

## ORDER LAGOMORPHA

by Robert S. Hoffmann

### ORDER LAGOMORPHA

SYNONYMS: Duplicidentata Illiger, 1811.

#### Family Ochotonidae Thomas, 1897. Proc. Zool. Soc. Lond., 1896:1026 [1897].

SYNONYMS: Lagomina Gray, 1825; Lagomyidae Lilljeborg, 1866.

COMMENTS: Revisions of the family include Gureev (1964), Corbet (1978c), and Erbaeva (1988). Other useful treatments include Allen (1938), Ellerman and Morrison-Scott (1951), Ognev (1940), Hall (1981), and A. T. Smith et al. (1990).

#### *Ochotona* Link, 1795. Beitr. Naturgesch., 2:74.

TYPE SPECIES: *Ochotona minor* Link, 1795 (= *Lepus dauuricus* Pallas, 1776).

SYNONYMS: *Conothoa* Lyon, 1904; *Lagomys* G. Cuvier, 1800; *Lepus* Linnaeus, 1758 (in part); *Ogotoma* Gray, 1867; *Pika* Lacépède, 1799; *Tibetholagus* Argyropulo and Pidoplichko, 1939.

COMMENTS: There are presently no grounds for recognizing subgenera pending a phylogenetic analysis of specific relationships within the genus. The subgeneric classifications published (e.g., Allen, 1938; Ellerman and Morrison-Scott, 1951; Erbaeva, 1988; Ognev, 1940) differ dramatically, even when based on the same distinguishing characteristics.

#### *Ochotona alpina* (Pallas, 1773). Reise Prov. Russ. Reichs., 2:701.

TYPE LOCALITY: "in Alpinus, rupestribus Sibiriae". Restricted by Ognev (1940:23) to Kazakhstan, Altai Mtns, Vostocho-Kazakhstansk Obl., Tigiretskoe Range, vic. of Tigiretskoe [110 km NNW Ust-Kamenogorsk]. Not Tigiretskoe, ESE Minusinsk, Krasnoyarsk Krai, Russia.

DISTRIBUTION: Sayan and Altai Mtns; Khangai, Kentei and associated ranges; upper Amur drainage (NW Kazakhstan, S Russia, NW Mongolia); N Kansu-Ningsia border (China).

STATUS: The small isolated population of *O. a. argentata* at the southern extreme of the species range is likely endangered, and other isolated montane populations in Mongolia may be threatened (A. T. Smith et al., 1990).

SYNONYMS: *argentata* Howell, 1928; *ater* Eversmann, 1842; *changaica* Ognev, 1940; *cinereofusca* (Schrenk, 1858); *nitida* Hollister, 1912; *scorodumovi* Skalon, 1935; *sushkini* Thomas, 1924.

COMMENTS: Formerly included *hyperborea*; but see Ivanitskaya (1985) and Pavlinov and Rossolimo (1987). Sokolov and Orlov (1980:79) considered *hyperborea* a distinct species with a distribution overlapping that of *alpina* in the Khangai and Kentei Mtns, Mongolia. Separate specific status was supported by differences in chromosome numbers (Vorontsov and Ivanitskaya, 1973). The race *sushkini*, formerly assigned to *O. pallasi*, is a subspecies of *alpina* (see A. T. Smith et al., 1990, and references therein). Does not include *collaris* or *princeps*, see Weston (1981).

#### *Ochotona cansus* Lyon, 1907. Smithson. Misc. Coll., 50:136.

TYPE LOCALITY: "Taocheo, Kan-su, China" [Lintan, Gannan A.D., Gansu, China].

DISTRIBUTION: C China (Gansu, Qinghai, Sichuan); isolated populations in Shaanxi and Shanxi.

STATUS: The Shanxi subspecies *sorella*, isolated in the extreme northwest of the species range, may be extinct. It is known from only a few specimens, and has not been found in over 50 years.

SYNONYMS: *morosa* Thomas, 1912; *sorella* Thomas, 1908; *stevensi* Osgood, 1932.

COMMENTS: Büchner (1890) originally included this species in the quite different *O. roylei*, but in recent years it has usually been assigned to *O. thibetana* (Allen, 1938; Argyropulo, 1948; Corbet, 1978c; Ellerman and Morrison-Scott, 1951; Gureev, 1964; Honacki et al., 1982; Weston, 1982). Recent studies showed that *cansus* and *thibetana* are broadly sympatric, with distinct ecological niches, and morphological characters that do not intergrade (Feng and Kao, 1974; Feng and Zheng, 1985). The latter

authors, without access to holotypes, assigned the race *morosa* to *thibetana*, but it is an isolated subspecies of *cansus* that is sympatric with *O. thibetana* in the Tsing Ling Shan, Shaanxi Province (A. T. Smith et al., 1990, and references therein).

*Ochotona collaris* (Nelson, 1893). Proc. Biol. Soc. Washington, 8:117.

TYPE LOCALITY: "about 200 miles south of Fort Yukon, Alaska near the head of the Tanana River." [USA].

DISTRIBUTION: WC Mackenzie, S Yukon, NW British Columbia (Canada); SE Alaska (USA).

STATUS: Not significantly threatened (MacDonald and Jones, 1987).

SYNONYMS: Monotypic.

COMMENTS: Broadbooks (1965) and Youngman (1975) considered *collaris* and *princeps* conspecific. Corbet (1978c), following Argyropulo (1948) and Gureev (1964), included *collaris* in *alpina*. A statistical reevaluation of craniometric data by Weston (1981) indicated that *collaris*, *princeps* and *alpina* are separate species; Hall (1981:286) also recognized *collaris* as a distinct species. *O. collaris* and *O. princeps* share similar chromosome numbers that differ sharply from those of *alpina* and *hyperborea* (Vorontsov and Ivanitskaya, 1973). Reviewed by MacDonald and Jones (1987, Mammalian Species, 281).

*Ochotona curzoniae* (Hodgson, 1858). J. Asiat. Soc. Bengal, 1857, 26:207 [1858].

TYPE LOCALITY: "district of Chumbi", Chumbi Valley, Tibet, China.

DISTRIBUTION: Tibetan Plateau; adjacent Gansu, Qinghai, Sichuan (China), Sikkim (India) and E Nepal.

STATUS: This species is the focus of widespread control efforts throughout its range, and has been eliminated locally (A. T. Smith et al., 1990).

SYNONYMS: *melanostoma* (Büchner, 1890).

COMMENTS: Includes *melanostoma*, but not *seiana* from Iran, *contra* Corbet (1978c:69); see A. T. Smith et al. (1990). Treated as a subspecies of *dauurica* by Mitchell (1978), but it is considered a distinct species by the Chinese; see Feng and Zheng (1985) and Feng et al. (1986). *O. curzoniae* and *O. dauurica* occur in geographic sympatry in Hainan County, Qinghai Province, China, and differ both chromosomally (Vorontsov and Ivanitskaya, 1973) and electrophoretically (Zhou and Xia, 1981).

*Ochotona dauurica* (Pallas, 1776). Reise Prov. Russ. Reichs., 3:692.

TYPE LOCALITY: "Vivit in campis, montiumque declivibus arenosis apricis, per totam Dauriam..." Restricted by Ellerman and Morrison-Scott (1951:452) to "Kulusutai, Onon River, Eastern Siberia" [Chitinsk. Obl. Russia].

DISTRIBUTION: Steppes from Altai, Tuva, and Transbaikalia (Russia) through N China and Mongolia, south to Qinghai Province, China.

STATUS: Considered a pest, is intensively controlled in China; control in Russia has been much less intensive. Isolated populations around the margins of the Gobi Desert in China and Mongolia are very vulnerable (A. T. Smith et al., 1990).

SYNONYMS: *altaina* Thomas, 1911; *annectens* Miller, 1911; *bedfordi* Thomas, 1908; *minor* Link, 1795; *mursavi* Bannikov, 1951.

COMMENTS: The spelling of *dauurica* conforms to that of the original description. Formerly included *curzoniae* and *melanostoma*; see *curzoniae*. Ellerman and Morrison-Scott's type restriction is dubious because modern Kulusutai is south of the Onon River, at the NE end of Lake Baron-Torei. See Ognev (1940:62) and Allen (1938:551) for alternate type localities in the same general area.

*Ochotona erythrotis* (Büchner, 1890). Wiss. Result. Przewalski Cent. Asien Reisen. Zool. Th., B. I: Säugeth., p. 165.

TYPE LOCALITY: Not specified; restricted by Allen (1938:535) to "Burchan-Budda", East Tibet, China.

DISTRIBUTION: E Qinghai, W Gansu, possibly N Sichuan, S Xinjiang, and Tibet (China).

STATUS: Indeterminate.

SYNONYMS: *vulpina* Howell, 1928.

COMMENTS: Formerly included *gloveri*; see Corbet (1978c:68). Feng and Zheng (1985) provided evidence that *gloveri* (including *brookei*) is a distinct species. Formerly included in *rutila* (Ellerman and Morrison-Scott, 1951), but now regarded as distinct (Feng and Zheng, 1985; Weston, 1982). The distribution of this species is poorly

known, as are its relationships with the apparently allopatric *rutila*, *iliensis*, and *gloveri*.

*Ochotona forresti* Thomas, 1923. Ann. Mag. Nat. Hist., ser. 9, 11:662.

TYPE LOCALITY: "N.W. flank [Li-kiang Range, 27°N, 100°30'E] 13,000'" [Yunnan, China].

DISTRIBUTION: NW Yunnan, SE Tibet (China); N Burma; Assam, Sikkim (India); Bhutan.

STATUS: Unknown.

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *pusilla* (Ellerman and Morrison-Scott, 1951), *roylei* (Corbet, 1978c), and *thibetana* (Feng and Kao, 1974; Gureev, 1964; Weston, 1982), but now considered distinct (A. T. Smith et al., 1990, and references therein). *O. forresti* is poorly known, but may prove to be an allospecies of *O. roylei*; it is thought to be geographically sympatric with *O. gloveri* and/or *O. thibetana* in Yunnan (China), Burma, and Sikkim (India).

*Ochotona gaoligongensis* Wang, Gong, and Duan, 1988. Zool. Res., 9:201, 206.

TYPE LOCALITY: "Dongsao-fang [Mount Gaoligong], (27°45'N, 98°27'E), Gongshan Co., Northwest Yunnan, alt. 2950 m." [China].

DISTRIBUTION: Known only from the type locality.

STATUS: IUCN - Indeterminate.

SYNONYMS: Monotypic.

COMMENTS: From the original description, this taxon is likely to prove to be a synonym of *O. forresti*, which is known to occur in the same area.

*Ochotona gloveri* Thomas, 1922. Ann. Mag. Nat. Hist., ser. 9, 9:190.

TYPE LOCALITY: "Nagchuka [= Nyagquka (Yajiang), W Sichuan, China], 10,000'."

DISTRIBUTION: W Sichuan, NW Yunnan, NE Tibet, SW Qinghai (China).

STATUS: Unknown.

SYNONYMS: *brookei* Allen, 1937; *calloceps* Pen et al., 1962; *kamensis* Argyropulo, 1948 (not 1941; see Honacki et al., 1982).

COMMENTS: Formerly included in *erythrotis*; see comments therein. Whether *gloveri* and *erythrotis* are sym-, para-, or allopatric in distribution in Sichuan and/or Qinghai is unknown.

*Ochotona himalayana* Feng, 1973. Acta Zool. Sinica, 19:69, 73.

TYPE LOCALITY: "Qu-xiang, Bo-qu Valley, Nei-la-mu [= Nyalam] District, alt. 3500 m." [Xigaze (Shigatse) County, Xizang (Tibet), China].

DISTRIBUTION: Mt. Jolmolunga (Everest) area, S Xizang, China; probably adjacent Nepal.

STATUS: Unknown.

SYNONYMS: Monotypic.

COMMENTS: This taxon was considered a synonym of *O. roylei* by Corbet (1978c) and Weston (1982). Additional data (Feng and Zheng, 1985; Feng et al., 1986) suggest that it may be an independent species. However, its range is within that of the similar *O. roylei nepalensis*, and additional studies are necessary to confirm its specific distinctness.

*Ochotona hyperborea* (Pallas, 1811). Zoogr. Rosso-Asiat., 1:152.

TYPE LOCALITY: "... e terris Tschuktschicis," [Chukotsk peninsula (Ognev, 1940:41), Chukotsk A.O., Russia].

