



issued by the  
SMITHSONIAN INSTITUTION  
U. S. NATIONAL MUSEUM

Vol. 103

Washington: 1954

No. 3329

MAMMALS OF NORTHERN COLOMBIA, PRELIMINARY  
REPORT NO. 7: TAPIRS (GENUS *TAPIRUS*), WITH A  
SYSTEMATIC REVIEW OF AMERICAN SPECIES<sup>1</sup>

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All known New World species of tapirs occur in Colombia. Representatives of the Brazilian tapir (*Tapirus terrestris*) were secured in northern Colombia by the writer during his 1941-1943 tenure of the Walter Rathbone Bacon Travelling Scholarship. The mountain, or woolly, tapir (*Tapirus pinchaque*), originally described from the Bogotá region in Colombia, is found in parts of the temperate zones of Colombia and Ecuador and does not range into coastal provinces. Baird's tapir (*Tapirus bairdii*), the largest indigenous land mammal of the Neotropical region, is here recorded for the first time from South America. The author discovered the coexistence of this species with the Brazilian tapir in northwestern Colombia while conducting the Chicago Natural History Museum-Colombian Zoological Expedition (1949-1952). A woolly tapir was also taken, and it is described in this paper. A fourth species, *Tapirus indicus*, the only other living form of tapir, is Asiatic in distribution.

<sup>1</sup> Previous reports in this series have been published in the Proceedings of the U. S. National Museum as follows:

1. Squirrels, vol. 97, August 25, 1947
2. Spiny rats, vol. 97, January 6, 1948
3. Water rats, vol. 98, June 30, 1948
4. Monkeys, vol. 98, May 10, 1949
5. Bats, vol. 99, May 10, 1949
6. Rabbits, vol. 100, May 26, 1950

ERRATA: In No. 5: Bats, measurements given for *Glossophaga soricina soricina* on page 438 are misleading because of a transposition. On line 25, for "head and body" read "total length," for "tail" read "head and body," for "hind foot" read "tail," for "ear" read "hind foot," and add "ear, 15-15 mm."

### Nomenclature

The generic name *Tapirus* employed here is from Brännich, 1771. Scopoli's use of *Tapirus* in 1777 is next available. For rejection of Brisson's *Tapirus* and other Latin names in his "Regnum Animale," 1762, see Hopwood (Proc. Zool. Soc. London, vol. 117, pp. 534-536, 1947). *Tapirus* Brännich is adopted here on the same authority, a copy of the "Zoologiae Fundamenta . . .," where the generic name appears, not being available in this country. Merriam (Science, new ser., vol. 1, p. 376, 1895) employed an ingenious device in his attempt to validate *Tapirus* Brisson. He combined his own with Brisson's (Regnum Animale, p. 81, 1762) monomial specific Latin designation for "Le Tapir" to produce the custom-made binomial *Tapirus tapirus*. This combination is valid, to be sure, but dates from its originator, Merriam, 1895, and not from Brisson. The question that has arisen over the basic date of publication of the "Regnum Animale" is entirely subordinate to the fact that the system of classification employed therein is incontrovertibly non-Linnaean. Hence, Brisson's Latin names, really classical rather than technical, are not available.

Bibliographic references and citations to generic synonyms are given under the subgeneric headings. Synonymies under specific headings include references to all original descriptions and to selected taxonomic works.

### Classification

Cranial and external differences between living species of American tapirs are such as to warrant full generic rank for each of the recognized forms. Simpson (Bull. Amer. Mus. Nat. Hist., vol. 86, pp. 40-41, 1945) agreed with this in theory but found it impractical to recognize a multiplicity of closely related monotypic genera of Recent and Pleistocene tapirs. Accordingly, he grouped all species in the genus *Tapirus*. The simplified nomenclature can be justified in this special case because whatever hierarchic terminology is employed in classification interrelationships remain the same. However, the real separation between each of the species should be emphasized by adding to Simpson's system the available subgeneric names.

Living and fossil tapirs were first reviewed in a classical study by Hatcher (Amer. Journ. Sci., ser. 4, vol. 1, art. 17, 1896). Simpson (op. cit.) summarized much of the information since accumulated and described and analyzed the osteology of North American Recent and Pleistocene tapirs. Concerning modern American species, these authors agreed that *terrestris*, *bairdii*, and *pinchaque* (*roulinii*) are representative. Other named forms were regarded as either absolute synonyms or, at best, subspecies of one or another of the three species cited.

### Material

A total of 122 specimens of Recent American tapirs were studied. Included in the 84 specimens examined in the U. S. National Museum were *Tapirus terrestris* (2 skins with complete skeletons, 4 skins with skulls, 5 complete skeletons only, 17 skulls only), *Tapirus bairdii* (4 skins with skulls, 7 complete skeletons only, 41 skulls only), and *Tapirus pinchaque* (1 skin only, 3 complete skeletons only, 1 skull only). Included in the 38 specimens examined in the Chicago Natural History Museum were *Tapirus terrestris* (2 skins with complete skeletons, 1 skin with skull, 4 skulls, skins mounted in habitat group; 21 skulls only), *Tapirus bairdii* (2 complete skeletons, 6 skulls only), and *Tapirus pinchaque* (1 skin with skeleton, 1 skull only). More than 20 skulls of the Indian tapir, *Tapirus (Acrocodia) indicus*, were compared with the American species.

Capitalized color terms in the text are from Ridgway (Color Standards and Color Nomenclature, 1912).

The following abbreviations of museums are used in the lists of types:

BM	British Museum (Natural History)
CNHM	Chicago Natural History Museum
MACN	Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"
MHNP	Muséum National d'Histoire Naturelle, Paris
USNM	U. S. National Museum

### Genus *Tapirus* Brünnich

*Distribution*.—American forms are widely and nearly continuously distributed throughout most of the Neotropical region from about 30 degrees south latitude in eastern Brazil to about 20 degrees north latitude in southern México (see map, fig. 61); altitudinal range is from sea level to approximately 4,500 meters above. One species, *Tapirus (Acrocodia) indicus*, is represented in Burma, Siam, French Indochina, the Malay States, and Sumatra. Recent tapirs are survivors of a large family that originated in early Tertiary in the Palearctic region and which, at successive periods of time, occupied the land masses now intervening between Asiatic and American species.

*Habitat and habits*.—Within the geographic limits defined, tapirs may occur in practically any wooded or grassy habitat with good surface supplies of water. Forests and thickets are usual daytime retreats, while bordering exposed areas such as grass or scrublands, marshes, lakes and streams with herbaceous banks, and grassy islands are favored nocturnal feeding resorts. Streams, whether narrow, torrential watercourses of mountain gorges or wide, sluggish rivers of the interior and coastal plains are indispensable refuges of all tapirs attacked by enemies, be they of the itch-producing, external parasitic kind, or tigers, jaguars, and man.



Tapirs are omnivorous. They browse and graze. They feed on underwater organisms as readily as they pluck fruit, leaves, and twigs from shrubs and trees. They are facile of movement whether in open country or thick brushland, whether in water or under water. They are expert hill-climbers, runners, sliders, waders, and swimmers. Tapirs tame quickly and adjust themselves easily to artificial living conditions in captivity. They survive seasonal changes without apparent inconvenience when exhibited in American and European menageries. Ostensibly, there are no barriers in environment or limiting factors in tapir structure and physiology to preclude the coexistence of all three American species in a natural habitat suitable to any one of them. The Brazilian species does share a part of its range in northwestern South America with Baird's tapir. Here, both species frequent the same feeding and watering places. On the other hand, the high Andean woolly tapir (*Tapirus pinchaque*) is not recorded from lower slopes of the Andes and the other tapirs are not known to encroach upon the upper levels, or temperate zone, of the Cordilleras.

*Characters.*—External characters recorded in literature for distinguishing any one of the three living American species from the others are, for the most part, either common to all species or are juvenal and individually variable characters. In all American tapirs, entire margin or only upper borders and lower edges of ears either conspicuously trimmed or spotted with white or buff, or uniformly brown or black; lips edged white, gray or buff; cheeks paler than crown, the contrastingly paler color usually continuing onto throat, chest, and, to a varying degree, on belly; chin darker than cheeks and lips; upper parts of head and body, sides, and limbs light drab to brown in palest individuals, dark brown to black in darkest individuals. Juvenal pelage marked by a variable pattern of yellow and white spots and stripes covering entire body. Spotting persists past the first year of age and vestiges may remain (usually on limbs) in young adults. Apart from the urinogenital system, sexual dimorphism is not evident.

*Size.*—Simpson (Bull. Amer. Mus. Nat. Hist., vol. 86, p. 77, 1945) calculated the following proportional differences between Pleistocene *Tapirus excelsus* and Recent *T. terrestris* and *T. bairdii*: In linear measurements, *T. excelsus* about 1.37 times *T. terrestris* and about 1.19 times *T. bairdii*; in bulk and weight, *T. excelsus* over 2.5 times *T. terrestris* and about 1.7 times *T. bairdii*. On the basis of these figures, *T. bairdii* is about  $1\frac{1}{2}$  the linear size and nearly  $1\frac{1}{2}$  times bulkier and heavier than *T. terrestris*. The estimated difference in bulk and weight between the two species may be extreme. Length of skull and proportions of postcranial bones in present material confirm the greater average size of *T. bairdii*. *T. terrestris* averages slightly larger than *T. pinchaque*. Greatest length of skull, from gnathion to nuchal crest,

measured on a horizontal plane, may be taken as a fair index of total length and bulk of any one species. This measurement, in centimeters, is tabulated below according to the number of functional upper molars. In the tabulation, the first measurement of each tooth group is average length of skull, figures in parentheses are extremes, and the last figure shows number of specimens measured.

	M <sup>1</sup> functional	M <sup>2</sup> functional	M <sup>3</sup> functional
<i>bairdii</i> (36 specimens)-----	39 (38-41) 10	41 (40-43) 9	42 (40-44) 17
<i>terrestris</i> (41 specimens)-----	37 (35-41) 9	38 (36-41) 15	38 (36-41) 17
<i>pinchaque</i> (5 specimens)-----	35	37, 40	37, 38

It is practically impossible to arrive at better than a rough estimate of differences in size between the three living species of American tapirs. There may be as marked size differences between two individuals or populations of a given species as between each of two "comparable" individuals or populations of different species. The above tabulation shows that in *T. terrestris* there is no significant relationship between age and size after the second upper molar becomes functional. The same appears to be true for *pinchaque*, but *bairdii* continues to grow for a time after eruption of its last upper molar. A specimen of *terrestris* from Rio Grande do Sul, Brazil, with the largest skull, length 415 mm.,<sup>2</sup> still has the second upper molar deep in the alveolus. Another skull of *terrestris* from Pozuzo, Perú, with complete and worn dentition is only 360 mm. long. Other specimens from the same regions indicate that difference in length between the two skulls is purely individual. Importance of individual variation in estimating size differences between species may also be demonstrated. A fully adult specimen of the larger *bairdii*, from Tiger Hill, C. Z., has a combined head and body length of 193 cm., while a "comparable" individual of the smaller *terrestris* from Mato Grosso, Brazil, measures 201 cm.

The few available measurements indicate that the Malay tapir, *Tapirus indicus*, averages slightly larger than *T. bairdii*.

### Subgenus *Pinchacus*<sup>3</sup> Gray

*Cinchacus* [sic] Gray, Hand-list of the edentate, thick-skinned, and ruminant mammals in the British Museum, p. 34, 1873 (typographical error for *Pinchacus*; genotype by monotypy, *Tapirus leucogenys* Gray=*Tapirus pinchaque* Roulin).

*Included species*.—*Tapirus pinchaque* Roulin.

