



PUMA. (Male.)

THE PUMA, OR AMERICAN LION: FELIS CONCOLOR OF LINNÆUS.

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The Puma is the only large, unspotted, native American cat.* The general color of the fur is tawny, but on the under surfaces of the body it is whitish. The color of the central line of the back is darker than that of the sides and the end of the tail is dusky brown. The ears are black externally, with a central whitish area. The upper lip is white from the nostrils to the middle of the mouth, and at the latter point is a prominent black spot. The nostrils are flesh-colored. Baird compares the color of the Puma to that of the Virginia deer, and states that it varies with the seasons as it does in the deer; that is, the summer coat is reddish and the winter coat grayish.†

There is much variation in color among individuals of this species, but it has not been proven that this is correlated with the varying

* Nine species of cats are found in North America north of the Isthmus of Panama. These are—

The Puma, *Felis concolor* Linné.

The Jaguar, *Felis onca* Linné.

The Ocelot, *Felis pardalis* Linné.

The Tiger Cat, *Felis tigrina* Erxleben.

The Eyra, *Felis eyra* Desmarest.

The Yaguarundi, *Felis yaguarundi* Desmarest.

The Bay Lynx, *Lynx rufus* (Güldenstädt).

The Plateau Lynx, *Lynx baileyi* Merriam.

The Canada Lynx, *Lynx canadensis* (Desmarest).

The Puma, on account of its wonderfully extensive range, reaching from Patagonia to Canada, may perhaps be considered as the most characteristic of American animals, though it is less powerful than the Jaguar. The Jaguar and Ocelot enter the territory of the United States only on the extreme southwestern border. The Eyra, Yaguarundi, and Tiger Cat have never been found north of the Rio Grande. The Lynxes are common in the United States. The spotted form of the Bay Lynx, found in Texas, and the banded form, found in Oregon and Washington, have been described as separate species, under the names *Lynx maculatus* and *Lynx fasciatus*. They are now generally regarded as geographical races of the Bay Lynx. The Canada Lynx is a distinct species.

† Baird, *Mammals of North America*, 1859, p. 83.

climatic conditions of its range.* The occurrence of albino Pumas in the Alleghany Mountains and in New Mexico has been reported, but not authoritatively.†

Burmeister remarks on this point: "Very rarely individuals of this species of a brown, nearly black color have been found, while differences in color between yellowish-brown and yellowish gray are not rare. I am aware that individuals nearly white and others nearly black have been observed, but I have never seen such myself."‡

New-born Pumas are very different in appearance from the adults. Instead of being of uniform color, the back and legs are covered with large blackish-brown spots, and the tail is ringed with the same color.§ According to Dr. W. A. Conklin these markings disappear in about six months after birth.||

The male Puma represented in Plate XCIV is of the following dimensions: Head and body, measured along the curves, 53 inches; tail, 26½

* There is an early allusion to this matter in Müller's translation of Linnæus's System of Nature, published in 1796. After mentioning the discrepancy between Pennant's and Schreber's measurements of the Puma, this author remarks: "It is not, however, to be wondered at that different measurements are given, when it is considered that the two animals from which they were taken were born in such very different regions. The climate likewise contributes to changes in their disposition, and hence those living in North America are much less ferocious and much weaker than those which are born in hotter regions. It has influence also upon the color. In the Iroquois country the species is gray, in other regions reddish." (Müller, Linné's Natursyst. Fortsetzung nach 13ten Ausgabe, 1. Theil, Säugethiere, 1796, p. 207.)

† See *Forest and Stream* newspaper, xvii, p. 110; also, *American Field*, xx, 1883, p. 201

‡ Burmeister: Description Physique de la République Argentine, III, 1879, p. 132.

§ This difference between the young and adults in coloration led the voracious Garcilasso de la Vega into error. In his Royal Commentaries he writes: "A Spaniard whom I knew killed a great lioness in the country of the Antis, near Cuzco. She had climbed into a high tree, and was killed by four thrusts of a lance. They found two whelps in her belly, which were sons of a tiger, for their skins were marked with their sire's spots." (Royal Commentaries, 1609, book 8. < Hakluyt Society, xli, 1869, p. 385.) According to Castelnau, young North American Pumas have white spots. Burmeister states that he never saw such individuals in Brazil.

|| Dr. W. A. Conklin, in Merriam's Vertebrates of the Adirondack Region. < Trans. Linnean Soc., New York, I, 1882, p. 35, foot-note.

They persist, however, though always more or less indistinct, until the animal has reached its full size, or perhaps in some cases, throughout life. The term spotted, notwithstanding, can not be applied to the species in the same sense as to the Jaguar, Leopard, and Ocelot. It may be mentioned in this connection that lions, which to the eye are unspotted, sometimes appear in photographs as spotted animals. I subjoin some notes on the color of a number of flat skins of Pumas, which I recently examined through the kindness of Mr. F. S. Webster, of Washington.

(a) Length without tail, 4 feet 9 inches. Color very pale tawny. Spots apparent on all parts of the body.

(b) Length without tail, 4 feet 4 inches. Shows spots of darker tawny than the general color of the body.

(c) Length without tail, 4 feet 7 inches. Color very pale. Shows very faint spots.

(d) Total length, 6 feet 11 inches. Color gray. Numerous irregular small spots of white and single white hairs. No dark spots.

(e) Total length, 6 feet 10 inches. Color pale tawny. Numerous white hairs. Faint spots on the legs only.

inches; height at the shoulder, $22\frac{1}{2}$ inches. Audubon and Bachman give the following dimensions of a male killed by J. W. Audubon at Castroville, Tex., January 28, 1846. From point of nose to root of tail (whether measured along curves, not stated), 5 feet 1 inch; tail, 3 feet 1 inch; height of ear posteriorly, 3 inches.*

The male Puma measured by Azara was somewhat smaller, the head and body being $51\frac{1}{8}$ inches and the tail 29 inches.† The system of measurement is not given.

The average dimensions obtained from these three individuals are: For the head and body, $55\frac{1}{4}$ inches, and for the tail, $30\frac{4}{5}$ inches; total, 85 inches.

Dr. Edgar A. Mearns has generously permitted me to copy his measurements of the nineteen individuals killed by him in Arizona between 1884 and 1888. Measurements of total length are given in seven instances. These are as follows:

	Total length.	Length of head and body.	Length of tail with hairs.
	Inches.	Inches.	Inches.
Female, Mogollon Mountains, Arizona.....	72.5	44.5	29.5
Male, 10 miles southwest of Fort Verde, Arizona.....	80.0	51.2	31.1
Male, east slope of Mogollon Mountains, Arizona.....	78.0	.....	31.0
Female, east slope of Mogollon Mountains, Arizona.....	60.0	.....	25.5
Male, east slope of Mogollon Mountains, Arizona.....	84.0	.....	36.0
Do.....	72.0	.....	23.0
Do.....	72.0	.....	30.0

I have found no authentic record of any individuals measured before skinning of which the dimensions were greater than those of Audubon's

- (f) Total length, 5 feet $9\frac{1}{2}$ inches. Color grayish. A few very faint spots.
- (g) Total length, 5 feet 8 inches. Color gray. Shows large spots throughout, and also two bars on the shoulders, and a line of very distinct spots along the spine.
- (h) Total length, 5 feet 8 inches; color gray; numerous spots, especially on the legs.
- (i) Total length, 5 feet 5 inches (tip of tail wanting). Similar to "g," but the spots less distinct.
- (j) Total length, 5 feet 6 inches. Similar to "g."
- (k) Total length, 5 feet 4 inches (tip of tail wanting). Color gray. Shows large dusky spots throughout.
- (l) Total length, 5 feet 3 inches. Color pale tawny. Spots distinct but pale.
- (m) Length without head, 4 feet 1 inch. Color a beautiful vinaceous tawny, overlaid everywhere with large dusky spots. A broad, dark spinal band, and very distinct shoulder bars. A black line along the entire tail, above. The terminal third of the tail entirely blackish.