DISTRIBUTION: Ural, Putorana, Sayan Mtns, east of Lena River to Chukotka, Koryatsk and Kamchatka; upper Yenesei, Transbaikalia, and Amur regions, Sakhalin Island (Russia); NC Mongolia; NE China; N Korea; Hokkaido (Japan).

STATUS: Appears common throughout its large range.

SYNONYMS: *cinereoflava* (Schrenk, 1858); *coreana* Allen and Andrews, 1913; *ferruginea* (Schrenk, 1858); *kamtschaticus* Dybowski, 1922; *kobayashii* Kishida, 1930; *kolymensis* Allen, 1903; *litoralis* Peters, 1882; *mantchurica* Thomas, 1909; *normalis* (Schrenk, 1858); *sadakei* Kishida, 1933; *svatoshi* Turov, 1924; *turuchanensis* Naumov, 1934; *uralensis* Flerov, 1927; *yezeoensis* Kishida, 1930; *yoshikurai* Kishida, 1932.

COMMENTS: Formerly included in *alpina*; see A. T. Smith et al. (1990), and references therein. Difference in morphology and vocalizations are noticeable where *hyperborea* and *alpina* are sympatric in the W Sayan Mtns, Khangai Mtns, and Transbaikalia, and character displacement in size is also evident in some populations (A. T. Smith et al.,

1990). The original citation was printed and privately circulated in 1811, but not published for general distribution until 1826.

*Ochotona iliensis* Li and Ma, 1986. *Acta Zool. Sinica*, 32:375, 379.

TYPE LOCALITY: "Tienshan Mountain [Borokhoro Shan], Nilka [County], Xinjiang, China, alt. 3200 m."

DISTRIBUTION: Known only from the type locality (Li et al., 1988).

STATUS: IUCN - Indeterminate.

SYNONYMS: Monotypic.

COMMENTS: Perhaps related to the *erythrotis-rutila* group; poorly known.

*Ochotona koslowi* (Büchner, 1894). *Wiss. Reisen. Przewalski Cent. Asien Zool. Th. I: Säugeth.*, pg. 187.

TYPE LOCALITY: "Dolina Vetrov" [Valley of the Winds; pass between Guldsha Valley and valley of Dimnalyk River, tributary of Chechen, Tarim Basin, Xinjiang, China, 14,000' (37°55'N, 87°50'E)].

DISTRIBUTION: Arkatag Range, Kunlun Mtns (China).

STATUS: IUCN - Vulnerable. Not found by recent expedition to type locality, but reported at Aqqikkol (37°09'N, 88°11'E)(Zheng, 1986). Listed in "Red Book" of China.

SYNONYMS: Monotypic.

*Ochotona ladacensis* (Günther, 1875). *Ann. Mag. Nat. Hist.*, ser. 4, 16:231.

TYPE LOCALITY: "Chagra, 14000 feet above the sea" [Changra, Ladak, Kashmir, India].

DISTRIBUTION: SW Xinjiang, Qinghai, E Tibet (China); Kashmir (India); Pakistan.

STATUS: Probably not scarce, but poorly known. May be affected by control measures directed at *curzoniae*.

SYNONYMS: Monotypic.

COMMENTS: Broadly sympatric with *curzoniae* on the Tibetan Plateau, though not so widely distributed.

*Ochotona macrotis* (Günther, 1875). *Ann. Mag. Nat. Hist.*, ser. 4, 16:231.

TYPE LOCALITY: "Doba" [C Tibet, (31°N, 87°E), China] Ognev (1940:86). Not "Doba. . .N side . . . Kuenlun on road. . . via Kugiar" [Kakyar, 37°45'N, 77°05'E, W Xinjiang, China] *contra* Blanford (1879:76). Not Dobo, Qinghai [(36°41'N, 101°30'E)(Vaurie, 1972:352)].

DISTRIBUTION: Mountains of Sichuan and Yunnan (China); Himalayas (Nepal, India) from Bhutan through Tibet, Kunlun (China), Karakorum (Pakistan), Hindu Kush (Afghanistan), Pamir, and W Tien Shan Mtns (Kirghizistan, Tadzhikistan, SE Kazakhstan).

STATUS: Currently not threatened (A. T. Smith et al., 1990).

SYNONYMS: *auritus* Blanford, 1875; *baltina* Thomas, 1922; *chinensis* Thomas, 1911; *griseus*, Blanford, 1875; *sacana* Thomas, 1914; *sinensis*, Lydekker, 1912; *wollastoni* Thomas and Hinton, 1922.

COMMENTS: Included in *roylei* by Gureev (1964), Roberts (1977), Corbet (1978c:68), and Gromov and Baranova (1981:72). Morphological and ecological differences in the area of sympatry first documented by Kawamichi (1971) and Abe (1971), and confirmed by Mitchell (1978, 1981). Weston (1982), Feng and Zheng (1985), and Feng et al. (1986) indicated that *macrotis* is a distinct species. Whether the co-type from "Doba" in the Natural History Museum (London) is from C Tibet or W Xinjiang is uncertain.

*Ochotona muliensis* Pen and Feng, 1962. *In* Pen et al., *Acta Zool. Sinica*, 14 (supplement):120, 132.

TYPE LOCALITY: "Ting-Tung-Niu-Chang, southeastern Muli (alt. 3600m) Szechuan" [Muli A.D., Xichang County, Sichuan, China].

DISTRIBUTION: Known only from the vicinity of the type locality.

STATUS: IUCN - Indeterminate.

SYNONYMS: Monotypic.

COMMENTS: This taxon was originally described as a subspecies of *gloveri*, but is now thought to be specifically distinct (Feng and Zheng, 1985). It differs from *gloveri* in certain cranial characters, and in habitat (A. T. Smith et al., 1990), but its extreme rarity in collections makes its independent status difficult to demonstrate.

*Ochotona nubrica* Thomas, 1922. Ann. Mag. Nat. Hist., ser. 9, 9:187.

TYPE LOCALITY: "Tuggur, Nubra Valley, alt. 10,000" [Ladak, Kashmir, India].

DISTRIBUTION: Southern edge of Tibetan Plateau from Ladak (India, China) through Nepal to E Tibet (China).

STATUS: IUCN - Indeterminate.

SYNONYMS: *aliensis* Zheng, 1979; *lama* Mitchell and Punzo, 1975; *lhasaensis* Feng and Kao, 1974.

COMMENTS: Assigned to *pusilla* by Ellerman and Morrison-Scott (1951), to *roylei* (as *O. lama*) by Corbet (1978c) and to *thibetana* (as *O. t. lama*) by Feng et al. (1986). Recognized as distinct by A. T. Smith et al. (1990). Its closest relations seem to be with *thibetana* and it is possible that further data may indicate intergradation between the two. May include *hodgsoni*; see comment under *O. roylei*.

*Ochotona pallasii* (Gray, 1867). Ann. Mag. Nat. Hist., ser. 3, 20:220.

TYPE LOCALITY: "...said to come from 'Asiatic Russia-Kirgisen'" (Thomas, 1908:109).

Restricted by Heptner (1941:328) to "southern parts...Karkaralinsk Mountains...north of Lake Balkhash" [Karagandinsk Obl., Kazakhstan (49°N, 75°E)].

DISTRIBUTION: Discontinuous in arid areas (mntns and high steppes) in Kazakhstan; Altai Mtns, Tuva (Russia), and Mongolia, to Xinjiang and Inner Mongolia (China).

STATUS: Isolated populations of *O. p. hamica* and *O. p. sunidica* are threatened, or in some cases may be extinct (A. T. Smith et al., 1990).

SYNONYMS: *hamica* Thomas, 1912; *ogotona* Waterhouse, 1848 (not Bonhote, 1905); *opaca* Argyropulo, 1939 (not Vinogradov and Argyropulo, 1948; see Ellerman and Morrison-Scott, 1951; not Argyropulo, 1941, see comment under *gloveri kamensis*); *pricei* Thomas, 1911; *sunidica* Ma et al., 1980.

COMMENTS: Includes *pricei* (Corbet, 1978c) as it is commonly referred to in Soviet literature. However, marked difference in reproduction, habitat, behavior, and vocalization suggest that *pallasii* and *pricei* may prove to be specifically distinct (A. T. Smith et al., 1990).

*Ochotona princeps* (Richardson, 1828). Zool. J., 3:520.

TYPE LOCALITY: "Rocky Mountains"; restricted by Preble (1908) to "near the sources of Elk (Athabasca) River," [Athabasca Pass, head of Athabasca River, Alberta, Canada].

DISTRIBUTION: Mountains of W North America from C British Columbia (Canada) to N New Mexico, Utah, C Nevada, and EC California (USA).

STATUS: Most populations are not currently threatened, except for a few isolates in the Great Basin (*goldmani*, *obscura*, *nevadensis*, *tutelata*); *tutelata* may now be extinct (A. T. Smith et al., 1990).

SYNONYMS: *albata* Grinnell, 1912; *barnesi*, Durrant and Lee, 1955; *brooksi* Howell, 1924; *brunnescens* Howell, 1919; *cinnamomea* Allen, 1905; *clamosa* Hall and Bowlus, 1938; *cuppes* Bangs, 1899; *fenisex* Osgood, 1913; *figginsi* Allen, 1912; *fumosa* Howell, 1919; *fuscipes* Howell, 1919; *goldmani* Howell, 1924; *howelli* Borell, 1931; *incana* Howell, 1919; *jewetti* Howell, 1919; *lasalensis* Durrant and Lee, 1955; *lemhi* Howell, 1919; *levis* Hollister, 1912; *littoralis* Cowan, 1955; *lutescens* Howell, 1919; *minimus* Lord, 1863; *moorei* Gardner, 1950; *muri* Grinnell and Storer, 1916; *nevadensis* Howell, 1919; *nigrescens* Bailey, 1913; *obscura* Long, 1965; *saturata* Cowan, 1955; *saxatilis* Bangs, 1899; *schisticeps* (Merriam, 1889); *septentrionalis* Cowan and Racey, 1947; *sheltoni* Grinnell, 1918; *taylori* Grinnell, 1912; *tutelata* Hall, 1934; *uinta* Hollister, 1912; *utahensis* Hall and Hayward, 1941; *ventorum* Howell, 1919; *wasatchensis* Durrant and Lee, 1955.

COMMENTS: Broadbooks (1965) and Youngman (1975) considered *princeps* and *collaris* conspecific. Corbet (1978c), following Gureev (1964) included *princeps* in *alpina*. A statistical reevaluation of craniometric data by Weston (1981) indicated that *princeps*, *collaris*, and *alpina* are separate species. Reviewed by Smith and Weston (1990, Mammalian Species, 352).

*Ochotona pusilla* (Pallas, 1769). Nova Comm. Imp. Acad. Sci. Petropoli, 13:531.

TYPE LOCALITY: "in campis circa Volgam..."; restricted by Ognev (1940) to Samarsk Steppe, near Buzuluk, left bank of Samara River [Orenburgsk Obl. Russia].

DISTRIBUTION: Steppes from middle Volga (Russia), east and south through N Kazakhstan to upper Irtysh River and Chinese border. Not yet recorded in China.

