COMMENTS: Hollister (1915) placed in monotypic Bassariscidae.

Bassariscus astutus (Lichtenstein, 1830). Abh. König. Akad. Wiss., Berlin, 1827:119 [1830].

TYPE LOCALITY: "Mexico" [near city of Mexico].

DISTRIBUTION: SW Oregon, N Nevada, Utah, SW Wyoming and W Colorado, south through California, Arizona, New Mexico and Texas (USA), to the Isthmus of Tehuantepec (Mexico); Tiburon Isl and several other islands in the Gulf of California.

SYNONYMS: *albipes* Elliot, 1904; *arizonensis* Goldman, 1932; *bolei* Goldman, 1945; *consitus* Nelson and Goldman, 1932; *flavus* Rhoads, 1894; *insulicola* Nelson and Goldman, 1909; *macdougalli* Goodwin, 1956; *nevadensis* Miller, 1913; *octavus* Hall, 1926; *oregonus* Rhoads, 1894; *palmarius* Nelson and Goldman, 1909; *raptor* Baird, 1859; *saxicola* Merriam, 1897; *willetti* Stager, 1950; *yumanensis* Huey, 1937.

COMMENTS: Revised by Rhoads (1893). See Poglajen-Neuwall and Toweill (1988, Mammalian Species, 327).

Bassariscus sumichrasti (Saussure, 1860). Rev. Mag. Zool. Paris, ser. 2, 12:7.

TYPE LOCALITY: "Cet animal habite les greniers dans la région chaude du Mexique." Hall and Kelson (1959) listed "Mexico, Veracruz, Mirador."

DISTRIBUTION: Guerrero and S Veracruz (Mexico) to W Panama including Guatemala, Belize, Nicaragua, El Salvador, and Costa Rica.

STATUS: CITES - Appendix III (Costa Rica).

SYNONYMS: *campechensis* Nelson and Goldman, 1932; *monticola* Cordero, 1875; *notinus* Thomas, 1903; *oaxacensis* Goodwin, 1956; *variabilis* Peters, 1874.

Nasua Storr, 1780. Prodr. Meth. Mamm., p. 35, tabl. A.

TYPE SPECIES: *Viverra nasua* Linnaeus, 1766, by absolute tautomy (Melville and Smith, 1987).

COMMENTS: Revised by Allen (1879) and Decker (1991). Reviewed by Cabrera (1958).

Nasua narica (Linnaeus, 1766). Syst. Nat., 12th ed., 1:64.

TYPE LOCALITY: "America", restricted by Allen (1879) to "Veracruz, Mexico"; Herkovitz (1951) further restricted it to "Achtal, Isthmus of Tehuantepec, Vera Cruz."

DISTRIBUTION: USA (S Arizona and SW New Mexico), south through Mexico (except Baja California), Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), to northernmost Colombia (Gulf of Uraba).

STATUS: CITES - Appendix III (Honduras) as *Nasua nasua* (= *narica*); IUCN - Insufficiently known as *N. nelsoni*.

SYNONYMS: *bullata* Allen, 1904; *isthmica* Goldman, 1942; *mexicana* Weinland, 1860; *molaris* Merriam, 1902; *nelsoni* Merriam, 1901; *pallida* Allen, 1904; *panamensis* Allen, 1904; *richmondi* Goldman, 1932; *tamaulipensis* Goldman, 1942; *thersites* Thomas, 1901; *vulpecula* Erxleben, 1777; *yucatanica* Allen, 1904.

COMMENTS: Includes *nelsoni* (Decker, 1991).

Nasua nasua (Linnaeus 1766). Syst. Nat., 12th ed., 1:64.

TYPE LOCALITY: "America."; listed by Cabrera (1958) as "Pernambuco".

DISTRIBUTION: Argentina, Bolivia, Brazil, Colombia, Guyana, Peru, Venezuela, Paraguay, Surinam, Uruguay.

STATUS: CITES - Appendix III as *N. n. solitaria* (Uruguay) and *Nasua nasua* (Honduras).

SYNONYMS: *annulata* Desmarest, 1820; *aricana* Vieira, 1945; *boliviensis* Cabrera, 1956; *candace* Thomas, 1912; *cinerascens* Lönnerberg, 1921; *dichromatica* Tate, 1939; *dorsalis* Gray, 1866;

fusca Schonburgk, 1839; *gualeae* Lönnberg, 1921; *gualeae* Lönnberg, 1921; *henseli* Lönnberg, 1921; *jivaro* Thomas, 1914; *judex* Thomas, 1914; *jurvana* Ihering, 1911; *leucorhynchus* Tschudi, 1845; *manium* Thomas, 1912; *mephisto* Thomas, 1927; *mexianae* Vieira, 1945; *mondie* Olfers, 1818; *montana* Tschudi, 1844; *monticola* Schinz, 1844; *nasica* Winge, 1859; *nasuta* Tschudi, 1844; *obfuscata* Olfers, 1818; *phaeocephala* Allen, 1904; *quasje* Gmelin, 1788; *quichua* Thomas, 1901; *rufa* Fischer [von Waldheim], 1814; *rufina* Tschudi, 1844; *rusca* Fischer [von Waldheim], 1814; *sociabilis* Schinz, 1821; *soederstroemmi* Lönnberg, 1921; *solitaria* Schinz, 1821; *vittata* Tschudi, 1845.

Nasuella Hollister, 1915. Proc. U.S. Natl. Mus., 49:148.

TYPE SPECIES: *Nasua olivacea meridensis* Thomas, 1901, by original designation.

Nasuella olivacea (Gray, 1865). Proc. Zool. Soc. Lond., 1864:703 [1865].

TYPE LOCALITY: "Santa Fé de Bogota" [Colombia], subsequently restricted by Cabrera (1958:249) to "Bogotá, lo que debe interpretarse como las montañas próximas a esta capital."

DISTRIBUTION: Andes of Colombia, W Venezuela, and Ecuador.

Procyon Storr, 1780. Prodr. Meth. Mamm., p. 35.

TYPE SPECIES: *Ursus lotor* Linnaeus, 1758, by designation by Elliot (1901).

COMMENTS: Reviewed by Goldman (1950) and Lotze and Anderson (1979); the later suggested *gloveralleni*, *maynardi*, and *minor* may be conspecific with *lotor*; Corbet and Hill (1986) considered *gloveralleni*, *insularis*, *minor*, and *pygmaeus* as conspecific with *lotor*; however, primary systematic works supporting these views are lacking.

Procyon cancrivorus (G. Cuvier, 1798). Tabl. Elem. Hist. Nat. Anim., p. 113.

TYPE LOCALITY: "se trouve à Cayenne" [French Guiana, Cayenne].

DISTRIBUTION: Argentina, Bolivia, Brazil, Colombia, Costa Rica, Guyana, Panama, Peru, Surinam, Trinidad and Tobago, and Venezuela.

SYNONYMS: *aequatorialis* J. A. Allen, 1915; *brasiliensis* Ihering, 1911; *nigripes* Mivart, 1886; *panamensis* Goldman, 1913; *proteus* J. A. Allen, 1904.

Procyon gloveralleni Nelson and Goldman, 1930. J. Mammal., 11:453.

TYPE LOCALITY: "Island of Barbados, Lesser Antilles, West Indies."

DISTRIBUTION: Known only from the type locality.

STATUS: IUCN - Extinct? (see Hall, 1981:973).

Procyon insularis Merriam, 1898. Proc. Biol. Soc. Washington, 12:17.

TYPE LOCALITY: "María Madre Island, Tres Marias Ids., Mexico."

DISTRIBUTION: María Madre Isl (*P. i. insularis*), and María Magdalena Isl (*P. i. vicinus*).

SYNONYMS: *vicinus* Nelson and Goldman, 1931.

Procyon lotor (Linnaeus, 1758). Syst. Nat., 10th ed., 1:48.

TYPE LOCALITY: "Americæ maritimis," restricted by Thomas (1911a) to "Pennsylvania" [USA].

DISTRIBUTION: S Canada throughout USA (except parts of the Rocky Mtns), Mexico, and Central America to C Panama. Introductions into France, Germany and republics of the former USSR.

SYNONYMS: *annulatus* Fischer, 1814; *auspicatus* Nelson, 1930; *brachyurus* Wiegmann, 1837; *californicus* Mearns, 1914; *castaneus* de Beaux, 1910; *crassidens* Hollister, 1914; *dickeyi* Nelson and Goldman, 1931; *elucus* Bangs, 1898; *excelsus* Nelson and Goldman, 1930; *flavidus* de Beaux, 1910; *fusca* Burmeister, 1850; *fuscipes* Mearns, 1914; *grinnelli* Nelson and Goldman, 1930; *gularis* H. Smith, 1848; *hernandezii* Wagler, 1831; *hirtus* Nelson and Goldman, 1930; *hudsonicus* Brass, 1911; *incautus* Nelson, 1930; *inesperatus* Nelson, 1930; *litoreus* Nelson and Goldman, 1930; *marinus* Nelson, 1930; *maritimus* Dozier, 1948; *megalodous* Lowery, 1943; *melanus* Gray, 1864; *mexicana* Baird, 1858; *nivea* Gray, 1837; *obscurus* Wiegmann, 1837; *ochraceus* Mearns, 1914; *pacifica* Merriam, 1899; *pallidus* Merriam, 1900; *proteus* Brass, 1911; *psora* Gray, 1842; *pumilus* Miller, 1911; *rufescens* de Beaux, 1910; *shufeldti* Nelson and Goldman, 1931; *simus* Gidley, 1906; *solutus* Nelson and Goldman, 1931; *vancouverensis* Nelson and Goldman, 1930; *varius* Nelson and Goldman, 1930; *vulgaris* Tiedemann, 1808.

