

THE RACES OF THE OCELOT AND MARGAY IN  
MIDDLE AMERICA

BY E. A. GOLDMAN

In "The Races of the Ocelot and the Margay" Pocock (Zool. Ser., Field Mus. Nat. Hist., vol. 27, pub. 511, pp. 319-369, Dec. 8, 1941) records the results of "An effort to disentangle some of the knots of difficulties in the determination and distribution of the described local races of two American tiger cats . . ." His paper has been the chief incentive to the writer to undertake at the present time further elucidation of the geographic races in Middle America, especially in view of lack of agreement with Pocock's disposition of some of the "knots" in the process of disentanglement.

These cats have been in urgent need of further revision and they remain imperfectly known, owing in part to the need for more ample material, especially to fill gaps in the known ranges of subspecies.

The ocelot appears to be fairly common throughout most of its range in Middle America, but the margay which is similarly dispersed, is a much rarer animal. A third group of very small tiger cats extends north from South America and is represented in Costa Rica by the form currently recognized as *Felis pardinooides onquilla*. It requires no consideration in this connection.

On the basis of extremely scanty specimen material and statements from literature, Pocock has arrived at conclusions regarding Middle American tiger cats that are obviously at variance in several particulars with the facts as shown by the limited, but more ample number of specimens available in American museums. Of *Felis pardalis pardalis* Linné, of Veracruz, he says (*op. cit.*, p. 343): "The published information about this race is meager and unsatisfactory. There are no specimens in the British Museum, apart perhaps from a skin, without skull, doubtfully assigned to it, from Dueñas, Guatemala. . . ." Then follows a description of this skin, statements from literature, and an attempt to justify the placing of *Felis pardalis nelsoni* of Colima, western Mexico, in the synonymy of typical *pardalis*. In describing two new ocelots from Mexico (Jour. Mamm., vol. 6, pp. 122-124, May 12, 1925) I did not mention all of the material used for comparison, but pointed out how the great wedge formed by the Mexican highlands splits the northern part of the range of this essentially tropical group in a manner bearing significantly on subspeciation. *Felis pardalis nelsoni* was based on 5 skins and skulls from Colima, supplemented by 15, mainly skins, from Guerrero and Oaxaca. These were compared with 6 skins and 10 skulls, including adults of both sexes from Veracruz, and other specimens believed to represent typical *pardalis*.

With discussion similarly unconvincing to me Pocock (*op. cit.*, p. 346) assigns *Felis pardalis sonoriensis* of Sonora to the synonymy of *Leopardus pardalis griseus*. *Leopardus griseus* was briefly described by Gray (Ann. Mag. Nat. Hist., vol. 10, p. 260, 1842) as from "Central America." Twenty-five years later Gray (Proc. Zool. Soc. London, 1867, p. 270) in notes on the skulls of the Felidae listed the species as *Felis grisea* and the habitat was recorded as Guate-

mala. The dimensions of the skull were given as length  $5\frac{1}{8}$  inches; width  $3\frac{3}{8}$  inches. On page 403 in the same volume the animal was more fully described, and he said: "My *Leopardus griseus* differs from the other Ocelots in having a grey fur with whitish sides." Two years later still Gray (Cat. Carn. Pach. Edent. Mamm. 1869, p. 19) again listed *Felis grisea*, with Guatemala as habitat. *Felis picta*, originally described by him as *Leopardus pictus* on the same page with *Leopardus griseus*, and like it ascribed to Central America, retained its habitat designation unchanged. In a review of the nomenclature of the ocelots Mearns (Proc. U. S. Nat. Mus., vol. 25, p. 245, Sept. 17, 1902) refers to Gray's statement that *Leopardus griseus* came from Guatemala and says: "I am unable to identify it with any of the forms I have examined." In a more complete treatment of the group: "Notes on the Synonymy and Nomenclature of the Smaller Tiger Cats of Tropical America," J. A. Allen (Bull. Amer. Mus. Nat. Hist., vol. 41, p. 345, Oct. 3, 1919) says: "Two names [*Leopardus griseus* and *Leopardus pictus*] had been given to ocelots of the *pardalis* group from Central America previous to Mearns' description of his *Felis costaricensis*, but they prove very difficult to identify and have thus far been held in abeyance." *Leopardus pictus* is assigned by Pocock (*op. cit.*, p. 322) to the synonymy of *Leopardus pardalis brasiliensis* Oken.