*Audubon and Bachman, *Viviparous Quadrupeds of North America*, II, 1851, p. 306. Buffon gives the following measurements received in a letter from Collinson (whether measured along curves not stated): Head and body, 5 feet 4 inches; tail, 2 feet 6 inches. This is probably English measure. < *Œuvres Comp. de Buffon*, edited by Richard, xv, 1826, p. 74, under heading of *Le Cougar de Pennsylvanie*.

†Azara, *Apuntamientos para la Historia Natural de los Cuadrúpedos del Paraguay*, II, 1802, p. 124. "Longitud, 74 pulgadas; cola, 26 $\frac{3}{4}$."

specimen mentioned above. The total length in that case was 8 feet 2 inches. There are, however, records of measurements of flat skins of greater size.* I have myself measured a skin from Colorado in the National Museum, (No. 19906), of which the total length in a straight line is 8 feet 4 inches. Mr. Livingston Stone states that the skin of a Puma killed on the McCloud River, California, "measured 8½ feet when stretched."† The average total length of nine flat skins of adults in the possession of Mr. F. S. Webster, of Washington, is 7 feet 4 inches.

The area over which the Puma ranges extends from New England and British Columbia to the Straits of Magellan. On the Atlantic coast of North America the species has apparently not been found in the States of New Hampshire, Rhode Island, New Jersey, or Delaware. On our northern boundary I find no mention of its having been found in Michigan or Indiana. In Ohio it was extirpated prior to 1838, and probably more recently in Illinois and Indiana. I find no record of its occurrence in Nevada, but as it has been found in the surrounding States it seems improbable that it should be entirely absent here.

With these exceptions there are recorded instances, more or less numerous, of the occurrence of the Puma in every State and Territory of

* Since this was written, Prof. C. L. Bristol, of Vermillion, South Dakota, has sent me a letter addressed to him by Mr. James G. Needham, taxidermist of Galesburgh, Illinois, in which the writer states that he knows of several mounted specimens in which the head and body taken together exceed 60 inches in length, and that he has recently mounted one from near Lake Valley, New Mexico, a fine dark skin, which measured 70 inches from the nose to the root of the tail. The tail was 39 inches long, and the total length 109 inches.

† *Forest and Stream*, XIX, 1882, p. 208.

Anonymous and pseudonymous writers in the various natural history and sporting journals give still larger dimensions. Thus we read of a Puma killed at Lauder, in Wyoming Territory, which measured "10 feet from tip to tip" (*American Field*, XXIV, 1885, p. 486) and even of one from Colorado that was 11 feet 3 inches long ("S. C. C." *Forest and Stream*, XIX, 1882, p. 127).

While it is well known that giants, which greatly exceed ordinary individuals in size, exist among many kinds of animals, it is necessary that statements regarding them in order to receive credence should be accompanied by unquestionable proofs. The best vouchers are the skins and skulls of the specimens preserved in museums. The cases cited above are not properly vouched for. It may be said, furthermore, that among the twenty skulls of Pumas in the National Museum there is none which by the most liberal calculation could be supposed to belong to an individual exceeding 8½ feet in total length. The greatest length of the largest skull, (No. 1158, from Prairie Mer Rouge, Louisiana), is 8¾ inches, and its basilar length, that is, from the back of the incisor teeth to the front edge of the *foramen magnum*, 6¾ inches.

In recording measurements of fresh specimens, it should always be stated whether the line is allowed to follow the curves of the back or whether the measurements are made in straight lines. It should also be remembered, as regards measurements of total length, that an individual with a well-developed body, but a short tail, may appear to be a smaller and feebler animal than one with a long tail, when the contrary may in reality be the truth.

the Union, dating from the beginning of the century. Like many other large American animals, however, the Puma has retired before the advance of civilization, and in many of the more thickly populated States it is improbable that even stragglers could be found at the present day.*

* The localities in the several States and Territories in which individuals have been captured or seen, so far as they are recorded in the literature at command, are given in the following list :

Upper Canada.—A specimen from this region was seen by Audubon. (Audubon and Bachman, *Quadrupeds of North America*, II, 1851, p. 312.) A second specimen was killed near the city of Ottawa. (William Couper, in *Forest and Stream*, VIII, 1877, pp. 299, 300. Communicated by Dr. Elliott Cones.) King reports having seen one which was killed by Dr. Maitland near St. Catherine's. (King, *Sportsman and Naturalist in Canada*, 1866, p. 16.) There is an improbable narration of a Puma having attempted to attack some men in a boat near St. Francis on the St. Lawrence River, in Small's *Animals of North America*, 1864, p. 49. The size, weight, and other particulars are, however, given.

Manitoba.—The Puma is not included by Mr. E. E. Thompson in his recent list of the mammals of Manitoba. (Trans. Manitoba Sci. & Hist. Soc., No. 23, May, 1886.)

British Columbia.—Abundant in Vancouver's Island, and ranges to 56° north latitude in British Columbia, according to J. C. Hughes. (*Forest and Stream*, XXI, p. 103.)

Alabama.—Hallock states that the Puma is occasional in De Kalb County. (*Sportsman's Gazetteer*, 1877, p. 3.)

Arizona.—Generally distributed, but found most frequently in the wooded and mountainous portions of the Territory. (Cones, *American Naturalist*, I, 1867, pp. 281-292.) Drs. Cones and Yarrow killed two specimens in the Triplet Mountains. (Wheeler's Survey, v, *Zoology*, 1875, pp. 40, 41). Dr. Edgar A. Mearns, U. S. Army, has kindly given me measurements of nineteen Pumas killed by him in Arizona between December, 1884, and February, 1888. Four were killed near Fort Verde; six, in the Mogollon Mountains; four, at the head of Beaver Creek, Yavapai County; and five, on the Verde River.

Arkansas.—Nuttall reported the occurrence of the Puma on the Arkansas River, north of Little Rock, in 1819. (Travels into Arkansas Territory, 1821, p. 118.) Mr. Hallock states that the dense cane-brakes, swamps, and forests of Cross County are infested by Pumas. They are occasionally found also in the dense cane-brakes along the Red River, in Jackson County, and great numbers in Prairie County, in the cane-brakes between the White and Cache Rivers; also in Phillips County, in the vicinity of Helena, in the woods; in Pulaski County, near Little Rock; and in St. Francis County. (*Sportsman's Gazetteer*, 1877, pp. 8, 9.) One is reported to have been killed near Bayou Bartholomew, in Jefferson County, in 1883. (*Forest and Stream*, XX, 1883, p. 125.) There is also an account of a hunt on Crooked Bayou in the southeastern part of the State in 1887 in *Forest and Stream*, XXVIII, 1887, p. 323.