- STATUS: Disappearance from W end of its range within historic times was probably caused by elimination of preferred shrub-steppe habitat (Kuz'mina, 1965). Some pop. are listed as rare in the "Red Book" of Bashkir Aut. Rep. (A. T. Smith et al., 1990).
- SYNONYMS: *angustifrons* Argyropulo, 1932; *minutus* Pallas, 1771.
- COMMENTS: Formerly included *nubrica* (= *lama*), *forresti*, and *osgoodi* (a subspecies of *thibetana*); see comments therein.
- Ochotona roylei* (Ogilby, 1839). Royle's Illus. Botany...Himalaya, vol. 2, 69, pl. 4 [erroneously labeled "*Lagomys alpinus*"].
- TYPE LOCALITY: "Choor Mountain, Lat. 30. Elev. 11,500[ft], [60 mi. (96 km) N of Saharanpur], Punjab, India.
- DISTRIBUTION: Himalayan Mtns in NW Pakistan and India to Nepal; adjacent Tibet (China).
- STATUS: Currently not under threat.
- SYNONYMS: *angdawai* Biswas and Khajuria, 1955; *hodgsoni*, Blyth, 1841; *mitchelli* Agrawal and Chakraborty, 1971; *nepalensis* Hodgson, 1841; *wardi* Bonhote, 1904.
- COMMENTS: Includes *angdawai* and *mitchelli*, but not *forresti* and *himalayana*, which are here provisionally considered distinct; see comments therein. *O. hodgsoni* is traditionally placed here, but based on the original description may be assigned to *nubrica*.
- Ochotona rufescens* (Gray, 1842). Ann. Mag. Nat. Hist., [ser. 1], 10:266.
- TYPE LOCALITY: "India, Cabul, Rocky Hills near Baker Tomb at about 6000 or 8000 feet elevation" [Baber's (?) Tomb, Kabul, Afghanistan].
- DISTRIBUTION: Afghanistan, Baluchistan (Pakistan), Iran, Armenia, and SW Turkmenia.
- STATUS: Considered a crop pest and controlled in parts of its range. However, most populations are not considered threatened. A possible exception may be the isolated population of *shukurovi* in the Little Balkhan Range, Turkmenia (A. T. Smith et al., 1990).
- SYNONYMS: *regina* Thomas, 1911; *shukurovi* Heptner, 1961; *vizier* Thomas, 1911; *vulturina* Thomas, 1920.
- COMMENTS: Includes *seiana*; see A. T. Smith et al. (1990) and comments under *O. curzoniae*.
- Ochotona rutila* (Severtzov, 1873). Izv. Obshch. Lyubit. Estestvozn., 8(2): 83.
- TYPE LOCALITY: "...in mountains near Vernyi [Alma-ata]...7000-8000 ft." [2134-2438m]. Restricted by Shnitnikov (1936) to valley of Maly Alma-atinsk River, Zailisk Alatau Mtns, Kazakhstan (43°05'N, 77°10'E).
- DISTRIBUTION: Isolated ranges from the Pamirs (Tadjikistan) to Tien Shan (SE Uzbekistan, Kirghizistan, SE Kazakhstan); perhaps N Afghanistan and E Xinjiang (China).
- STATUS: This is a rare species, extremely sporadic in occurrence throughout its range, and common in only a few localities (A. T. Smith et al., 1990).
- SYNONYMS: Monotypic.
- COMMENTS: Apparently an allospecies of *O. erythrotis*, which has sometimes been included in *rutila*; see comments therein.
- Ochotona thibetana* (Milne-Edwards, 1871). Nouv. Arch. Mus. Hist. Nat. Paris, Bull., 7:93.
- TYPE LOCALITY: "mountain near Moupin" [Baoping, Ya'an County, Sichuan, China].
- DISTRIBUTION: Shanxi, Shaanxi, W Hubei, Yunnan, Sichuan, S Tibet (China); N Burma; Sikkim (India); perhaps adjacent Bhutan and India.
- STATUS: *O. t. sikimaria* of Sikkim may be endangered by habitat destruction (A. T. Smith et al., 1990). Other forms do not appear to be threatened.
- SYNONYMS: *hodgsoni* Bonhote, 1905; *huangensis* Matschie, 1908; *nanggenica* Zheng et al., 1980; *osgoodi* Anthony, 1941; *sacraria* Thomas, 1923; *sikimaria* Thomas, 1922; *syrinx* Thomas, 1911; *xunhuaensis* Shou and Feng, 1984; *zappeyi* Thomas, 1922.
- COMMENTS: Formerly included *cansus*, *forresti*, and *nubrica*; see comments therein. The taxon *aliensis*, originally described as a subspecies of *thibetana*, is now considered a synonym of *nubrica* (Feng et al., 1986; A. T. Smith et al., 1990). *O. osgoodi*, described as a distinct species by Anthony (1941), was listed as a subspecies of *O. pusilla* by Ellerman and Morrison-Scott (1951), and subsequently allocated to *thibetana* by Corbet (1978c) and Weston (1982). The isolated subspecies *sikimaria* was assigned to *cansus* by Feng and Kao (1974) and Feng and Zheng (1985), but transferred to *thibetana* by A. T. Smith et al. (1990). Erbaeva (1988:190-191) considered *cansus* and *sikimaria* subspecies of *thibetana*, as well as *lhasaensis*, here placed in *nubrica*;

however, she thought *hodgsoni* was probably a distinct species (based on examination of a skull photograph).

*Ochotona thomasi* Argyropulo, 1948. Trudy Zool. Inst. Leningrad, 7:127.

TYPE LOCALITY: "Valley of Alyk-nor." Restricted by Formosov (in A. T. Smith et al., 1990) to Alang-nor Lake, NE Qinghai, China (35°35'N, 97°25'E); see also Corbet (1978c).

DISTRIBUTION: NE Qinghai, Gansu, and Sichuan (China).

STATUS: IUCN - Indeterminate. Apparently rare and scattered in distribution.

SYNONYMS: *ciliana* Bannikov, 1940.

COMMENTS: Widely sympatric with the similar *O. cansus*.

*Prolagus* Pomel, 1853. Cat. Meth. Desc. Vert. Foss. dans le Bassin Hydro. Super. de la Loire et Surt. la Val. Aff. Prin., l'Allier. Paris. p. 43.

TYPE SPECIES: *Anoema oeningensis* König, 1825 (fossil).

SYNONYMS: *Anoema* König, 1825; *Archaeomys* Fraas, 1856; *Lagomys* G. Cuvier, 1800; *Myolagus* Hensel, 1856.

COMMENTS: Elevated by Erbaeva (1988) to family Prolagidae. Reviewed by Tobien (1975).

*Prolagus sardus* (Wagner, 1832). Abh. Bayer. Akad. Wiss., 1:763-767.

TYPE LOCALITY: Italy, Sardinia.

DISTRIBUTION: Mediterranean Isls of Corsica (France) and Sardinia (Italy); adjacent small islands.

STATUS: IUCN - Extinct.

SYNONYMS: Monotypic.

COMMENTS: Described from fossils, but apparently survived until historic times (Vigne, 1983) perhaps as late as 1774 (Kurten, 1968). Reviewed by Dawson (1969).

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

SYNONYMS: Leporinorum Fischer, 1817.

COMMENTS: Often divided into subfamilies Paleolaginae (*Pentalagus*, *Pronolagus*, *Romerolagus*) and Leporinae (remaining genera) (Dice, 1929; Simpson, 1945), but no subfamilies were recognized by Ellerman and Morrison-Scott (1951). For basis of genera recognized here, see Corbet (1983).

*Brachylagus* Miller, 1900. Proc. Biol. Soc. Washington, 13:157.

TYPE SPECIES: *Lepus idahoensis* Merriam, 1891.

*Brachylagus idahoensis* (Merriam, 1891). N. Am. Fauna, 5:76.

TYPE LOCALITY: "Pahsimeroi Valley [near Goldburg, Custer County], Idaho." [USA].

DISTRIBUTION: SW Oregon to EC California, SW Utah, N to SW Montana (USA). Isolated population in WC Washington (USA).

STATUS: The status of the isolated Washington population is uncertain. Varies from secure to IUCN - Vulnerable depending upon population (Chapman et al., 1990).

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *Sylvilagus*; but see Corbet (1983). Placed in the monotypic genus *Brachylagus* by Dawson (1967) and, together with *bachmani*, in the genus *Microlagus* by Gureev (1964:170-173); but also see Hall (1981:294), who recognized *Brachylagus* as a subgenus. This species is widely sympatric with *Sylvilagus nuttallii*, and perhaps overlaps narrowly with *S. audubonii*. It has been interpreted as either a primitive rabbit (Hibbard, 1963), or as derived from *Sylvilagus* (Corbet, 1983). Reviewed by Green and Flinders (1980, Mammalian Species, 125).

*Bunolagus* Thomas, 1929. Proc. Zool. Soc. Lond., 1929:109.

TYPE SPECIES: *Lepus monticularis* Thomas, 1903.

*Bunolagus monticularis* (Thomas, 1903). Ann. Mag. Nat. Hist., ser. 7, 11:78.

TYPE LOCALITY: "Deelfontein, Cape Colony," South Africa.

DISTRIBUTION: C Karoo (31°22'S, 22°E), Cape Prov. (South Africa).

STATUS: IUCN - Endangered. Now survives only in "dense, discontinuous karoid vegetation in the districts of Victoria West, Beaufort West and Frazerburg" (86km<sup>2</sup>) (Duthie and Robinson, 1990).

SYNONYMS: Monotypic.

COMMENTS: Reviewed by Petter (1972b). Formerly in *Lepus* (Ellerman and Morrison-Scott, 1951), but returned to *Bunolagus* by Angermann (1966). Karyological evidence supports the separation of *Bunolagus* (2n=44) from *Lepus* (2n=48) (Robinson and Skinner, 1983; Robinson and Dippenaar, 1987); its closest relatives are probably *Pronolagus* (Corbet, 1983).

*Caprolagus* Blyth, 1845. J. Asiat. Soc. Bengal, 14:247.

TYPE SPECIES: *Lepus hispidus* Pearson, 1839.

*Caprolagus hispidus* (Pearson, 1839). In M'Clelland, Proc. Zool. Soc. Lond., 1838:152 [1839].

TYPE LOCALITY: "...Assam, ...base of the Boutan [Bhutan] mountains" [India].

DISTRIBUTION: S Himalaya foothills from Uttar Pradesh (India) through Nepal and West Bengal to Assam (India), and south through NW Bangladesh. Since 1951, there have been very few reports from Uttar Pradesh and Assam, see Santapau and Humayun (1960), Mallinson (1971), and Ghose (1978). Presently known distribution summarized by Bell et al. (1990).

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

SYNONYMS: Monotypic.

COMMENTS: Subgenus *Caprolagus* (see Gureev, 1964).

*Lepus* Linnaeus, 1758. Syst. Nat., 10th ed., 1:57.

TYPE SPECIES: *Lepus timidus* Linnaeus, 1758.

SYNONYMS: *Allolagus* Ognev, 1929; *Boreolagus*; Barrett-Hamilton, 1911; *Chionobates* Kaup, 1829; *Eulagos* Gray, 1867; *Eulepus* Acloque, 1899; *Indolagus* Gureev, 1953; *Lagos* Palmer, 1904; *Macrotolagus*, Mearns, 1895; *Poecilolagus* Lyon, 1904; *Proeulagus* Gureev, 1964; *Tarimolagus* Gureev, 1947.

COMMENTS: Formerly included *Bunolagus*; see Petter (1972b); and originally all other genera except *Pentalagus*. The taxonomy of this genus remains controversial. *L. crawshayi* (including *whytei*), *peguensis*, *ruficaudatus*, and *siamensis* have been variously treated as separate species or have been included in *nigricollis*. *L. europaeus*, *corsicanus*, *granatensis*, *tolai*, and *tibetanus* have been placed in *capensis* or treated as distinct species; see comments therein.

*Lepus alleni* Mearns, 1890. Bull. Am. Mus. Nat. Hist., 2:294.

TYPE LOCALITY: "Rillito Station [Pima Co.] Arizona" [USA].

DISTRIBUTION: SC Arizona (USA) to N Nayarit and Tiburon Isl (Mexico).

STATUS: Populations appear stable in Arizona, but in Mexico require investigation (Flux and Angermann, 1990).

SYNONYMS: *palitans* Bangs, 1900; *tiburonensis* Townsend, 1912.

COMMENTS: Placed in *Caprolagus* (*Macrotolagus*) by Gureev (1964:155). Probably related to *callotis*, but recognized as a distinct species by Hall (1981:331).

*Lepus americanus* Erxleben, 1777. Syst. Regni Anim., 1:330.

TYPE LOCALITY: "in America boreali, ad fretum Hudsonis copiosissimus." Restricted by Nelson (1909:87) to Fort Severn, Ontario, Canada.

DISTRIBUTION: S and C Alaska (USA) to S and C coasts of Hudson Bay to Newfoundland and Anacosti Isl (introduced) (Canada), south to S Appalachians, S Michigan, North Dakota, NC New Mexico, SC Utah, and EC California (USA).

STATUS: Although population densities fluctuate greatly, status secure nearly everywhere (Keith and Windberg, 1978; Sinclair et al., 1988).

SYNONYMS: *bairdii* Hayden, 1869; *bishopi* J. Allen, 1899; *borealis* Schinz, 1845; *cascadensis* Nelson, 1907; *columbiensis* Rhoads, 1895; *dalli* Merriam, 1900; *hudsonius* Pallas, 1778; *klamathensis* Merriam, 1899; *macfarlani* Merriam, 1900; *nanus* Schreber, 1790; *niediecki* Matschie, 1907; *oregonus* Orr, 1934; *pallidus* Cowan, 1938; *phaeonotus* J. Allen, 1899; *pinetus* Dalquest, 1942; *saliens*, Osgood, 1900; *seclusus* Baker and Hankins, 1950; *struthopus* Bangs, 1898; *tahoensis* Orr, 1933; *virginianus* Harlan, 1825; *wardi* Schinz, 1825; *washingtoni* Baird, 1855.