As the skin and skull of the type of *Leopardus griseus* are still extant, the name cannot, of course, be ignored. Pocock remarks (*op. cit.*, p. 346) that he can find no justification for Gray's statement in 1867 that the type came from Guatemala. Gray repeated the statement in 1869, but did not revise the habitat data for *Leopardus pictus*, described with *griseus* from "Central America," and it seems reasonable to assume that some additional information regarding the type locality may have been received by him. Some support for a conclusion that *griseus* came from Guatemala is the close approach of the skull of the type, an adult female, in total length (126 mm) as given by Pocock (*op. cit.*, p. 348), to that of a female about full grown (total length, 125.8 mm) in the American Museum of Natural History, from Finca Cipres, altitude about 2,000 feet, at the base of the Volcan Zunil, some 9 miles from Mazatenango, southwestern Guatemala. The Finca Cipres specimen and another in the same museum from Finca El Espino, altitude 150 feet, 15 miles south of Mazatenango, examined by me, were recorded as *Felis pardalis pardalis* by Goodwin (Bull. Amer. Mus. Nat. Hist., vol. 48, p. 22, Dec. 12, 1934). They agree closely not only in color but in size and cranial details with examples from Veracruz. In treating these specimens Goodwin mentioned the possibility of relationship to *Leopardus griseus* of Gray, which has proven to be "difficult to identify." Pocock, on the other hand, associates the type of *griseus* with material from Mazatlan, Sinaloa. Detailed comparisons are made and he says (*op. cit.*, p. 348): "The closeness of the likeness in shape and dimensions between the adult female skulls of the type *griseus* and of the example from Mazatlan is quite unusual even in skulls of the same sex, race, and locality." In a group of four fully mature female skulls, however, including two old adults from Escuinapa, about 50 miles southeast of Mazatlan, Sinaloa, among those examined by me in the American Museum

of Natural History the average total length is 118.5 mm and the extremes 115.5 to 122.5 mm. The total number of specimens available for comparison from Escuinapa is 24. These include old adults of both sexes and afford a fairly clear idea of the scope of individual variation. The series appears to be referable to *nelsoni* which doubtless passes into *sonoriensis* not far to the northward. Typical *sonoriensis* from beyond the northern limit of the Tropical Zone is still smaller. It may be pointed out that the skull of the fully adult male type of *sonoriensis* measures only 125.8 mm in total length, which is slightly less than this dimension (126 mm) in the female type of *griseus*. When the sex disparity in size is considered the significance of this difference becomes apparent. It is true that ocelots from the northern ends of the range of the group average grayer than those from farther south, but individual variation in color and arrangement of spots is remarkable everywhere. Not only are there no two individuals exactly alike, but the spots differ in detail from the median line down over the two sides of the same animal. Selected specimens from such widely separated regions as Veracruz, Guatemala, Sonora and Texas, representing three geographic races, are practically indistinguishable in grayish ground color. As further evidence in regard to color, Hamilton Smith's *Felis ocelot* No. 3 was based on a pale specimen called *Felis griffithii* by Fischer in 1830, and renamed *Felis canescens* by Swainson in 1838. These names are properly treated by Pocock as synonyms of typical *pardalis*. The color of the skin of the type of *griseus* which, as Pocock remarks, is "a century old and was formerly exhibited as a mounted specimen" can, therefore, hardly be accepted as diagnostic. Three skulls of adult females of *pardalis* range from 121.5 to 132.5 mm in total length. In the apparent absence of any known diagnostic character, or more definite information in regard to the type locality for *griseus*, Guatemala should apparently be accepted as the type region and the name may be placed in the synonymy of typical *pardalis*.

The ocelot is very similar to the margay in spotted pattern of coloration, but is much larger, more robust, with a shorter tail. The skull is more angular and massive, with a more prominent sagittal crest extending normally to the frontals. The two species have been treated by some authors, including Pocock, as generically different from *Felis*. In the more essential cranial characters, however, the differences from *Felis* are so narrowly quantitative instead of qualitative that generic recognition seems unwarranted. Possibly the differential color pattern may justify the use of *Leopardus* as a subgeneric name.