COMMENTS: Reviewed by Lotze and Anderson (1979, Mammalian Species, 119).

Procyon maynardi Bangs, 1898. Proc. Biol. Soc. Washington, 12:92.

TYPE LOCALITY: "Nassau Island, Bahamas".

DISTRIBUTION: Known only from the type locality.

COMMENTS: Koopman et al. (1957) examined the type series and believed it to be conspecific with *P. lotor*.

Procyon minor Miller, 1911. Proc. Biol. Soc. Washington, 24:4.

TYPE LOCALITY: "Ponite-à-Pitre, Guadeloupe, Lesser Antilles".

DISTRIBUTION: Guadeloupe Isl (Lesser Antilles).

Procyon pygmaeus Merriam, 1901. Proc. Biol. Soc. Washington, 14:101.

TYPE LOCALITY: "Cozumel Island, Yucatan" [Mexico].

DISTRIBUTION: Known only from the type locality.

STATUS: IUCN - Insufficiently known.

Family Ursidae Fischer, 1817. Mém. Soc. Imp. Nat. Moscow, 5:372.

COMMENTS: *Ailurus* and *Ailuropoda* have been placed in a separate family by some; however, morphological and molecular evidence strongly supports the placement of *Ailuropoda* in this family (Chorn and Hoffmann, 1978; Davis, 1964; Goldman et al., 1989; Hendy, 1980a; O'Brien et al., 1985; Wozencraft, 1989a). Thenius (1979) placed *Ailuropoda* in the monotypic family Ailuropodidae, and *Ailurus* in the Procyonidae. The placement of *Ailurus* is certainly more controversial, with most phenetic studies placing it in the procyonids and most phylogenetic studies placing it near or in the ursids. See comments under *Ailurus* concerning its placement here. Morphological studies have supported the monophyly of three subfamilies (Hendy, 1980a; Kurtén, 1966; Thenius, 1979), although this has not been corroborated by a recent molecular approach (Goldman et al., 1989).

Subfamily Ailurinae Gray, 1843. List Specimens Mamm. Coll. Brit. Mus., p. xxi.

COMMENTS: Hendy (1980a, b) placed *Ailuropoda* and *Ailurus* in tribe Ailuropodini, subfamily Agriotheriinae (Ailurinae has priority).

Ailuropoda Milne-Edwards, 1870. Ann. Sci. Nat. Zool. (Paris), ser. 5, 13(10):1.

TYPE SPECIES: *Ursus melanoleucus* David, 1869, by monotypy.

COMMENTS: Revised by Davis (1964) and Hendey (1980a). Reviewed by Chorn and Hoffmann (1978).

Ailuropoda melanoleuca (David, 1869). Nouv. Arch. Mus. Hist. Nat. Paris, Bull., 5:12-13.

TYPE LOCALITY: "Mou-pin" [China, Sichuan Sheng, Baoxing (=Moupin) 30°23'N, 102°50'E].

DISTRIBUTION: China: Sichuan, Shensi, Gansu; perhaps Qinghai, on E edge of Tibetan plateau.

STATUS: CITES - Appendix I; U.S. ESA and IUCN - Endangered.

COMMENTS: Regarded by Hendey (1980a, b) as the only surviving species in the subfamily Agriotheriinae. Placed in the monotypic family Ailuropodidae by Thenius (1979). Reviewed by Chorn and Hoffmann (1978, Mammalian Species, 110).

Ailurus F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat.

Mammifères, pt. 3, 5(50), "Panda" 3 pp.

TYPE SPECIES: *Ailurus fulgens* F. G. Cuvier, 1825, by monotypy (Melville and Smith, 1987).

COMMENTS: Biochemical and molecular evidence has suggested that the enigmatic *Ailurus* is intermediate between the procyonids and the ursids (O'Brien et al., 1985; Sarich, 1973; Tagle et al., 1986; Wayne et al., 1989; Wurster and Benirschke, 1968); more closely related to ursids than to procyonids (Todd and Pressmann, 1968; Zhang and Shi, 1991); or more closely related to the procyonids than to ursids (Goldman et al., 1989). Morphological studies have pointed out the lack of any shared derived features with the procyonids (Bugge, 1978; Decker and Wozencraft, 1991; Ginsburg, 1982; Hunt, 1974; Mayr, 1986; Schmidt-Kittler, 1981; Wozencraft, 1989a, b). Flynn et al. (1988) could not find any unambiguous features to place *Ailurus* with the procyonids, and only two characters to unite *Ailurus* with some procyonids, the loss of M/3 (shared also with mustelids) and the presence of a cusp on P4 on some, but not all procyonids. Wozencraft (1989a) found 9 shared derived features with the

Ursidae, and Decker and Wozencraft (1991) identified 6 unambiguous shared derived features of the procyonids, all of which are lacking in *Ailurus*. Only phenetic studies have indicated any kind of relationship to the procyonids (Gregory, 1936; Thenius, 1979) and only when compared to *Procyon*, a derived procyonid (Baskin, 1982, 1989; Decker and Wozencraft, 1991).

Ailurus fulgens F. G. Cuvier, 1825. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat. Mammifères, pt. 3, 5(50), "Panda" 3 pp.

TYPE LOCALITY: "Indes orientales."

DISTRIBUTION: Yunnan and Szechwan (China), N Burma, Sikkim (India), Nepal.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *ochraceus* Hodgson, 1847; *refulgens* Milne-Edwards, 1868; *styani* Thomas, 1902.

COMMENTS: Although this species is sometimes included in the Procyonidae because of its ringed tail, and superficial resemblance of teeth and rounded skull to *Procyon*, this species does not have the shared derived morphological characters that would place it there (Decker and Wozencraft, 1991). See comments under the genus. Nearly all of the derived features that it shares with *Ailuropoda* (and not with other bears) relate directly to feeding on bamboo (Davis, 1964; Gregory, 1936). Reviewed by Roberts and Gittleman (1984, Mammalian Species, 222).

Subfamily Ursinae Fischer, 1817. Mém. Soc. Imp. Nat. Moscow, 5:372.

COMMENTS: Revised by Erdbrink (1953). Although there is general agreement as to the monophyletic origin of this subfamily, there is considerable disagreement as to the relationships within (Goldman et al., 1989; Hendy, 1980a; Thenius, 1979). Erdbrink (1953) collapsed all taxa into a broadly encompassing "*Ursus*"; also suggested by the hybridization criteria of Van Gelder (1977b). A consensus tree, not shown, but derived from hypotheses presented in Goldman et al. (1989) would not elucidate relationships below this level. Simpson (1945) followed Pocock (1941a) and recognized these taxa as monotypic genera.

Helarctos Horsfield, 1825. Zool. J., 2(6):221.

TYPE SPECIES: *Helarctos euryspilus* Horsfield, 1825 (= *Ursus malayanus* Raffles, 1821), by original designation (Melville and Smith, 1987).

COMMENTS: Revised by Pocock (1932b). Van Gelder (1977) placed *Helarctos* in *Melursus*. Pocock (1941a) first suggested the close relationship between *M. ursinus* and *H. malayanus*; however, this was not well supported by Goldman et al. (1989).

Helarctos malayanus (Raffles, 1821). Trans. Linn. Soc. Lond., 13:254.

TYPE LOCALITY: "Sumatra" [Indonesia].

DISTRIBUTION: Burma, China (Yunnan and Szechwan), India, Indonesia (Sumatra, Borneo), Laos, Taiwan, Malaysia, Thailand, Vietnam.

STATUS: CITES - Appendix I; IUCN - Vulnerable.

SYNONYMS: *anmamiticus* Heude, 1901; *euryspilus* Horsfield, 1825; *wardi* Lydekker, 1906.

Melursus Meyer, 1793. Zool. Entdeck., p. 155.

TYPE SPECIES: *Melursus lybius* Meyer, 1793 (= *Bradypus ursinus* Shaw, 1791), by monotypy (Melville and Smith, 1987).

COMMENTS: Revised by Pocock (1932b). See comments under *Helarctos* concerning the relationship between these taxa.

Melursus ursinus (Shaw, 1791). Nat. Misc., 2 (unpaged) pl. 58.

TYPE LOCALITY: "Abinteriore Bengala"; restricted by Pocock (1941a) as "Patna, north of the Ganges, Bengal" [India].

DISTRIBUTION: Sri Lanka; India, north to the Indian desert and to the foothills of the Himalayas.

STATUS: CITES - Appendix I; IUCN - Vulnerable.

SYNONYMS: *inornatus* Pucheran, 1855; *labiatus* de Blainville, 1817; *longirostris* Tiedemann, 1820; *lybius* Meyer, 1793; *niger* Goldfuss, 1804.