<sup>1</sup> Actually, in *terrestris* the greatest skull length, 420 mm., is of a menagerie specimen. This individual died at the age of 32 years after living 27 years in the National Zoological Park, Washington.

<sup>2</sup> The name "*Cinchacus*" originally proposed by Gray is so obviously a typographical error that it is quite permissible, according to article 19 of the International Code of Zoological Nomenclature, to emend the spelling to *Pinchacus* in conformity with both the etymology and the author's intent.

*Distribution.*—From upper subtropical and temperate zone forests into bordering "páramos," or grasslands, of the Andes in Colombia, Ecuador, and possibly in northern Perú and western Venezuela (Sierra de Mérida). (See map, fig. 61.)

*Characters.*—Head flattened dorsally, without mane; proboscis short and comparatively delicate; pelage long, coarse, thick, the skin well covered except usually on rump which may be marked by one or two patches of abraded pelage, or callouses in old adults; hoofs elongated, each longer than wide. Dorsal contour of skull flattened (fig. 58, *c*); median frontal line on about same horizontal plane as nasals and roughly parallel to horizontal plane of maxillary tooth row; superior parietal ridges approximating to form a low sagittal crest marked by a longitudinal groove (fig. 59, *c*) that tends to obsolescence in old individuals; ossification of mesethmoid cartilage not extending beyond tips of nasals; exposed dorsal surface of maxilla as in *Tapirus* but may be flattened mediolaterally, maxillae somewhat less divergent from each other than in *Tapirus*; posterolateral maxillary process as in *Tapirus*, overlying frontal process and not entering into composition of inner lateral wall of narial meatus; posterolateral margin of premaxilla slightly, entirely, or not at all embraced laterally by outer anterior border of maxilla; nasals as in *Tapirus* but more elongate, descending process more delicate. First upper premolar with or without cinguloid shelf extending anteriorly from protocone (fig. 60, *a, b*); upper incisors distinctly opisthodont.

*Remarks.*—Cranial contours of the mountain tapir show least departure from primitive lines; cranial characters generally, and particularly those associated with the comparatively little-developed proboscis, are less specialized than in other Recent species; dentition, as manifested by the first upper premolar, is variable. Ecuadorian specimens show the simple condition, with cinguloid shelf absent, while the only authentic Colombian skull examined shows the premolar as in true *Tapirus*.

Distribution of *Pinchacus* points to its prior arrival into South America and at a period when a temperate climate prevailed at sea level in equatorial latitudes. It inhabits an area representing part of the original Colombian Central Land Mass, the South American side of the intercontinental land bridge where Tertiary mammals entering from North America established foothold. Present restriction of *Pinchacus* to the Colombian Central Land Mass, now the temperate zone of the bulk of the Venezuelan, Colombian, and Ecuadorian Andes, probably is the result of an inherited urge for sustenance in cooler climates pari passu with increasing rise in height of the Andes above sea level and rising temperatures at sea level. Newly established tropical zone habitats at the base of the Andes were invaded subsequently by other kinds of tapirs.



*Tapirus pinchaque* Roulin

(Woolly, Andean, or mountain tapir, "danta lanuda" or "danta cordillerana")

*Le Pinchaque* Cuvier, Ann. Sci. Nat., Paris, ser. 2 (Zool.), vol. 17, p. 110 (pp. 107–112), 1829 (advance notice with description and comparisons of the "pinchaque" of Roulin).

*Tapir pinchaque* Roulin, Ann. Sci. Nat., Paris, ser. 2 (Zool.), vol. 18, p. 46, pls. 1, 2, figs. 1–3, 1829.—Goudot, Compt. Rend. Acad. Sci., Paris, vol. 16, p. 331, 1843 (Las Juntas, Rfo Combeima, southern foot of Mt. Tolima, Colombia, altitude, 1,918 meters; description, habits; tracks seen between 1,400 and 4,400 meters above sea level).—Blainville, Ostéographie, text, vol. 4, fasc. 19, p. 22, 1846 (osteology).

*Tapirus pinchaque*, Hunter, The natural history of the quadrupeds of Paraguay . . . (translated from the Spanish of Felix de Azara), vol. 1, p. 113, 1838, Edinburgh (ref.).

*Tapirus pinchacus* [sic], Gray, Proc. Zool. Soc. London (1867), p. 884, 1868; ibid., (1872), p. 484, 1872 (original description quoted; bibliography; synonymy).—Blainville, Ostéographie, text, vol. 4, fasc. 19, p. 51, 1846 ("T. roulini Fischer," in synonymy), atlas, vol. 4, pl. 3, 1846 (skull of type; skull of specimen collected by Goudot in Colombia).—Döderlein, Ueber das Skelett des *Tapirus Pinchacus*, Inaugural-Dissertation, 1877 (osteology; distribution).

*Tapirus* [Roulinii] Fischer, Synopsis Mammalium, Addenda, p. 604 [sic=406], 1830 (new name for *Tapir pinchaque* Roulin).

*Tapirus roulini* [sic], Selater, Proc. Zool. Soc. London (1870), p. 51 and footnote, 1870 (report of specimen seen by Robert A. White on Volcán de Puracé, Cordillera Central, Colombia, altitudinal range reported as between 3,500 and 4,200 meters above sea level; "the first Latin name applied to this tapir appears to be *roulini* [sic] Fischer"); ibid., (1872), p. 604, fig. 2 (nasals), 1872 (skull collected by Buckley, undoubtedly in Ecuador).—Hatcher, Amer. Journ. Sci., ser. 4, vol. 1, p. 173 and text, pl. 4, figs. 2, 2a, pl. 5, fig. 2, 1896 (cranial characters, comparisons, phylogeny, synonymy: *Pinchacus villosus*, *leucogenys*, *aenigmaticus* [=terrestris], *pinchaque*).—Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 44, 1916 (synonymy: *pinchaque*, *villosus*, *leucogenys*, *enigmaticus* [sic=terrestris]; specimens from Suñac and "Assuay," Ecuador).—Simpson, Bull. Amer. Mus. Nat. Hist., vol. 86, pp. 39–80, pl. 10, fig. 2, 1945 (cranial and dental characters, comparisons, phylogeny).—Crandall, Animal kingdom, Bull. New York Zool. Soc., vol. 44, No. 1, 1951 (description of live animal in captivity).

*Tapirus roulinii*, G. M. Allen, Extinct and vanishing mammals of the Western Hemisphere, p. 404, 1942 (part, not description; Department of Santander, Colombia, 8,000–10,000 feet altitude; Cordillera de Llanganates, Cordillera Oriental, Ecuador, 14,000 feet altitude).

*Rhino* [choerus] *villosus* Wagler, Natürliches System der Amphibien . . . , footnote 2, p. 17, 1830 (name proposed for "*le Pinchaque*" Cuvier=*Tapir pinchaque* Roulin).

*Tapirus villosus* Wagner, in Schreber, Die Säugthiere in Abbildungen nach der Natur, mit Beschreibungen, vol. 6, p. 392, pl. 319b, 1835 (new name for *Tapir pinchaque* Roulin).—Tschudi, Untersuchungen über die Fauna Peruana, Therologie, pp. 213, 215, 1844 (description, distribution in Perú).

*[Tapirus] andicola* Gloger, Gemeinnütziges Hand- und Hilfsbuch der Naturgeschichte . . . , vol. 1, p. 124, 1842 (new name for *pinchaque* Roulin).  
*Tapirus leucogenys* Gray, Proc. Zool. Soc. London (1872), p. 488, pl. 21, 1872 (type locality, "Ecuador, on the Cordilleras at Sunia and Assuay").—Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 44, 1916 (type from "Assuay"; listed as synonym of *roulinii*).

*Types*.—Of *pinchaque* Roulin, adult male, skull only, MHNP, collected by Roulin; of *leucogenys* Gray, adult male lectotype (designated by Lydekker, *supra cit.*), skin and skull mounted, BM 72.1.24.3-4 (1577 b), collected by Clarence Buckley.

*Type localities*.—Of *pinchaque* Roulin, Páramo de Sumapaz, Cordillera Oriental, south of Bogotá, extreme southern part of Department of Cundinamarca, Colombia; of *leucogenys* Gray, Páramo del Azuay, Cordillera Oriental, southern Ecuador (restricted by Lydekker, *supra cit.*).

*Distribution*.—Generally as for the subgenus; actual specimens recorded in scientific literature were taken only in the Cordilleras Oriental and Central of Colombia and the Cordillera Oriental of Ecuador, from 5 degrees north latitude (Mt. Tolima) to about 4 degrees south latitude (Azuay) (see map, fig. 62); altitudinal range between 2,000 and 4,400 meters. Carriker (in G. M. Allen, *supra cit.*) reported tapirs common at altitudes from 8,000 to 10,000 feet in the Cordillera Oriental, Department of Santander, Colombia, at the Venezuelan border, about 7 degrees north latitude. No signs of *T. pinchaque* were seen by the writer in the comparatively low Sierra de Perijá, the extension of the Cordillera Oriental north of Santander, and the species is unknown in the Colombian Cordillera Occidental. Tschudi (*supra cit.*, p. 215) recorded the woolly tapir from the upper forest zone of the Peruvian Andes at elevations between 7,000 and 8,000 feet. This report, never since confirmed, was based on testimony of natives who killed the animal in "mittleren Peru in der Ceja von Comas, Huancavelica etc." Published records of tapir tracks noted in the Andes at elevations in the neighborhood of 1,500 meters above sea level may refer to any species, although no museum specimens of tapir have actually been collected anywhere within 300 meters of this altitude.

*Characters*.—Those given for the subgenus. Some general external characters are mentioned under the generic heading. Skin of adult female from Río Majuas, Colombia, collected by the writer in 1951, is blackish brown on back, sides of body, upper parts of limbs, and tail; pelage of rump on either side of middorsal line abraded; individual cover-hairs of dorsum 1 to 1½ centimeters long, with very fine, crinkly, brown tips, black basally; hairs on sides of body and chest become progressively longer to approximately 3 cms. with basal portions



brown; long, crinkly wool-hairs sparsely present on sides and underparts; guard-hairs scattered, slightly stiffer than cover-hairs and 1 to 2 cms. longer; hairs of lower parts of limbs short, harsh, black with fine brown tips. There is a thin sprinkling of white hairs over all dark parts of body. Head is blackish brown dorsally, with whorl on forehead; ear well haired on outer side, anterior and upper borders blackish brown, behind brown sprinkled with whitish; inner side of ear practically bare except for a thin concentration, not at all conspicuous, of whitish hairs along borders. Sides of head and neck are brownish, the hairs with gray bases; muzzle blackish brown with tip and sides strongly grizzled and sharply demarcated from narrow white band encircling mouth; underparts blackish brown, pelage of throat long, somewhat matted, that of belly shorter, and directed forward; anal region thinly haired, whitish. A pair of teats is present.

Another adult female exhibited in the New York Zoological Park is described by Crandall (Animal Kingdom, Bull. New York Zool. Soc., vol. 54, p. 3, figs., 1951) as "clothed [on body] with dense, matted hair, blackish brown in color . . . head paler. Individual hairs from the back are approximately an inch long, most of them with one or two kinks. The white fringe at the ear tips, present in all tapirs, is especially conspicuous in Panchita, because of the length and density of the hair . . . Also, the eyes are pale brown—not blue as often stated."

Skin of a third adult<sup>4</sup> is blackish brown on back, hairs black terminally, dark brown basally, the brown portion increasing progressively toward posterior end of back; sides mixed blackish and auburn, becoming nearly uniformly Tawny on belly, chest, and posterior sides of thighs; limbs blackish brown with a scattering of buffy and ochraceous hairs; rump with a nearly bald area; top of head dark reddish brown, nearly black; muzzle brown, approximately auburn; sides of face mixed brown, ochraceous and buffy; upper lip and chin buffy, throat brown; ears auburn edged with buffy to ochraceous.