Among the unidentifiable or not clearly assignable names that may be associated with members of the *Felis pardalis* group are the following:

1792. *Felis mexicana* Kerr, Anim. King. no. 274, p. 151, 1792. Based on Pennant's account, and that in turn in part on the Tlalocelotl of Hernandez. Regarded as not determinable by Allen (Bull. Amer. Mus. Nat. Hist., vol. 7, p. 188, June 20, 1895).
1816. *Felis mexicana* Desmarest, Nouv. Dict. d'Hist. Nat., vol. 6, p. 112, 1816 edition [original date of publication about Feb. 4, 1803—See Osgood, Proc. Biol. Soc. Washington, vol. 27, p. 3, Feb. 2, 1914]. Based on the "Chat Sauvage de la Nouvelle Espagne" of Buffon (Hist. Nat., Sup., vol. 3, p. 227, pl. 43, 1776), which might be confused with the ocelot. Buffon himself (*op. cit.*, p. 228) re-

- garded this as the same as the Serval, described and figured in his earlier work (Hist. Nat., vol. 13, p. 236, pl. 34, 1765).
1816. *P[anthera] mexicana* Oken. Lehrb. der Naturgesch., theil 3, abt. 2, p. 1054, 1816. Under this name Oken listed the "Tlaco-Ozelotl, Catus-Pardus mexicanus," "Panthera americana" and "F. pardalis." Apparently associated with the last mentioned he says "Die alten Könige von Mexico hatten dieses Thier um den Thron liegen." The next paragraph under the same heading, however, begins with "Jaguar (ist Tlaco-Ocelotl)." Aside from this apparent confusion of the ocelot with the jaguar the name is preoccupied by *Felis mexicana* Kerr (1792) and *Felis mexicana* Desmarest (1816).
1842. *Felis pseudopardalis* Boitard, Jardin des Plantes Description et Moeurs des Mammiferes, etc., p. 187, 1842. Based on the Ocelot du Mexique figured by Buffon (Hist. Nat. t. 9, pl. 18, 1761) and *Felis onca* by Schreber (Saug. pl. C 2, 1775). Although the name *Felis onca* appears on Schreber's plate, the heavy longitudinal stripe on the nape in the crude illustration conforms more closely to the color pattern of the ocelot. In regard to locality he says: "Il habite le Mexique et la baie de Campeche?" This name was treated by Mearns (Proc. U. S. Nat. Mus., vol. 25, p. 240, 1903) as a synonym of *Felis pardalis*.
1860. *Felis pardalis minimus* Wilson, Proc. Acad. Nat. Sci. Phila., p. 82, 1860. This name was based on a very small kitten from Realejo, Nicaragua, which was permitted its liberty on the deck of a ship. One morning its absence was noted and it became apparent that the animal was lost overboard during the night. While the name was assigned to the *pardalis* group there seems to be no means of determining whether it was applied to an ocelot or a margay.
1911. *Felis buffoni* and *Felis mexicana* Brass, Aus dem Reiche del-Pelze, p. 412, Apr. 1911. These names were proposed with color descriptions of spotted Mexican cats, presumably ocelots. No definite localities are given and they are evidently based on individual color variations of which there may be many in the same locality. *Felis mexicana* had already been used several times. Both names are unidentifiable.

The present review of the Middle American ocelots is based on studies of a total of 111 specimens. Of this number 24 were skins without skulls, and 25 were skulls without skins. The specimens, unless otherwise stated, are in the U. S. National Museum, including the Biological Surveys collection.

For the privilege of examining material and other courtesies, I am indebted to Harold E. Anthony, George G. Goodwin, and T. Donald Carter, American Museum of Natural History, New York.

The races of the ocelot inhabiting Middle America appear to be recognizable, as follows:

***Felis pardalis pardalis* Linné**

Veracruz Ocelot

[*Felis*] *pardalis* Linné, Syst. Nat., ed. 10, vol. 1, p. 42, 1758. Based on the Cato-pardus Mexicanus of Hernandez.

*Felis ocelot* Link, Beitr. Zool., 2, p. 90, 1795. (See Osgood, Jour. Mamm., vol. 1, no. 2, p. 88, Mar. 2, 1920).