Tremarctos Gervais, 1855. Hist. Nat. Mammifères, 2:20.

TYPE SPECIES: *Ursus ornatus* F. G. Cuvier, 1825.

COMMENTS: Thenius (1976) argued that differences between *Tremarctos* and other bears warranted separation at the subfamily level, however, Kurtén (1966) and Hendeý (1980a) supported its inclusion here.

Tremarctos ornatus (F. G. Cuvier, 1825). In E. Geoffroy Saint-Hilaire and F. G. Cuvier, *Hist. Nat. Mammifères*, pt. 3, 5(50) "Ours des cordilières du Chili," 2 pp.

TYPE LOCALITY: "cordilières du Chili," restricted by Cabrera (1958) to "los montañas al este de Trujillo, departamento de la Libertad, Perú."

DISTRIBUTION: Mountainous regions of W Venezuela, Colombia, Ecuador, Peru, and W Bolivia; perhaps Panama.

STATUS: CITES - Appendix I; IUCN - Vulnerable.

SYNONYMS: *frugilegus* Tschudi, 1844; *lasallei* Maria, 1924; *majori* Thomas, 1902; *nasutus* Sclater, 1868; *thomasi* Hornaday, 1911.

Ursus Linnaeus, 1758. *Syst. Nat.*, 10th ed., 1:47.

TYPE SPECIES: *Ursus arctos* Linnaeus, 1758, by tautonymy (Melville and Smith, 1987).

SYNONYMS: *Thalarctos*.

COMMENTS: The close relationship of these four species has been generally recognized by morphological and molecular studies (Goldman et al., 1989; Hendeý, 1980a; Kurtén and Anderson, 1980; Shields and Kocher, 1990). Allen (1938) proposed a close relationship between *thibetanus* and *americanus*. Thenius (1953), Goldman et al. (1989), and Shields and Kocher (1991) gave support to the monophyly of *arctos* with *maritimus*.

Ursus americanus Pallas, 1780. *Spicil. Zool.*, 14:5.

TYPE LOCALITY: Not given. In Pallas' (1780) description, he referred to Brickell (1737) who implied North Carolina (USA) by stating they "are very common in this province." Palmer (1904) listed the locality as "eastern North America".

DISTRIBUTION: NC Alaska to Labrador and Newfoundland (Canada), south to C California, N Nevada (USA), N Nayarit and S Tamaulipas (Mexico), and Florida (USA).

STATUS: CITES - Appendix II.

SYNONYMS: *altifrontalis* Elliot, 1903; *amblyceps* Baird, 1859; *californiensis* Miller, 1900; *carlottae* Osgood, 1901; *cinnamomum* Audubon and Bachman, 1854; *emmonsii* Dall, 1895; *eremicus* Merriam, 1904; *floridanus* Merriam, 1896; *glacilis* Kells, 1897; *hamiltoni* Cameron, 1957; *hunteri* Anderson, 1944; *hylodromus* Elliot, 1904; *kenaiensis* Allen, 1910; *kermodei* Hornaday, 1905; *luteolus* Griffith, 1821; *machetes* Elliot, 1903; *perniger* Allen, 1910; *pugnax* Swarth, 1911; *randi* Anderson, 1944; *sornborgeri* Bangs, 1898; *vancouveri* Hall, 1928.

Ursus arctos Linnaeus, 1758. *Syst. Nat.*, 10th ed., 1:47.

TYPE LOCALITY: "sylvus Europæ frigidæ" restricted by Thomas (1911a) to, "Northern Sweden."

DISTRIBUTION: Formerly, NW Africa, all of the Palearctic from W Europe, Near and Middle East through N Himalayas to W and N China and Chukot (Russia); Hokkaido (Japan); W North America, north from N Mexico.

STATUS: CITES - Appendix I as *U. arctos* (Mexico, Bhutan, China, and Mongolia populations), *U. a. isabellinus*, and *U. a. pruinosus*; otherwise Appendix II. U.S. ESA - Endangered as *U. a. arctos* in Italy, *U. a. nelsoni* in Mexico, and *U. a. pruinosus*; Threatened as *U. a. horribilis* in the USA (48 conterminous states); IUCN - Extinct as *U. a. nelsoni*.

SYNONYMS: *absarokus* Merriam, 1914; *alascensis* Merriam, 1896; *albus* Gmelin, 1788; *alexandrae* Merriam, 1914; *alpinus* Fischer, 1814; *andersoni* Merriam, 1918; *annulatus* Billberg, 1827; *apache* Merriam, 1916; *argenteus* Billberg, 1827; *arizonae* Merriam, 1916; *atnarko* Merriam, 1918; *aureus* Fitzinger, 1855; *badius* Schrank, 1798; *baikalensis* Ognev, 1924; *bairdi* Merriam, 1918; *beringiana* Middendorff, 1853; *bisonophagus* Merriam, 1918; *bosniensis* Bolkay, 1925; *brunneus* Billberg, 1827; *cadaverinus* Eversmann, 1840; *californicus* Merriam, 1896; *canadensis* Merriam, 1914; *candescens* Hamilton-Smith, 1827; *caucasicus* Smirnov, 1919; *caurinus* Merriam, 1914; *cavifrons* Heude, 1901; *chelan* Merriam, 1916; *chelidoniæ* Merriam, 1918; *cinereus* Desmarest, 1820; *collaris* Cuvier and Geoffroy Saint-Hilaire, 1824; *colusus* Merriam, 1914; *crassodon* Merriam, 1918; *crassus* Merriam, 1918; *cressonus* Merriam, 1916; *crowtheri* Schinz, 1844; *dalli* Merriam,

1896; *durogus* Merriam, 1916; *eltonclarki* Merriam, 1914; *ereunetes* Merriam, 1918; *eulophus* Merriam, 1904; *euryrhinus* Nilsson, 1847; *eversmanni* Gray, 1864; *eximius* Merriam, 1916; *falciger* Reichenbach, 1836; *ferox* Temminck, 1844; *formicarius* Billberg, 1828; *fuscus* Gmelin, 1788; *grandis* Gray, 1864; *griseus* Kerr, 1792; *gyas* Merriam, 1902; *henshawi* Merriam, 1914; *holzworthi* Merriam, 1929; *hoots* Merriam, 1916; *horriaeus* Baird, 1858; *horribilis* Ord, 1815; *hylodromus* Elliot, 1904; *idahoensis* Merriam, 1918; *imperator* Merriam, 1914; *impiger* Merriam, 1918; *innuitus* Merriam, 1914; *inopinatus* Merriam, 1918; *insularis* Merriam, 1916; *internationalis* Merriam, 1914; *isabellinus* Horsfield, 1826; *jeniseensis* Ognev, 1924; *kadiaki* Kleinschmidt, 1911; *kenaiensis* Merriam, 1904; *kennerleyi* Merriam, 1914; *kidderi* Merriam, 1902; *klamathensis* Merriam, 1914; *kluane* Merriam, 1916; *kodiaki* Kleinschmidt, 1911; *kolymensis* Ognev, 1924; *kwakiutl* Merriam, 1916; *lagomyiarius* Przewalski, 1883; *lasiotus* Gray, 1867; *lasistanicus* Satunin, 1913; *latifrons* Merriam, 1914; *leuconyx* Severtzov, 1873; *macfarlani* Merriam, 1918; *machetes* Elliot, 1903; *macrodon* Merriam, 1918; *magister* Merriam, 1914; *major* Nilsson, 1820; *mandchuricus* Heude, 1898; *marsicanus* Altobello, 1921; *melanarctos* Heude, 1898; *mendocinensis* Merriam, 1916; *meridionalis* Middendorff, 1851; *merriamii* J. A. Allen, 1902; *middendorffi* Merriam, 1896; *minor* Nilsson, 1820; *mirabilis* Merriam, 1916; *mirus* Merriam, 1918; *myrmephagus* Billberg, 1827; *navaho* Merriam, 1914; *neglectus* Merriam, 1916; *nelsoni* Merriam, 1914; *niger* Gmelin, 1788; *normalis* Gray, 1864; *nortoni* Merriam, 1914; *norvegicus* Fischer, 1829; *nuchek* Merriam, 1916; *ophrus* Merriam, 1916; *orgiloides* Merriam, 1918; *orgilos* Merriam, 1914; *oribasmus* Merriam, 1918; *pallasi* Merriam, 1916; *pamirensis* Ognev, 1924; *pellyensis* Merriam, 1918; *persicus* Lönnberg, 1925; *perturbans* Merriam, 1918; *pervagor* Merriam, 1914; *phaeonyx* Merriam, 1904; *piscator* Pucheran, 1855; *planiceps* Merriam, 1918; *polonicus* Gray, 1864; *pruinus* Blyth, 1854; *pulchellus* Merriam, 1918; *pyrenaicus* Fischer, 1829; *richardsoni* Swainson, 1838; *rogersi* Merriam, 1918; *rossicus* Gray, 1864; *rufus* Borkhausen, 1797; *rungiusi* Merriam, 1918; *russelli* Merriam, 1914; *sagittalis* Merriam, 1918; *scandinavicus* Gray, 1864; *schmitzi* Matschie, 1917; *selkirki* Merriam, 1916; *shanorum* Thomas, 1906; *sheldoni* Merriam, 1910; *shirasi* Merriam, 1914; *shoshone* Merriam, 1914; *sibiricus* Gray, 1864; *sitkeenensis* Merriam, 1914; *sitkensis* Merriam, 1896; *smirnovi* Lönnberg, 1925; *stenorostris* Gray, 1864; *syriacus* Hemprich and Ehrenberg, 1828; *tahltanicus* Merriam, 1914; *texensis* Merriam, 1914; *toklat* Merriam, 1914; *townsendi* Merriam, 1916; *tularensis* Merriam, 1918; *tundrensis* Merriam, 1914; *ursus* Boddaert, 1772; *utahensis* Merriam, 1914; *warburtoni* Merriam, 1916; *washake* Merriam, 1916; *yesoensis* Lydekker, 1897.