COMMENTS: Distinctive small species, but subgeneric separation (*Poecilolagus* Lyon, 1904) not supported; see Hall (1981:314); but see also Gureev (1964:188).

*Lepus arcticus* Ross, 1819. Voy. Discovery, II; ed. 2, App. IV, p. 170.

TYPE LOCALITY: "Southeast of Cape Bowen" (Nelson, 1909:61) [Possession Bay, Bylot Island, lat. 73°37'N, Canada].

DISTRIBUTION: Greenland and Canadian arctic islands southward in open tundra to WC shore of Hudson Bay, thence northwestward to the west of Fort Anderson on coast of Arctic Ocean. Isolated populations in tundra of N Quebec and Labrador, and on Newfoundland (Canada).

STATUS: Does not appear to be at risk presently (Flux and Angermann, 1990).

SYNONYMS: *andersoni* Nelson, 1934; *bangsii* Rhoads, 1896; *banksicola* Manning and Macpherson, 1958; *canus* Preble, 1902; *glacialis* Leach, 1819; *groenlandicus* Rhoads, 1896; *hubbardi* Handley, 1952; *hyperboreus* Pedersen, 1930; *labradorius* Miller, 1899; *monstrabilis* Nelson, 1934; *persimilis* Nelson, 1934; *porsildi* Nelson, 1934.

COMMENTS: Formerly included in *timidus* by Gureev (1964), Angermann (1967), Honacki et al. (1982), and Dixon et al. (1983), but considered distinct by Corbet (1978c), Hall (1981), A. J. Baker et al. (1983), and Flux and Angermann (1990). Angermann (in litt., 1992) considered it "probably conspecific" with *timidus*.

*Lepus brachyurus* Temminck, 1845. In Siebold, Fauna Japonica, 1(Mamm.), p. 44, pl. 11.

TYPE LOCALITY: "...tout l'Empire mais surtout dans l'île de Jezo", Nagasaki, Kyushu, Japan.

DISTRIBUTION: Honshu, Shikoku, Kyushu, Oki Isls and Sado Isl (Japan).

STATUS: No indication of decline at present (Flux and Angermann, 1990).

SYNONYMS: *angustidens* Hollister, 1912; *etigo* Abe, 1918; *lyoni* Kishida, 1937; *okiensis* Thomas, 1906.

COMMENTS: Reviewed by Imaizumi (1970b). Gureev (1964:150) and Gromov and Baranova (1981:63) placed this species in *Caprolagus* (*Allolagus*); see also comment under *mandshuricus*.

*Lepus californicus* Gray, 1837. Mag. Nat. Hist. [Charlesworth's], 1:586.

TYPE LOCALITY: "St. Antoine" [probably near Mission of San Antonio, California, USA]. Discussed by Hall (1981:326).

DISTRIBUTION: Hidalgo and S Queretaro to N Sonora and Baja California (Mexico), north to SW Oregon and C Washington, S Idaho, E Colorado, S South Dakota, W Missouri, and NW Arkansas (USA). Apparently isolated population in SW Montana.

STATUS: Secure; range is expanding at expense of *L. callotis* and *L. townsendi* (Flux and Angermann, 1990).

SYNONYMS: *altamirae* Nelson, 1904; *asellus* Miller, 1899; *bennettii* Gray, 1843; *curti* Hall, 1951; *depressus* Hall and Witlow, 1932; *deserticola* Mearns, 1896; *eremicus* J. Allen, 1894; *festinus* Nelson, 1904; *griseus* Mearns, 1896; *magdalenae* Nelson, 1907; *martirensis* Stowell, 1895; *melanotis* Mearns, 1890; *merriami* Mearns, 1896; *micropus* J. Allen, 1903; *richardsonii* Bachman, 1839; *sheldoni* Burt, 1933; *texianus* Waterhouse, 1848; *tularensis* Merriam, 1904; *vigilax* Dice, 1926; *wallawalla* Merriam, 1904; *xanti* Thomas, 1898.

COMMENTS: Subgenus *Proeulagus* (Gureev, 1964:193).

*Lepus callotis* Wagler, 1830. Naturliches Syst. Amphibien, p. 23.

TYPE LOCALITY: "Mexico"; restricted by Nelson (1909:122) to southern end of Mexican Tableland.

DISTRIBUTION: C Oaxaca (Mexico) north discontinuously to SW New Mexico (USA).

STATUS: Appears to be relatively rare; classified as "endangered" in U.S. (Flux and Angermann, 1990).

SYNONYMS: *battyi* J. Allen, 1903; *gaillardi* Mearns, 1896; *mexicanus* Lichtenstein, 1830; *nigricaudatus* Bennett, 1833.

COMMENTS: Subgenus *Proeulagus* (Gureev, 1964:192). Includes *gaillardi* and *mexicanus*; see Anderson and Gaunt (1962) and Hall (1981:328-330); but see also Gureev (1964:192, 195). Range allopatric to *L. alleni*, to which it is probably related.

*Lepus capensis* Linnaeus, 1758. Sys. Nat., 10th ed., 1:58.

TYPE LOCALITY: "ad Cap. b. Spei" [South Africa, Cape of Good Hope].

**DISTRIBUTION:** Africa in two separate, non-forested areas: South Africa, Namibia, Botswana, Zimbabwe, S Angola, S Zambia (?), Mozambique; and to the north, Tanzania, Kenya, Somalia, Ethiopia, countries of the Sahel and Sahara, and N Africa; thence eastward through the Sinai to the Arabian Peninsula, Jordan, S Syria, S Israel and W and S Iraq, west of the Euphrates River.

**STATUS:** Populations have declined locally due to habitat alteration, but most are not threatened so far as is known (Flux and Angermann, 1990).

**SYNONYMS:** *abbotti* Hollister, 1918; *abyssinicus* Lefebvre, 1850; *aegyptius* Desmarest, 1822; *aethiopicus* Hemprich and Ehrenberg, 1832; *aquilo* Thomas and Wroughton, 1907; *arabicus* Ehrenberg, 1833; *arenarius* L. Geoffroy, 1826; *atallahi* Harrison, 1972; *atlanticus* de Winton, 1898; *barcaeus* Ghigi, 1920; *bedfordi* Roberts, 1932; *berberanus* Heuglin, 1861; *carpi* Lundholm, 1955; *centralis* Thomas, 1903; *cheesmani* Thomas, 1921; *crispii* Drake-Brockman, 1911; *dinderus* Setzer, 1956; *ermeloensis* Roberts, 1932; *granti* Thomas and Schwann, 1904; *habessinicus* Hemprich and Ehrenberg, 1832; *hartensis* Roberts, 1932; *harterti* Thomas, 1903; *hawkeri* Thomas, 1901; *innesi* de Winton, 1902; *isabellinus* Cretzschmar, 1826; *jeffreyi* Harrison, 1980; *kabylicus* de Winton, 1898; *kalaharicus* Dollman, 1910; *langi* Roberts, 1932; *major* Grill, 1860; *mandatus* Thomas, 1926; *maroccanus* Cabrera, 1907; *narranus* Thomas, 1926; *ochropoides* Roberts, 1929; *ochropus* Wagner, 1844; *omanensis* Thomas, 1894; *pallidior* Barrett-Hamilton, 1898; *pediaeus* Cabrera, 1923; *rothschildi* de Winton, 1902; *salai* Jentink, 1880; *schlumbergeri* Remy-St. Loup, 1894; *sefranus* Thomas, 1913; *senegalensis* (Rochebrune, 1883); *sherif* Cabrera, 1906; *sinaiticus* Ehrenberg, 1833; *somalensis* Heuglin, 1861; *tigrensis* Blanford, 1869; *tunetae* de Winton, 1898; *vernayi* Roberts, 1932; *whitakeri* Thomas, 1902.

**COMMENTS:** Subgenus *Proeulagus* (Gureev, 1964:202). Includes *arabicus*; formerly included *europaeus*, *corsicanus*, *granatensis*, and *tolai*; see Corbet (1978c:71), Angermann (1983:20), and Harrison and Bates (1991). Includes *habessinicus*, but see Azzaroli-Puccetti (1987a, b) who considered *habessinicus* as distinct. The enigmatic form *connori*, often placed in *capensis* (Corbet, 1978c; Harrison and Bates, 1991) is provisionally placed in *europaeus* on the basis of pelage characteristics; see Angermann (1983:19). Most Russian authors consider *tolai* (including *tibetanus*) a distinct species; see Gromov and Baranova (1981:65); but also see Pavlinov and Rossolimo (1987:229). Sludskii et al. (1980:58, 85) indicated an area of sympatry between *europaeus* and *tolai* in Kazakhstan. Sokolov and Orlov (1980:85) considered *tibetanus* a distinct species. Some Arabian forms may be specifically distinct (Flux and Angermann, 1990); Angermann (1983:19) noted pronounced "size" groups within *arabicus*. These are *arabicus* (largest, gray), *cheesmani* (with insular *atallahi*) (smaller, buffy), and *omanensis* (with insular *jeffreyi*) (smallest, gray).

*Lepus castroviejoi* Palacios, 1977. Doñana, Acta Vertebr., 1976, 3(2):205 [1977].

**TYPE LOCALITY:** "Puerto de la Ventana, San Emiliano (León [Province])" [= Puerto Ventana, Spain, 1500 m].

**DISTRIBUTION:** Cantabrian Mtns between Sierra de Ancares and Sierra de Peña Labra (N Spain).

**STATUS:** Although it has a very restricted range (25-40 km by 230 km), it is common in most places (Palacios, 1983).

**SYNONYMS:** Monotypic.

**COMMENTS:** Reviewed by Palacios (1983, 1989) and Bonhomme et al. (1986).

*Lepus comus* Allen, 1927. Am. Mus. Novit., No 284:9.

**TYPE LOCALITY:** "Teng-yueh [Tengueh], Yunnan Province, China, 5,500 feet altitude."

**DISTRIBUTION:** Yunnan, W Guizhou (China).

**STATUS:** Probably secure at present (Flux and Angermann, 1990).

**SYNONYMS:** *peni* Wang and Luo, 1985; *pygmaeus* Wang and Feng, 1985.

**COMMENTS:** Formerly included in *oiostolus*; see Corbet (1978c). Elevated to specific status by Cai and Feng (1982) and Wang et al. (1985), on the basis of morphological and ecological differences. May be allo- or parapatric with *oiostolus*. Possibly related to *nigricollis* (Flux and Angermann, 1990).

*Lepus coreanus* Thomas, 1892. Ann. Mag. Nat. Hist., ser. 6, 9:146.

**TYPE LOCALITY:** "Söul" [Seoul], Korea.

DISTRIBUTION: Korea; S Kirin, S Liaoning, E Heilungjiang (China).

STATUS: Secure at present (Flux and Angermann, 1990).

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *sinensis* (Corbet, 1978c) or in *brachyurus* (Kim and Kim, 1974); here considered distinct, following Flux and Angermann (1990) and Jones and Johnson (1965). Angermann (in litt., 1992) suggested that *coreanus* and *mandshuricus* are conspecific.

*Lepus corsicanus* de Winton, 1898. Ann. Mag. Nat. Hist., ser. 7, 1:155.

TYPE LOCALITY: "Bastia," [Corsica, Italy].

DISTRIBUTION: Italy from the Abruzzo Mtns southward; Sicily; introduced into Corsica no later than 16th Century (Vigne, 1988).

STATUS: Unknown, but probable reduction in numbers and range due to overhunting and introduction of *L. europaeus* (Palacios et al., 1989).

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *capensis* or *europaeus*; see Ellerman and Morrison-Scott (1951) and Petter (1961); but see also Palacios et al. (1989) who provided evidence of their specific distinctness.

*Lepus europaeus* Pallas, 1778. Nova Spec. Quad. Glir. Ord., p. 30.

TYPE LOCALITY: Not stated; restricted by Trouessart (1910), to Poland (see discussion in Ognev, 1940:140, which further restricts it to SW Poland).