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<sup>4</sup> Sex unknown, it was removed from exhibition in the halls of the U. S. National Museum in March, 1911, and preserved as skull and two flat pieces of hide. Somehow, the skin was given the same catalog number (USNM 61221) as one of two skins of *T. bairdii* formerly mounted and exhibited by the Guatemalan Commission in the Columbian Exhibition. The skull was likewise misnumbered but in September 1938 was renumbered 267894. Most likely, the specimen originated in Ecuador but it may have come from Colombia. According to records of the Smithsonian Institution, Gen. S. A. Hurlbut donated skins with complete skeletons of two mountain tapirs he secured in Tolima, Colombia. The skeletons were entered in the Mammal Division "bone" catalog on November 11, 1871, as numbers 11883 and 11884. There is no account of corresponding skins, if ever accessioned. In 1872, President García Moreno of Ecuador presented through the U. S. Minister to Ecuador, the Hon. E. Rumsey Wing, a complete skeleton of mountain tapir. The specimen is entered in the "bone" catalog as No. 12759. However, according to the Annual Report of the Smithsonian Institution for 1873 (p. 47), a mounted specimen was also donated by President García Moreno. A "skin" catalog entry in 1874, No. 11869, is of a mounted "*Tapirus Roulini*" without further data, but almost certainly the specimen now at hand.

*Measurements.*—Of the type specimen, fully adult male with worn dentition (ex Roulin, *supra cit.*, p. 32): Total length, 5 ft., 6.5 in., in old French system, or approximately 1,800 mm.; height at withers, 2 ft., 9 in., or about 900 mm.; length of forefoot, 1 ft., 4 in., or about 433 mm.; hind foot slightly shorter; circumference of upper foreleg, over 16 in.; circumference of upper hind leg considerably less; weight, completely eviscerated, between 240–250 French pounds. Of the fully adult female, from Río Majuas, upper Río Magdalena Valley, Huila, Colombia, 2,700 meters altitude: Head and body, about 2,000 mm.; tail, 50 mm.; hind foot (approx., from skeleton) 310 mm.; ear, 170 mm.; height at withers (approx., from skeleton) 870 mm.; height at rump (approx., from skeleton) 910 mm.; weight, 583 pounds (including fetus of approximately 10 pounds). Of “Panchita,” adult female, on 21 November, 1951, age between  $3\frac{1}{2}$  and 4 years, measurements according to Lee S. Crandall, General Curator of the New York Zoological Park (in litt.): “Tip of nose to base of tail, 6 ft. [1,829 mm.]; tail, 2 in. [51 mm.]; height at shoulder, 2 ft.,  $7\frac{1}{2}$  in. [80 mm.]; height at hips 2 ft.,  $9\frac{1}{2}$  in. [851 mm.]; greatest circumference, 4 ft., 3 in. [1,295 mm.].” At reported age of  $2\frac{1}{2}$  years, Panchita weighed 223 pounds.

*Remarks.*—The abraded, bald, or calloused areas of the rump are evidently consequences of the tapir’s habit of sitting or reclining on either side of its rump and from scrubbing the affected areas against rocks, gravelly ground, and tree trunks to relieve itching. The large size and quantity of ticks attached to all species of tapirs is notorious. Similar abrasions of the rump in short and thinly haired species living in tropical lowlands where rocks are rare could easily escape detection. Goudot (Compt. Rend. Acad. Sci., Paris, vol. 16, p. 331, 1843) reports that native hunters attribute the peculiarities of the rump to the animal’s proclivities for sliding downhill in, presumably, a sitting posture. This explanation need not be given serious consideration. No bald spot or abrasion appeared on the rump of the young adult female tapir killed by Goudot in the Colombian Cordillera Central and none was present on the type of *T. leucogenys* Gray. On the other hand, abrasions mark the rumps of the specimens described in the preceding section, and were present in two live woolly tapirs that arrived at the New York Zoological Park (see below). Both individuals were hand raised from the very young, spotted-and-striped stage. Neither of them had been exposed to conditions of life conducive to downhill rump sliding.

Color of upper border of ear is variable. The female from Majuas, Colombia, described above and the two males observed by Roulin lack white on upper borders of the ears. Ears of the type of *leucogenys* Gray are described as “with scarcely any indication of white edges.”

All other specimens of woolly tapirs of which external characters are known and recorded or described herein have white ear tips.

In skinning the woolly tapir taken in Colombia, the writer was impressed by its comparatively thin hide. Hides of the Brazilian, Baird's, and Indian tapirs are notoriously thick and range in thickness in the order named, that of the last the heaviest. Characteristic extra thickness of hide of nape in these species is altogether absent in the maneless *T. pinchaque*. The Indian tapir with maximum thickness of hide offers a deep armor where most vulnerable to the tiger's fangs. Hide of nape combined with mane in Brazilian and Baird's tapirs are equally good fenders against the smaller-toothed and weaker-jawed jaguar. Mountain fastnesses of the woolly tapir are rarely, if ever, visited by jaguars. Mountain lions (*Felis concolor*) occur within the range of *T. pinchaque* but rarely attack any wild animal larger than a brocket (*Mazama*). Bears (*Tremarctos ornatus*) sometimes prey on woolly tapirs but their technique of attack, distinct from that of cats, gives no special advantage to quarry with a well-protected nape.

Tapirs eat anything edible and a surprisingly large amount of material such as woody twigs and mud, which is not generally regarded as edible. However, in any given habitat the bulk of the tapir's diet consists of green shoots of the commonest browsing plant. Stomachs of woolly tapirs examined by the writer, by Roulin, and by Goudot (supra cit.) contained mostly ferns and shoots of "chusque," a trailing bamboo of the genus *Chusquea*. These are the dominant plants in many situations of the steeper, more sterile wooded slopes of the Andean temperate zone. In "páramo" zone, according to Goudot (p. 334), woolly tapirs eat tender shoots of "frailejón" (*Espeletia*) as well as those of rough grasses.

The word "pinchaque" is, according to Roulin, the name of a large fabulous animal believed to live within the Colombian range of the woolly tapir. It may refer to the extinct Mastodon but few, if any, Colombians now use the term. "Danta" is the name applied indiscriminately by natives to all three species of tapirs. The terms woolly tapir, mountain tapir, and Andean tapir have been in use in the English language for over a century. Their Colombian equivalents are "danta lanuda" and "danta cordillerana." Ecuadorians of the eastern slope of the Cordillera Oriental distinguish the woolly from the Brazilian tapir by the names "danta negra" and "danta café," respectively. "Huagra" is the Quechua term for tapir. For lack of another word in their vocabulary, Quechua-speaking Indians of Ecuador use "huagra" also for domestic cattle.

The first specimen of *Tapirus pinchaque* to be exhibited alive outside its country of origin is "Panchita," received in the fall of 1950 by the New York Zoological Society's park in the Bronx, New York. The animal, a female, was approximately 2½ years of age at the time.



According to Crandall (Animal Kingdom, Bull. New York Zool. Soc., vol. 44, no. 1, pp. 3-8, 1951), the specimen, from the Cordillera Oriental of Ecuador, lived "as a village pet in a hamlet called Borja, sixty miles [kilometers is surely intended] to the east of Quito at an elevation of about 6,000 feet. . . . 'Panchita', as the villagers called the animal, had been captured higher up the Andean range while still in her striped-and-spotted coat of tapir infancy." The second captive tapir, a male from Papallacta, east of Quito, Ecuador, about 3,150 meters above sea level on the eastern slope of the Cordillera Oriental, was received June 19, 1952, by the same zoological park (cf. Animal Kingdom, Bull. New York Zool. Soc., vol. 45, Nos. 1, 2, 1952). It had been sent by Charles Cordier, the dealer who also secured the first live tapir.

Contrary to all ruling, previous authors have attempted to replace the first valid name, *pinchaque* Roulin, with Latin names of which the earliest and most commonly cited is *roulinii* Fischer. The specific name *pinchaque* was properly proposed in combination with the generic synonym *Tapir* as technical name for the woolly tapir. Roulin explicitly borrowed *pinchaque* from the vernacular term applied by some Colombians to a large legendary animal, possibly the extinct mastodon. In an advance notice of the discovery of the woolly tapir, Cuvier (supra cit.) discreetly used "pinchaque" strictly as the vernacular term for the new species, leaving the formal proposal of a technical name to Roulin.

Published descriptions and figures of misidentified species of American tapirs have led to some garbled accounts in current literature. External characters attributed to the woolly tapir by G. M. Allen (supra cit.) are derived from a figure and description by Sclater (Proc. Zool. Soc. London (1878), p. 631, pl. 39, 1878) of a living example of *T. terrestris* exhibited in the London Zoological Gardens. The individual was first misrepresented as "*Tapirus roulini*." Later, as the result of a post mortem, Sclater (ibid. (1885), p. 718, 1886) discovered his error and emended the name to *Tapirus americanus* (= *T. terrestris*). Tapirs secured by Buckley at Sarayacu, eastern Ecuador, and mentioned by G. M. Allen are also misidentified representatives of *T. terrestris* (cf. *antea*, in synonymy of *T. terrestris terrestris*).

An early revision of tapirs by Gray (Proc. Zool. Soc. London (1872), pp. 483-492, pls. 21, 22, 1 fig., 1872) has been a popular but confusing and misleading source of information. The work is characterized by numerous typographical errors, misquotations of authors, contradictions, and assumptions derived from specimens mislabeled as to sex and locality and mismatched as regards skins and corresponding osteological material. Gray's description of external characters of the adult *leucogenys* may be that of *terrestris*, but the skull, as analyzed,

certainly pertains to *pinchaque*. It may be necessary to restrict the type of *leucogenys* to the skull only. The young individual described by Gray as "*Tapirus leucogenys* jun., or *T. aenigmaticus*," if correctly figured (pl. 21, and skull, p. 491) must be regarded as *T. terrestris*. The skin of this specimen may be that of a mountain tapir but the skull as figured by Gray is unquestionably that of a lowland tapir. Indeed, Gray (pp. 484, 491, 492) questioned both locality data and the association of skin and skull as given by the collector, Clarence Buckley. Present determination of types and type localities of Gray's specimens follow Lydekker (Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 44, 1916).

In addition to specimens examined by the writer, there is a mounted skin and skeleton and a skull only from Ecuador in the Museum of Comparative Zoology and two specimens from the Cordillera de los Llanganates (Cordillera Oriental), Ecuador, in the Academy of Natural Sciences of Philadelphia. The species is also poorly represented in European museums.

*Specimens examined*.—Six. COLOMBIA: Huila, San Agustín, Río Majuas, upper Río Magdalena, 2,700 meters, 1 female, skin and skeleton (CNHM); no precise locality, 2 complete skeletons (USNM). ECUADOR: Cordillera de los Llanganates, upper Río Pastaza drainage, Cordillera Oriental, 1 skull (CNHM); no precise locality, 1 complete skeleton (USNM). No locality (probably Ecuador, possibly Colombia), 1 skin with skull (USNM).

### Subgenus *Tapirus* Brünnich

*Tapirus* Brünnich, Zoologiae fundamenta . . . , pp. 44, 45, 1772.—Scopoli, J. A. Scopoli . . . Introductio ad historiam naturalem . . . , p. 492, 1777.—Merriam, Science, new ser., vol. 1, p. 376, 1895 (based on "*Le Tapir*" or *Tapirus* Brisson, Regnum Animale, 1762).