COMMENTS: Reviewed by Couturier (1954), Rausch (1963a), Kurtén (1973), and Hall (1984). Ognev (1931) and Allen (1938) recognized *U. pruinosus* as distinct; not followed by Ellerman and Morrison-Scott (1951), Gao (1987), and Strognov (1962). Lönnberg (1923b) believed that differences between *pruinus* and *arctos* warranted subgeneric distinction as (*Mylarctos*) *pruinus*; however, this was not supported by Pocock's (1932a) thorough revision.

Ursus maritimus Phipps, 1774. Voyage Towards North Pole, p. 185.

TYPE LOCALITY: "on the main land of Spitsbergen" [Norway].

DISTRIBUTION: Circumpolar in the Arctic, S limits determined by ice pack.

STATUS: CITES - Appendix II; IUCN - Vulnerable.

SYNONYMS: *eogroenlandicus* Knotterus-Meyer, 1908; *groenlandicus* Birula, 1932; *jenaensis* Knotterus-Meyer, 1908; *labradorensis* Knotterus-Meyer, 1908; *marinus* Pallas, 1776; *polaris* Shaw, 1792; *spitzbergensis* Knotterus-Meyer, 1908; *ungavensis* Knotterus-Meyer, 1908.

COMMENTS: Revised by Wilson (1976). Reviewed by DeMaster and Stirling (1981, Mammalian Species, 145). Placed in subgenus *Thalarctos* by Gromov and Baranova (1981). Sister species to *arctos* (Goldman et al., 1989; Shields and Kocher, 1991).

Ursus thibetanus G.[Baron] Cuvier, 1823. Rech. Oss. Foss., Nouv. ed., 4:325.

TYPE LOCALITY: "Cet ours a été trouvé d'abord par M. Wallich dans les montagnes du Napaul, et je l'ai rencontré également dans celles du Sylhet" [India, Assam, Sylhet].

DISTRIBUTION: Afghanistan, China, India, Indochina, Japan, Korea, Laos, Nepal, Pakistan, Taiwan, Thailand, Russia (SE Primorski Krai), Vietnam.

STATUS: CITES - Appendix I; U.S. ESA - Endangered as *U. t. gedrosianus*; IUCN - Endangered as *U. t. gedrosianus*, otherwise Vulnerable.

SYNONYMS: *arboreus* Gray, 1864; *clarki* Sowerby, 1920; *formosanus* Swinhoe, 1864; *gedrosianus* Blanford, 1877; *japonicus* Schlegel, 1857; *laniger* Pocock, 1932; *leuconyx* Heude, 1901; *macneilli* Lydekker, 1909; *melli* Matschie, 1922; *mupinensis* Heude, 1901; *rexi* Matschie, 1897; *torquatus* Wagner, 1841; *ussuricus* Heude, 1901; *wulsini* Howell, 1928.

COMMENTS: Placed in subgenus *Selenarctos* by Gromov and Baranova (1981); and in subgenus *Euarctos* by Thenius (1979). Allen (1938) suggested a close relationship to *U. americanus*; Pocock (1932b) retained in a separate genus, there is molecular support for both positions (Goldman et al., 1989).

Family Viverridae Gray, 1821. London Med. Repos., 1821:301.

COMMENTS: Type genus: *Viverra* Linnaeus, 1758, by original designation (Melville and Smith, 1987). Does not include subfamilies Herpestinae Bonaparte, 1845, or Galidiinae Gray, 1865; see Pocock (1916c, 1919), Gregory and Hellman (1939), Wurster and Benirschke (1968), Thenius (1972), Radinsky (1975), Hunt (1987), Flynn et al. (1988), and Wozencraft (1989a, b).

Subfamily Cryptoproctinae Gray, 1865. Proc. Zool. Soc. Lond., 1864:508 [1865].

COMMENTS: Type genus: *Cryptoprocta* Bennett, 1833, by monotypy (Melville and Smith, 1987). Considered a subfamily of felids by Gregory and Hellman (1939) and Beaumont (1964). There is disagreement as to the proper subfamilies for the Malagasy viverrids; see Pocock (1915a), Petter (1974), and Wozencraft (1989a, b).

Cryptoprocta Bennett, 1833. Proc. Zool. Soc. Lond., 1833:46.

TYPE SPECIES: *Cryptoprocta ferox* Bennett, 1833, by original designation (Melville and Smith, 1987).

COMMENTS: Beaumont (1964) placed *Cryptoprocta* with the Felidae because of similarities in dental characters. Albignac (1970), Thenius (1972), Radinsky (1975), Coetzee (1977b), Flynn et al. (1988), and Wozencraft (1989a, b) placed it in the Viverridae; Hemmer (1978) suggested an intermediate position.

Cryptoprocta ferox Bennett, 1833. Proc. Zool. Soc. Lond., 1833:46.

TYPE LOCALITY: "Madagascar".

DISTRIBUTION: Endemic to Madagascar.

STATUS: CITES - Appendix II; IUCN - Insufficiently known.

SYNONYMS: *typicus* A. Smith, 1834.

COMMENTS: Reviewed by Köhncke and Leonhardt (1986, Mammalian Species, 254).

Subfamily Euplerinae Chenu, 1852. Ency. Hist. Nat., 21:165.

COMMENTS: Type genus: *Eupleres* Doyère, 1835, by monotypy (Melville and Smith, 1987) for those who consider *Eupleres* and *Hemigalus* in different family groups. There is disagreement as to the subfamilies for Malagasy viverrids; Pocock (1915a) placed *Fossa* in the SE Asian Hemigalinae. The evidence for this is weak (Albignac, 1973; Wozencraft, 1989a). Gregory and Hellman (1939), Albignac (1974), and Petter (1974), placed it in Fossinae; however, Eupleridae Chenu, 1852, is the senior synonym.

Eupleres Doyère, 1835. Bull. Soc. Sci. Nat., 3:45.

TYPE SPECIES: *Eupleres goudotii* Doyère, 1835, by monotypy (Melville and Smith, 1987).

COMMENTS: Gregory and Hellman (1939) followed Chenu (1852), and suggested placing *Eupleres* in a separate family; however, Albignac (1973, 1974), Petter (1974), Coetzee (1977b), and Wozencraft (1989a) included it in Viverridae.

Eupleres goudotii Doyère, 1835. Bull. Soc. Sci. Nat., 3:45.

TYPE LOCALITY: "Tamatave" [Madagascar, 18°10'S, 49°23'E].

DISTRIBUTION: Endemic to Madagascar.

STATUS: CITES - Appendix II. IUCN - Vulnerable; considered by IUCN to have high conservation priority status for viverrids (Schreiber et al., 1989).

SYNONYMS: *major* Lavauden, 1929.

COMMENTS: Includes *E. major* (Albignac, 1973; Coetzee, 1977b).

Fossa Gray, 1865. Proc. Zool. Soc. Lond., 1864:518 [1865].

TYPE SPECIES: *Fossa d'aubentonii* Gray, 1865 (= *Viverra Fossana* Müller, 1776).

Fossa fossana (Müller, 1776). Linné's Vollstand, Natursyst., Suppl., p. 32.

TYPE LOCALITY: "Madagascar".

DISTRIBUTION: Endemic to Madagascar.

STATUS: CITES - Appendix II; IUCN - Vulnerable.

SYNONYMS: *d'aubentonii* Gray, 1865; *fossa* Schreber, 1777; *majori* Dollman, 1909.

COMMENTS: The commonly used *Viverra fossa* Schreber, 1777, is a junior synonym (G. Petter, 1962, 1974).

Subfamily Hemigalinae Gray, 1865. Proc. Zool. Soc. Lond., 1864:508 [1865].

COMMENTS: Simpson (1945) also included *Eupleres* and *Fossa*, following Pocock (1915a).

Pocock (1933d) and Gregory and Hellman (1939) placed *Cynogale* in the monotypic Cynogalinae, although both recognized the close relationship of *Cynogale* to other hemigalines. Placed in Hemigalinae by Simpson (1945) and Ellerman and Morrison-Scott (1951).

Chrotogale Thomas, 1912. Abstr. Proc. Zool. Soc. Lond., 1912(106):17.

TYPE SPECIES: *Chrotogale owstoni* Thomas, 1912, by monotypy.

Chrotogale owstoni Thomas, 1912. Abstr. Proc. Zool. Soc. Lond., 1912(106):17.

TYPE LOCALITY: "Yen-bay, on the Song-koi River, Tonkin" [Vietnam: Yen Bay on the Songhoi River; 21°43'N 104°54'E].