California.—Abundant throughout the State, as appears from the statements of various authors. Mr. H. W. Henshaw, however, stated in 1875 that the species had apparently disappeared from the lower and more thickly settled portions. (Wheeler's Survey, Report of 1876, pp. 305-312.) Mr. Hallock mentions the Puma as occurring in 1877 in Butte, Humboldt, Klamath, Trinity, Mendocino, Los Angeles, Marin, Nevada, Santa Clara, Shasta, Siskiyou, Sonoma, and Tehama Counties. (*Sportsman's Gazetteer*, 1877, pp. 11-18.) Specimens were obtained in Shasta County in 1884 by Mr. C. H. Townsend. See also *Forest and Stream*, XIX, 1882, p. 208; XX, 1883, p. 203; XXIII, 1885, p. 497, (McCloud River); XXV, 1885, p. 46 (Concho Valley); XXVIII, 1887, p. 493; XXX, 1888, pp. 289, 350, 411. *American Field*, XXI, 1884, p. 451; XXV, 1886, p. 343 (San Buenaventura); XXVII, 1887, p. 105 (Georgetown).

Colorado.—Common in Park County in 1874, according to Dr. J. A. Allen. (Bull. Essex Inst., VI, 1874, pp. 43-66). Elsewhere in the mountains, according to Drs. Cones and Yarrow. (Report Wheeler's Survey, v, 1875, pp. 35-129.) Mr. Hallock states that they occur in the North Park, in Summit County. (Sportsman's Gazetteer, 1877, p. 22.) Three specimens were received from Cañon City in 1877 by the National Museum. See also *Forest and Stream*, xxx, 1888, p. 243 (Rifle Creek).

Connecticut.—Linsley, in 1842, saw a specimen reported to have been killed in the northern part of the State. (*Amer. Journ. Sci.*, XLIII, 1842, pp. 345-354.)

Dakota.—Mr. G. B. Grinnell saw a single individual in the Black Hills in 1874, but believed them to be quite numerous in that region. (Ludlow, Rep't of a Reconnaissance of the Black Hills, 1874, pp. 77-85.) Mr. Vernon Bailey also learned in 1887 that they were considered quite common in the Black Hills, and saw a young one which had been captured there. (Rep't Ornithologist, Dept. Agric., 1888, p. 431.) Hoffman reported in 1877 that specimens were occasionally captured in the oak groves on Oak Creek in the vicinity of Grand River. (Proc. Boston Soc. Nat. Hist., XIX, 1877, pp. 94-102.)

Florida.—Dr. J. A. Allen stated in 1870 that the Puma was not unfrequent in the more unsettled parts of the State. (Bull. Mus. Comp. Zoology, II, 1870, p. 186.) Maynard in 1853 reported that it was common in the interior and more southern parts of the State, but was not found on the Keys. (Quart. Journ. Boston Zool. Soc., II, 1883, Nos. 1-4.) The late Mr. Judson, however, writing under the pseudonym of "Ned Buntline," reported that a Puma was captured on Key Largo. (*Forest and Stream*, XIII, 1880, p. 994.) See also a note on one killed in Manatee County in 1887, in *American Field*, xxviii, 1887, p. 7.

Georgia.—Found along the water-courses in this State thirty years ago, according to Audubon. (Audubon and Bachman, Quadrupeds of North America, II, 1851, p. 312.) According to Mr. Hallock the scream of the Puma is not uncommonly heard in Barlow County and in the hill country generally; also in Thomas County, in the vicinity of McDonald. (Sportsman's Gazetteer, 1877, pp. 37-40.)

Idaho.—Mr. Hallock reported in 1877 that Pumas could be found in the mountains and forests of Idaho County. (Sportsman's Gazetteer, 1877, p. 42.) A person writing under the pseudonym of "Nica" reports that he killed a Puma in Northern Idaho in 1888. (*Forest and Stream*, xxx, 1888, p. 308.)

Illinois.—Kennicott in 1855 stated that a single individual had been known to occur in Cook County. (Trans. Illinois State Agric. Soc., I, 1855, pp. 577-580.) The species has probably disappeared from the State. Professor Leidy calls attention to a fossil skull found 30 feet below the surface, in the bed of the Kaskaskia River, in Proc. Acad. Nat. Sci. Phila., 1888, p. 9.

Indiana.—I have not met with any mention of the occurrence of the Puma in this State. Haymond omits it from his list of mammals observed in Franklin County in 1869, published in the Report of the Geological Survey of Indiana for that year.

Indian Territory.—Woodhouse in 1853 remarks of this species: "It was observed in the Indian Territory in the neighborhood of a swamp." He does not give the location of the swamp. (Sitgreaves, Exped. down the Zuñi and Colo. Rivers, 1853, p. 47.)

Iowa.—Dr. C. A. White writes in 1869 as follows: "The panther has been known within our limits but very rarely." (Proc. Boston Soc. Nat. Hist., XIII, 1869, p. 181, foot-note.)

Kansas.—According to Mr. F. W. Cragin, four Pumas were captured and three others seen in the counties of Harper, Barbour and Comanche in the winter of 1884-'85. (Bull. Washburn Laboratory of Nat. Hist., I, 1885, p. 42.)

Kentucky.—I am obliged to Prof. John R. Procter, director of the geological survey of Kentucky, for a letter regarding the occurrence of the Puma in Kentucky, written at his request by Mr. R. T. Durrett, of Louisville. On the authority of manuscripts in his possession, Mr. Durrett states that John Sanders killed a Puma in a chestnut-oak tree at the Knobs, 6 or 7 miles south of Louisville, in 1784. A young Puma was

killed on Mr. Durrett's father's farm, in Allen County, by a negro, in 1815. The Puma was last seen in Kentucky in 1863, when a full-grown individual, having a total length of 7 feet, and weighing 111 pounds, was killed by Mr. John Custis and others, within 6 miles of Lexington.

There is also mention of two or three killed near Reeder in *American Field*, XXIII, 1885, p. 174.

Louisiana.—A skull from Prairie Mer Rouge, obtained by James Fairie, in 1853, is in the National Museum. Baird includes the Puma in his list of the mammals of the Red River of Louisiana. (Marcy's Exploration of the Red River of Louisiana, 1853, Appendix F.) See also *American Field*, XXVIII, 1887, 390 (Red River). Mr. Hallock states in 1877 that Pumas were to be found in Grant Parish, about Flagon, Clear, Big, and Tront Creeks. (*Sportsman's Gazetteer*, 1877, p. 62.)

Maine.—Included without comment in Holmes's list of the mammals of the State, in the sixth annual report of the Maine board of agriculture, 1861, p. 123. I am credibly informed that no Pumas have been killed in the State in recent years.

Maryland.—The species formerly occurred here, according to Audubon and Bachman. (See Quadrupeds of North America, II, 1851, p. 312.) It is included by Scott among the indigenous animals of the State, under the name of Panther. (Joseph Scott, A Geog. Descript. of the States of Maryland and Delaware, 1807, p. 28.)

Massachusetts.—Emmons states that the Puma was not to be found here in 1840, though it existed in the State at an earlier day. (Emmons, Report on the Quadrupeds of Massachusetts, 1840, p. 36.) Dr. J. A. Allen, in 1869, writes: "The Panther has probably been for some time extinct in Massachusetts, though undoubtedly once occurring here." (*Bull. Mus. Comp. Zool.*, I, 1863-1869, p. 153.) There was a rumor that one was seen near East Douglass as late as 1883. See *Forest and Stream*, XX, 1883, p. 48.

Michigan.—No record was found of its occurrence in this State. It is not mentioned in a list of the vertebrates of the State, published by M. Miles, M. D., about 1861. (Presumably in the report of the geological survey of the State for that year. I have seen only an undated excerpt.)

Minnesota.—Not included in Head's list of mammals found in the vicinity of Fort Ripley in 1854. (*Smithsonian Report*, 1854, p. 291.) Mr. Frank J. Locke makes the following statement: "I recently had a bloodless encounter with a huge panther the only one seen in this locality for years." (*Forest and Stream*, XX, 1883, p. 226.)