*Tapir* Blumenbach, Handbuch der Naturgeschichte, ed. 1, vol. 1, p. 129, 1779 (genotype, by monotypy, *Tapir suillus* Blumenbach=*Tapirus terrestris* Linnaeus).—Zimmermann, Geographische Geschichte . . . , vol. 2, p. 154, 1780 (genotype, by monotypy, *anta* Zimmermann=*terrestris* Linnaeus).—Gmelin, Caroli a Linné systema naturae . . . , ed. 13, vol. 1, p. 216, 1788 (genotype, by monotypy, *americanus* Gmelin=*tapir* Erxleben=*terrestris* Linnaeus).

*Syspotamus* Billberg, Synopsis faunae Scandinaviae, vol. 1, pt. 1, Mammalia, Conspectus A (before p. 1), 1827 (new name for *Tapir* Gmelin).

*Rhinochoerus* Wagler, Natürliches System der Amphibien . . . , p. 17, 1830 (proposed for *Tapirus* Brisson).

*Tapyra* Liais, Climats, géologie, faune et géographie botanique du Brésil, p. 397, 1872 (emendation of *Tapirus*).

*Included species*.—*Tapirus terrestris* Linnaeus.

*Distribution*.—Tropical zones of mainland South America, from Rio Grande do Sul, Brazil, and the Chaco of Argentina, Paraguay,

and Bolivia, north through the Amazonian regions of Brazil, Bolivia, Perú, Ecuador, and Colombia; in the Guianas and Venezuela west across the Sierra de Perijá of the Cordillera Oriental into northern Colombia at least as far as the Río Atrato (see map, fig. 61); unknown from the Pacific coastal plains of South America; altitudinal range from sea level to 1,200 meters above, not certainly recorded from higher altitudes.

Occurrence of the Central American *Tapirella* in northwestern South America presupposes the probable existence of typical *Tapirus* in Central America. However, bonafide records of *T. terrestris* from Central America do not exist. A specimen of *T. terrestris*, supposedly from Talamanca, Costa Rica, was recorded by Goldman (Smithsonian Misc. Coll., vol. 69, p. 83, 1920). Later authors have cited the same record. The specimen in question, a skull only, was entered into the catalog of the mammal collection of the U. S. National Museum in 1873 or 1874 along with other skulls of *terrestris* and *pinchaque* and 14 skulls of *bairdii* from Costa Rica. No doubt, the skull, without original locality data, was inadvertently included in the catalog with the Costa Rican material of Prof. Gabb.

*Characters*.—Crest of head rising abruptly from behind base of muzzle and surmounted by a low, narrow mane that continues back to withers, sometimes to behind middle of back; proboscis well developed, fairly bulky; pelage short, stiff, and usually not completely hiding skin; hoofs short, broad, the middle always wider than long. Dorsal contour of braincase (fig. 58, *a*) decidedly convex, the median frontal line rising steeply from horizontal plane of nasals and diverging even more sharply from horizontal plane of maxillary tooth row; superior ridges of parietals united to form a single arched sagittal crest (fig. 59, *a*); ossification of vertical mesethmoid cartilage usually not extending anteriorly beyond middle of nasals, rarely to tips of nasals; maxillae divergent, exposed dorsal surface of each rounded mediolaterally, without rising process in front of plane of infraorbital foramen; posterolateral maxillary process overlying anterior frontal process and not entering into composition of inner lateral wall of nasal meatus; posterolateral margin of premaxilla forming a nearly straight or a slightly curved line, not embraced laterally by anterior margin of maxilla; nasal with thick descending sigmoid process overlapping maxilla. First upper premolar with cinguloid shelf extending anteriorly from internal cusp (fig. 60, *a*); upper incisors slightly pro-odont.

*Remarks*.—A glance at the striking sagittal crest of the skull or the head of the living animal is sufficient for distinguishing *T. terrestris* from all other Recent tapirs. The crest appears to be an extreme development of a condition that is incipient in *T. pinchaque*



where the parietal ridges almost or barely unite to form a low, inconspicuous crest. Cranial characters associated with the proboscis are, in *T. terrestris*, hardly distinguishable from those of *T. pinchaque*. Nevertheless, the proboscis of the Brazilian tapir is more developed.

*Tapirus terrestris terrestris* Linnaeus

("Tapir" of Brazilian Tupi; "danta," "anta," and "gran bestia" of Spanish and Portuguese; "huagra" of Quechua Indians of Peruvian and Ecuadorian Amazonas, "mborebi" of Paraguayan Guaraní; "maipuri" or "manipuri" of Guianan Gahibi and Macusi Indians; "bushcow" of British Guianan colonists)

*Hippopotamus terrestris* Linnaeus, *Systema naturae*, ed. 10, vol. 1, p. 74, 1758.

*Hydrochaerus tapir* Erxleben, . . . *Systema regni animalis*. . . Mammalia, p. 191, 1777 (range given: Istmo de Darién to Rio Amazonas).

*Tapir suillus* Blumenbach, *Handbuch der Naturgeschichte*, ed. 1, vol. 1, p. 129, 1779 (based on Allamand suppl. in Buffon, *Histoire naturelle*, vol. 15, Holland ed., pls. 9, 10, of male and female *T. terrestris* exhibited in Amsterdam, origin unknown, possibly Surinam).

*Tapir (Anta)* Zimmermann, *Geographische Geschichte* . . . vol. 2, p. 154, 1780, part (based primarily on the tapir of Marggraf and Linnaeus=*terrestris* Linnaeus).

*Tapir americanus* Gmelin, *Caroli a Linné* . . . , *Systema naturae*, ed. 13, vol. 1, p. 216, 1788 (primary reference, Brisson, *Regnum animale*, p. 119, 1756, the tapir of Guiana and Brazil; range given: Istmo de Panamá to Rio Amazonas).

*T[apirus] americanus*, Tschudi, *Untersuchungen über die Fauna Peruana, Therologie*, pp. 213–215, 1844 (Perú; description, habits and distribution).

*Tapirus rufus*, Fischer, *Zoognosia tabulis synopticis illustrata* . . . , vol. 3, p. 292, 1814 [ed. 3] (Guiana).

*Tapir maypuri* Roulin, *Ann. Sci. Nat. Zool. Paris*, vol. 18, p. 45, 1829 (name derived from the vernacular of Indians living between right bank of the Caroní and mouth of Amazon).

*Tapirus laurillardi* Gray, *Proc. Zool. Soc. London* (1867), p. 881, figs. A, B, 1–4, 1868.

*Tapirus terrestris laurillardi*, Lydekker, *Catalogue of the ungulate mammals in the British Museum (Natural History)*, vol. 5, p. 43, 1916 (Venezuela?).

*Tapirus leucogenys*, juv., Gray, *Proc. Zool. Soc. London* (1872), p. 490, pl. 22, fig. 1 (animal), fig. p. 491 (skull), 1872.

*T[apirus] aenigmaticus* Gray, *Proc. Zool. Soc. London* (1872), p. 490, pl. 22, fig. 1, 1872 (alternative name for "*leucogenys*, juv." Gray).—Lydekker, *Catalogue of the ungulate mammals in the British Museum (Natural History)*, vol. 5, p. 44, 1916 (type from "Sunac," synonym of "*roulini*").

*Tapirus ecuadorensis* Gray, *Proc. Zool. Soc. London* (1872), p. 492, pl. 22, fig. 2, 1872.—Thomas, *Proc. Zool. Soc. London* (1880), p. 400, 1880 (synonym of *roulini*).

*Tapirus (terrestris) peruvianus* Gray, *Proc. Zool. Soc. London* (1872), p. 624, pl. 45, 1872.

*Tapyra sabatyra* Liais, *Climats, géologie, faune et géographie botanique du Brésil*, p. 397, 1872 (name suggested as more "appropriate" for the Brazilian tapir).

*Tapirus pinchaque* ou *roulini* . . . variété *brasiliensis*, Liais, *Climats, géologie, faune et géographie botanique du Brésil*, p. 398, 1872.

- Tapirus tapirus* Merriam, Science, new ser., vol. 1, p. 376, 1895 (new combination of *tapirus* Brisson plus *tapirus* Merriam ex Brisson = *terrestris* Linnaeus).
- Tapirus americanus* Brisson, var. *mexicanae* Hagman, Archiv Rass.-Ges. Biol., vol. 5, p. 22, fig. 1, 1908.
- Tapirus terrestris mexicana*, Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 43, 1916.
- Tapirus spegazzinii* Ameghino, Anales Mus. Nac. Buenos Aires, vol. 20, p. 31, pls. 5, 6, December 1909 (separate); *ibid.*, ser. 3, vol. 18, p. 31, pls. 5, 6, 1911 (bound volume).
- Tapirus terrestris spegazzinii*, Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 43, 1916.
- Tapirus terrestris guianae* Allen, Bull. Amer. Mus. Nat. Hist., vol. 35, p. 566, 1916.
- Tapirus anulipes* Hermann, Mitt. Zool. Mus. Berlin, vol. 11, pt. 1, p. 167, 1924.
- Tapirus (Hippopotamus) terrestris*, Hatcher, Amer. Journ. Sci., vol. 1, p. 174, pl. 4, figs. 1, 1a, pl. 5, fig. 1, 1896 (cranial characters; comparisons; phylogeny; synonymy: *americanus*, *anta*, *suillus*, *laurillardi*, *equadorensis* [sic]).
- Tapirus terrestris*, Gray, Proc. Zool. Soc. London (1867), p. 879, 1868 (revision; skulls only from Brazil; Berbice and Demerara in British Guiana).—Selater, Proc. Zool. Soc. London (1873), p. 193, fig. p. 194, 1873 (Paraguay).—Osgood, Field Mus. Nat. Hist. Publ., Zool. Ser., vol. 10, p. 46, 1912 (Empalado Savanas, Zulia, Venezuela).—Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 41, 1916 (synonyms: *tapir*, *anta*, *americanus*, *suillus*, *ecuadorensis*, *tapirus* Palmer ex Brisson; type locality, Brazil or Paraguay).—Goldman, Smithsonian Misc. Coll., vol. 69, p. 83, 1920 (skull only in U. S. National Museum labeled "Talamanca, Costa Rica").—Tate, Bull. Amer. Mus. Nat. Hist., vol. 76, p. 222, 1939 (Duida and Auyán-tepui, Venezuela; British Guiana).—Simpson, Bull. Amer. Mus. Nat. Hist., vol. 86, p. 42, tables 1-8, figs. 1-4, pl. 10, fig. 2, 1945 (osteological and dental characters; comparisons; phylogeny; Mato Grosso, Brazil; Colombia; eastern Perú; British Guiana; "South America").—Goodwin, *ibid.*, vol. 87, p. 451, 1946 ("Talamanca, Costa Rica").
- Tapirus terrestris terrestris*, Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 42, 1916 (Rio de Janeiro; Taquara, Rio Grande do Sul, Brazil; "Brazil"; Berbice and Demerara, British Guiana; Surinam).
- Tapirus roulini* [sic], Selater (nec Fischer), Proc. Zool. Soc. London (1878), p. 631, pl. 39, 1878.—Thomas, Proc. Zool. Soc. London (1880), p. 400, 1880 (Sarayacu, Ecuador; striped juvenals without skulls; part of original series described by Gray as *ecuadorensis* placed in synonymy of *roulini*).—Lydekker, Catalogue of the ungulate mammals in the British Museum (Natural History), vol. 5, p. 44, 1916 (part; *enigmaticus* [sic] in synonymy only).
- Tapirus roulini* [sic, nec Fischer] x *Tapirus americanus*, Selater, Proc. Zool. Soc. London (1882), p. 311, 1882 (specimen of "roulini" same as the "roulini" of Selater, 1878, *supra cit.*).
- Tapirus dowii* (?), Selater (nec Gill), Proc. Zool. Soc. London (1882), p. 391, pl. 23, 1882 (Río Yuruari, Venezuela).
- Tapirus americanus*, Selater, Proc. Zool. Soc. London, 1885, p. 718, 1886 (correction of identification of "roulini" Selater, 1878, *supra cit.*, and "dowii" (?) Selater, 1882, *supra cit.*).—Döderlein, Ueber das Skelett des *Tapirus pinchacus*; Inaugural-Dissertation, p. 3, Bonn, 1877 (distribution).