*Felis ocelot* No. 3, Hamilton Smith in Griffith's Anim. Kingd., Mamm., vol. 2, p. 476, pl., 1827.

*Felis griffithii* Fischer, Synop. Mamm. Addend., Emend. et Index, p. 369, 1830. Based on a pale specimen in the Bullock Collection, probably from Veracruz, Mexico.

*Felis canescens* Swainson, Anim. in Menog., p. 118, 1838. (= *Felis ocelot* No. 3, Hamilton Smith.)

*Leopardus griseus* Gray, Ann. Mag. Nat. Hist., vol. 10, p. 260, 1842. From "Central America." Ascribed to Guatemala by Gray, Proc. Zool. Soc. London, 1867, p. 270.

*Felis pardalis* True, Proc. U. S. Nat. Mus., vol. 7, p. 610 (1884) 1885.

*Felis pardalis pardalis* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 22, p. 221, July 25, 1906.

*Felis griffithii* Osgood, Jour. Mamm., vol. 1, p. 90, Mar. 2, 1920.

*Leopardus pardalis pardalis* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 345, Oct. 3, 1919.

*Leopardus pardalis pardalis* Pocock, Zool. Ser., Field Mus. Nat. Hist., vol. 27, Pub. 511, p. 342, Dec. 8, 1941.

*Type locality*.—State of Veracruz, Mexico.

*Distribution*.—Tropical lowlands and eastern slopes of the interior plateau in Veracruz, south across the Isthmus of Tehuantepec and east through Tabasco, Chiapas, and Guatemala to Honduras (Balfate).

*General characters*.—Size medium or rather large; general body color, size, shape, and arrangement of rosettes variable, as is usual in the group; interspaces between rosettes over dorsum varying from buffy gray to near "cinnamon" (Ridgway, 1912); skull massive; brain case broad; zygomata widely spread posteriorly, narrowed anteriorly; lambdoid crest moderately upturned; dentition moderate. Size usually smaller than in *mearnsi* of Costa Rica; color averaging paler and grayer, less tawny; skull smaller, less elongated; lambdoid crest more upturned. Similar in size but tending to be larger than *albescens* of eastern Texas and neighboring territory; pelage shorter; colors usually darker, cinnamon buffy or "cinnamon" instead of plainer grayish tones tending to prevail; interspaces between rosettes usually broader; skull similar in general form; lambdoid crest less upturned; dentition heavier. Size larger than *nelsoni*; color about the same; skull usually distinctly larger; zygomata more converging anteriorly, the sides less evenly bowed outward; dentition heavier.

*Measurements*.—A male approaching full grown, but sagittal crest slightly developed, from Catemaco, Veracruz: Total length, 1130 mm; tail vertebrae, 375; hind foot, 164. An adult male from Finca El Espino, Guatemala: 1125; 334; 170. An adult or nearly adult female from Champoton, Campeche: 1080; 360; 155. *Skull*: An old male from Catemaco, Veracruz, and a younger but nearly full grown male from Mirador, Veracruz, respectively: Greatest length, 150.4, 144.4; condylobasal length, 137.5, 134.5; zygomatic breadth, 102.4, 90.5; squamosal constriction, 57.4, 54.7; interorbital breadth, 26, 25; postorbital constriction, 27.5, 26; maxillary tooth row, crown length to back of carnassial, 41.5, 41.8; upper carnassial, crown length (outer side), 15.3, 16.4. An adult male (fronto-parietal suture closed and sagittal crest moderately developed) from Finca El Espino, 15 miles south of Mazatenango, Guatemala: Greatest length, 140.2; condylobasal length, 129.2; zygomatic breadth, 94.5; squamosal constriction, 51, interorbital breadth, 27.1; postorbital constriction, 31.4; maxillary tooth row, crown length to back of carnassial, 42; upper carnassial, crown length (outer side), 17.1. An adult but not very old female from Buena Vista, Veracruz, and an old female from Perez, Veracruz, respectively: Greatest length, 121.5, 132.5; condylobasal length, 113, 122; zygomatic breadth, 87.2, 91.4; squamosal constriction, 47, 53.2; interorbital breadth, 21.7, 25.5; postorbital constriction, 29.4, 29; maxillary tooth row, 38.7, 38; upper carnassial, 15.3, 15.2. A female about full-grown, but frontoparietal suture open, from Finca Cipres, base of Volcan Zunil, Guatemala: Greatest length, 125.8; condylobasal length, 117; squamosal constriction, 49.9; interorbital breadth, 24.8; postorbital constriction, 33.4; maxillary tooth row, crown length to back of carnassial, 39.1; upper carnassial, crown length (outer side), 15.1.