Mississippi.—Audubon states, in 1851, that the Puma was to be found in the swamps of this State, and relates several adventures with it in the region of the Yazoo River. (*Quadrupeds of North America*, II, 1851, p. 303.) Wailes, in 1854, writes: "The Panther is now rarely met with except in dense and extensive swamps and canebrakes." (*Report on the Geology of Mississippi*, 1854, p. 315.) Mr. Hallock states in 1877 that there was an excellent region for Pumas in Tunica County, at Hudson, near the Mississippi River; also in Washington County. (*Sportsman's Gazetteer*, 1877, p. 92.) See also an improbable story in *Forest and Stream*, XX, 1883, p. 125. In this connection, the remarks of Du Pratz, a writer of the last century, are of interest. Du Pratz appears to have established himself near Natchez. Writing in 1758, he says of the Puma or *Tigre*: "One sees them but little; and if this animal was as common as a certain author (? Buffon) would have us believe, the ancient inhabitants of the country would have seen a certain number, but I have never heard mention of but one. I have seen two at different times about my habitation." (*M. Le Page Du Pratz, Histoire de la Louisiane*, II, 1758, pp. 91-92.)

Missouri.—I found no records of the occurrence of the Puma in this State since the beginning of the century, when Dr. J. Watkins, in a letter to Dr. Barton, included it among the mammals found in the country west of St. Louis. (*Trans. Amer. Philos. Soc.*, VI, 1809, pp. 69-72.)

Montana.—The Puma occurs in congenial localities throughout the Territory. It was seen by Mr. G. B. Grinnell at the mouth of Alum Creek in 1875. (*Reconnaissance*

from Carroll, Montana, to Yellowstone Nat. Park in 1875, by Wm. Ludlow, 1875, pp. 63-72.) A Puma from Fort Keogh is living in the Smithsonian park at this date. See also *Forest and Stream*, xxvi, 1886, p. 508; xxx, 1888, pp. 411, 350. Mr. Vernon Bailey found the Puma at Tilyou's Ranch, Dawson County, in 1887. (Rep't Ornithologist, Dep't Agriculture, 1888, p. 431.)

Nebraska.—Anghey remarks regarding the Puma in this State: "I have only seen it a few times on the Niobrara and the Loup." (S. Aughey, Geology of Nebraska, 1880, p. 119.)

Nevada.—I have found no distinct record of its occurrence in this State.

New Hampshire.—No evidence found of its occurrence in this State.

New Jersey.—Omitted by Beesley from his list of the wild animals of Cape May County (Geology of the County of Cape May, 1857, p. 137) and by Abbott from his list of the mammals of the State published in the Report of the Geological Survey of New Jersey, 1868, pp. 751-761.

New Mexico.—Bartlett found the Puma along the water courses of this Territory thirty-five years ago, (Narrative of Explorations in Texas, New Mexico, etc., II, 1853, p. 555b.) Woodhouse states that the Puma was observed in the mountains of New Mexico. He also in another place states that its cry was heard on the San Francisco Mountains. (He calls it *Felis pardalis*.) (Woodhouse in Sitgreaves's Exped. down the Zuñi and Colorado Rivers, 1853, pp. 37 and 47.) Drs. Cones and Yarrow reported in 1875 that the Puma was tolerably common in the mountains of Colorado, New Mexico, and Arizona. (Rep't Wheeler's survey, v, 1875, pp. 35-129.) Mr. J. Preston True states that his guide killed a Puma at Albuquerque in 1888. (*Forest and Stream*, xxx, 1888, pp. 350, 411. See also *Forest and Stream*, xii, 1879, p. 294, and *American Field*, xx, 1883, p. 201.)

New York.—The Puma is still found in the Adirondack Mountains. Dr. C. H. Merriam gives a list of forty-six killed in that region between 1871 and 1881, and estimates that nearly a hundred were killed between 1860 and 1882. (Trans. Linnean Society of New York, I, 1882, p. 39.) DeKay stated, in 1842, that the species was occasionally seen in the Catskill Mountains. (Nat. Hist. of New York, Zoology, 1842, pp. 47, 48.) He also remembered the appearance of one in Westchester County, within 25 miles of New York City, when a boy, and was informed that one had been killed in Warren County. See also *Forest and Stream*, xxiii, 1884, pp. 4 and 264; xxv, 1885, p. 286; vi, 1876, 138 (Lewis County); x, 1878, p. 138 (Fulton Lakes).

North Carolina and South Carolina.—Audubon, in 1851, stated that it was occasionally killed along the water-courses of these States. (Audubon and Bachman, Quadrupeds of North America, II, 1851, p. 312.) I find no reference to its occurrence here at a later date. Dr. Merriam in 1883 reported that the Panther was unknown in the Great Smoky Mountain region of Tennessee and North Carolina. (*Amer. Jour. Science*, xxxvi, 1888, p. 459.)

Ohio.—Kirtland stated, in 1838, that the Puma was formerly found in Ohio, but had disappeared. He mentions specimens in Dorfeuille's Museum in Cincinnati. (Rep't Geol. Survey of Ohio, 1838, p. 176.) Later writers do not include the species.

Oregon.—Suckley and Gibbs, in 1859, reported the Puma common in Oregon and Washington, and abundant in the mountains of the Klamath River. (Nat. History of Wash. Territory, U. S. Pacific R. R. Survey, 1859.) Mr. Hallock mentions that Pumas were numerous in Josephine County, in 1877. (Sportsman's Gazetteer, 1877, p. 138.) See also *Forest and Stream*, xxvii, 1887, p. 104 (near Puget Sound).

Pennsylvania.—Audubon stated that the Puma was abundant at the headwaters of the Juniata River in 1851. (Audubon and Bachman, Quadrupeds of North America, II, 1851, p. 311.) McMurtrie states that a woman was killed by a Puma in Pennsylvania in January, 1830. (Cuvier's Animal Kingdom, I, 1831, p. 115.) (See also *Forest and Stream*, III, 1874, p. 67. Berks County.) Mr. Hallock states that Pumas were to be found in Cambria County, near Ebensburg, in 1877; also in Elk County, near Ridgway. (Sportsman's Gazetteer, 1877, p. 140.) Mrs. B. H. Warren writes me that

a Puma was killed in the northeastern part of the State about fifteen years ago, and adds: "It is asserted by apparently reliable persons (hunters) that a few of these are yet to be found in Cameron and Potter Counties."

Rhode Island.—No record of its occurrence in this State has been found.

South Carolina.—See North Carolina.

Tennessee.—Heywood, in his *Early History of Tennessee*, mentions the Puma as among the wild animals of the State. Mr. Hallock states in 1877 that the cane-breaks of Shelby county afforded fine grounds for hunting Pumas. (*Sportsman's Gazetteer*, 1877, p. 153.) There is a report that a Puma was killed on Wheatley's plantation, 8 miles south of Memphis, in the *Chicago Field*, XIII, 1880, p. 11. (See North Carolina.)

Texas.—Common all over the State in 1880, according to Professor Cope. (Bull. U. S. Nat. Mus., No. 17, 1880, p. 9.) There are specimens in the National Museum from Eagle Pass and the Brazos River, collected respectively in 1853 and 1857.

Utah.—The Puma, according to Dr. J. A. Allen, is not common, but quite generally distributed in the Great Salt Lake valley. (Bull. Essex Inst., VI, 1874, pp. 43-66.) Drs. Coles and Yarrow state that they occur in eastern and middle Utah but are not numerous. (Rept. Wheeler's Survey, v, Zoology, 1875, p. 40.)