DISTRIBUTION: Open woodland, steppe and subdesert: from S Sweden and Finland to Britain, throughout Europe (not Iberian Penin. south of Cantabria and the Ebro R, or south of Siena in Italy), to W Siberian lowlands; south to N Israel, N Syria, N Iraq, the Tigris-Euphrates valley and W Iran. SE border of range (Iran) from S Caspian Sea south to Persian Gulf (54°E); see Angerman (1983:19). Introduced to Ireland, SE Canada-NE USA, S South America, Australia, New Zealand and several islands, including Barbados, Réunion, and the Falklands.

STATUS: Most populations secure (Flux and Angermann, 1990).

SYNONYMS: *alba* Bechstein, 1801; *aquilonius* Blasius, 1842; *argenteogrisea* König-Warthaussen, 1875; *astaricus* Baloutch, 1978; *biarmicus* Heptner, 1948; *borealis* Kuznetsov, 1944; *campestris* Bogdanov, 1871; *campicola* Gervais, 1859; *caspicus* Hemprich and Ehrenberg, 1832; *caucasicus* Ognev, 1929; *cinereus* Fitzinger, 1867; *connori* Robinson, 1918; *coronatus* Fitzinger, 1867; *creticus* Barrett-Hamilton, 1903; *cyanotus* Blanchard, 1957; *cypricus* Barrett-Hamilton, 1903; *cyrensis* Satunin, 1905; *flavus* Bechstein, 1801; *ghigii* de Beaux, 1927; *hybridus* Desmarest, 1822; *hyemalis* Tumac, 1850; *judeae* Gray, 1867; *kalmikororum* Ognev, 1929; *karpatorum* Hilzheimer, 1906; *laskerewi* (?) Khomenko, 1916; *maculatus* Fitzinger, 1867; *medius* Nilsson, 1820; *meridiei* Hilzheimer, 1906; *meridionalis* Gervais, 1859; *niethammeri* Wettstein, 1943; *niger* Bechstein, 1801; *nigricans* Fitzinger, 1867; *occidentalis* de Winton, 1898; *parnassius* Miller, 1903; *ponticus* Ognev, 1929; *pyrenaicus* Hilzheimer, 1906; *rhodius* Festa, 1914; *rufus*, Fitzinger, 1867; *syriacus* Hemprich and Ehrenberg, 1832; *tesquorum* Ognev and Worobiev, 1923; *transsylvanicus* Matschie, 1901; *transsylvaticus* Hilzheimer, 1906; *tumac* Tichomirov and Kortchagin, 1889.

COMMENTS: Subgenus *Eulagos* (Gureev, 1964:205; Gromov and Baranova, 1981). This species was earlier placed in *capensis* by Petter (1961) based on what was interpreted as a cline in morphological characters (mainly size) from NE Africa eastward across the N Arabian peninsula and the Middle East, and northward through Israel to Turkey. Sympatry between large "*europaeus*" and small "*capensis*" (= *tolai*) in Kazakhstan, without evidence of hybridization (Sludskii et al., 1980) was interpreted as overlapping ends of a Rassenkreis. Angermann's (1983) reanalysis indicated a marked discontinuity between smaller *capensis* (incl. *arabicus*) and larger *europaeus* running from the E Mediterranean coast (C Israel) through Iran, and on this basis we separate *europaeus* from *capensis* and *tolai*. East of the border of the range of *europaeus* in Iran, *tolai* occurs, apparently in allo- or parapatry with *europaeus*. Insular populations in the E Mediterranean are assigned to this species (Ellerman and Morrison-Scott, 1951).

*Lepus fagani* Thomas, 1903. Proc. Zool. Soc. Lond., 1902(2):315 [1903].

TYPE LOCALITY: "Zegi, Lake Tsana [Tana, Ethiopia] 4000 feet."

DISTRIBUTION: N and W Ethiopia, and adjacent SE Sudan, south to extreme NW Kenya.  
STATUS: Unknown.

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *victoriae* (as *crawshayi*) by Gureev (1964:204); Azzaroli-Puccetti (1987a, b) maintained its specific identity. Its known distribution is largely allo- or parapatric to that of *victoriae*; may be a highland allospecies (Flux and Angermann, 1990). Angermann (in litt., 1992) considered *fagani* conspecific with *victoriae*.

*Lepus flavigularis* Wagner, 1844. In Schreber, Die Säugethiere ..., Suppl. 4:106.

TYPE LOCALITY: "Mexico" Restricted by Elliot (1905:543) to San Mateo del Mar, Tehuantepec [City, Oaxaca, Mexico].

DISTRIBUTION: Coastal plains and bordering foothills on south end of Isthmus of Tehuantepec (Oaxaca, Mexico), along Pacific coast to Chiapas (Mexico); now restricted to small area between Salina Cruz, Oaxaca, and extreme W Chiapas.

STATUS: IUCN - Endangered, by habitat destruction and overhunting.

COMMENTS: Subgenus *Proeulagus* (Gureev, 1964:193). Closely related to *callotis*, with which it has an isolated allopatric distribution; see Anderson and Gaunt (1962); also see Hall (1981:330).

*Lepus granatensis* Rosenhauer, 1856. Die Thiere Andalusiens, 3.

TYPE LOCALITY: "bei Granada" [Granada, Analusia Prov., Spain].

DISTRIBUTION: Iberian Peninsula, except NE and NC parts (Spain, Portugal); Mallorca (Balearic Isl, Spain).

STATUS: Generally common, but scarce or extinct in a few places.

SYNONYMS: *gallaecius* Miller, 1907; *hispanicus* Fitzinger, 1867; *iturissius*, Miller, 1907; *lilfordi* de Winton, 1898; *mediterraneus* Wagner, 1841; *meridionalis* Graells, 1897; *solisi* Palacios and Fernández, 1992; *typicus* Hilzheimer, 1906.

COMMENTS: Formerly included in *europaeus* or *capensis*; but see Palacios (1983, 1989), and Bonhomme et al. (1986). The Mallorcan population was probably introduced by humans (Palacios and Fernández, 1992). The population in Sardinia, to which the names *mediterraneus* Machado, 1869 (not *mediterraneus* Wagner, 1841) and *typicus* Hilzheimer, 1906, have been applied, is assigned to this species, but its status needs investigation, as do populations from the NW African coast that have been assigned to *capensis* (Angermann, in litt., 1992).

*Lepus hainanus* Swinhoe, 1870. Proc. Zool. Soc. Lond., 1870:233.

TYPE LOCALITY: Hainan Island, "in the neighbourhood of the capital city" [Hainan Province, China].

DISTRIBUTION: Lowlands of Hainan Island.

STATUS: Numbers reduced to extremely low levels by habitat alteration and overhunting, but no official status as yet conferred.

SYNONYMS: Monotypic.

COMMENTS: Placed in *Caprolagus* (*Indolagus*) by Gureev (1964:146). Considered a subspecies of *pequensis* by Ellerman and Morrison-Scott (1951); Flux and Angermann (1990) recommended provisional specific status, as did Gureev (1964). Closely related to *nigricollis* (Angermann, in litt., 1992).

*Lepus insularis* W. Bryant, 1891. Proc. California Acad. Sci., ser. 2, 3:92.

TYPE LOCALITY: "Espiritu Santo Island, [near La Paz], Gulf of California [Baja California del Sur], Mexico."

DISTRIBUTION: Restricted to the type locality.

STATUS: IUCN - Rare. Occupies very small insular range, but population is stable, and seems in no danger (Chapman et al., 1983).

SYNONYMS: *edwardsi* Saint-Loup, 1895.

COMMENTS: Subgenus *Proeulagus* (Gureev, 1964:195). Insular melanic allospecies, related to *californicus*; see Hall (1981:328) and Dixon et al. (1983).

*Lepus mandshuricus* Radde, 1861. Melanges Biol. Acad. St. Petersburg, 3:684.

TYPE LOCALITY: "Im Chy(Gebirge)" Bureya Mtns [Khabarovsk Krai, Russia].

DISTRIBUTION: Ussuri region (Russia); NE China; extreme NE Korea.

STATUS: Undetermined.

SYNONYMS: *melainus* Li and Luo, 1979; *melanonotus* Ognev, 1922.

COMMENTS: Distinct from *brachyurus*; see Angermann (1966, 1983); but placed in *Caprolagus* (*Allolagus*) *brachyurus* by Gureev (1964:150); followed by Gromov and Baranova (1981:63). Melanic individuals known since at least the time of Sowerby (1923) have recently been given the specific designation *melainus* (Li and Luo, 1979). The range of this taxon is entirely within that of *mandshuricus*, and I provisionally retain them in that species, although Flux and Angermann (1990) recognized *melainus*. *L. mandshuricus* and *L. coreanus* are parapatric in distribution in NE Korea/SE Heilungjiang, but are described as occupying different habitats; the former, mixed forest in hilly country, the latter, both forest and cultivated land, primarily in the plains (Flux and Angermann, 1990). Moreover, *mandshuricus* is sympatric with another forest species, *timidus*, and with the plains species, *tolai*; as forest is cleared, *tolai* tends to replace *mandshuricus* (Flux and Angermann, 1990). *L. mandshuricus*, *L. timidus* and *L. tolai* all occur in the area occupied by the taxon *melainus*; four species of sympatric hares, three of them forest-dwellers, is unprecedented in hare ecology, and supports the view that *melainus* is not a distinct species.

*Lepus nigricollis* F. Cuvier, 1823. Dict. Sci. Nat., 26:307.

TYPE LOCALITY: "Malabar" [Madras, India].

DISTRIBUTION: Pakistan; India; Bangladesh, except Sunderbands; Sri Lanka; introduced into Java (?) and Mauritius, Gunnera Quoin, Anskya, Réunion and Cousin Isls in the Indian Ocean. Considered native to Java by McNeely (1981:931).

STATUS: Mainland (and Sri Lankan?) populations secure (Flux and Angermann, 1990). If *nigricollis* is native to Java (rather than an introduced population), its numbers are now very low there.

SYNONYMS: *aryabertensis* Hodgson, 1844; *cutchensis* Kloss, 1918; *dayanus* Blanford, 1874; *joongshaiensis* Murray, 1884; *macrotus* Hodgson, 1840; *mahadeva* Wroughton and Ryley, 1913; *rajput* Wroughton, 1917; *ruficaudatus* Geoffroy, 1826; *sadiya* Kloss, 1918; *simcoxi* Wroughton, 1912; *singhala* Wroughton, 1915; *tytleri* Tytler, 1854.

COMMENTS: Placed in *Caprolagus* (*Indolagus*) by Gureev (1964:139). Includes *ruficaudatus*; see Prater (1980) and Angermann (1983), but see Gureev (1964:142); *ruficaudatus* is closer to *capensis* according to Petter (1961), and *nigricollis* may include *whytei*, *crawshayi*, *pequensis* and *siamensis*; but also see comments under *pequensis* and *saxatilis*. Also includes *dayanus*, given specific status by Gureev (1964:139).

*Lepus oiostolus* Hodgson, 1840. J. Asiat. Soc. Bengal, 9:1186.

TYPE LOCALITY: "...the snowy region of the Himalaya, and perhaps also Tibet." Restricted by Kao and Feng (1964), to "Southern Tibet" [Xizang, China].

DISTRIBUTION: Tibetan Plateau, from Ladak to Sikkim (India) Nepal, and eastward through Xizang (Tibet) and Qinghai, Gansu and Sichuan (China).

STATUS: Probably secure, but may be affected by rodent control activity on Tibetan Plateau.

SYNONYMS: *grahami* Howell, 1928; *hypsibius* Blanford, 1875; *illuteus* Thomas, 1914; *kozlovi* Satunin, 1907; *oemodias* Gray, 1847; *pallipes* Hodgson, 1842; *przewalskii* Satunin, 1907; *qinghaiensis* Cai and Feng, 1982; *qusongensis* Cai and Feng, 1982; *sechuenensis* de Winton, 1899; *tsaidamensis* Hilzheimer, 1910.

COMMENTS: Placed in subgenus *Proeulagus* by Gureev (1964:196); *przewalskii* was assigned to *capensis* (= *tolai*) by Corbet (1978c), but is placed here following Cai and Feng (1982); Angermann (in litt., 1992) agreed with Corbet.

*Lepus othus* Merriam, 1900. Proc. Washington Acad. Sci., 2:28.

TYPE LOCALITY: "St. Michaels, [Norton Sound], Alaska." [USA].

DISTRIBUTION: W and SW Alaska (USA); formerly perhaps northwestward to Pt. Barrow; as here interpreted, also E Chukotsk (Russia).

STATUS: Rare, perhaps decreasing in range and numbers (Flux and Angermann, 1990).