DISTRIBUTION: China (Yunnan, Guangxi), Laos, Vietnam.

STATUS: IUCN - Insufficiently known; considered by IUCN to have high conservation priority status for viverrids (Schreiber et al., 1989).

COMMENTS: Revised by Pocock (1933d).

Cynogale Gray, 1837. Proc. Zool. Soc. Lond., 1836:88 [1837].

TYPE SPECIES: *Cyongale bennettii* Gray, 1837, by monotypy (Melville and Smith, 1987).

SYNONYMS: *Lamictis* de Blainville, 1837; *Potamophilus* Müller, 1838.

Cynogale bennettii Gray, 1837. Proc. Zool. Soc. Lond., 1836:88 [1837].

TYPE LOCALITY: "Sumatra" [Indonesia].

DISTRIBUTION: Brunei, Indonesia (Sumatra, Borneo), Malaysia, Thailand, Vietnam.

STATUS: CITES - Appendix II. IUCN - Insufficiently known; *Cynogale* populations from Vietnam (*C. lowei*) considered by IUCN to have high conservation priority status for viverrids (Schreiber et al., 1989).

SYNONYMS: *barbatus* Müller, 1838; *carcharias* de Blainville, 1837; *lowei* Pocock, 1933.

COMMENTS: Revised by Pocock (1933d). Includes *C. lowei*, which is only known from the type, a poorly preserved juvenile skin from N Vietnam (Ellerman and Morrison-Scott, 1951).

Diplogale Thomas, 1912. Abstr. Proc. Zool. Soc. Lond., 1912(106):18.

TYPE SPECIES: *Hemigale hosei* Thomas, 1892, by original designation.

Diplogale hosei (Thomas, 1892) Ann. Mag. Nat. Hist. ser. 6, 9:250.

TYPE LOCALITY: "Mount Dulit, N. Borneo, 4000 ft" [Malaysia, Sarawak, Gunung Dulit, 3°15'N, 114°15'E].

DISTRIBUTION: Malaysia (Sabah, Sarawak).

COMMENTS: Thomas published two accounts of the type description in 1892, one printed in August (Thomas, 1892a), and another printed in October (Thomas, 1892b). Although Pocock (1933d) supported Thomas (1912) in separating this species into *Diplogale*; Chasen (1940), Medway (1977), and Payne et al. (1985) did not. Similar differences in pelage and dentition have been used elsewhere (e.g., *Osobornictis* vs. *Genetta*) at the generic level.

Hemigalus Jourdan, 1837. C. R. Acad. Sci. Paris, 5:442.

TYPE SPECIES: *Hemigalus zebra* Gervais, 1841 (= *Paradoxurus Derbyanus* Gray, 1837), by monotypy.

SYNONYMS: *Hemigale* Gray, 1865.

Hemigalus derbyanus (Gray, 1837). Mag. Nat. Hist. [Charlesworth's], 1:579.

TYPE LOCALITY: Not given. Fixed by Gray (1837) as "in Peninsulâ Malayanâ".

DISTRIBUTION: Peninsular Burma, Indonesia (Sipora Isl, South Pagi Isl, Borneo, Sumatra), Malaysia, Thailand.

STATUS: CITES - Appendix II.

SYNONYMS: *boiei* Müller, 1838; *derbianus* Thomas, 1915; *derbyi* Temminck, 1841; *incursor* Thomas, 1915; *invisus* Gray, 1830; *minor* Miller, 1913; *zebra* Gray, 1837.

COMMENTS: Gervais (1841) was the first to place in *Hemigalus*. Gray (1849) later considered *Paradoxurus derbyanus* a junior synonym of *Viverra hardwicki* Gray, 1830, and placed it also in the genus *Hemigalea* after Jourdan (1837). However, *V. hardwicki* is a junior synonym of *Prionodon linsang* Raffles, 1821.

Subfamily Nandiniinae Pocock, 1929. Ency. Brit. (ed. 14), 3:898.

COMMENTS: Type genus: *Nandinia* Gray, 1843, by monotypy. Listed in Nandiniinae by Gregory and Hellman (1939), and Coetzee (1977b); separated at the family level by Pocock (1929), and Hunt (1987). Although *Nandinia* shares many derived features of the scent gland and external morphology with the viverrids (especially the Paradoxurinae), Hunt (1987) felt that the retention of the primitive features of the auditory bullae were sufficient to warrant separation at the family level.

Nandinia Gray, 1843. List Specimens Mamm. Coll. Brit. Mus., p. 54.

TYPE SPECIES: *Viverra binotata* Gray, 1830, by monotypy (Melville and Smith, 1987).

Nandinia binotata (Gray, 1830). Spicil. Zool., 2:9.

TYPE LOCALITY: "Africa, Ashantee" [Ghana; Ashanti Region; approximately at 6°55'N 0°32'E].

DISTRIBUTION: Angola, Benin, Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Liberia, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

SYNONYMS: *gerrardi* Thomas, 1893; *hamiltonii* Gray, 1832.

Subfamily Paradoxurinae Gray, 1865. Proc. Zool. Soc. Lond. 1864:508 [1865].

COMMENTS: Type genus: *Paradoxurus* F. G. Cuvier, 1821.

Arctictis Temminck, 1824. Prospectus de Monographies de Mammiferes, p. xxi. [issued March, 1824].

TYPE SPECIES: *Viverra ? binturong* Raffles, 1821, by monotypy (Melville and Smith, 1987).

SYNONYMS: *Ictides* Valenciennes, 1825.

COMMENTS: First placed in Paradoxurinae by Gray (1869).

Arctictis binturong (Raffles, 1821). Trans. Linn. Soc. London, 13:253.

TYPE LOCALITY: "Malacca".

DISTRIBUTION: Bangladesh, Bhutan, Burma, China (Yunnan), India (incl. Sikkim), Indonesia (Borneo, Java, Sumatra), Laos, Malaysia, Nepal, Philippine Isls (Palawan), Thailand, Vietnam.

STATUS: CITES - Appendix III (India).

SYNONYMS: *albifrons* F. G. Cuvier, 1822; *ater* F. G. Cuvier and E. Geoffroy Saint-Hilaire, 1824; *gairdneri* Thomas, 1916; *niasensis* Lyon, 1916; *pageli* Schwarz, 1911; *penicillatus* Temminck, 1835; *whitei* Allen, 1910.

COMMENTS: Revised by Pocock (1933d).

Arctogalidia Merriam, 1897. Science, 5:302.

TYPE SPECIES: *Paradoxurus trivirgatus* Gray, 1832, by monotypy through the replaced name *Arctogale* Gray, 1865 (Melville and Smith, 1987).

SYNONYMS: *Arctogale* Gray, 1865.

COMMENTS: Gray's (1864[1865]) generic name stood until Merriam (1897) pointed out that the name *Arctogale* was preoccupied (= *Arctogale erminea* Kaup, 1829). First placed in the Paradoxurinae by Gray (1869); later separated into the monotypic Arctogalidinae

by Pocock (1933*d*), and followed by Gregory and Hellman (1939); however, Simpson (1945), and Ellerman and Morrison-Scott (1951) retained it in Paradoxurinae.

Arctogalidia trivirgata (Gray, 1832). Proc. Zool. Soc. Lond., 1832:68.

TYPE LOCALITY: "from a specimen in the Leyden Museum, sent from the Molúccas", restricted by Jentink (1887) to "Java, Buitenzorg" [= Indonesia, Java, Bogor] but see comments.

DISTRIBUTION: Bangladesh, Burma, China (Yunnan), India, Indonesia, Laos, Malaysia, Thailand, Vietnam.

STATUS: IUCN - Indeterminate as *A. t. trilineata*.

SYNONYMS: *bancana* Schwarz, 1913; *bicolor* Miller, 1913; *depressa* Miller, 1913; *fusca* Miller, 1906; *inornata* Miller, 1901; *leucotis* Horsfield, 1851; *macra* Miller, 1913; *major* Miller, 1906; *melli* Matschie, 1922; *millsi* Wroughton, 1921; *mima* Miller, 1913; *minor* Lyon, 1907; *simplex* Miller, 1902; *stigmaticus* Temminck, 1853; *sumatrana* Lyon, 1908; *tingia* Lyon, 1908; *trilineatus* Wagner, 1841.

COMMENTS: Revised by Pocock (1933*d*) and Van Bemmelen (1952). Gray (1832) originally described the type from the "Moluccas"; later Temminck (1841) referred to the same specimen as being from "Java". Gray (1843), then corrected the presumed geographic error and listed the same type as from "Malacca". Jentink (1887) listed the same type from "Buitenzorg". However, Van Bemmelen (1952) stated that the collector, Reinwardt, was in the eastern part of the Indo-Australian Archipelago in 1821 and the type did not match other specimens from Java.

Macrogalidia Schwarz, 1910. Ann. Mag. Nat. Hist., ser. 5, 8:423.

TYPE SPECIES: *Paradoxurus musschenbroekii* Schlegel, 1877, by monotypy.

COMMENTS: First placed in the Paradoxurinae by Pocock (1933*d*).

Macrogalidia musschenbroekii (Schlegel, 1877). Prosp. mus. publ., 1877.