Vermont.—Thompson mentions a Puma killed in Manchester in 1850, and states that the species had become very rare at that time. He knew of one killed in Roxbury in 1821. (Z. Thompson, Nat. Hist. of Vermont, 1853, p. 33; Appendix, p. 12.) At an earlier time one was killed in Bennington. It had taken a calf out of a pen where the fence was 4 feet high. (Williams's History of Vermont, 1794, pp. 86, 87.) Dr. J. A. Allen saw a specimen which was killed on Pine Hill, Weathersfield, in 1867. (Bull. Mus. Comp. Zool., I, 1863-1869, p. 153.) A Puma was reported killed in West Wardsboro' in 1875, and another near Brattleboro' in 1885. (See *Forest and Stream*, v, 1875, p. 300, and XXV, 1885, p. 306.)

Virginia.—A specimen was received from Capon Springs in 1850 by the National Museum. Mr. Hallock makes the very interesting statement that the Puma is found in the Dismal Swamp. I find no other reference to its occurrence in the low coast lands of the South Atlantic States, except in Florida. (*Sportsman's Gazetteer*, 1877, p. 167.)

Washington.—Dr. Cooper pronounced it very common in 1859. He mentions one captured while swimming in the Columbia River. (Nat. Hist. Washington Territory, 1859, p. 74.) A specimen collected by Dr. George Gibbs in 1855 was received from Fort Steilacoom by the National Museum. Dr. Snedley, in 1859, reported the species especially abundant in Cowlitz, Chehalis, and Nisqually Counties. (L. c., p. 103.) There are references to its occurrence in Cedar Mountain, Black River, and White River, at recent dates. (See *Forest and Stream*, XXX, 1888, p. 308; *American Field*, XXI, 1884, p. 302.)

West Virginia.—I am in possession of a letter from Mr. W. H. Hill, of Gurley Bridge, to Mr. Randolph I. Geare, dated August 14, 1890, in which it is stated that six or more Pumas have been killed in Webster County during the last eight or ten years, and that it has been ascertained from reliable sources that Pumas now infest the wilds of the Alleghany range in the Counties of Randolph and Webster, and are also to be found in Logan County, near the Cumberland range. Individuals have also been taken in the Counties of Randolph and Greenbrier.

Wisconsin.—Lapham, on the authority of Dr. Hoy, refers to it as occurring in northern Wisconsin, in his catalogue of the animals of the State, published in 1852. (Fauna and Flora of Wisconsin, prepared for the State Agricultural Society, p. 339.)

Wyoming.—Dr. J. A. Allen, in 1874, writes of the Puma as follows: "More or less common in the timber of the Medicine Bow Range, as it is also throughout the timbered portions of the Rocky Mountains." (Bull. Essex Inst., VI, 1874, pp. 43-66.) According to Mr. Hallock it was to be found, in 1877, in Laramie and Sweetwater Counties. (*Sportsman's Gazetteer*, 1877, p. 181.)

The Puma occurs throughout Central America* and in all parts of South America to the Straits of Magellan.†

The first mention of the Puma appears to be the remark in the letter of Columbus regarding his fourth voyage in 1502. In the narrative of his exploration of the coast of Honduras and Nicaragua he writes: "I saw some very large fowls (the feathers of which resemble wool), lions [*leones*], stags, fallow-deer, and birds.‡

There are also references to the occurrence of the Puma in North America of very early date in the narratives of Laudonnière, Hariot, Coronado, Hawkins|| and others.

The Puma, regarded as a species, possesses in a remarkable degree the power of adapting himself to varied surroundings. He endures severe cold during the winter in the Adirondack Mountains§ and other parts of our northern frontier, and tracks his prey in the snow. He is equally at home in the hot swamps and canebrakes along the river-courses of our southern States.¶ In South America he inhabits the treeless, grass-covered pampas as well as the forests.** In the Rocky Mountains, as I am informed by Mr. William T. Hornaday, he ascends to the high altitudes in which the mountain sheep are found. Mr. Livingston Stone saw tracks of the Puma on the summit of Mount Persephone in California, at an elevation of 3,000 feet.†† Similarly, Darwin states that he saw the footprints of the Puma on the cordillera of central Chili, at an elevation of at least 10,000 feet.‡‡ According to Tschudi,

* For list of localities see Alston in Godman & Salvin's, *Biologia Centrali-Americana, Mammalia*, 1879-1882.

† Burmeister, *Description Physique de la République Argentine*, III, 1879, pp. 130-132.

‡ Hakluyt Soc., II, 1847, p. 193.

This letter was written in Jamaica, 1503, and according to R. H. Major appears to have been first published in Venice in 1505, although Pinelo and Ferdinando Columbus asserted that it was published elsewhere in Spanish as well.

|| *Mexico*.—"Here are many sorts of beasts, as Beares, Tigers, Lions, Porkespicks," etc. Coronado, *Relation of Mexico*, 1540. (Hakluyt's *Collection of Voyages*, III, 1810, p. 369.)

Florida.—"It is thought that there are lions and tygres as well as unicornes; lions especially; if it be true that is sayd, of the enmity betweene them and the unicornes; for there is no beast but hath his enemy, as the cony the polecat, a sheepe the wolfe, the elephant the rinoceros; and so of other beasts the like: insomuch that whereas the one is, the other can not be missing." (John Hawkins, *First Voyage to the West Indies*, 1562, l. c., p. 616.)

Laudonnière mentions "a certaine kinde of beast that differeth from the Lyon of Africa." (*Four Voyages by Certain French Captains into Florida (1561-1565)*, l. c., p. 369.)

Virginia.—"The inhabitants sometime kill the Lion, and eat him." Thos. Hariot, "A briefe and true report of the new found land of Virginia" (1587). (l. c., p. 333.)

§ See Dr. C. H. Merriam, *Trans. Linnean Soc.*, New York, I, 1882, p. 32.

¶ Audubon and Bachman, *Quadrupeds of North America*, II, 1851, p. 312.

** Azara, *Quadrúpedos del Paraggiay*, I, 1802, p. 120.

†† *Amer. Naturalist*, XVII, 1833, p. 1185.

‡‡ *Voyage of the Beagle*, p. 269.

the Puma is found in Peru in the highest forests and even to the snow-line (though seldom here).* A writer in the *Encyclopædia Britannica* states that "in Central America it is still common in the dense forests which clothe mountain ranges as high as 8,000 or 9,000 feet above the sea-level."

In these different regions the Puma always selects for his abode such spots as afford some shelter, but we find him in the thickets and copses, rather than in the great forests.† "Those panthers that we have observed," writes one of the naturalists of the Mexican Boundary Survey, "were always found in the most solitary places, generally where there were thick bushes, and in the vicinity of rocky spots, affording caverns for secure concealment, and in which to bring forth their young."‡

The Puma seeks his prey chiefly at dawn and twilight and under cover of night, but he also sometimes hunts by day. The different species of American deer are his principal quarry, but he preys also upon smaller mammals. He will even feed upon the different species of American porcupines, despite their quills, which lacerate his mouth and face.§ Audubon and Bachman state that raccoons and skunks, as well as birds, form a part of his food, and that he will eat carrion when hard pressed by hunger.¶ To this list Brehm adds the South American Coati,** Agouti †† and Paca, ‡‡ and the Rhea, or American ostrich.‖‖ Drs. Coues and Yarrow state that in New Mexico and Arizona the Puma kills hundreds of wild turkeys and has indeed broken up many of the former breeding-places.‡‡ Pennant asserts that the wolf serves the Puma for prey. This is improbable. Nevertheless, he reports that there was in the Museum of the Royal Society of London the skin of a Puma which was shot shortly after it had killed a wolf.¶¶

Of the larger domestic animals, such as the horse and cow, the Puma

* *Fauna Peruana*, 1844-'46, p. 132.