SYNONYMS: *podromus* Merriam, 1900; *tschuktschorum* Nordquist, 1883.

COMMENTS: Formerly included in *arcticus* or *timidus* (see comments therein). Regarded as distinct by Hall (1981) and by Flux and Angermann (1990), who, however, followed A. J. Baker et al. (1983) in allying populations from E Chukotsk (Russia) with Alaskan populations; but see also Pavlinov and Rossolimo (1987). Angermann (in litt., 1992) considered *othus* as "probably conspecific" with *timidus*.

- Lepus pequensis* Blyth, 1855. J. Asiat. Soc. Bengal, 24:471.  
 TYPE LOCALITY: "Pegu" [Upper Pegu, Burma].  
 DISTRIBUTION: C, S Burma from Chindwin River valley east through Thailand; Cambodia; S Laos, S Vietnam; south in upper Malay Peninsula (Burma, Thailand) to 120°N.  
 STATUS: Does not seem threatened (Flux and Angermann, 1990).  
 SYNONYMS: *siamensis* Bonhote, 1902; *vassali* Thomas, 1906.  
 COMMENTS: Placed by Gureev (1964:144) in *Caprolagus* (*Indolagus*); he ranked *siamensis* as a distinct species; but see Lekagul and McNeely (1977:333) and Flux and Angermann (1990). Petter (1961) suggested that *pequensis* might be conspecific with *nigricollis* because of its close resemblance to *L. n. ruficaudatus*. However, *L. n. ruficaudatus* appears to be allopatric with respect to *pequensis* in E India-W Burma. Angermann (in litt., 1992) considered *pequensis* conspecific with *nigricollis*.
- Lepus saxatilis* F. Cuvier, 1823. Dict. Sci. Nat., 26:309.  
 TYPE LOCALITY: "il habite les contrées qui se trouvent à trois journées au nord du cap de Bonne-Espérance," [Cape of Good Hope, South Africa].  
 DISTRIBUTION: Cape Province (and Zululand north to C Natal?) (South Africa) and S Namibia.  
 STATUS: Appears common (Flux and Angermann, 1990), but this is uncertain (Angermann, in litt., 1992).  
 SYNONYMS: *albaniensis* Roberts, 1932; *aurantii* Thomas and Hinton, 1923; *bechuanae* Roberts, 1932; *chiversi* Roberts, 1929; *chobensis* Roberts, 1932; *damarensis* Roberts, 1926; *fumigatus* Wagner, 1844; *gungunyanae* Roberts, 1914; *khanensis* Roberts, 1946; *longicaudatus* Gray, 1837; *megalotis* Thomas and Schwann, 1905; *ngamiensis* Roberts, 1932; *nigrescens* Roberts, 1932; *orangensis* Kolbe, 1948; *rufinucha* A. Smith, 1829; *subrufus* Roberts, 1913; *timidus* A. Smith, 1826.  
 COMMENTS: Placed by Gureev (1964:203) in subgenus *Proeulagus*. Formerly included *crawshayi* and *whytei*, see Ansell (1978:67), Swanepoel et al. (1980:159), and Robinson and Dippenaar (1983b, 1987); but see also Petter (1961, 1972b). Angermann (1983) considered *whytei* a distinct species that includes *crawshayi*; Flux and Angermann (1990) placed both as subspecies of *victoriae*. Angermann (in litt., 1992) would restrict *saxatilis* to the following taxa: *albaniensis*, *aurantii*, *chiversi*, *fumigatus*, *longicaudatus*, *megalotis*, *rufinucha*, and *timidus*; transferring the remainder to *victoriae*.
- Lepus sinensis* Gray, 1832. Illustr. Indian Zool., 2, pl. 20.  
 TYPE LOCALITY: "China". Restricted to vicinity of Canton [Guangzhou, Guangdong Province, China].  
 DISTRIBUTION: SE China from Yangtse River southward; Taiwan; disjunct in NE Vietnam.  
 STATUS: Unknown, but probably affected by habitat modification.  
 SYNONYMS: *flaviventris* G. Allen, 1927; *formosus* Thomas, 1908; *yuenshanensis* Shih, 1930.  
 COMMENTS: Placed in *Caprolagus* (*Indolagus*) by Gureev (1964:143). Formerly included *coreanus*; see Corbet (1978c:73); here considered distinct, following Flux and Angermann (1990).
- Lepus starcki* Petter, 1963. Mammalia, 27:239.  
 TYPE LOCALITY: "Jeldu-Liban-Shoa, 2,740 mètres, 40 km W. d'Addis-Abeba," [Ethiopia].  
 DISTRIBUTION: C highlands of Ethiopia.  
 STATUS: Numerous within its restricted range (Flux and Angermann, 1990).  
 SYNONYMS: Monotypic.  
 COMMENTS: Formerly included in *capensis* (Petter, 1963a), or *europaeus* (Azzaroli-Puccetti 1987a, b); but see Angermann (1983) and Flux and Angermann (1990).
- Lepus timidus* Linnaeus, 1758. Syst. Nat., 10th ed., 1:57.  
 TYPE LOCALITY: "in Europa" [Uppsala, Sweden].  
 DISTRIBUTION: Palearctic from Scandinavia to E Siberia, except E Chukotsk (Russia), south to Sakhalin and Sikhote-Alin Mtns (Russia); Hokkaido (Japan); Heilungjiang, N Xinjiang (China); N Mongolia; Altai, N Tien Shan Mtns; N Ukraine, E Poland, and Baltics; isolated populations in the Alps, Scotland, Wales and Ireland. Introduced into England, Faeros and Scottish Isls.  
 STATUS: Populations fluctuate, but none apparently threatened, except perhaps in Alps (Flux and Angermann, 1990).

SYNONYMS: *abei* Kuroda, 1938; *ainu* Barrett-Hamilton, 1900; *albus* Leach, 1816; *algidus* Pallas, 1778; *alpinus* Erxleben, 1777; *altaicus* Barrett-Hamilton, 1900; *begitschevi* Koljushev, 1936; *borealis* Pallas, 1778; *breviauritus* Hilzheimer, 1906; *canescens* Nilsson, 1844; *collinus* Nilsson, 1831; *gichiganus* J. Allen, 1903; *hibernicus* Bell, 1837; *kamtschaticus* Dybowski, 1922; *kolymensis* Ognev, 1923; *kozhevnikovii* Ognev, 1929; *lugubris* Kastschenko, 1899; *lutescens* Barrett-Hamilton, 1900; *mordeni* Goodwin, 1933; *orii* Kuroda, 1928; *rubustus* Urita, 1935; *saghaliensis* Abe, 1931; *sclavonius* Blyth, 1842; *scoticus* Hilzheimer, 1906; *septentrionalis* Link, 1795; *sibiricorum* Johanssen, 1923; *sylvaticus* Nilsson, 1831; *transbaicalicus* Ognev, 1929; *typicus* Barrett-Hamilton, 1900; *variabilis* Pallas, 1778; *varronis* Miller, 1901.

COMMENTS: Subgenus *Lepus* (Gureev, 1964:180). Formerly included *arcticus* and *othus*; see Corbet (1978c:73); but also see comments under those species. A. J. Baker et al. (1983) found Scottish and Alpine populations morphologically distinct, as well as geographically isolated, from other populations, and Flux (1983) remarked that *L. t. scoticus* and *L. t. hibernicus* (from Scotland and Ireland, respectively), both introduced on the island of Mull (Hewson, 1991) still do not interbreed after 50 years.

*Lepus tolai* Pallas, 1778. Nova Spec. Quad. Glir. Ord., p. 17.

TYPE LOCALITY: "Caeterum in montibus aprecis campisque rupestribus vel arenosis circa Selengam..." Restricted by Ognev (1940:162) to "...valley of the Selenga River..." [Russia].

DISTRIBUTION: Steppes N of Caspian Sea southward along eastern shore of Caspian to E Iran; eastward through Afghanistan; Kazakhstan and S Siberia, Middle Asian republics to Mongolia; and W, C, and NE China.

STATUS: Populations in China (and perhaps elsewhere) have declined due to intensified agriculture and increased use of pesticides (Flux and Angermann, 1990).

SYNONYMS: *aralensis* Severtsov, 1861; *aurigineus* Hollister, 1912; *biddulphi* Blanford, 1877; *brevinasus* J. Allen, 1909; *buchariensis* Ognev, 1922; *butlerowi* Bogdanov, 1882; *centrasiaticus* Satunin, 1907; *cheybani* Baloutch, 1978; *cinnamomeus* H. Smith, 1940; *craspedotis* Blanford, 1875; *desertorum* Ognev and Heptner, 1928; *filchneri* Matschie, 1907; *gansuicus* Satunin, 1907; *gobicus* Satunin, 1907; *habibi* Baloutch, 1978; *huangshuiensis* Luo, 1982; *kaschgaricus* Satunin, 1907; *kessleri* Bogdanov, 1882; *lehmanni* Severtsov, 1873; *pamirensis* Günther, 1875; *petteri* Baloutch, 1978; *quercerus* Hollister, 1912; *sowerbyae* Hollister, 1912; *stegmanni* Matschie, 1907; *stoliczkanus* Blanford, 1875; *subluteus* Thomas, 1908; *swinhoei* Thomas, 1894; *tibetanus* Waterhouse, 1841; *turcomanus* Heptner, 1934; *zaisanicus* Satunin, 1907.

COMMENTS: Subgenus *Proeulagus* (Gureev, 1964:198). Formerly included in *capensis* or *europaeus*; see comments therein. Includes *tibetanus*; but see also Sokolov and Orlov (1980:85); Qui (1989) also provided evidence of differentiation of *tibetanus* but did not address specific status. Formerly included *przewalskii*, now assigned to *L. oiostolus*; see Cai and Feng (1982). "The situation in [southern] Iraq [and SW Iran] deserves a more detailed analysis (Angermann, 1983:19). *L. tolai petteri* occurs westward to about 55°-56°E, while *L. c. arabicus* occurs eastward to SE Iraq. Whether the two forms come into contact is not known, but their ranges may be separated by that of *L. europaeus astaricus* in SW Iran (and *L. e. connori*?); see Baloutch (1978) and Angermann (1983). Angermann (in litt., 1992) considered *tolai* conspecific with *capensis*. According to Ellerman and Morrison-Scott (1951:430) the type locality should be "Adinscholo Mountain, near Tchinden [Chinden = Chindant], on Borsja [Boriya] River, a tributary of the Onon River, Eastern Siberia." This locality is more than 700 km east of the Selenga River.

*Lepus townsendii* Bachman, 1839. J. Acad. Nat. Sci. Philadelphia, 8(1):90.

TYPE LOCALITY: "...on the Walla-walla...river"; restricted by Nelson (1909:78) to Fort Walla Walla, [near present town of Wallula, Walla Walla Co., Washington].

DISTRIBUTION: C Alberta and Saskatchewan east to extreme SW Ontario (Canada), south to SW Wisconsin, Iowa, NW Missouri, west through C Kansas to NC New Mexico, west to C Nevada, EC California (USA) and north to SC British Columbia (Canada).

STATUS: Has withdrawn from parts of its southeastern (Wisconsin, Iowa, Missouri, Kansas, S Nebraska) distribution, perhaps because of habitat alteration. Stable in remainder of range (Flux and Angermann, 1990).

SYNONYMS: *campanius* Hollister, 1915; *campestris* Bachman, 1837; *sierrae* Merriam, 1904.

COMMENTS: Placed (as *campestris*) in subgenus *Proeulagus* by Gureev (1964:190). Reviewed by Lim (1987, Mammalian Species, 288).

*Lepus victoriae* Thomas, 1893. Ann. Mag. Nat. Hist., ser. 6, 12:268.

TYPE LOCALITY: "Nassa, Speke Gulf, S. Victoria Nyanza" [Lake, Tanzania].

DISTRIBUTION: From Atlantic coast of NW Africa (Spanish Sahara, Mauritania, south to Guinea and Sierra Leone) eastward across Sahel to Sudan and extreme W Ethiopia; southward through E Africa (E Congo, W Kenya) to NE Namibia, Botswana, and Natal (South Africa). Small isolated population in W Algeria.

STATUS: Isolated population around Beni Abbés, Algeria, "deserve[s] attention" (Flux and Angermann, 1990).