*Types*.—Of *terrestris* Linnaeus, *tapir* Erxleben, *anta* Zimmermann, *americanus* Gmelin, *suillus* Blumenbach, none in existence, names based on bibliographic references; of *rufus* Fischer, skin and skull, MHNP; of *maypuri* Roulin, *sabatyra* Liais, none in existence, names proposed as substitutes for *terrestris* Linnaeus; of *brasiliensis* Liais, none in existence, name based on reported differences alleged to exist in a "variety" of Brazilian tapir; of *laurillardi* Gray, adult, skull only, BM 52.12.9.3. (709 g), purchased from Brandt of Hamburg in 1852; of *aenigmaticus* Gray, immature, skull only if skin mismatched, BM 72.1.24.9-10 (1577 f), collected by Clarence Buckley; of *ecuadorensis* Gray, striped juvenal, male, skin mounted, BM 72.1.24.13, collected by Buckley, original number, 13; of *peruvianus* Gray, striped juvenal, skin and skull, presumably the specimen later listed by Gray (Handlist of the Edentate, Thick-skinned and Ruminant Mammals in the British Museum, p. 33, 1873) as BM 69.3.31.9. (38 d), with skull, 72.4.11.4 (709 l), collected May 31, 1868, by E. Bartlett; of *mexianae* Hagmann, young adult, skull only, "Zoological Collection, Strassburg"; of *spgazzinii* Ameghino, adult male, skull only, MACN, collected by Carlos Spegazzini; of *guianae* Allen, young adult, skull only, AMNH 36198, collected by Leo E. Miller; of *anulipes* Hermann, young adult with persistent juvenal streaks and spots, especially on limbs, observed in zoological garden in Corumbá, Mato Grosso, Brazil.

*Type localities*.—Of *terrestris* Linnaeus, Brazil, restricted to Pernambuco by Thomas (Proc. Zool. Soc. London (1911), p. 155, 1911); of *anta* Zimmermann, here restricted to Pernambuco; of *sabatyra* Liais, same as for *terrestris* Linnaeus; of *laurillardi* Gray, "South America," here restricted to Pernambuco; of *mexianae* Hagmann, Ilha Mexiana, mouth of Rio Amazonas, Brazil; of *brasiliensis* Liais, Rio São Francisco, Minas Geraes, Brazil; of *anulipes* Hermann, neighborhood of Cuyabá, Mato Grosso, Brazil; of *spgazzinii* Ameghino, Río Pescado, Departamento de Orán, Salta, Argentina; of *peruvianus* Gray, "Peruvian Amazons," here restricted to Santa Cruz, Río Huallaga, Perú (this locality that of a specimen reported by Bartlett (*in* Gray, Proc. Zool. Soc. London (1872), p. 625, 1872) as mother of type; of *aenigmaticus* Gray, said to be "Sunia," Cordillera Oriental, Ecuador, but almost certainly from Macas, eastern Ecuador; of *ecuadorensis* Gray, Macas, eastern Ecuador; of *tapir* Erxleben, *suillus* Blumenbach, and *americanus* Gmelin, here restricted to Surinam; of *rufus* Fischer, Guiana, probably French Guiana; of *maypuri* Roulin, here restricted to the Guianas; of *guianae* Allen, Tumatumari, British Guiana.

*Distribution*.—As for the subgenus except in western Colombia where it is replaced by another race (see map, fig. 61). Tschudi (*supra cit.*) affirmed that in Perú the common tapir is confined to the



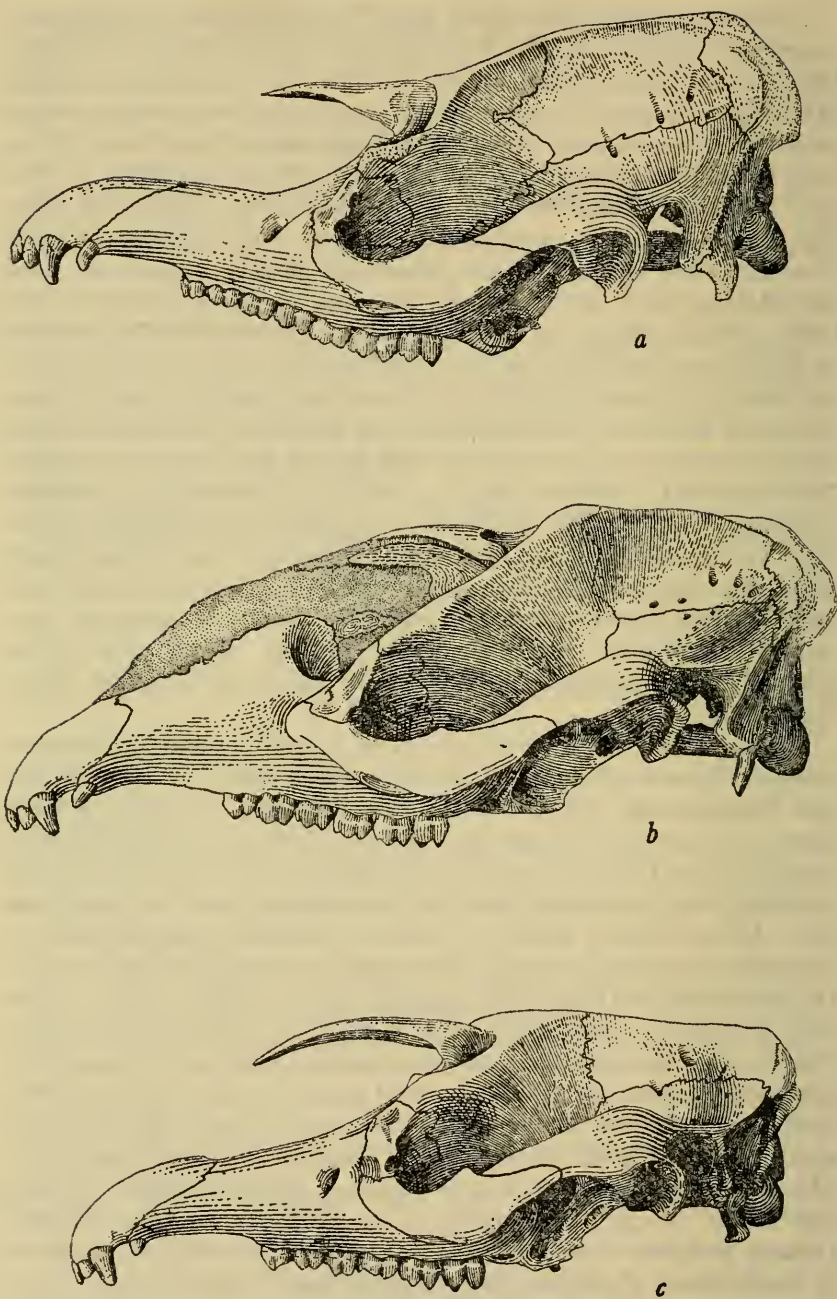
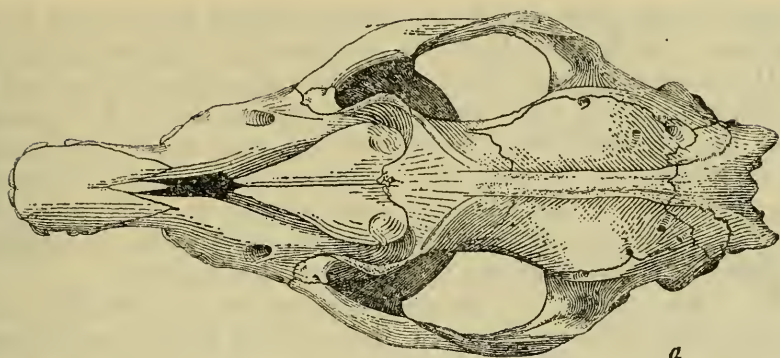
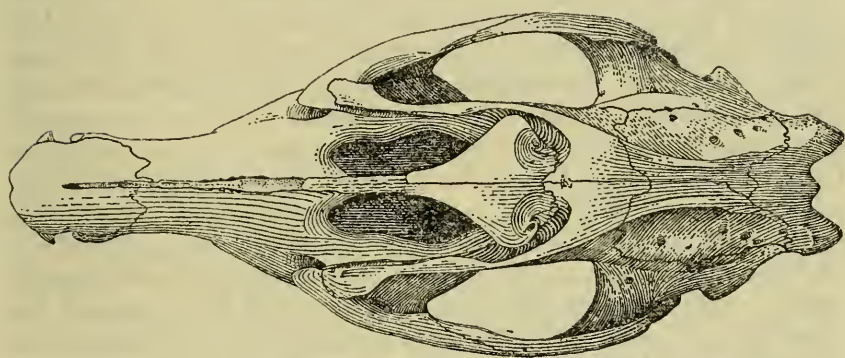


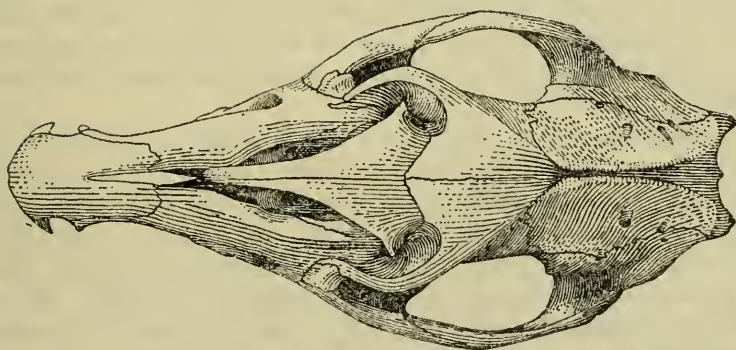
FIGURE 58.—Crania of American tapirs, lateral views  $\times \frac{1}{4}$ . *a*, *Tapirus terrestris*; *b*, *Tapirus bairdii*; *c*, *Tapirus pinchaque*.



a



b



c

FIGURE 59.—Crania of American tapirs, dorsal views  $\times \frac{1}{4}$ . a, *Tapirus terrestris*; b, *Tapirus bairdii*; c, *Tapirus pinchaque*.

tropical forest region and is never found at 3,000 feet or more above sea level. On the other hand, Tate (supra cit., p. 223) stated that on "Mt. Auyan-tepui [Venezuela] tapir tracks were abundant as high as 3,500 feet." Tate added that "on the eastern slopes of the Andes near the Pastaza River I found tracks of tapir above 7,000 feet." It is possible that the last refers to the mountain tapir of Ecuador, *T. pinchaque*. It has already been shown (p. 478) that the common tapir recorded from "Talamanca, Costa Rica," by authors, is probably South American, possibly Brazilian, in origin.

*Characters*.—Those of the subgenus; general external characters given under the generic heading. Skin of adult female from Surinam (USNM) blackish brown on back and sides, dark brown on chest, belly, and limbs; top of head blackish brown, ears blackish brown except for white edging; cheeks grizzled brown and gray, throat with more gray, neck brown, chin blackish brown; mane from front of ears to withers black. Specimen from Río Yuruari, Venezuela, figured by Sclater as "*Tapirus dowii* (?)", similarly colored but jaws strikingly white. Two skins of menagerie individuals (CNHM, received from Chicago Zoological Society) also like Surinam specimens, one practically indistinguishable, the other with less black on sides and limbs. Untanned skin from Buena Vista, Santa Cruz, Bolivia (CNHM, collected by José Steinbach), considerably paler, dorsal surface from Cinnamon-Brown to Tawny, sides paler, mixed with gray, mane blackish brown, limbs like back but becoming Prout's Brown on posterior surface. Skin of adult male (USNM) that died at 32 years of age after living 27 years in the National Zoological Park, Washington, is extremely pale; back Cinnamon-Brown mixed with gray, sides more grizzled, underparts dominantly gray to dirty white, mane Prout's Brown, hoofs unpigmented. A portion of hide from posteriormost end of body of another specimen (USNM) from same zoological park is nearly uniformly Ochraceous-Tawny on dorsal surface, sides grizzled, underparts tending to become dominantly gray; pelage of both menagerie specimens considerably thicker and longer than in any wild, living *T. terrestris*.