† Ninth ed., xx, 1886, p. 105.

‡ Burmeister, *Description Physique de la République Argentine*, III, 1879, p. 130.

¶ Kennerly, *U. S. and Mex. Bound. Survey*, Pt. II, *Mammals*, 1859, p. 6.

§ De Kay, *Zoology of New York*, Pt. I, *Mammalia*, 1842, p. 49; Merriam, *Trans. Linnean Soc.*, New York, 1, 1882, p. 30.

¶ Audubon and Bachman, *Quadrupeds of North America*, II, 1851, p. 307.

** *Nasua narica*.

†† *Dasyprocta aguti*.

‡‡ *Coelogenys paca*.

‖‖ Brehm, *Thierleben*, *Säugethiere*, I, 1876, p. 382.

‡‡ Report, *Wheeler's Survey*, v, *Zoology*, 1875, p. 40.

¶¶ Pennant, *History of Quadrupeds*, 3d ed., 1, 1793, p. 290. Jardine also mentions this skin. See *Naturalists' Library*, xvi, p. 127. Pennant states also, in the place cited, that the Puma leaps upon the moose, as well as on other wild animals, which is improbable.

attacks only the young, but he will carry away a full-grown sheep from the fold,* and not unfrequently preys upon the llama in South America.†

In the less settled portions of America the Puma has proved at times a great hindrance to stock raising.‡ Kennerly states that in Sonora, Mexico, it kills many colts and calves, and is poisoned with strychnine by the herdsmen.§ Mr. C. H. Townsend remarks in 1887: "It is practically impossible to raise colts in the Shasta County hills, California, on account of these pests. They destroy many hogs and young cattle also, but do not present so serious an impediment to the keeping of these animals as in the case of horses." || I have recently received similar reports from other sources.

The Puma does not ordinarily attack men, but on the contrary when surprised attempts to flee from them. Nevertheless it seems probable that some individuals, when strongly pressed by hunger, or moved by other unusual circumstances, may be emboldened to make such attacks. Hensel affirms that such is the case.¶ Darwin states that he had heard of two men and a woman who were killed by Pumas in Chili.** McMurtrie mentions that a woman was killed by a Puma in Pennsylvania, January, 1830.†† That the Puma sometimes kills the hunter who has

* See Azara, *Quadrúpedos del Paraguay*, 1, 1802, p. 208; Williams, *History of Vermont*, 1794, pp. 86-87.

† It appears that the Puma received permission to kill llamas from the god Coniraya. The tale of Coniraya's pursuit of the beautiful Cavillaca is thus narrated by Avila: "The god went on and met a lion, which in reply to his question told him that he was very near the goddess Cavillaca, and that if he made a little more haste he would overtake her. This good news pleased the sage, and he blessed the lion saying: 'You shall be respected and feared by all, and I assign to you the office of punisher and executioner of evil doers; you may eat the llamas of sinners, and after your death you shall still be honored; for when they kill you and take your skin they shall do so without cutting off the head, which they shall preserve, with the teeth, and eyes shall be put in the sockets so as to appear to be still alive. Your feet shall remain hanging from the skin with the tail, and, above all, those who kill you shall wear your head over their own, and your skin shall cover them. This shall they do at their principal festivals, so that you shall receive honor from them. I further decree that he who would adorn himself with your skin must kill a llama on the occasion, and then dance and sing with you on his back.'" <Narrative of Errors, False Rites, etc., of the Indians of Huarochiri, collected by Francisco de Avila. Hakluyt Soc., XLVIII, 1873. (Edited by C. R. Markham.)

‡ Burmeister, *Descr. Physique de la Répub. Argentine*, III, 1879, p. 131.

§ U. S. Mex. Bound. Survey, Pt. II, Mammals, 1859, p. 5.

|| Proc. U. S. National Museum, 1887, p. 189. See also *Forest and Stream*, xxxv, 1890, p. 312.

¶ *Fide* Brehm, *Säugethiere*, 1, 1876, p. 382.

** *Voyage of the Beagle*, p. 269.

†† Commenting on Cuvier's statement, he remarks; "That this animal, our common panther, does not always confine itself to sheep, etc., is well known, and has lately been proved, January, 1830, by an unprovoked attack upon an unfortunate woman in Pennsylvania. The ferocious brute seized upon her as she was passing along the road, and killed her in an instant." (McMurtrie, *Cuvier's Animal Kingdom*, I, 1831, p. 115.)

wounded him is doubtless true, as any wounded animal is likely to turn upon its persecutor, but this is quite different from an unprovoked assault.*

It is the habit of the Puma to spring upon his prey from an eminence, such as a ledge of rock or a slight rise of ground. If he fails to strike his victim, he seldom pursues it for any considerable distance. In northern regions, however, he sometimes pursues the deer when they are almost helpless in the deep snow.† It was reported to Darwin that the Puma killed its prey by jumping upon the shoulder and turning the head back with its paw until the vertebræ of the neck are broken or dislocated. Azara ascribes the same habit to the Jaguar.‡

The female brings forth her young in some secluded spot. In the Adirondacks, according to Dr. Merriam, "the lair is usually in a shallow cavern on the face of some inaccessible cliff or ledge of rocks."|| "In the southern States," says Audubon, "where there are no caves or rocks, the lair of the Cougar is generally in a very dense thicket or in a cane-brake. It is a rude sort of bed of sticks, weeds, leaves, and grasses or mosses, and where the canes arch over it, as they are evergreen, their long pointed leaves turn the rain at all seasons of the year."§

From two to five young are born at a time. Bartlett states that in captivity the number is usually two, but sometimes one. Their young are reared without difficulty.¶ They are brought forth at the close of winter or early in spring in the Northern parts of the United States,|| and at the beginning of summer in South America, that is at the end of December.** The period of gestation is from thirteen to fourteen

* Catesby, in a generally judicious account of the Puma, remarks: "The smallest cur, in company with his master, will make him take to a tree, which they will climb to the top of with the greatest agility. The hunter takes this opportunity to shoot him, though with no small danger to himself, if not killed outright, for descending furiously from the tree he attacks the first in his way, either man or dog, which seldom escape alive." (Natural History of Carolina, II, 1743, p. xxv.)

† Merriam, l. c., p. 32.

‡ Darwin, *Voyage of the Beagle*, p. 269; Azara, *Quadrúpedos de la Paraguiay*, I, 1802, p. 93. These statements are in a measure corroborated by reliable writers on Asiatic mammals, who affirm that the tiger frequently kills its prey in the same manner. Sterndale remarks, however, that as the attack is usually made in the evening or at night, and very suddenly, it is not easy to determine the exact manner in which the prey is killed. He mentions having seen five cattle, killed by tigers, which had the neck dislocated. (Sterndale, *Mammals of India*, 1884, p. 174.) Darwin saw skeletons of guanacos with the neck dislocated, which were believed to have been killed by Pumas.

|| Merriam, l. c., p. 35.

§ Audubon and Bachman, l. c., p. 311.

¶ Proc. Zool. Soc., London, 1861, p. 141.