TYPE LOCALITY: "in the Northern parts of the isle of Celebes", restricted by Jentink (1887), to "Celebes, Menado-Kinilo" [Indonesia, Kinilou, 1°22'N, 124°51'E].

DISTRIBUTION: Indonesia (Sulawesi).

STATUS: IUCN - Rare.

COMMENTS: Schlegel (1877) circulated an unnumbered "Prospectus," for the "Annals of the Royal Zoological Museum of the Netherlands at Leyden", which contained the first mention of the new species. The prospectus was to precede the first issue of the new "Annals" which was never printed. He republished the type description in the Notes of the Leyden Museum, (1879).

Paguma Gray, 1831. Proc. Comm. Sci. and Corres. Zool. Soc. Lond., 1831:94.

TYPE SPECIES: *Gulo larvatus* C. E. H[amilton] Smith, 1827.

COMMENTS: Reviewed by Pocock (1933*c*). First placed in the Paradoxurinae by Gray (1864).

Paguma larvata (C. E. H[amilton] Smith, 1827). In Griffith et al., Anim. Kingdom, 2:281.

TYPE LOCALITY: Not given. Fixed by Temminck (1841) as "Nepal". Gray (1864) discounted this because he knew of no specimens from Nepal, and reassigned the name to two specimens from Canton, China collected by J. R. Reeve (Pocock, 1934*a*).

DISTRIBUTION: Bangladesh, Burma, Cambodia, China (Hainan Dao north to Hopei, Shanxi and the vicinity of Beijing), India (and S Andaman Isls), Indonesia (N Borneo, Sumatra), Japan (introduced), Laos, Malaysia, Nepal, Pakistan, Singapore, Taiwan, Thailand, Vietnam.

STATUS: CITES - Appendix III (India).

SYNONYMS: *annectens* Robinson and Kloss, 1918; *aurata* Blainville, 1842; *grayi* Bennett, 1835; *hainana* Thomas, 1909; *intrudens* Wroughton, 1910; *janetta* Thomas, 1928; *jourdanii* Gray, 1837; *laniger* Hodgson, 1841; *lanigerus* Hodgson, 1836; *leucocephala* Gray, 1850; *leucomystax* Gray, 1837; *neglecta* Pocock, 1934; *nigriceps* Pocock, 1939; *nipalensis* Hodgson, 1836; *ogilbyi* Fraser, 1849; *pallasii* Otto, 1835; *reevesi* Matschie, 1908; *rivalis* Thomas, 1921; *robustus* Miller, 1906; *rubidus* Blyth, 1858; *taivana* Swinhoe, 1862; *tytleri* Tytler, 1864; *vagans* Kloss, 1919; *wroughtoni* Schwarz, 1913; *yunalis* Thomas, 1921.

COMMENTS: Pocock (1934*b*) included *Paradoxurus tytleri*. The "imperfect, no doubt immature skin, without skull (B.M. no. 43.1.12.103)" (Pocock, 1941a:416)

provisionally recognized by Pocock as *P. lanigera* does not contain diagnostic features that would definitively align the specimen with *Paguma* (Ellerman and Morrison-Scott, 1951).

Paradoxurus F. G. Cuvier, 1821. In E. Geoffroy Saint-Hilaire and F. G. Cuvier, Hist. Nat. Mammifères, pt. 2, 3(24):15 "Martre des Palmiers" and pl. 186.

TYPE SPECIES: *Paradoxurus typus* F. G. Cuvier, 1821 (= *Viverra hermaphrodita* Pallas, 1777), by indication (Melville and Smith, 1987).

COMMENTS: Revised by Pocock (1933c).

Paradoxurus hermaphroditus (Pallas, 1777). In Schreber, Die Säugethiere, 3(25):426, [1777].

TYPE LOCALITY: Uncertain. "Das Vaterland des beschriebenen Thieres ist die Barbarey".

DISTRIBUTION: Bhutan, Burma, Cambodia, China, India, Indonesia, Japan, Laos, Malaysia, Nepal, New Guinea, Philippine Isls, Singapore, Sri Lanka, Thailand, Vietnam; scattered records in Sulawesi, Moluccas, and Aru Isls, probably resulting from introductions.

STATUS: CITES - Appendix III (India); IUCN - Endangered as *P. lignicolor*.

SYNONYMS: *baritensis* Lönnberg, 1925; *birmanicus* Wroughton, 1917; *bondar* Desmarest, 1820; *brunneipes* Miller, 1906; *canescens* Lyon, 1907; *canus* Miller, 1913; *celebensis* Schwarz, 1911; *cochinensis* Schwarz, 1911; *crassiceps* Pucheran, 1855; *crossi* Gray, 1832; *dubius* Gray, 1832; *exitus* Schwarz, 1911; *felinus* Wagner, 1841; *fossa* Marsden, 1811; *fuliginosus* Gray, 1832; *fuscus* Miller, 1913; *hamiltonii* Gray, 1832; *hanieli* Schwarz, 1912; *hirsutus* Hodgson, 1836; *javanica* Horsfield, 1824; *kangeanus* Thomas, 1910; *kutensis* Chasen and Kloss, 1916; *laneus* Pocock, 1934; *laotum* Gyldenstolpe, 1917; *lehmanni* Mertens, 1929; *leucopus* Ogilby, 1829; *lignicolor* Miller, 1903; *macrodus* Gray, 1865; *milleri* Kloss, 1908; *minax* Thomas, 1909; *minor* Bonhote, 1903; *musanga* Raffles, 1822; *musangoides* Gray, 1837; *nictitans* Taylor, 1891; *niger* Blanford, 1885; *nigra* Desmarest, 1820; *nigrifrons* Gray, 1843; *padangus* Lyon, 1908; *pallasii* Gray, 1832; *pallens* Miller, 1913; *parvus* Miller, 1913; *pennantii* Gray, 1832; *philippinensis* F. G. Cuvier, 1837; *prehensilis* Desmarest, 1820; *pugnax* Miller, 1913; *pulcher* Miller, 1913; *quadriscriptus* Horsfield, 1855; *ravus* Miller, 1913; *rindjanicus* Mertens, 1929; *robustus* Miller, 1906; *rubidus* Blyth, 1858; *sabanus* Thomas, 1909; *sacer* Miller, 1913; *scindiae* Pocock, 1934; *senex* Miller, 1913; *setosus* Jacquinet and Pucheran, 1853; *siberu* Chasen and Kloss, 1927; *simplex* Miller, 1913; *strictis* Horsfield, 1855; *sumatrensis* Fischer, 1829; *sumbanus* Schwarz, 1910; *torvus* Thomas, 1909; *typus* F. G. Cuvier and E. Geoffroy Saint-Hilaire, 1821; *vellerosus* Pocock, 1934; *vicinus* Schwarz, 1910.

Paradoxurus jerdoni Blanford, 1885. Proc. Zool. Soc. Lond., 1885:613.

TYPE LOCALITY: "Kodaikanal, on the Palni (or Pulney) hills in the Madura district, Madras Presidency" [India, Tamil Nadu Province, Palni Hills, Kodaikanal; 10°15'N, 77°31'E].

DISTRIBUTION: S India.

STATUS: CITES - Appendix III (India); IUCN - Indeterminate.

SYNONYMS: *caniscus* Pocock, 1933.

Paradoxurus zeylonensis (Pallas, 1777). In Schreber, Die Säugethiere, 3(26):451[1777].

TYPE LOCALITY: "Cenlon" [= Sri Lanka].

DISTRIBUTION: Endemic to Sri Lanka.

SYNONYMS: *aureus* F. G. Cuvier, 1822; *montanus* Kelaart, 1852.

Subfamily Viverrinae Gray, 1821. London Med. Repos., 15:301.

COMMENTS: Type genus: *Viverra* Linnaeus, 1758, by original designation (Melville and Smith, 1987). Pocock (1933d) and Gregory and Hellman (1939) placed *Poiana* and *Prionodon* in the Prionodontinae, considered a sister group to the remaining viverrines. This was not followed by Gill (1872), Simpson (1945), Ellerman and Morrison-Scott (1951), Rosevear (1974), and Wozencraft (1989b).

Civettictis Pocock, 1915. Proc. Zool. Soc. Lond., 1915:134.

TYPE SPECIES: *Viverra civetta* Schreber, 1776, by monotypy (Melville and Smith, 1987).

COMMENTS: Included in *Viverra* by Coetzee (1977b); recognized as *Civettictis* by Rosevear (1974), Kingdon (1977), Ansell (1978), Smithers (1983), and Wozencraft (1989b).

Civettictis civetta (Schreber, 1776). Die Säugethiere, 3(16):pl. 111[1776]; text 3(24):418, 3:index, p. 587[1777].

TYPE LOCALITY: "Guinea, Kongo, das Vorgebirge der guten Hofnung und Aethiopien", restricted by Allen (1924:117) to "Guinea".

DISTRIBUTION: Angola, Benin, Botswana, Cameroon, Central African Republic, Congo, Equatorial Guinea, Ethiopia, Gabon, Gambia, Guinea, Ivory Coast, Kenya, Liberia, Malawi, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Thailand, Uganda, Zaire, Zambia, Zimbabwe.