*Remarks*.—*Felis pardalis* was based by Linné on the *Cato-pardus mexicanus* of Hernandez, from Mexico. The type region was more definitely assigned as Veracruz by J. A. Allen (Bull. Amer. Mus. Nat. Hist., vol. 41, p. 345, Oct. 3, 1919). From the tropical lowlands in Veracruz the typical subspecies ranges up over the adjoining mountain slopes, but is absent on the high plateau of the interior. From the lowlands across the Isthmus of Tehuantepec it extends eastward at least to Honduras. It is possible that ample material from Guatemala may show that *griseus*, ascribed to that country by Gray, is a recognizable regional race; but

the few specimens examined do not appear to differ in any essential respect from typical *pardalis*. The ocelots of Middle America diminish progressively in size from south to north, especially along the Pacific coast. The typical subspecies is, therefore, intermediate in geographic range, as well as in detailed characters, between more northern and southern races.

*Specimens examined.*—Total number, 20, as follows: **Campeche:** Campeche, 2 (skins without skulls); La Tuxpeña, Champoton, 2 (skins without skulls). **Guatemala:** Finca Cipres (base of Volcan Zunil, about 9 miles from Mazatenango), 1 (Amer. Mus. Nat. Hist.); Finca El Espino (15 miles south of Mazatenango), 1 (Amer. Mus. Nat. Hist.). **Honduras:** Archaga, (20 Kilometers north of Tegucigalpa), 2 (Amer. Mus. Nat. Hist.); Balfate, Colon, 1 (skull only). **Oaxaca:** Huilotepec (8 miles southeast of Tehuantepec), 1. **Tabasco:** Teapa, 1. **Veracruz:** Catemac, 3 (2 skulls without skulls); Mirador, 1 (skull only); Perez, 5.

### *Felis pardalis mearnsi* Allen

#### Costa Rican Ocelot

*Felis costaricensis* Mearns, Proc. U. S. Nat. Mus., vol. 25, p. 245, Sept. 17, 1902. Not *Felis bangsi costaricensis* Merriam, 1901, proposed for a puma.

*Felis mearnsi* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 71, Feb. 29, 1904. (Substitute for *Felis costaricensis* Mearns, preoccupied.)

*Felis pardalis mearnsi* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 20, p. 71, Feb. 29, 1904. *Leopardus pardalis mearnsi* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 41, Oct. 3, 1919.

*Type locality.*—Talamanca, northeastern Costa Rica. Type of *Felis costaricensis* (= *F. p. mearnsi*), no. 14180, old male, skull only, U. S. National Museum; collected by W. M. Gabb.

*Distribution.*—Panama, Costa Rica, and northward probably to Nicaragua.

*General characters.*—Size, as indicated by skulls, averaging the largest of the Middle American subspecies; color dark, the spaces within and between rosettes along median line of dorsum, in Panama specimens at least, more or less distinctly "ochraceous-tawny"; skull relatively narrow and elongated; lambdoid crest not distinctly upturned; dentition heavy. Similar in general to *pardalis* of Veracruz, but usually larger; upper parts more distinctly tawny instead of grayish in ground color; skull usually larger, more elongated; lambdoid crest less upturned; dentition similar, but rather heavy. Similar in size to *Felis pardalis aequatorialis* of northern Ecuador, but ground color of upper parts less tawny than in the type; skull also similar, but brain case narrower than in the type specimen.