*Measurements*.—Of an adult male and a female, respectively, collected in Porto Campo, Rio Sepotuba, Mato Grosso, Brazil, by Leo E. Miller (ex Allen, Bull. Amer. Mus. Nat. Hist., vol. 35, p. 566, 1916): In millimeters, total length, 2,070, 2,000; tail, 60, 100; "hind foot" (digits only), 140, 140; ear, 120, 120. Of type of *spgazzinii*, collector's measurements cited by Ameghino (supra cit.): Height, 80 cm.; weight, approximately, 250 kilos. Of type of *anulipes*, living animal measured by Hermann (supra cit.): Total length, 210 cm.; height at shoulder, 77 cm.; height at rump, 83 cm. Of an adult from Perú, measurements from Tschudi (supra cit.): Head and body, 6 ft., 7 in.



(German system); tail, 3 in., 3 lines; height at withers, 3 ft., 6 in. Of an adult male from Paraguay (ex Azara, *Essais sur l'Histoire Naturelle des Quadrupèdes de la Province du Paraguay* . . . , French ed., vol. 1, p. 5, 1801): Head and body, 2,000 mm.; tail, 100 mm.; height at shoulder, 1,100 mm., at rump, 1,130 mm.; circumference of chest, 1,215 mm.; ear, from crown, 80 mm.

*Remarks.*—All evidence points to the existence of but one species of tapir east of the Andes in South America. That there is more than one subspecies within the range assigned to the typical form is likely but cannot be satisfactorily demonstrated without comparisons with the Linnaean *terrestris* from Pernambuco. Earlier characterizations based on single skulls only (*laurillardi*, *spgazzinii*, *guianae*, *mexianae*) define nothing more than individual variation. Descriptions of species based on skins of striped juvenals (*aenigmaticus*, *ecuadorensis*, *peruvianus*) and young adults with persistent juvenal striping (*anulipes*) are trivial. Except for the Guianan *rufus*, the remaining names included in the synonymy of *terrestris* are founded on bibliographic references or simply distaste for the original Linnaean designation.

Color and, possibly, size seem to be the only valid characters for distinguishing subspecies of tapirs. Unfortunately, external characters of typical representatives of *terrestris* are unknown. With their type localities now restricted, *anta* Zimmermann, *sabatyra* Liais, and *laurillardii* Gray become absolute synonyms of *terrestris*. The Rio São Francisco *brasiliensis* Liais is almost certainly identical with the Pernambuco form. Tapirs of the Guianas are extremely dark, blackish brown in general appearance, and probably distinctly darker than typical *terrestris*. The earliest available name for a Guianan tapir is *tapir* Erxleben (synonyms: *suillus* Blumenbach, *americanus* Gmelin, *rufus* Fischer, *maypuri* Roulin, *guianae* Allen). It is extremely doubtful if *mexianae* Hagmann, from the mouth of the Rio Amazonas, is recognizable. It may be referable to either the Guianan or typical form or it may represent an intergrading population not certainly separable from either of its nearest allies. In any case, the earlier named *aenigmaticus* Gray (*ecuadorensis* Gray) from Macas and *peruvianus* Gray from the Río Huallaga must be given prior consideration if an Amazonian race is recognized. The tapir of Mato Grosso, Brazil, is extremely pale grayish brown in general appearance. Three adults collected by Colin C. Sanborn and mounted in a habitat group in the Chicago Natural History Museum agree with the published description of the living type of *anulipes* from Cuyabá, Mato Grosso. The specimen from Buena Vista, Santa Cruz, Bolivia, described above, is similarly pale. This pale austral tapir is certainly distinguishable from the saturate Guianan form but comparison with

the typical Pernambuco tapir is required. The name *spgazzinii* Ameghino (*anulipes* Hermann, a synonym) is available, should recognition be indicated. Finally, the tapir of the Maracaibo basin, western Venezuela, may be referable to the northern Colombian race but it is known from skulls only and is here provisionally assigned to the "catch-all" *terrestris* Linnaeus.

*Specimens examined*.—Forty-nine. BRAZIL: Pará, 4 (CNHM); Rio Grande do Sul, 4 (USNM); Mato Grosso, 1 (USNM); Descalvados, Mato Grosso, 4 (CNHM); 50 miles northwest of Miranda, Mato Grosso, 1 (CNHM); Salto do Hua, Rio Maturaca, at Venezuelan boundary, Amazonas, 1 (USNM); Serra da Lua, Amazonas, 1 (CNHM); "Branch of Amazon," 1 (USNM); SURINAM: Moengo, 1 (USNM); Paramaribo, 1 (USNM); no precise locality, 2 (USNM). VENEZUELA: Empalado Savanas, Zulia, 1 (CNHM); Sierra de Perijá, Zulia, 1 (CNHM). BOLIVIA: near Brazilian boundary, west of São Luiz de Cáceres, 1 (USNM); Buena Vista, Santa Cruz, 1 (CNHM). PERÚ: Tingo María, Huanuco, 1 (CNHM); Pozuzo, Huanuco, 10 (CNHM); Yarinacocha, Loreto, 1 (CNHM). "COSTA RICA": 1 (USNM, a skull only, probably from Brazil). SOUTH AMERICA: 11 (USNM, 9; CNHM, 2).

*Tapirus terrestris colombianus*, new subspecies

("danta colombiana")

*Tapir* [sp.] Roulin, Ann. Sci. Nat., Paris, ser. 2 (Zool.), vol. 18, p. 35, 1829 (distribution of *T. terrestris* in Colombia: Lower Magdalena and Cauca valleys; common at Murindó, right bank of Río Atrato; in Colombian Darién but never seen on Panamanian side).

*Tapirus terrestris*, Bangs, Proc. New England Zool. Club, vol. 1, p. 90, 1900 (adult female, skin and skull from Dibulla, coastal plain north of the Sierra Nevada de Santa Marta).—Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 430, 1904 (two adults with skeletons, one spotted immature, from Cacagualito, Sierra Nevada de Santa Marta, 20 miles east of Santa Marta, altitude, 1,500 ft.).—Goodwin, Bull. Amer. Mus. Nat. Hist., vol. 87, p. 451, 1946 (Naranjo, Santa Marta region, Colombia).

[*Tapirus*] *terrestris*, G. M. Allen, Extinct and vanishing mammals of the Western Hemisphere, p. 405, 1942 (part; Dibulla, northern Colombia.).

*Holotype*.—Young adult male, skin and skull, USNM 281389; collected July 15, 1942, by Philip Hershkovitz; original number, 438.

*Type locality*.—El Salado, eastern slope of Sierra Nevada de Santa Marta, on road between Valencia and Pueblo Bello, Department of Magdalena, Colombia; altitude, 430 meters.

*Distribution*.—Tropical Zone of northern Colombia, in the Departments of Magdalena, Atlántico (?), Bolívar, Córdoba, and northwestern Antioquia; the species is not known to occur west of the

Río Atrato in the Department of Chocó and north of the Río Ranchería, in La Guajira. The subspecies may range into the Lake Maracaibo basin in Venezuela but external characters of the tapir there are unknown. (See map, fig. 62). H. H. Smith (*in* Allen, *supra* cit.) stated that on the western slope of the Santa Marta region, Magdalena, "the tapir is common from sea-coast to 6,000 feet, and probably higher as I have seen tapir tracks at nearly 8,000 feet." I saw no signs of tapir above 700 meters on the southern and eastern slopes of the Sierra Nevada de Santa Marta. In the absence of reliable records proving otherwise, the altitudinal range of the species has been determined as sea level to not over 1,200 meters above. The tapir is certainly extinct now in the Department of Atlántico and is vanishing from Córdoba.

*Characters.*—Distinctly paler throughout than Guianan representatives of *terrestris*; slightly darker, less gray than the Mato Grosso-Chaco tapir at the opposite extreme of the range of the species.

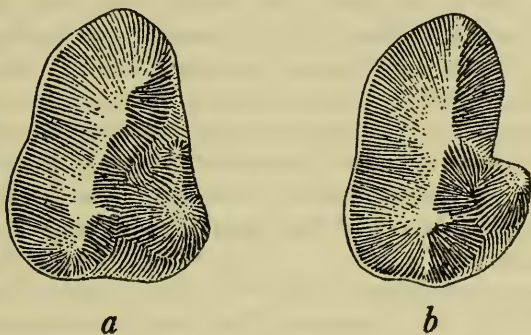


FIGURE 60.—Structural variation in first upper premolar of American tapirs,  $\times 2$ . *a*, first premolar of *Tapirus terrestris* with fully developed cinguloid shelf extending from protocone. *b*, first premolar of *Tapirus pinchaque*, specimen from Ecuador (CNHM 47051) with cinguloid shelf absent (in another specimen from Colombia, CNHM 70557, premolar is as shown in *a*).

*Coloration of holotype.*—Back thinly haired Prout's Brown, basal portions of hairs buffy to ochraceous; side paler, hairs gray basally, Prout's Brown to Cinnamon-Brown terminally; pelage of chest and belly thinner, more gray. Fore and hind limb Prout's Brown with persistent juvenal spots and patches of whitish to buffy. Snout and frontal region Prout's Brown, ear Prout's Brown rimmed with white; cheek and side of lower jaw gray lightly mixed with brown, throat and anterior part of chest less brown; chin brown, lips fringed with stiff gray and buffy hairs. Sharply defined blackish brown mane extends from forehead to well behind middle of back.

*Measurements.*—Those of the holotype followed by those of an adult male paratype (in millimeters): Total length, 1,760, 1,870;



tail, 46, 83; hind foot, 333, 350; ear, 137, 125; greatest length of skull (from gnathion to nuchal crest), 370 ( $m^2$  functional), 385 ( $m^3$  functional), zygomatic breadth, 175, 175.

*Remarks.*—Distinction of *colombianus* from trans-Andean *terrestris* is based on comparisons with the blackish-brown representatives of the species in the Guianas (= *Tapirus terrestris tapir* ?Erxleben). The skin of the adult male paratype of *colombianus* could not be preserved and was discarded. Its color was quite like that of the type. The specimen recorded by Bangs (supra cit.) was collected by W. W. Brown, Jr., in Dibulla, a humid tropical locality on the northern base of the Sierra Nevada de Santa Marta. It was examined by Miss Barbara Lawrence of the Museum of Comparative Zoology, Harvard, and found to agree with the above description of *colombianus* except for its slightly paler back, chest, and belly, more buffy cheeks, sides of lower jaws, and throat; greatest length of skull ( $M^2$  functional), 385 mm.

Herbert H. Smith (in Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 431, 1904) reported that "all the hunters near Santa Marta aver that there is a tapir, found in the mountain forest, which, in general color, resembles *T. americanus*, but has a broad white mark over the shoulder." Smith concluded that it might represent an "undescribed tapir, which differs in color from all the known American species, and resembles that of the Malay Islands." The tapir in question, if not a myth, may be a pied individual of *colombianus*.

*Specimens examined.*—Seven. COLOMBIA: El Salado, Sierra Nevada de Santa Marta, Magdalena, 2 (USNM); El Orinoco, Río Cesar, Magdalena, 2 (USNM); Río Guaimaral, Río Cesar, Magdalena, 1 (USNM); "Río Magdalena," 1 (USNM); Socorré, upper Río Sinú, Córdoba, 1 (CNHM).