STATUS: CITES - Appendix III (Botswana).

SYNONYMS: *australis* Lundholm, 1955; *congica* Cabrera, 1929; *matschiei* Pocock, 1933; *megaspila* Noack, 1891; *orientalis* Matschie, 1891; *poortmanni* Pucheran, 1855; *schwarzi* Cabrera, 1929; *volkmanni* Lundholm, 1955.

COMMENTS: Some authors have placed this species in *Viverra*, see Coetzee (1977b); most have followed Pocock (1915b), who placed this species in *Civettictis*. Rosevear (1974) noted differences in scent glands; G. Petter (1969) discussed dental differences.

Genetta G. Cuvier, 1816. Regne Anim., 1:156.

TYPE SPECIES: *Viverra genetta* Linnaeus, 1758, by original designation.

SYNONYMS: *Paragenetta*, *Pseudogenetta*.

COMMENTS: For reviews, see Crawford-Cabral (1966, 1969, 1970, 1973, 1981), Rosevear (1974), Coetzee (1977b), Schlawe (1980, 1981), and Wozencraft (1984, 1989b). Includes *Paragenetta* and *Pseudogenetta* as subgenera.

Genetta abyssinica (Rüppell, 1836). Neue Wirbelt. Fauna Abyssin. Gehörig. Säugeth., 1:33.

TYPE LOCALITY: "In Abyssinien, wo es sehr häufig vorkömmt, führt es beiden Landeseingebornen zu Gondar"; Ethiopia, Gondar (12°36'N, 37°28'E).

DISTRIBUTION: Egypt, Ethiopia, Somalia, Sudan.

STATUS: IUCN - Insufficiently known.

COMMENTS: Subgenus *Pseudogenetta*.

Genetta angolensis Bocage, 1882. J. Sci. Math. Phys. Nat. Lisboa, ser. 1, 9:29.

TYPE LOCALITY: "Calcuimba" [= Angola, Caconda (13°47'S, 15°08'E)].

DISTRIBUTION: Angola, Malawi, Mozambique, Tanzania, Zaire, Zambia, Zimbabwe.

SYNONYMS: *hintoni* Schwarz, 1929; *mossambica* Matschie, 1902.

COMMENTS: Subgenus *Genetta*.

Genetta genetta (Linnaeus, 1758). Syst. Nat., 10th ed., 1:45.

TYPE LOCALITY: "oriente juxta rivos", restricted by Linnaeus (1766) to "oriente juxta rivos, Hispania", later listed by Thomas (1911a) as "Spain". Cabrera (1914), synonymizing *G. peninsulæ*, further restricted the type locality to "El Pardo, cerca de Madrid" [Spain, El Pardo, near Madrid (40°32'N, 3°46'W)].

DISTRIBUTION: Algeria, Angola, Arabia, Belgium, Botswana, Burkina Faso, Egypt, Ethiopia, France, Germany, Holland, Kenya, Lybia, Liberia, Mauritania, Morocco, Mozambique, Namibia, Nigeria, Orange Free State, Portugal, Senegal, Spain, Somalia, South Africa, Sudan, Tanzania, Tunisia, Uganda, Western Sahara, Yemen, Zambia, Zimbabwe.

STATUS: IUCN - Rare as *G. g. isabelae*.

SYNONYMS: *afra* F. G. Cuvier, 1825; *albipes* Trouessart, 1904; *balearica* Thomas, 1902; *barbar* Matschie, 1902; *barbara* Hamilton-Smith, 1842; *bella* Matschie, 1902; *bonapartei* Loche, 1857; *communis* Burnett, 1830; *dongolana* Hemprich and Ehrenberg, 1833; *felina* Thunberg, 1811; *gallica* Oken, 1816; *grantii* Thomas, 1902; *guardafuensis* Neumann, 1902; *hararensis* Neumann, 1902; *hispanica* Oken, 1816; *leptura* Reichenbach, 1836; *ludia* Thomas and Schwann, 1906; *macrura* Jentink, 1892; *melas* de la Paz Graells, 1897; *neumanni* Matschie, 1902; *peninsulæ* Cabrera, 1905; *pulchra* Matschie, 1902; *rhodanica* Matschie, 1902; *senegalensis* Fischer, 1829; *tedescoi* de Beaux, 1924; *terraesanctae* Neumann, 1902; *vulgaris* Lesson, 1827.

COMMENTS: Subgenus *Genetta*. Schlawe (1981) included *afra*, *bonapartei*, *barbar*, *barbara*, *balearica*, *lusitanica*, *melas*, *peninsulæ*, *pyrenaica*, *terraesanctae*, *rhodanica*, and *isabelae*; and provisionally separated into *G. felina* the following: *guardafuensis*, *hararensis*, *leptura*, *senegalensis*, *dongolana*, *granti*, *neumanni*, *bella*, *pulchra*, and *ludia*, which are included here, following Crawford-Cabral (1966, 1969; 1981), Coetzee (1977b),

Smithers (1983), and Wozencraft (1984, 1989b). Rosevear (1974) separated *senegalensis* from *genetta*; however, this was not followed by Coetzee (1977b), Kingdon (1977), Ansell (1978), Crawford-Cabral (1981), or Wozencraft (1989b). Wozencraft (1984) recognized four allopatric populations: *genetta* (Mediterranean), *dongolana* (East African), *felina* (South African), and *senegalensis* (West African).

Genetta johnstoni Pocock, 1908. Proc. Zool. Soc. Lond., 1907:1041 [1908].

TYPE LOCALITY: "in a district from fifteen to twenty miles west of the Putu Mountains, which lie west of the Duobe and Cavally Rivers". [Liberia]

DISTRIBUTION: Ghana, Guinea, Ivory Coast, Liberia.

STATUS: IUCN - Insufficiently known.

SYNONYMS: *lehmanni* Kuhn, 1960.

COMMENTS: Subgenus *Paragenetta*.

Genetta maculata (Gray, 1830). Spicil. Zool., 2:9.

TYPE LOCALITY: "in Africa Boreali".

DISTRIBUTION: Angola, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Equatorial Guinea, Ethiopia, French Equatorial Africa, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Malawi, Mozambique, Namibia, Niger, Nigeria, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

SYNONYMS: *aequatorialis* Heuglin and Fitzinger, 1866; *albiventris* Schwarz, 1930; *amer* Gray, 1843; *bettoni* Thomas, 1902; *bini* Rosevear, 1974; *deorum* Funaiolo and Simonetta, 1960; *dubia* Matschie, 1902; *erlangeri* Matschie, 1902; *fieldiana* Du Chaillu, 1860; *genettoides* Temminck, 1853; *gleimi* Matschie, 1902; *insularis* Cabrera, 1921; *letabae* Thomas and Schwann, 1906; *loandae* Matschie, 1930; *matschiei* Neumann, 1902; *pantherina* Hamilton-Smith, 1842; *pardina* I. Geoffroy Saint Hilaire, 1832; *poensis* Waterhouse, 1838; *pumila* Hollister, 1916; *rubiginosa* Pucheran, 1855; *schraderi* Matschie, 1902; *soror* Schwarz, 1929; *stuhlmanni* Matschie, 1902; *suahelica* Matschie, 1902; *zambesiana* Matschie, 1902; *zuluensis* Roberts, 1924.

COMMENTS: Schlawe (1981) included *aequatorialis*, *amer* (*sensu* Schwartz, 1930), *bini* (not a synonym of *servalina*), *deorum*, *dubia*, *erlangeri*, *fieldiana*, *genettoides*, *gleimi*, *insularis*, *letabae*, *matschiei*, *pantherina*, *pardina*, *poensis*, *pumila*, *rubiginosa*, *schraderi*, *stuhlmanni*, *suahelica*, and *zambesiana*. May be conspecific with *tigrina*; see Coetzee (1977b), Pringle (1977), and Schlawe (1981); but also see Ansell (1978) and Wozencraft (1984). Crawford-Cabral (1981) and Ansell (1978) placed genets west of the Dahomey Gap in *pardina* and southern and eastern populations in *rubiginosa* (except for the extreme southern *tigrina*).

Genetta servalina Pucheran, 1855. Rev. Mag. Zool. Paris, 7(2):154.

TYPE LOCALITY: "Gabon".

DISTRIBUTION: Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon, Kenya, Niger, Tanzania, Uganda, Zaire.

SYNONYMS: *aubryana* Pucheran, 1855; *bettoni* Thomas, 1902; *cristata* Hayman, 1940; *intensa* Lönnberg, 1917.

COMMENTS: Includes *cristata*, *bettoni*, and *aubryana*, but not *bini*, which is here considered a junior synonym of *maculata*; see Crawford-Cabral (1970:323), Wenzel and Haltenorth (1972), Coetzee (1977b), and Schlawe (1981); but also see Rosevear (1974) and Crawford-Cabral (1981), who recognized *cristata* as a separate species.

Genetta thierryi Matschie, 1902. Verh. V. Internat. Zool. Congr., 1901:1142.

TYPE LOCALITY: "Hinterland von Togo von 9° n. Br. ab", restricted to "Borogu = Borgou, (10.78 N., 0.65 E)?" by Schlawe (1981:159).