*Measurements.*—An adult male from Gatun, Canal Zone: Total length, 1230 mm; tail vertebrae, 355; hind foot, 151. Two adult females from Gatun, Canal Zone, respectively: Total length, 1095, 1110; tail vertebrae, 350, 355; hind foot, 146, 149. *Skull:* Type and an old male from Punta de Peña, Bocas del Toro, Panama, respectively: Greatest length, 158, 156.4; condylobasal length, 146.3, 143.5; zygomatic breadth, 106.2, 100.5; squamosal constriction, 57.8, 56.2; interorbital breadth, 29.2, 27.3; postorbital constriction, 32, 26.3; maxillary tooth row, crown length to back of carnassial, 45.2, 47.1; upper carnassial, crown length (outer side), 16.8, 18.2. An adult female from Isthmus of Panama: Greatest length, 140.7; condylobasal length, 126.8; zygomatic breadth, 96.4; squamosal constriction, 54.4; interorbital breadth, 29.8; postorbital constriction, 27.8; maxillary tooth row, crown length to back of carnassial, 39.6; upper carnassial, crown length (outer side), 15.7.

*Remarks.*—*F. p. mearnsi* doubtless passes into *aequatorialis* on the east in Colombia, as suggested by comparison with the type, and remarks by Pocock (*op. cit.*, p. 335) and others. In Middle America close alliance with typical *pardalis* is evident, and the two forms probably intergrade in Nicaragua.

*Specimens examined.*—Total number, 15, as follows: **Costa Rica:** Pacific side, 1 (skull only); Talamanca (type locality), 5 (skulls only). **Panama:** Boqueron, 1 (Amer. Mus. Nat. Hist.); Gatun, 3; "Isthmus of Darien", 1; Isthmus of Panama, 1 (skull only); Mount Pirri, 1 (skull only); Punta de Peña, Bocas del Toro, 1 (skull only), Real de Santa Maria, 1 (Amer. Mus. Nat. Hist.).

*Felis pardalis nelsoni* Goldman

Colima Ocelot

*Felis pardalis nelsoni* Goldman, Jour. Mamm., vol. 6, no. 2, p. 122, May 12, 1925.

*Type locality*.—Manzanillo, Colima, Mexico (altitude 50 feet). Type no.  $\frac{32642}{44565}$ , old male, skin and skull, U. S. National Museum (Biological Surveys collection); collected by E. W. Nelson, February 11, 1892.

*Distribution*.—Pacific coastal lowlands and western slope of the mountains of the interior from southern Oaxaca (Puerto Angel) north to southern Sinaloa (Escuinapa). Intergradation with *sonoriensis* farther north, and with typical *pardalis* on the south may safely be assumed.

*General characters*.—Similar in general to *Felis pardalis pardalis* of Veracruz, but smaller; color averaging about the same; skull usually smaller; zygomata more evenly bowed outward, the sides more nearly parallel, less abruptly converging anteriorly; dentition lighter. Size larger than *sonoriensis* of Sonora; general color somewhat darker, the black markings above and below separated by narrower light interspaces, black cervical stripes usually broader; skull larger, the brain case more elongated; frontal region less elevated; zygomata rather narrowly spreading posteriorly, without marked convergence anteriorly, and teeth small, much as in *sonoriensis*.

*Measurements*.—Type, an old male, and one of similar age with high sagittal crest from Papayo, Guerrero, respectively: Total length, 1140, 1120 mm; tail vertebrae, 362, 372; hind foot, 166, 157. Two males nearing maturity but sagittal crest low, from type locality, respectively: Total length, 1002, 1060; tail vertebrae, 350, 310; hind food, 155, 143. A male nearing maturity but sagittal crest low, from Armeria, Colima: Total length, 1140; tail vertebrae, 400; hind foot, 170. An adult female topotype and one from Puerto Angel, Oaxaca, respectively: Total length, 995, 1000; tail vertebrae, 310, 325; hind foot, 155, 143. *Skull*: Type, an old male, and one of similar age from Papayo, Guerrero, respectively: Greatest length, 143.8, 141; condylobasal length, 131.4, 130.3; zygomatic breadth, 95.9, —; squamosal constriction, 51.2, —; interorbital breadth, 25.4, 25.4; postorbital constriction, 24.8, 30.5; maxillary tooth row, crown length to back of carnassial, 38.8, 40.6; upper carnassial, crown length (outer side), 14.7, 15. An adult female topotype and one of similar age from Puerto Angel, Oaxaca, respectively: Greatest length, 120, 121.8; condylobasal length, 112.8, 112.5; zygomatic breadth, 83.3, 82.5; squamosal constriction, 47.7, 50.5; interorbital breadth, 23, 23.8; postorbital constriction, 34.5, 34.5; maxillary tooth row, crown length to back of carnassial, 37; upper carnassial, crown length (outer side), 14.1, 15.8.