SYNONYMS: *angolensis* Thomas, 1904; *ansorgei* Thomas and Wroughton, 1905; *canopus* Thomas and Hinton, 1921; *chadensis* Thomas and Wroughton, 1907; *cordeauxi* Drake-Brockman, 1911; *crawshayi* de Winton, 1899; *herero* Thomas, 1926; *kakumegae* Heller, 1912; *meridionalis* Monard, 1933; *mickleimi* Chubb, 1908; *microtis* Heuglin, 1865; *raineyi* Heller, 1912; *whytei* Thomas, 1894; *zairensis* Hatt, 1935; *zechi* Matschie, 1899; *zuluensis* Thomas and Schwann, 1905.

COMMENTS: Placed (as *crawshayi*) in subgenus *Proeulagus* by Gureev (1964:204), who recognized both *crawshayi* and *whytei* as distinct species, as did Azzaroli-Puccetti (1987a). Formerly included in *saxatilis*; see comments under that species. Angermann and Feiler (1988) demonstrated that the oldest available name for this species is *victoriae*. It is widely sympatric with *capensis*, but allo- to parapatric with *saxatilis*, which is also sympatric with *capensis*.

*Lepus yarkandensis* Günther, 1875. Ann. Mag. Nat. Hist., ser. 4, 16:229.

TYPE LOCALITY: "neighbourhood of Yarkand" [15 mi E, Xinjiang, China].

DISTRIBUTION: Steppes of Tarim Basin, S Xinjiang (China), around edge of Takla Makan desert.

STATUS: Presently secure (Flux and Angermann, 1990).

SYNONYMS: Monotypic.

COMMENTS: Placed in subgenus *Tarimolagus* by Gureev (1964:147); but see Xu (1986). Reviewed by Angermann (1967) and Gao (1983).

*Nesolagus* Forsyth-Major, 1899. Trans. Linn. Soc. London, 7:493.

TYPE SPECIES: *Lepus netscheri* Schlegel, 1880.

*Nesolagus netscheri* (Schlegel, 1880). Notes Leyden Mus., II:59.

TYPE LOCALITY: "Sumatra: Padang-Padjang...about 2000 feet" [Padangpanjang, Sumatera Barat, Indonesia].

DISTRIBUTION: Sumatra [Indonesia].

STATUS: IUCN - Indeterminate. "...apparently the rarest lagomorph. About a dozen museum specimens exist, collected between 1880 and 1916, and there has been only one confirmed sighting since then, in 1972." (Flux, 1990).

SYNONYMS: Monotypic.

*Oryctolagus* Lilljeborg, 1873. Sverig. Og Norges Ryggradsdjur, 1:417.

TYPE SPECIES: *Lepus cuniculus* Linnaeus, 1758.

SYNONYMS: *Cuniculus* Meyer, 1790.

*Oryctolagus cuniculus* (Linnaeus, 1758). Syst. Nat., 10th ed., 1:58.

TYPE LOCALITY: "in Europa australis" [= Germany].

DISTRIBUTION: W and S Europe through the Mediterranean region to Morocco and N Algeria; original range probably limited to Iberia and perhaps NW Africa; introduced on all continents except Antarctica and Asia; see Gibb (1990). Worldwide as domesticated forms.

STATUS: The form *huxleyi* of the Atlantic and Mediterranean isls "may be endangered" (Gibb, 1990).

SYNONYMS: *algius* (Loche, 1858); *borkumensis* Harrison, 1952; *brachyotus* Trouessart, 1917; *campestris* (Meyer, 1790); *cnossius* Bate, 1906; *fodiens* Gray, 1867; *habentensis* Cabrera, 1923; *huxleyi* Haeckel, 1874; *kreyenbergi* Honigmann, 1913; *nigripes* Bartlett, 1857; *oreas* Cabrera, 1922; *vermicula* Gray, 1843; *vernicularis* Thompson, 1837.

COMMENTS: The specific name is probably based on a feral specimen (Gibb, 1990).



*Pentalagus* Lyon, 1904. *Smithson. Misc. Coll.*, 45:428.

TYPE SPECIES: *Caprolagus furnessi* Stone, 1900.

*Pentalagus furnessi* (Stone, 1900). *Proc. Acad. Nat. Sci. Philadelphia*, 52:460.

TYPE LOCALITY: "Liu Kiu Islands" [Amami-Oshima, Ryukyu Isls, Japan].

DISTRIBUTION: Amami Isls (Amami-Oshima and Tokuno-shima) (S Japan).

STATUS: U.S. ESA and IUCN - Endangered. Total population estimated at around 4,000 (Sugimura, 1990).

*Poelagus* St. Leger, 1932. *Proc. Zool. Soc. Lond.*, 1932(1):119.

TYPE SPECIES: *Lepus marjorita* St. Leger, 1929.

COMMENTS: Originally spelled *Poëlagus*, but this is a diaeresis and not an umlaut and thus the correct spelling is *Poelagus* (see art. 32d of the Code of Nomenclature, International Commission on Zoological Nomenclature, 1985). Formerly placed as subgenus of *Pronolagus*; see Ellerman and Morrison-Scott (1951:425); but see also Petter (1972b:5). Formerly placed as subgenus of *Caprolagus*; see Gureev (1964:152).

*Poelagus marjorita* (St. Leger, 1929). *Ann. Mag. Nat. Hist.*, ser. 10, 4:292.

TYPE LOCALITY: "Near Masindi, Bunyoro [Bunyuru] Uganda, 4000 ft.", Africa.

DISTRIBUTION: S Sudan, Uganda, Ruanda, Burundi, NE Zaire, Central African Republic, S Chad, disjunct population in Angola.

STATUS: "...not under threat" (Duthie and Robinson, 1990).

SYNONYMS: *larkeni* St. Leger, 1935; *oweni* Setzer, 1956.

COMMENTS: This savanna-woodland species, like *Pronolagus*, is associated with rocky outcrops.

*Pronolagus* Lyon, 1904. *Smithson. Misc. Coll.*, 45:416.

TYPE SPECIES: *Lepus crassicaudatus* I. Geoffroy, 1832.

COMMENTS: From one (Peddie, 1975) to six (Roberts, 1951) species have been recognized in this genus (Robinson, 1982). Three species are now generally recognized (Duthie and Robinson, 1990).

*Pronolagus crassicaudatus* (I. Geoffroy, 1832). *Mag. Zool. Paris*, 2:cl. 1, pl. 9 and text.

TYPE LOCALITY: "Port Natal" [Durban, Natal, South Africa].

DISTRIBUTION: SE South Africa; extreme S Mozambique.

STATUS: Secure (Duthie and Robinson, 1990).

SYNONYMS: *bowkeri* Hewitt, 1927; *kariogae* Hewitt, 1927; *lebombo* Roberts, 1936; *ruddi* Thomas and Schwann, 1905.

COMMENTS: Formerly included *randensis*, see Lundholm (1955a). The relationship of *crassicaudatus* and *randensis* is unclear, see Petter (1972b:6). Distribution allopatric to that of *randensis*, but sympatric in western half of range with *rupestris*.

*Pronolagus randensis* Jameson, 1907. *Ann. Mag. Nat. Hist.*, ser. 7, 20:404.

TYPE LOCALITY: "Observatory Kopje...Johannesburg...Witwatersrand Range, Transvaal... 5,900 ft." [1,798 m] [South Africa].

DISTRIBUTION: Two disjunct areas: NE South Africa; E Botswana to extreme W Mozambique, Zimbabwe; and W Namibia, perhaps SW Angola.

STATUS: Secure.

SYNONYMS: *capricornis* Roberts, 1926; *caucinus* Thomas, 1929; *ekmani* Lundholm, 1955;

*kaokoensis* Roberts, 1946; *kobosensis* Roberts, 1938; *makapani* Roberts, 1924; *powelli*

Roberts, 1924; *waterbergensis* Hoesch and Von Lehmann, 1956; *whitei* Roberts, 1938.

COMMENTS: Formerly included in *crassicaudatus* by Lundholm (1955a); but see Petter (1972b:6). The systematic position of the two widely disjunct populations needs clarification (Duthie and Robinson, 1990).

*Pronolagus rupestris* (A. Smith, 1834). *S. Afr. Quart. J.*, 2:174.

TYPE LOCALITY: "South Africa, rocky situations" [probably Van Rhynsdorp District, Cape Province, South Africa].

DISTRIBUTION: Two disjunct areas: S and C South Africa, S Namibia; and E Africa, from N Malawi and E Zambia north through C Tanzania to SW Kenya.

STATUS: Secure.

SYNONYMS: *australis* Roberts, 1933; *barretti* Roberts, 1949; *curryi* (Thomas, 1902); *fitsimonsi* Roberts, 1938; *melanurus* (Rüppell, 1842); *mülleri* Roberts, 1938; *nyikae* (Thomas, 1902); *saundersiae* (Hewitt, 1927); *vallicola* Kershaw, 1924.

COMMENTS: Formerly included in *crassicaudatus*, see Gureev (1964:174) and Peddie (1975); see also Robinson and Dippenaar (1983a). The systematic relationships of the two widely disjunct populations should be examined (Duthie and Roberts, 1990).

*Romerolagus Merriam*, 1896. Proc. Biol. Soc. Washington, 10:173.

TYPE SPECIES: *Lepus diazi* Ferrari-Peréz, 1893.

SYNONYMS: *Lagomys* Herrera, 1897 (not *Lagomys* Cuvier, 1800).

COMMENTS: Whether this monotypic genus represents "the most primitive of the living rabbits and hares" (Fa and Bell, 1990), or is closer to the more specialized leporids (*Sylvilagus*, *Oryctolagus*, *Lepus*) (Corbet, 1983), or is intermediate (Hibbard, 1963), remains controversial.

*Romerolagus diazi* (Ferrari-Pérez, 1893). In Diaz, Cat. Comision Geogr.-Expl. República Mexicana, Exposicion Intern, Columbia de Chicago, pl. 42.

TYPE LOCALITY: "near San Martín Texmelusán, northeastern slope of Volcán Iztaccíhuatl [Iztaccíhuatl, Puebla], Mexico."

DISTRIBUTION: Distrito Federal, Mexico, and W Puebla (Mexico), in three discontinuous areas on the slopes of Volcán Pelado, Tlaloc, Popocatepetl, and Iztaccíhuatl.

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

SYNONYMS: *nelsoni* Merriam, 1896.

COMMENTS: Reviewed by Cervantes et al. (1990, Mammalian Species, 360).

*Sylvilagus Gray*, 1867. Ann. Mag. Nat. Hist., ser. 3, 20:221.

TYPE SPECIES: *Lepus sylvaticus* Bachman, 1837 (= *Lepus sylvaticus floridanus* J. Allen, 1890).

SYNONYMS: *Hydrolagus* Gray, 1867; *Limnolagus* Mearns, 1897; *Microlagus* Trouessart, 1897; *Paludilagus* Hershkovitz, 1950; *Tapeti* Gray, 1867.

COMMENTS: Formerly included *Brachylagus* as a subgenus; see Hall (1981:294); but see also Corbet (1983:14).

*Sylvilagus aquaticus* (Bachman, 1837). J. Acad. Nat. Sci. Philadelphia, 7:319.

TYPE LOCALITY: "...western parts of that state" [Alabama]. Restricted by Nelson (1909:272) to "Western Alabama".

DISTRIBUTION: S Illinois and SW Indiana, SW Missouri to SE Kansas southward through extreme W Kentucky and W Tennessee to E Oklahoma, E Texas, Louisiana, Alabama, Mississippi and NW South Carolina (USA).

STATUS: Some range reduction, but remains abundant (Chapman and Ceballos, 1990).

SYNONYMS: *attwateri* (J. Allen, 1895); *douglasii* (Gray, 1837; part) *littoralis* Nelson, 1909; *telmalemonus* (Elliott, 1899).

COMMENTS: Subgenus *Tapeti* (Gureev, 1964:162). Reviewed by Chapman and Feldhamer (1981, Mammalian Species, 151).

*Sylvilagus audubonii* (Baird, 1858). Mammalia, in Repts. U.S. Expl. Surv., 8(8):608.

TYPE LOCALITY: "San Francisco" [San Francisco Co., California, USA].

DISTRIBUTION: NE Puebla and W Veracruz (Mexico) to NC Montana and SW North Dakota, NC Utah, C Nevada, and NC California (USA), south to Baja California and C Sinaloa (Mexico).

STATUS: Secure (Chapman and Ceballos, 1990).