### Subgenus *Tapirella* Palmer

*Elasmognathus* Gill, Proc. Acad. Nat. Sci. Philadelphia, vol. 17, p. 183, 1865 (genotype by monotypy, *Elasmognathus bairdii* Gill).

*Tapirella* Palmer, Science, new ser., vol. 17, p. 873, 1903 (new name for *Elasmognathus* Gill, preoccupied by *Elasmognathus* Fieber, 1844, a genus of Hemiptera).

*Included species.*—*Tapirus bairdii*.

*Distribution.*—From México, in Veracruz and the Istmo de Tehuantepec, east into Campeche and British Honduras, south through Guatemala into Panamá, Colombia west of the Río Cauca, and Ecuador west of the Andes (see map, fig. 61).

*Characters.*—Head flattened dorsally, a low mane, not always well defined, extending from front of ears to withers; proboscis longer and bulkier than in other American species; pelage of lowland populations thin and not completely hiding skin, in highland populations longer.

thicker, and completely hiding skin; hoofs broad, larger than in subgenus *Tapirus* with middle hoof always wider than long. Dorsal contour of skull (fig. 58, *b*) flattened or slightly rounded; median frontal line usually placed abruptly above level of nasals, roughly parallel to horizontal plane of nasals but strongly divergent from horizontal plane of maxillary tooth row; superior longitudinal parietal ridges separated by a broad flat table, not uniting to form a sagittal crest (fig. 59, *b*); ossification of vertical mesethmoid plate extending beyond tips of nasals to angle between premaxillae in old adults; outer anterodorsal surface of maxillae produced upward to form thin, parallel-sided plates embracing mesethmoid; posterolateral maxillary process projecting back to form inner lateral wall of narial meatus but not contacting nasal bone; posterolateral border of premaxilla rounded or angular and embraced by maxilla; nasal without descending process overlapping maxilla; two ossification centers of nasal sometimes persistent in fully ossified bone of adult. First upper premolar as in subgenus *Tapirus*; upper incisors orthodont.

*Remarks.*—*Tapirella* resembles the Indian *Tapirus* (*Acrocodia*) *indicus* more than it does either of its American relatives. The raised but flat crown of Baird's tapir has the same relationship to the equally broad but low crown of the Indian tapir as the crested crown of *T. terrestris* has to that of *T. pinchaque*. Cranial characters associated with the proboscis are diagnostic of *T. bairdii* when compared with other American species but, in many details, are like conditions found in *T. indicus*.

The name *Tapirella*, diminutive of *Tapirus*, is most inappropriate for the largest living species of American tapir.

### *Tapirus (Tapirella) bairdii* Gill

(Baird's tapir; "danta centroamericana")

*Tapir (Anta)* Zimmermann, Geographische Geschichte . . . , vol. 2, p. 154, 1780 (part; Yucatán and Panamá).

*Elasmognathus bairdii* Gill, Proc. Acad. Nat. Sci. Philadelphia, vol. 17, p. 183, 1865.

*Elasmognathus dowii* Gill, Amer. Journ. Sci., ser. 2, vol. 50, p. 142, 1870.

*Elasmognathus bairdii*, Hatcher, Amer. Journ. Sci., ser. 4, vol. 1, p. 175, pl. 3 (nasals), pl. 4, fig. 4a, pl. 5, fig. 4, 1896 (osteological characters; phylogeny).

*Elasmognathus bairdi* [sic], Gray, Proc. Zool. Soc. London (1867), p. 885, pl. 42, 1868 (revision; description).

*Elasmognathus dowi* [sic], Hatcher, Amer. Journ. Sci., ser. 4, vol. 1, p. 175, pl. 3 (nasals), 1896 (osteological characters; phylogeny; "might better be considered as a subspecies [of *bairdii*]").

*Tapirus (Elasmognathus) bairdi* [sic], Sumichrast, Naturaleza (México), vol. 5, p. 332, 1882 (Sierra Madre, Istmo de Tehuantepec; Chiapas, México).

- Tapirus bairdi* [sic], Selater, Proc. Zool. Soc. London (1872), p. 635, pl. 51, 1872.—Gaumer, Monografía de los mamíferos de Yucatán, México, p. 43, 1917 (Yucatán, México; British Honduras).
- Tapirus dowi* [sic], Alston, Proc. Zool. Soc. London (1879), p. 666, 1880 (comments; range probably restricted to Pacific slope of Guatemala and Nicaragua).—Alston, Mammalia, in Godman and Salvin, Biologia Centrali-Americana: Zoology, p. 104, pl. 8, figs. 3–5, 1882 (part; description, characters, bibliographic references; figure pl. 9 = *T. terrestris*).
- Tapirus bairdii*, Alston, Mammalia, in Godman and Salvin, Biologia Centrali-Americana: Zoology, p. 101, pl. 8, figs. 1, 2, 1882 (description, characters, bibliographic references).—Simpson, Bull. Amer. Mus. Nat. Hist., vol. 86, pp. 37–80, pl. 8, fig. 2, 1945 (osteological characters; comparisons; phylogeny).
- [*Tapirella*] *dowi* [sic], Simpson, Bull. Amer. Mus. Nat. Hist., vol. 86, p. 41, footnote, 1945 (“specific status does not appear to be demonstrated”).
- Tapirella bairdii*, Goldman, Smithsonian Misc. Coll., vol. 69, p. 81, 1920 (Panamá).—Goodwin, Journ. Mamm., vol. 27, p. 91, 1946 (*dowii* a synonym); Bull. Amer. Mus. Nat. Hist., vol. 87, p. 450, 1946 (Costa Rica: Talamanca and Pacuare, Limón; Carillo, San José).—Hatt, Cranbrook Inst. Sci. Bull. 33, p. 72, 1953 (México: Actún Lara, Yucatán; extinct).

*Lectotypes*.—Of *bairdii* Gill, skull only, adult, USNM 6019, collected April 9, 1863, by W. T. White (one of two cotypes designated by Poole and Schantz, U. S. Nat. Mus. Bull. 178, p. 233, 1942); of *dowii* Gill, skull only, young adult, USNM 11278, collected by J. M. Dow, original number, 1 (one of five cotypes designated by Poole and Schantz, loc. cit.)

*Type localities*.—Of *bairdii* Gill, “Isthmus of Panama,” here restricted to Canal Zone, Panamá; of *dowii* Gill, “Guatemala,” believed by Alston (Proc. Zool. Soc. London, 1879, p. 666, 1880) to be “confined to the Pacific slope of Guatemala and Nicaragua.” Later, Alston (Mammalia, in Godman and Salvin, Biologia Centrali-Americana: Zoology, p. 105, 1882) quoted Godman and Salvin as follows: “On the Pacific coast [of Guatemala] Tapirs are no doubt abundant. In the forest of the hacienda of El Overo, a few leagues from the port of San José, the proprietor, Don Juan Viteri, assured us that they were to be found in plenty. He it was, we believe, who supplied Captain Dow with the original specimens of *T. dowi* [sic].” Accordingly, the type locality of *dowii* is here restricted to the Pacific slope of Guatemala.

*Distribution*.—As for the subgenus. According to Hatt (Cranbrook Inst. Sci. Bull. 33, p. 72, 1953), who recorded skull fragments from caves in southern Yucatán, “tapir has not been known in Recent time from this part of Yucatán.” In Panamá the species is known to range from sea level to the summits of the highest ridges of the eastern and western mountains. Oliver Pearson, who climbed to the top of the Volcán de Chiriquí in 1937, found well-worn tapir trails at 3,350 meters altitude, near the very summit of the peak. (See map, fig. 62.)

In northwestern Colombia, east of the Río Atrato, Baird’s tapir lives side by side with *Tapirus terrestris colombianus*. The writer



preserved a skull only of the Colombian tapir killed in the upper Río Sinú valley 3 kilometers below the mouth of the tributary Río Verde, and a skull only of a Baird's tapir killed by a hunter about 4 kilometers lower down the Sinú, near the confluence of the Río Nain. Within the same area, but more than a year before, a hunter killed a Baird's tapir while it was feeding on fallen fruit of the cannon-ball tree (*Couroupita guianensis*) and two weeks later killed a Colombian tapir feeding on the same fruit. The hunter preserved the skulls and they were identified by the writer.

Earliest authentic record of the existence of Baird's tapir in South America and first knowledge of the occurrence of this species in western Ecuador is based on a photograph of the animal kindly loaned to the writer by Belle Benchley, Executive Secretary of the Zoological Society of San Diego. Mrs. Benchley added the information (in litt.) that the individual photographed was brought to the San Diego Zoological Park by Fred Lewis, who "had taken a small boat and gone up the river at Guayaquil, Ecuador, and brought it back." The animal died in captivity in 1945.

*Characters*.—Those given for the subgenus. See also general external characters mentioned under the generic heading. Skin of adult male topotype of *bairdii* from Tiger Hill, C. Z., collected by E. A. Goldman, is dark brown with pelage thin, stiff, sleek, the skin showing through. Two skins of young adults from Guatemala, probably topotypical of *dowii*, are darker, nearly black on dorsal surface, pelage thick, coarse, comparatively long, and completely hiding skin.

*Measurements*.—Of the topotype of *bairdii* from Tiger Hill: Total length, 2,000 mm.; tail, 70 mm.; hind foot, 372 mm. Of an adult from Vera Cruz, México (ex Goodwin, Bull. Amer. Mus. Nat. Hist., vol. 87, p. 450, 1946): Total length, 2,020 mm.; tail, 70 mm.; hind foot, 375 mm.; ear, 140 mm. Skull lengths given under the generic heading.

*Remarks*.—That *bairdii* and *dowii* are conspecific has already been indicated by Hatcher, Simpson, and, finally, by Goodwin, all cited above in the synonymy. It is possible, however, that there may be two geographic races, one the typical lowland thinly haired form, the other a comparatively thickly haired highland race. However, additional characters to support what are ostensibly individual somatic responses to cooler climate are required for validating the name *Tapirus bairdii* *dowii* for the highland tapir of western Guatemala and El Salvador.

The two Guatemalan skins described above were mounted specimens exhibited in the Columbian Exposition by the Guatemalan Commission. They are now preserved as study skins in the collection of the U. S. National Museum and numbered 61221 and 61222, the last with skull. A skull only of a young individual, numbered 61221-B, has the same history and may correspond to the first skin.

The head of "*Tapirus dowi*" figured by Alston (Mammalia, pl. 9, in Godman and Salvin, *Biologia Centrali-Americana: Zoology*, 1882) has the high, maned crest distinctive of *T. terrestris*, to which species it is now assigned.