** Burmeister, l. c., p. 118.

weeks.* The young first open their eyes when nine or ten days old. Their total length when born is from 10 to 12 inches.† Dr. Merriam is of the opinion that in the Adirondacks the Puma does not breed oftener than once in two years.‡

The age which the Puma attains in the state of nature is unknown. It may be remarked, however, that one lived in the Zoological Garden at Frankfort, Germany, sixteen years, one month, and nine days. It died from injuries received by accident, October 13, 1878.|| Dr. W. A. Conklin states that the various species of cats live in captivity fifteen or sixteen years, but show signs of decay at twelve years.§

Authoritative writers upon the habits of the Puma in North America agree that the adults do not commonly or frequently make use of trees except when traversing precipitous cliffs or when pursued by dogs. Under the latter circumstances they do not climb into a tree, but jump upon the nearest branch, even though it be at a considerable distance from the ground.¶ Rengger, in his *Travels in Paraguay*, however, states that both the Puma and the Ocelot climb well, and that in the forest they make their flight not only on the ground, but also by springing from tree to tree.** He tells us in another place that he once saw a Puma chase a troop of monkeys through the forest by jumping from bough to bough among the trees.†† However incredible this may at first appear, it becomes less so when we consider the wonderful denseness of the South American forests, described by Humboldt and other writers.‡‡

The Puma, like the cat, has the habit of scratching the bark of trees with its claws, for the purpose of sharpening or smoothing them. Having mentioned this habit as possessed by the Jaguar, Darwin writes: "Some such habit must also be common to the puma, for on

* Dr. W. A. Conklin (in Merriam's *Mammals of the Adirondacks*, l. c., p. 35) gives ninety-one days for a female kept in captivity in the Central Park menagerie, New York. Head Keeper Devereux Fuller reported ninety-six or ninety-seven days in the case of the Puma in the Zoological Gardens, London, in 1832. (*Proc. Committee of Science, Zool. Soc. of London*, Pt. II, 1832, p. 62.)

† Pumas living in captivity in the London Zoological Gardens bred in five instances between the years 1848 and 1867. See Selater, *Proc. Zool. Soc. London*, 1868, p. 624.

‡ Merriam, l. c., p. 35.

|| *Zool. Garten.*, XX, 1879, p. 70.

§ *Chicago Field*, XIV, p. 67.

¶ Mr. Livingston Stone states that old hunters in California affirm that the Puma is able to jump upon boughs that are more than 20 feet above the ground. (*Amer. Naturalist*, XVII, 1883, p. 1188.)

** Rengger, *Reise nach Paraguay*, 1835, p. 203.

†† Rengger, *Säugethiere von Paraguay*. *Fide* Brehm.

‡‡ It may be observed that a writer in the *Forest and Stream* newspaper affirms that he saw a Puma climb a tree that had no limbs below thirty feet from the ground, and knew of another that climbed a straight tree with no limbs below thirty-five feet. He states, however, that both individuals were of small size. (*Forest and Stream*, XXX, 1888, p. 308. See also, pp. 289 and 512.) Dr. Merriam informs us that the kittens sometimes climb trees in play. (Merriam, l. c., p. 33.)

the bare, hard soil of Patagonia I have frequently seen scores so deep that no other animal could have made them."*

Many reliable authorities are agreed that the Puma does not ordinarily emit loud cries or screams,† but Kennerly, one of the naturalists of the Mexican boundary survey, states that on one or two occasions the cry of the Puma was heard at a distance, and Schott writes as follows: "After dark his mournful note is heard resounding through the solitudes of the deserts. The note, listened to once attentively, is apt to make a deep, lasting impression. The different native names, as pronounced in Spanish, sound very appropriately to the note, and it is likely that the cry of the animal forms the base of its names. The note itself is often several times repeated, with intervals of from two to four minutes. As night advances the cry is heard but rarely."‡ He also writes: "A Puma was killed on the Rio Bravo, between Fort Duncan and Laredo. During his struggle with the hunters and dogs he raised a terrible cry, twice or thrice, to express his rage, and perhaps also to give his family the notice of danger."|| Dr. J. A. Allen reports that he once heard the Puma's cry near his camp in Montgomery, Colorado.§ Eliot likewise states that he heard the cry of the puma at night, while camping on the St. John's River, Florida. He did not, however see the animal.¶ Darwin states that the Puma does not often utter cries. He writes: "It is a very silent animal, uttering no cry, even when wounded, and only rarely during the breeding season.**"

In captivity the Puma purrs when pleased, after the manner of the cat, and the female has been heard to utter a mewling sound.††

The flesh of the Puma is eaten by certain of the South American

* Voyage of the Beagle, p. 136. Darwin is of the opinion that this practice is indulged in for the purpose of tearing away the ragged points of the claws, and not for sharpening them.

† See Merriam, c. 1., p. 37. Audubon & Bachman, l. c., p. 311.

‡ U. S. Mex. Bound. Survey, Pt. II, Mammals, 1859, p. 6.

‡ L. e.

§ Bull. Essex Inst., vi, 1874, p. 53.

¶ D. G. Eliot, Monograph of the Felidæ, 1883, p. 72. See also Snekley, Nat. Hist. of Washington Territory, 1859, p. 108.

** Voyage of the Beagle, p. 270.

†† A tame Puma was kept by Edmund Kean, the actor, as a pet. Its skeleton is now in the Museum of the Royal College of Surgeons in London. Jardine gives some particulars about this individual. "The celebrated Kean possessed one which followed him loose, and was often introduced to company in his drawing room. We have frequently been in company with the animal which served for the accompanying illustration. It was extremely gentle and playful, and showed no symptoms of ferocity to the strangers who came to see it. Its motions were all free and graceful, and it exhibited the greatest agility in leaping and swinging about the joists of a large unoccupied room in the old college of Edinburgh."

"While in London," observed Mr. Wilson, "it made its escape into the street during the night, but allowed itself to be taken up by a watchman, without offering even a show of resistance."—Naturalists' Library, xvi, p. 113.

Indians, and was likewise eaten by the natives of North America, according to Catesby.* Darwin, who tasted it himself, states that it is white in color and has the flavor of veal.† Numerous other explorers and travellers make the same comment. Azara says on this point: "I have known my peons to eat it in preference to beef, even when that meat was to be had in abundance."‡

The Puma is known under a multiplicity of English names. Among these are Panther, Painter, Cougar, Catamount, Wild Cat, American Lion, California Lion, Silver Lion,§ Mountain Lion, and Tiger.

The word *Puma* is the native Peruvian name,|| according to Garcilasso de la Vega,¶ La Condamine,** Tschudi,†† and other authors.‡‡

Cougar is an English form of the word *Couguar*, which Buffon derived by abbreviation from *Cuguacu-ara*.§§ This latter word, lengthened to *Cuguacuarana*, is, according to Markgrave, the native Brazilian name.|||| Azara, however, states that the ancient name, used by the Guarani

* Natural History of Carolina, II, 1743, p. xxv.

† Voyage of the Beagle, 1882, p. 116.

‡ Cuadrúpedos del Paraguiay, I, 1802, p. 128.

§ According to Brehm, Thierleben, Säugethiere, I, 1876, p. 381. Kirtland, in treating of the Mammals of Ohio, recognizes two species of Puma which he calls "Mountain Tiger," and "Mountain Cat," respectively. (Geol. Survey of Ohio, 1838, p. 176.)

|| Belonging to the Quichua language.

¶ Garcilasso de la Vega, Royal Commentaries, 1609, pt. 2, book 7. <Hakluyt Soc., Vol. XLV, p. 238.

** De la Condamine, Abridged Narrative of Travels through the Interior of South America. Read before the Acad. Sci. Paris, 1745. <Pinkerton's Coll., XIV. 1813, p. 246.

†† Tschudi, Fauna Peruana, 1844-1846, p. 126. It is here spelled *Poma*.

‡‡ The word occurs in several places in Garcilasso de la Vega's work, and its meaning is explained. This is the earliest reference to it that I find, though there may possibly be earlier ones.