SYNONYMS: *arizonae* (J. Allen, 1877); *baileyi* (Merriam, 1897); *cedrophilus* Nelson, 1907; *confinis* (J. Allen, 1898); *goldmani* (Nelson, 1904); *laticinctus* (Elliott, 1904); *major* (Mearns, 1896); *minor* (Mearns, 1896); *neomexicanus* Nelson, 1907; *parvulus* (J. Allen, 1904); *rufipes* (Elliott, 1904); *sanctidiegi* (Miller, 1899); *vallicola* Nelson, 1907; *warreni* Nelson, 1907.

COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:169). Reviewed by Chapman and Willner (1978, Mammalian Species, 106).

*Sylvilagus bachmani* (Waterhouse, 1839). Proc. Zool. Soc. Lond., 1839:103.

TYPE LOCALITY: "Between Monterey and Santa Barbara". Type locality restricted by Nelson (1909:247) to San Luis Obispo, California, USA.

DISTRIBUTION: W Oregon (USA) S of Columbia River to Baja California (Mexico), E to Cascade-Sierra Nevada Range (USA).

STATUS: "Still quite abundant" (Chapman and Ceballos, 1990).

SYNONYMS: *cerrosensis* (J. Allen, 1898); *cinerascens* (J. Allen, 1890); *exiguus* Nelson, 1907; *howelli* Huey, 1927; *macrorhinus* Orr, 1935; *mariposae* Grinnell and Storer, 1916; *peninsularis* (J. Allen, 1898); *riparius* Orr, 1935; *rosaphagus* Huey, 1940; *tehamae* Orr, 1935; *trowbridgii* Baird, 1855; *ubericolor* (Miller, 1899); *virqulti* Dice, 1926.

COMMENTS: Placed in genus *Microlagus* together with *idahoensis* by Gureev (1964:171). This is the only species of *Sylvilagus* known to have retained the putative ancestral karyotype (2n=48) shared by all known *Lepus*, and by *Romerolagus* (Robinson et al., 1981, 1984). Reviewed by Chapman (1974, Mammalian Species, 34).

*Sylvilagus brasiliensis* (Linnaeus, 1758). Syst. Nat., 10th ed., 1:58.

TYPE LOCALITY: "in America meridionali"; type locality restricted by Thomas (1911a), to Pernambuco, Brazil.

DISTRIBUTION: S Tamaulipas (Mexico) southward through Central and South America as far as Peru, Bolivia, N Argentina and S Brazil.

STATUS: Populations decline or disappear when forests are cleared; status unclear.

SYNONYMS: *andinus* (Thomas, 1897); *apollinaris* Thomas, 1920; *brasiliensis* (Waterhouse, 1848); *canarius* Thomas, 1913; *capsalis* Thomas, 1913; *caracasensis* Mondolfi and Méndez Aroche, 1957; *carchensis* Hershkovitz, 1938; *chapadae* Thomas, 1904; *chapidensis* Thomas, 1913; *chillae* Anthony, 1923; *chimbani* Thomas, 1913; *chotanus* Hershkovitz, 1938; *consobrinus* Anthony, 1917; *daulensis* J. Allen, 1914; *defilippi* (Cornalia, 1850); *defilippii* (Thomas, 1897); *dephilippii* Cabrera, 1912; *ecaudatus* Trouessart, 1910; *fulvescens* J. Allen, 1912; *fuscescens* J. Allen, 1916; *gabbi* (J. Allen, 1877); *gibsoni* Thomas, 1918; *inca* Thomas, 1913; *incitatus* (Bangs, 1901); *kelloggi* Anthony, 1923; *meridensis* Thomas, 1904; *messorius* Goldman, 1912; *minensis* Thomas, 1901; *nicefori* Thomas, 1921; *nigricaudatus* (Lesson, 1842); *nivicola* Cabrera, 1912; *paraguensis* Thomas, 1901; *paraguensis* Yepes, 1938; *peruanus* Hershkovitz, 1950; *salentus* J. Allen, 1912; *sanctamartae* Hershkovitz, 1950; *surdaster* Thomas, 1901; *tapeti* (Pallas, 1778); *tapetillus* Thomas, 1913; *truei* (J. Allen, 1890); *tumacus* (J. Allen, 1908).

COMMENTS: Subgenus *Tapeti* (Gureev, 1964:160); he also considered *gabbi*, which is included here, a distinct species. Formerly included *dicei*; revised by Diersing (1981).

*Sylvilagus cunicularius* (Waterhouse, 1848). Nat. Hist. Mamm., 2:132.

TYPE LOCALITY: "Mexico." Restricted by Goodwin (1969:125) to "Sacualpan" (= Zacualpan).

DISTRIBUTION: S Sinaloa to E Oaxaca and Veracruz (Mexico).

STATUS: Some populations have declined, but overall "still quite abundant" (Chapman and Ceballos, 1990).

SYNONYMS: *insolitus* (J. Allen, 1890); *pacificus* (Nelson, 1904); *veraecrucis* (Thomas, 1890).

COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:167).

*Sylvilagus dicei* Harris, 1932. Occas. Pap. Mus. Zool. Univ. Mich., 248:1.

TYPE LOCALITY: "El Copey de Dota, in the Cordillera de Talamanca, Costa Rica...6000 feet."

DISTRIBUTION: Cordillera de Talamanca (SE Costa Rica, NW Panama).

STATUS: Indeterminate.

SYNONYMS: Monotypic.

COMMENTS: Formerly included in *brasiliensis* (Hall, 1981:295); revised by Diersing (1981).

*Sylvilagus floridanus* (J. A. Allen, 1890). Bull. Am. Mus. Nat. Hist., 3:160.

TYPE LOCALITY: "Sebastian River, Brevard Co.," [Florida, USA].

DISTRIBUTION: N, C, and W Venezuela (including adjacent islands) and adjacent Colombia through Central America (disjunct in part); to NW Mexico, Arizona, north and east to North Dakota, Minnesota, N Michigan, New York and Massachusetts, Atlantic Coast south and Florida Gulf Coast (USA) west to Mexico; also S Saskatchewan, S Ontario and SC Quebec (C Canada).

STATUS: Secure.

SYNONYMS: *alacer* (Bangs, 1896); *ammophilus* Howell, 1939; *avius* Osgood, 1910; *aztecus* (J. Allen, 1890); *boylei* J. Allen, 1916; *caniclunis* Miller, 1899; *chapmani* (J. Allen, 1899); *chiapensis* (Nelson, 1904); *cognatus* Nelson, 1907; *connectens* (Nelson, 1904); *continentis* Osgood, 1912; *costaricensis* Harris, 1933; *cumanicus* (Thomas, 1897); *durangae* J. Allen, 1903; *hesperius* Hoffmeister and Lee, 1963; *hitchensi* Mearns, 1911; *holzneri* (Mearns,

- 1896); *hondurensis* Goldman, 1932; *llanensis* Blair, 1938; *macrocorpus*, Diersing and Wilson, 1980; *mallurus* (Thomas, 1898); *margaritae* Miller, 1898; *mearnsi* (J. Allen, 1894); *nelsoni* Baker, 1955; *nigronuchalis* (Hartert, 1894); *orinoci* Thomas, 1900; *orizabae* (Merriam, 1893); *paulsoni* Schwartz, 1956; *persultator* Elliot, 1903; *purgatus* Thomas, 1920; *restrictus* Nelson, 1907; *rigidus* Mearns, 1896; *robustus* (Bailey, 1905); *russatus* (J. Allen, 1904); *similis* Nelson, 1907; *simplicianus* Miller, 1902; *subcinctus* (Miller, 1899); *superciliaris* (J. Allen, 1899); *sylvaticus* (Bachman, 1837); *valenciae* Thomas, 1914; *yucatanicus* (Miller, 1899).
- COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:164). Widely introduced in North America (Hall, 1981:301) and Europe (Flux et al., 1990). Reviewed by Chapman et al. (1980, Mammalian Species, 136).
- Sylvilagus graysoni* (J. Allen, 1877). In Coues and Allen, Monog. N. Amer. Rodentia (U.S. Geol. Geograph. Survey Terr., Rep., 11:347).
- TYPE LOCALITY: According to Nelson (1899a:16), "Tres Marias Islands," "undoubtedly from Maria Madre" Isl, Nayarit, Mexico.
- DISTRIBUTION: Tres Marias Isls, Nayarit (Mexico).
- STATUS: IUCN - Endangered.
- SYNONYMS: *badistes* Diersing and Wilson, 1980.
- COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:168). An insular species probably derived from *cunicularius* of the adjacent mainland; see Diersing and Wilson (1980) and Hall (1981:314).
- Sylvilagus insonus* Nelson, 1904. Proc. Biol. Soc. Washington, 17:103.
- TYPE LOCALITY: "Omiteme, Guerrero," [Mexico].
- DISTRIBUTION: Appears restricted to Sierra Madre del Sur, C Guerrero (Mexico) between 2300-5280 ft. elevation.
- STATUS: IUCN - Endangered; known from fewer than 10 records.
- SYNONYMS: Monotypic.
- COMMENTS: Subgenus *Tapeti* (Gureev, 1964:164), or *Sylvilagus* (Hershkovitz, 1950:335).
- Sylvilagus mansuetus* Nelson, 1907. Proc. Biol. Soc. Washington, 20:83.
- TYPE LOCALITY: "San José Island, Gulf of California, Mexico" [Baja California del Sur, Mexico].
- DISTRIBUTION: Known only from the type locality.
- STATUS: IUCN - Indeterminate.
- SYNONYMS: Monotypic.
- COMMENTS: An insular allospecies closely related to *bachmani* (Chapman and Ceballos, 1990); a subspecies of *bachmani* according to Gureev (1964:171).
- Sylvilagus nuttallii* (Bachman, 1837). J. Acad. Nat. Sci. Philadelphia, 7:345.
- TYPE LOCALITY: "... west of the Rocky Mountains, . . . streams which flow into the Shoshonee and Columbia rivers"; restricted by Nelson (1909:201) to "eastern Oregon, near mouth of Malheur River." Listed by Bailey (1936) as "near Vale."
- DISTRIBUTION: Intermountain area of North America from S British Columbia to S Saskatchewan (Canada), south to E California, Nevada, C Arizona, and NW New Mexico (USA).
- STATUS: *S. floridanus* appears to be displacing *nuttallii* in SE North Dakota; see Genoways and Jones (1972); but elsewhere generally common (Chapman and Ceballos, 1990).
- SYNONYMS: *artemesia* (Bachman, 1839); *grangeri* (J. Allen, 1895); *perplicatus* Elliott, 1904; *pinetis* (J. Allen, 1894).
- COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:168). Reviewed by Chapman (1975a, Mammalian Species, 56).
- Sylvilagus palustris* (Bachman, 1837). J. Acad. Nat. Sci. Philadelphia, 7:194.
- TYPE LOCALITY: "... South Carolina. . . never. . . more than forty miles from the sea coast"; restricted by Miller and Rehn (1901:183) to E South Carolina.
- DISTRIBUTION: Florida to SE Virginia (Dismal Swamp) (USA) in coastal lowlands.
- STATUS: U.S. ESA - Endangered as *S. p. hefneri*; IUCN - Endangered as *S. p. hefneri*; other populations indeterminate (Chapman and Ceballos, 1990).
- SYNONYMS: *douglasii* (Gray, 1837); *hefneri* Lazell, 1984; *paludicola* (Miller and Bangs, 1894).

COMMENTS: Subgenus *Tapeti* (Gureev, 1964:162). *S. aquaticus* and *S. palustris* share a derived karyotype,  $2n=38$  (Robinson et al., 1983, 1984). Reviewed by Chapman and Willner (1981, *Mammalian Species*, 153).

*Sylvilagus transitionalis* (Bangs, 1895). *Proc. Boston Soc. Nat. Hist.*, 26:405.

TYPE LOCALITY: "Liberty Hill, Conn." [New London Co., Connecticut, USA].

DISTRIBUTION: S Maine to N Alabama discontinuously along the Appalachian Mtns (USA).

STATUS: Range, especially in north, has been much reduced, probably by habitat alteration and subsequent displacement by *S. floridanus* (Chapman and Ceballos, 1990).

SYNONYMS: Monotypic.

COMMENTS: Subgenus *Sylvilagus* (Gureev, 1964:166). Two cytotypes are known; northern ( $2n=52$ ) and southern ( $2n=46$ ) (Holden and Eabry, 1970; Robinson et al., 1983); and may require recognition of a new species (Ruedas, 1986). Reviewed by Chapman (1975b, *Mammalian Species*, 55).