*Remarks*.—*F. p. nelsoni* occupies the tropical strip extending north along the western coast of Mexico. It appears to give way to *sonoriensis* near the point where the northward range of the group passes into the arid Lower Sonoran division of the Lower Austral life zone.

*Specimens examined*.—Total number, 42, as follows: **Colima**: Armeria, 1; Manzanillo (type locality), 4. **Guerrero**: Acapulco, 4 (skins only); Coyuca, 6 (skins only); Omilteme, 1; Papayo, 1. **Oaxaca**: Puerto Angel, 1. **Sinaloa**: Escuinapa, 24 (5 skins without skulls; 2 skulls without skins) (Amer. Mus. Nat. Hist.).

*Felis pardalis sonoriensis* Goldman

Sonora Ocelot

*Felis pardalis sonoriensis* Goldman, Jour. Mamm., vol. 6, no. 2, p. 123, May 12, 1925.

*Type locality*.—Camoá, Rio Mayo, Sonora, Mexico (altitude 800 feet). Type no. 96216, adult male, skin and skull, U. S. National Museum (Biological Surveys collection); collected by E. A. Goldman, December 3, 1898.

*Distribution*.—Warmer western slopes of the Sierra Madre from southern Sonora, and probably northern Sinaloa, north to southeastern Arizona; formerly as far north as Fort Verde, Arizona; absent in the arid plains region of western Sonora.

*General characters.*—Most closely allied to *nelsoni*, but averaging still smaller; general color somewhat paler, the black dorsal and ventral markings more widely spaced by lighter areas; black cervical stripes usually narrower; skull smaller, the brain case relatively shorter, more rounded; frontal region more elevated; zygomata narrowly spreading posteriorly, without marked convergence anteriorly, and teeth small, much as in *nelsoni*. Similar in color to *albescens* of eastern Texas, but decidedly smaller and owing to isolation no very close comparison is required. Aside from smaller size the skull is relatively shorter, more rounded in form than that of *albescens*; zygomata less convergent anteriorly; supraoccipital crest usually less upturned; dentition light, much as in *albescens*.

*Measurements.*—Type and two male topotypes, all apparently mature, but sagittal crests low, respectively: Total length, 980, 1040, 1015 mm; tail vertebrae, 320, 351, 325; hind foot, 148, 149, 149. *Skull*: Three males just described, respectively: Greatest length, 125.3, 121, 123.3; condylobasal length, 115.6, 114.8, 114; zygomatic breadth, 85.9, 83.5, 82; squamosal constriction, 48.6, 47.7, 47; interorbital breadth, 24.2, 23.8, 21.8; postorbital constriction, 32.5, 29.3, 29.8; maxillary tooth row, crown length to back of carnassial, 35.5, 36.6, 38; upper carnassial, crown length (outer side), 13.2, 14.8, 15.5.

*Remarks.*—The range of *sonoriensis* marks the northern limit, on the western side of the continent, of an intergrading chain of geographic races extending from South America. This race, the smallest of the ocelots of Middle America, presents a marked contrast in size and color with the much larger more richly-hued subspecies, *mearnsi*, of Costa Rica and Panama.

*Specimens examined.*—Total number, 5, as follows: **Arizona**: Fort Verde, 1 (skin only) (Amer. Mus. Nat. Hist.). **Sonora**: Camoa (type locality), 4.

### *Felis pardalis albescens* Pucheran

#### Texas Ocelot

*Felis albescens* Pucheran, in Geoffroy St. Hilaire, Voy. Venus, Zool. Mamm., p. 149, Atlas, pl. 8, 1855.

*Felis limitis* Mearns, Proc. Biol. Soc. Washington, vol. 14, p. 146, Aug. 9, 1901. Type from Brownsville, Cameron County, Tex.

*Felis pardalis limitis* Bailey, North Amer. Fauna, no. 25, p. 66, Oct. 24, 1905.

*Felis ludoviciana* Brass, Aus dem Reiche der Pelze, p. 411, April, 1911. "In Louisiana, Arkansas, und Texas wird es durch eine andere verwandte Art vertreten, *Felis ludoviciana* oder *limitis*."