"Puma-tampu means a deposit of lions, composed of the words *puma*, a lion, and *tampu*, a depot." (Commentaries, Hakluyt Soc., XLI, 1869, p. 232.)

"The part of the city [of Cuzeo] where the house of the Fathers of the Company of Jesus now stands was called *Amaru-caucha*, or the district of Amaru, which means a very large kind of serpent. The part where they kept the lions, tigers, and bears was called *Puma-curcu*, and *Puma-chipana*, giving the name of the lion, which they call *puma*" (l. e., II, book 5. Hakluyt Soc., XLV, p. 30).

"Next [in the palace of Yuca Maneo Ceapae in Cuzeo], still following our eastern route, comes the ward called *Puma-curcu*, which means 'the beam of the lions.' *Puma* is a lion and *curcu* a beam; because they fastened the lions, which were presented to the Yuca, to large beams in that ward until they were tame and fit to be removed to the place where they were permanently kept." (L. e., II, book 7. Hakluyt Soc., XLV, p. 238.)

§§ "Le couguar, nom que nous avons donné à cet animal et que nous avons tiré par contraction de son nom brésilien *cuguacu-ara*, que l'on prononce *cougua-couare*. On l'appelle *tigre rouge* à la Guiane." (Œuvres Complètes de Buffon, edited by Richard, vol. xv, 1-26, p. 67, foot-note.)

|||| Markgrave, Hist. Rerum Naturalium Brasiliæ, 1648, lib. VI, p. 235.

Indians of Paraguay was "*Güüzará*. Others called it "Yagüá-pitá," meaning red Yagüá, or *Yagüatí* meaning white Yagüá.*

The word "Painter" is a corruption of Panther. It is unfortunate that this latter name has gained general acceptance in the United States, since the true Panther is a spotted, Old World cat, very different in appearance from the Puma.

The name Mountain Lion is not altogether inappropriate, as the Puma somewhat resembles the female Lion in color and general form.† From the earliest days the Puma has been called the Lion (*Leon*) by Spanish Americans, and the name is still used.

The names Catamount, or Catamountain, and Wild Cat have no special applicability to the Puma. They have been used by English writers to designate the European Wild Cat (*Felis catus*) and Lynxes, and by Americans have been applied to the Lynxes of this country.

Besides those names which are in common use, there are some which have been invented from time to time by various authors, and are known to zoologists as "book-names." Buffon's name *Couguar* really belongs to this class, as do also the names Brazilian Cat (die brasilian-

* Azara, *Quadrúpedos del Paragüay*, I, 1802, p. 120. In another place, (l. c., p. 91) Azara states that the word *Yagüá* originally signified a dog. (A writer in the *Encyclopædia Britannica* says "a big dog.") At the instigation of my friend Prof. O. T. Mason, Dr. A. Gatschet has kindly given me some very interesting information regarding the word *Yagüá*. "It appears," he writes, "that *agoará* was used in the Guarani language for all quadrupeds, or at least the wild ones, the dog being *yagüá* or *aguara-rati*; the wolf, *aguara-guaquí* (the large quadruped); the fox, *aguará*; the bear, *aguará-rána*. In the cognate Tupi, *jaqua* means tail, and as the initial *j* becomes deciduous, I infer that *aguará* means nothing else than 'having a tail.' Thus in Tonkawé (Texas) a large number of birds and the smaller quadrupeds are also called after their tail (*tan*) and its length or other properties."

† Some early writers, believing that the Puma was in truth the same as the Lion, were puzzled by the fact that all the skins appeared to be those of females, as they were without manes. Thus Adriaen van der Donck writes: "Although the New-Netherlands lay in a fine climate, and although the country in winter seems rather cold, nevertheless lions are found there, but not by the Christians, who have traversed the land wide and broad and have not seen one. It is only known to us by the skins of the females, which are sometimes brought in by the Indians for sale; who on inquiry say, that the lions are found far to the southwest, distant fifteen or twenty days' journey, in very high mountains, and that the males are too active and fierce to be taken." (Van der Donck, *A Description of the New-Netherlands*, 2d ed., 1656. Coll. N. Y. Hist. Soc., I, 1841, p. 167. See also De la Condamine in Pinkerton's *Collection of Travels*, etc., XIV, 1813, p. 246.)

Garcilasso de la Vega remarks of the land of the Yucas: "Lions are met with, though they are not so large nor so fierce as those of Africa. The Indians call them Puma." (Royal Commentaries, II, book 8. Hakluyt Soc., vol. XLV, 18, p. 238.)

See also Clavigero, *Hist. of Mexico*, Cullen's trans. I, 1807, p. 37.

ische Katze of Müller),* the Brown Tiger of Pennant, and the Red Tiger (*Tigre Rouge* of Barrère).†

As already stated, the Puma is called the lion (*Leon*) by Spanish-Americans, while the Jaguar is styled the tiger (*Tigre*). Early Spanish writers, however, did not always distinguish between the two, and sometimes mentioned the Puma under the name of Tiger, or used the name in some modified form, as red tiger, etc.‡ Molina states that it is called *Pagi* in Chili,§ and according to Clavigero, it was known to the Mexicans as *Mitzli*.||

The Puma is the *Felis concolor* of Linnæus.¶ This name has been adopted by subsequent authors, almost without exception. Schreber, however, has two figures of the species in his work on mammals, one of which is styled *Felis discolor*.**

Molina, in 1782, gave it the name of *Felis puma*,†† and Lesson, that of *Felis unicolor*.‡‡

* Müller, Linn., Natursyst.

† Nouvelle Relation de la France Équinoxiale, p. 166.

See also Pennant, Synopsis of Quadrupeds, German ed. by Bechstein, 1799, p. 299 (der rothe Tiger); Hall, Vierfüßs., p. 533 (der grosse americanische Tiger); Aless, Quadru., I, pl. 17 (Tigre rossa).

A note in the Encyclopedia Metropolitana (XIX, 1845, 62) states of the Puma: "It is sometimes called the Poltroon Tiger." Desmarest (Mammalogie, 1820, p. 218) also cites this name (Tigre Poltron), but I do not know its origin.

‡ See the last foot-note; also, Du Pratz, Hist. de la Louisiane, II, 1758, p. 91 (Tigre).

The Germans and the Scandinavians have adopted Buffon's name Cougar, spelled *Kuguar*.

§ Saggio Storia Nat. del Chili, 1782, pp. 295, 296.

|| History of Mexico, Cullen's trans., 1807, I, p. 37; II, p. 319.

I have made no especial attempt to trace out the native North American names of the Puma, but may mention that Kennerly gives the following native names: *Chimbica* (Cochimis of L. California); *Yutin* (Apache). Dr. Gatschet, however, does not find the latter word in the Apache language, but in Pinal Apache the name is *ntó-i-tcho* or *ntú-i-tchu*. *Tcho* or *tchu* means great. Prince Maximilian zu Wied gives the following (the spelling is German): *Mischipischú* (Ojibway), *Ingronga* (Osage), *Ingronga-sindä* (Omaha), *Schuntä-Haschka* (Mandan) ["The long tail"], *Ihtupáh-achati* (Minnitari). (Reise in Nord Amerika, p. 99.)

¶ Linn., Mantissa Plantarum, 1771, p. 522. (Fide Flower. There is no copy of this book in Washington.)

** Schreber's Säugethiere, Plate CIV, B.

†† Molina, Saggio Storia Nat. del Chili, 1782, p. 295.

‡‡ Lesson, Manuel de Mammalogie, 1827, p. 190. (Fide Eliot.)