DISTRIBUTION: Benin, Burkina Faso, Cameroon, Gambia, Ghana, Ivory Coast, Mali, Nigeria, Niger, Sierra Leone, Senegal, Togo.

SYNONYMS: *villiersi* Dekeyser, 1949.

COMMENTS: Subgenus *Pseudogenetta*. Includes *Pseudogenetta villiersi*, see Kuhn (1960), Crawford-Cabral (1969, 1981), Rosevear (1974), and Schlawe (1981).

Genetta tigrina (Schreber, 1776). Die Säugethiere, 3(17):pl. 115[1776]; text, 3(25):425 [1777].

TYPE LOCALITY: "von dem Vorgebirge der guten Hofnug" [South Africa, Cape Prov., Cape of Good Hope].

DISTRIBUTION: From the Cape of Good Hope to S Natal (South Africa), Lesotho, and Orange Free State.

SYNONYMS: *methi* Roberts, 1948.

COMMENTS: Subgenus *Genetta*. May be conspecific with *maculata*; see Crawford-Cabral (1966), Pringle (1977), Ansell (1978), Schlawe (1981), and Meester et al. (1986).

Genetta victoriae Thomas, 1901. Proc. Zool. Soc. Lond., 1901(2):87.

TYPE LOCALITY: "Entebbe, Uganda". Subsequently restricted by Moreau et al. (1945:410) to "Near Lupanzula's, ten miles west of Beni, Ituri Forest, Congo Belge". See Allen (1924) for discussion.

DISTRIBUTION: E Zaire, mountainous regions.

COMMENTS: Subgenus *Genetta*.

Osbornictis J. A. Allen, 1919. J. Mammal., 1:25.

TYPE SPECIES: *Osbornictis piscivora* J. A. Allen, 1919, by original designation.

COMMENTS: Sister taxon to *Genetta*.

Osbornictis piscivora J. A. Allen, 1919. J. Mammal., 1:25.

TYPE LOCALITY: "Niapu, Belgian Congo" [Zaire, Niapu, 2°25'N, 26°28'E].

DISTRIBUTION: Zaire.

COMMENTS: Reviewed by Van Rompaey (1988, Mammalian Species, 309).

Poiana Gray, 1865. Proc. Zool. Soc. Lond., 1864:507, 520 [1865].

TYPE SPECIES: *Genetta richardsonii* Thomson, 1842, by monotypy (Melville and Smith, 1987).

COMMENTS: Pocock (1933d) believed it very likely that *richardsonii* possessed scent glands and therefore separated it from *Prionodon*, although it is the loss of scent glands in *Prionodon* which is derived (Wozencraft, 1984).

Poiana richardsonii (Thomson, 1842). Ann. Mag. Nat. Hist., ser. 1, 10:204.

TYPE LOCALITY: "Fernando Po" [Equatorial Guinea: Bioko].

DISTRIBUTION: Cameroon, Congo, Equatorial Guinea, Gabon, Ivory Coast, Liberia, Zaire.

STATUS: IUCN - Indeterminate as *P. r. liberiensis*.

SYNONYMS: *leightoni* Pocock, 1908; *poensis* Mivart, 1882.

COMMENTS: Rosevear (1974) raised *leightoni* to the specific level. *Poiana* records are few and scattered and recent studies placed *leightoni* as a subspecies; see de Beaufort (1965), Michaelis (1972), and Kingdon (1977).

Prionodon Horsfield, 1821. Zool. Res. Java, Part 5.

TYPE SPECIES: *Prionodon gracilis* Horsfield, [1821] (= *Viverra* ? *linsang* Hardwicke, 1821).

SYNONYMS: *Pardictis* Thomas, 1925 (see Pocock, 1933d).

Prionodon linsang (Hardwicke, 1821). Trans. Linn. Soc. Lond., 13:236, pl. 24.

TYPE LOCALITY: "Malaysia, Malacca", restricted by Robinson and Kloss (1920:264) to "Malacca".

DISTRIBUTION: Bangka Isl; Java; Borneo; Billiton Isl; peninsular Burma, Malaysia (West) to Sumatra.

STATUS: CITES - Appendix II.

SYNONYMS: *gracilis* Horsfield, 1821; *maculosus* Blanford, 1878.

Prionodon pardicolor Hodgson, 1842. Calcutta J. Nat. Hist., 2:57.

TYPE LOCALITY: "Sikim. . . Sub-Himalayan mountains". [India].

DISTRIBUTION: Burma, China (Yunnan), India, Indonesia, Laos, Western Malaysia, Nepal, Thailand, Vietnam.

STATUS: CITES - Appendix I; U.S. ESA - Endangered.

SYNONYMS: *pardochrous* Gray, 1863; *perdicator* Schinz, 1844; *presina* Thomas, 1925.

Viverra Linnaeus, 1758. Syst. Nat., 10th ed., 1:43.

TYPE SPECIES: *Viverra zibetha* Linnaeus, 1758, by subsequent designation (Sclater, 1900; Melville and Smith, 1987).

COMMENTS: Pocock (1933b) placed *civettina* and *megaspila* in *Moschothera* which was not recognized by Ellerman and Morrison-Scott (1951), Wang (*in* Gao, 1987), or

Wozencraft (1989b). Does not include *Civettictis*; see Kingdon (1977) and Ansell (1978); but also see Coetzee (1977b).

Viverra civettina Blyth, 1862. J. Asiatic Soc. Bengal, 31:332.

TYPE LOCALITY: "Southern Malabar" restricted by Pocock (1933a:446) to "Travancore" [India].

DISTRIBUTION: Endemic to S India.

STATUS: U.S. ESA and IUCN - Endangered.

COMMENTS: Considered a subspecies of *V. megaspila* by Ellerman and Morrison-Scott (1951); however, considered at the specific level by Lindsay (1928), Pocock (1941a), and Wozencraft (1984, 1989b).

Viverra megaspila Blyth, 1862. J. Asiatic Soc. Bengal, 31:331.

TYPE LOCALITY: "vicinity of Prome" [Burma, Prome (= Pye) 18°49'N, 95°13'E].

DISTRIBUTION: Burma, Malaysia, Thailand, Vietnam.

STATUS: CITES - Appendix III (India).

COMMENTS: Does not include *V. civettina*; reviewed by Lindsay (1928), Pocock (1941a), and Wozencraft (1989b).

Viverra tangalunga Gray, 1832. Proc. Zool. Soc. Lond., 1832:63.

TYPE LOCALITY: Not given. Fixed by Gray (1843:48) as "Sumatra" [Indonesia].

DISTRIBUTION: China, Indonesia (Sumatra, Rhio-Lingga Arch., Bangka Isl, Borneo, Karimata Isl, Sulawesi, Buru, Amboina), Cambodia, Malaysia, Philippines, Thailand. Introduced to many SE Asian Islands.

SYNONYMS: *lankavensis* Robinson and Kloss, 1920.

Viverra zibetha Linnaeus, 1758. Syst. Nat., 10th ed., 1:44.

TYPE LOCALITY: "Indiis", subsequently restricted by Thomas (1911a:137) to "Bengal".

DISTRIBUTION: Burma, Cambodia, China (Anhui, Shaanxi, Zhejiang and Jiangsu), India, Indonesia, Laos, Western Malaysia, Nepal, Thailand, Vietnam.

STATUS: CITES - Appendix III (India).

SYNONYMS: *ashtoni* Swinhoe, 1865; *civettoides* Hodgson, 1842; *filchneri* Matschie, 1908; *melanura* Hodgson, 1842; *orientalis* Hodgson, 1842; *picta* Wroughton, 1915; *piscator* Shaw, 1800; *pruinosa* Wroughton, 1917; *sigillata* Robinson and Kloss, 1920; *surdaster* Thomas, 1927; *undulata* Gray, 1830.

Viverricula Hodgson, 1838. Ann. Mag. Nat. Hist., [ser. 1], 1:152.

TYPE SPECIES: *Civetta indica* Desmarest, 1804, by subsequent designation (Sclater, 1891; Melville and Smith, 1987).

Viverricula indica (Desmarest, 1804). Tabl. Méth. Hist. Nat., in, Nouv. Dict. Hist. Nat., 24:9, 17.

TYPE LOCALITY: "l'Inde" [India].

DISTRIBUTION: Bangladesh, Burma, Cambodia, China, Hong Kong, India, Indonesia (Sumatra, Java, Kangean Isl, Sumbawa, Bali), Laos, Malaysia, Pakistan, Sri Lanka, Taiwan, Thailand, Vietnam. Introduced to Yemen, Zanzibar, Socotra, Madagascar, the Comoro Isls, and the Philippines; scattered distribution on many SE Asian islands due to introductions.

STATUS: CITES - Appendix III (India).

SYNONYMS: *baptistae* Pocock, 1933; *bengalensis* Hardwicke, 1833; *deserti* Bonhote, 1898; *hanensis* Matschie, 1908; *malaccensis* Gmelin, 1788; *mayori* Pocock, 1933; *pallida* Gray, 1832; *rasse* Horsfield, 1824; *schlegelii* Pollen, 1868; *taivana* Schwarz, 1911; *thai* Kloss, 1919; *wellsi* Pocock, 1933.

COMMENTS: The correct identity of *V. malaccensis* is uncertain (Pocock, 1933b).