Baird's tapir, the least known and the last living species of the genus to be given a Linnaean name, was the first recorded in European literature. A recognizable, though exaggerated, description was given by Peter Martyr D'Angher, the first chronicler of the discovery and conquest of America, in book 9 of the second (of eight) Ocean Decade of his "*De Orbe Novo*," published in 1516. Martyr's concept of the tapir, acquired from descriptions brought to him by the first explorers of the Isthmus of Panamá, is of an animal which "Nature created in prodigious form. It is as large as a bull, and has a trunk like an elephant; and yet it is not an elephant. Its hide is like a bull's and yet it is not a bull. Its hoof resembles that of a horse, but it is not a horse. It has ears like an elephant's though smaller and drooping, yet they are larger than those of any other animal." Prior to official date of publication, the manuscripts of the "Oceanic Decades" were made available to students and correspondents as they were being written, from 1494 onward. This led to a pirated published edition in 1504 and another in 1507, both Italian. The second record of a tapir refers to another Panamanian *T. bairdii* and dates from the "Summario" of Gonzalo Fernández de Oviedo y Valdes, published in 1526 (or 1525) at Madrid. The accurate description of this tapir is repeated, accompanied by a first-rate woodcut, in Oviedo's "*Historia General y Natural de las Indias*" (book 12, chap. 11, pl. 1, fig. 11), published in 1535 at Seville, Spain. Oviedo extolled the gastronomic virtues of tapir meat and slow-boiled tapir feet, and told of how the animal is hunted with dogs. During the remainder of the 16th century practically all travelers, missionaries, and students interested in New World natural history described or referred to Baird's tapir. Francisco Hernández (*Rerum Medicarum Novae Hispaniae Thesaurus, seu Plantarum, Animalium . . .*, tract. I, cap. 8, p. 3, 1651) described the *Tlacaxolotl*, which, in spite of the long tail attributed to it, is unmistakably a tapir. The animal was said to occur in Atzacán [Veracruz], Tepetzotlán [México] and Tlaquilapán [Hidalgo or Veracruz]. The Hernández account of the *Tlacaxolotl* is identical to that of Fray Bernardino de Sahagún in his "*Historia General de las Cosas de Nueva Espana*." This work was written during the latter half of the 16th century. The manuscript, examined and cited by 16th and early 17th century students of Mexican history, was not published until 1831. Publication dates are of no importance in comparing the works of Hernández and

Sahagún because they were written contemporaneously. It cannot be determined now which author, or editor, copied from the other.

The first Linnaean reference to Baird's tapir is by Zimmermann in 1780 (*supra cit.*), who considered it the same as the Brazilian species. Zimmermann's Panamá record for the tapir is based either on Oviedo or other pre-Linnaean authors who quoted Oviedo. His Yucatán record is almost certainly derived from the account of the tapir in "Dampier's Voyages," volume 2, part 2 entitled "Two Voyages to

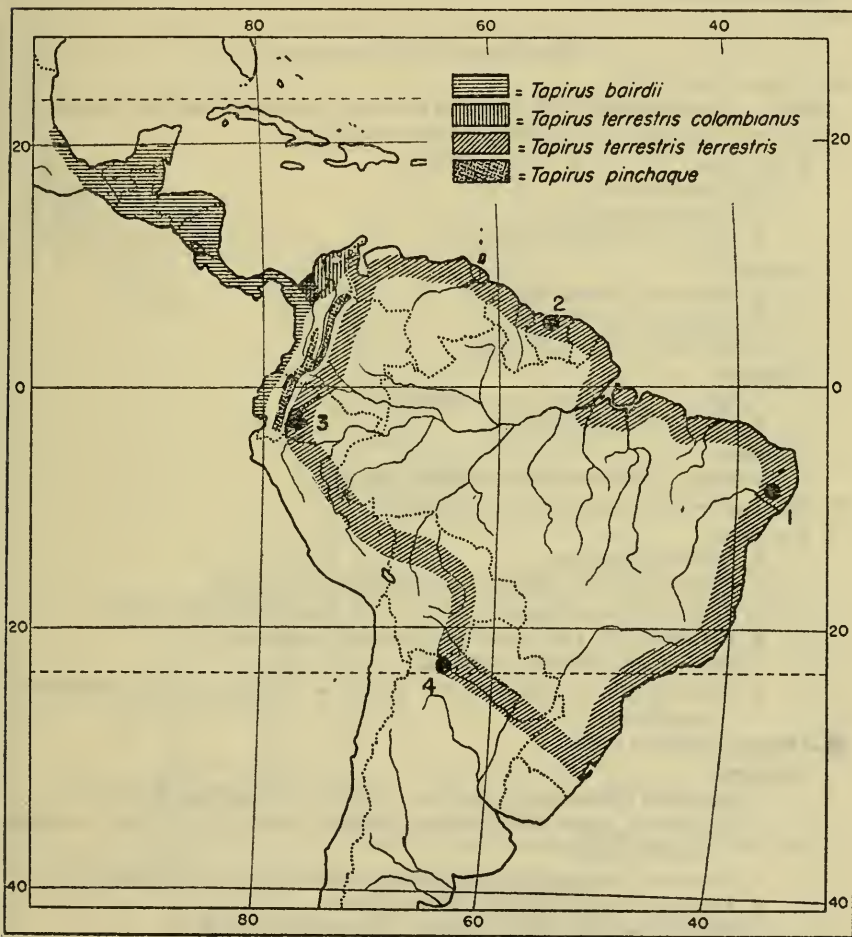


FIGURE 61.—Distribution map of American tapirs. Range of *Tapirus terrestris terrestris* as outlined includes those of other possibly recognizable subspecies. Type localities: (1) Pernambuco, Brazil, *Tapirus terrestris terrestris* Linnaeus; (2) Surinam, [*T. terrestris*] *tapir* Erxleben; (3) Macas, Ecuador, [*T. terrestris*] *aenigmaticus* Gray; (4) Río Pescado, Salta, Argentina, [*T. terrestris*] *spegazzinii*.



Campeachy; with a description of the Coasts, Product, Inhabitants, Logwood-Cutting, Trade, Etc. of Yucatan, Campeachy, New Spain, Etc.," page 102, which was first published in 1698.

The common name "danta" for the tapir is a corruption of the Spanish word for elk, "alce" or "anta." Early Spaniards in America gave peninsular names to all animals that resembled, whether in fact or fancy, those they had known in the Old World. The now universally accepted term "tapir" is from the same word in the Brazilian Tupi language.

#### EXPLANATION OF MAP, FIGURE 62

##### ● = *Tapirus bairdii* Gill

Locality records of authentically identified specimens from South America, Panamá, and Costa Rica. Range of species extends northward into México.

##### COSTA RICA

1. Pacuare, Limón.
2. Talamanca, Limón.
3. Carillo (= Carrillo), San José.

##### PANAMÁ

4. Volcán de Chiriquí, Chiriquí.
5. Canal Zone (type locality).
6. Mt. Pirri and Caná, Panamá.

##### COLOMBIA

7. Unguía, Chocó (sight record, by author).
8. Upper Río Sinú, Córdoba.

##### ECUADOR

9. North of Guayaquil (exact locality unknown).

##### ○ = *Tapirus terrestris colombianus*, new subspecies.

##### COLOMBIA

1. Dibulla, Magdalena.
2. Cacagualito, Sierra Nevada de Santa Marta, Magdalena.
3. El Salado, Sierra Nevada de Santa Marta, Magdalena (type locality).
4. El Orinoco, Río Cesar, and Río Guaimaral, Magdalena.
5. Socorré, upper Río Sinú, Córdoba.
6. Murindó, Chocó. Recorded by Roulin as *T. terrestris* but identification questionable.

##### ■ = *Tapirus pinchaque* Roulin.

##### COLOMBIA

1. Santander (Department), Cordillera Oriental, at Venezuelan boundary.
2. Las Juntas, upper Río Combeima, southern foot of Mt. Tolima, Cordillera Central, Caldas.
3. Páramo de Sumapaz, Cordillera Oriental, Cundinamarca (type locality).
4. Volcán de Puracé, Cordillera Central, Cauca.
5. Río Majuas, upper Río Magdalena, Cordillera Central, Huila.

##### ECUADOR

6. Borja, about 60 kilometers east of Quito, Cordillera Oriental Napo-Pastaza.
7. Papallacta, Cordillera Oriental, Pichincha.
8. Cordillera de los Llanganates, Cordillera Oriental, Tungurahua.
9. Páramo de Azuay, Cordillera Oriental, Azuay.

*Specimens examined.*—Sixty. COLOMBIA: Unguía, Urabá, Chocó, 1 (CNHM). PANAMÁ: No precise locality, probably Canal Zone, 5, including type of *bairdii* (USNM); Tiger Hill, C. Z., 1 (USNM); Madden Dam, C. Z., 1 (USNM); Río Chagres, C. Z., 1 (USNM); Panamá Railroad, C. Z., 1 (USNM); Gatún, C. Z., 1 (USNM); Mt. Hope, C. Z., 1 (USNM); Mt. Pirri, Panamá, 1 (USNM); Caná, Panamá, 2 (USNM). COSTA RICA: Talamanca, 4 (USNM); Pacuare, 3 (USNM); San José, 1 (USNM); "Dota Mountains," 1 (USNM); no precise locality, 6 (USNM). NICARAGUA: Ebenezar, Río Prinza-

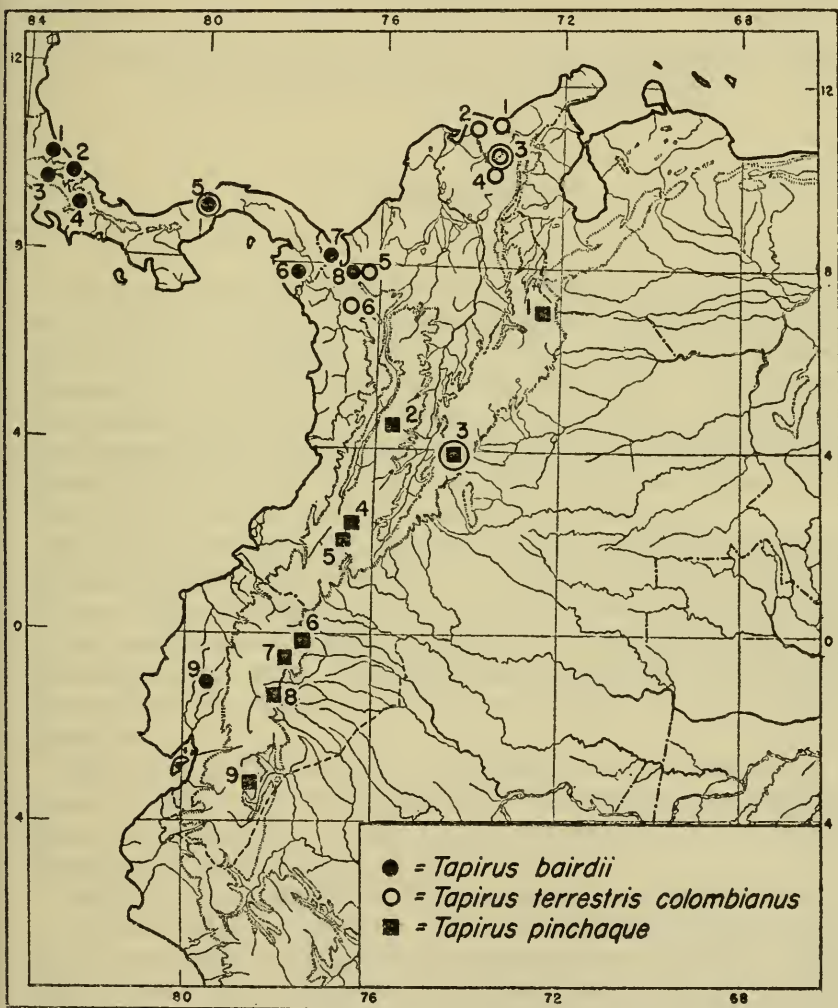


FIGURE 62.—Map of locality records for tapirs in Colombia and adjacent countries; type localities circled. See opposite page for key.

polka, 1 (USNM). HONDURAS: No precise locality, 2 (USNM). EL SALVADOR: No precise locality, 4 (USNM). GUATEMALA: Los Amates, Yzabal, 2 (CNHM); no precise locality, 8 (USNM). BRITISH HONDURAS: Belize, 1 (CNHM); Middlesex, 2 (CNHM). MÉXICO: Achotal, Vera Cruz, 2 (CNHM); Istmo de Tehuantepec, 1 (USNM); Chiapas, 1 (USNM); Buena Vista, 1 (USNM). CENTRAL AMERICA: No precise localities, 5 (USNM).