*Felis pardalis albescens* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 22, p. 219, 1906.

*Leopardus pardalis griffithii* J. A. Allen, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 345, Oct. 3, 1919. (Part.)

*Leopardus pardalis albescens* Pocock, Zool. Ser., Field Mus. Nat. Hist., vol. 27, Pub. 511, p. 350, Dec. 8, 1941.

*Type locality.*—Arkansas ("de l'état d'Arkansas, dans la Louisiane").

*Distribution.*—Formerly parts of Arkansas and probably the present state of Louisiana; still ranging in eastern and southern Texas and south into the northeastern states of Mexico (Soto la Marina, Tamaulipas). The intergradation of *albescens* with typical *pardalis* on the south and isolation from *sonoriensis* on the west is indicated by specimens compared.

*General characters.*—Similar in size but averaging somewhat smaller than typical *pardalis* of Veracruz; pelage longer; colors usually paler, grayish instead of cinnamon-buffy or "cinnamon" tones tending to prevail; black markings somewhat reduced, leaving wider inter-spaces; skull very similar in general form; lambdoid crest usually more extended laterally to form broader supraoccipital shelves with edges more upturned; dentition lighter. Similar in color to *sonoriensis* of Sonora, but owing to isolation no very close comparison is required. Aside from larger size, the skull is more elongated than that of *sonoriensis*; zygomata more convergent anteriorly; lambdoid crest usually more upturned; dentition light, much as in *sonoriensis*.

*Measurements.*—Two males apparently mature but with sagittal crests low, from Browns-



ville, Texas, respectively: Total length 1188, 1080; tail vertebrae, 380, 330; hind foot, 155, 160. Two adult females from Brownsville, Texas, respectively: Total length, 940, 920; tail vertebrae, 270, 300; hind foot, 140, 130. *Skull*: Three males, apparently mature but with sagittal crests low, from Angleton, Texas, respectively: Greatest length, 142.7, 136.7, 135.7; condylobasal length, 132.2, 126, 124.9; zygomatic breadth, 90.3, 91, 93.2; squamosal constriction, 58.4, 54.8, 54.2; interorbital breadth, 26.5, 26.8, 26.9; postorbital constriction, 28.6, 29.3, 32.4; maxillary tooth row, crown length to back of carnassial, 40.6, 39.5, 38; upper carnassial, crown length (outer side), 15.5, 14.7, 14.4. Two adult females from Bay City and Brownsville, Texas, respectively: Greatest length, 122.8, 120.9; condylobasal length, 114.7, 111.3; zygomatic breadth, 87.7, 86.5; squamosal constriction, 51.8, 49.8; interorbital breadth, 24.7, 22.6; postorbital constriction, 31, 33.7; maxillary tooth row, 36, 35.1; upper carnassial, crown length (outer side), 13.8, 14.2.

*Remarks*.—The subspecies *albescens* represents the northern limit of the ocelot east of the continental divide, which interposes a barrier between eastern and western northward extensions of the general range of the species in northern Mexico. Bone carving, believed to be of the ocelot, from a mound of the Mound Builders in Ross County, south-central Ohio, suggests that the range of the species may formerly have extended considerably farther north (See Moorehead, *Anth. Ser. Field, Mus. Nat. Hist.*, vol. 6, no. 5, Pub. 211, p. 159, 1922). The resemblance of *albescens* to *sonoriensis* in color may suggest close relationship, but differences in size and cranial details are quite trenchant. *Felis limitis* Mearns was proposed as a substitute name for *albescens* which was believed to be untenable, but the validity of the latter has since been established.

*Specimens examined*.—Total number, 29, as follows: **Texas**: Alamo de Cesarea Ranch (between Marfa and Terlingua), Brewster County, 1 (skin only); Angleton (18 miles west), 3 (2 skulls without skins); Bay City (18 miles east), 1; Brownsville, 10 (4 skulls without skins); Eagle Pass, 1; Raymondville (20 miles northeast), 2. **King Ranch**, Kleberg County, 2 (skins only) (Stanley P. Young Coll.). **Tamaulipas**: Matamoros, 4 (skulls only); Soto la Marina, 5 (skins only).

The margay, *Felis wiedii*, is a species of wide distribution from southern Brazil and parts of Bolivia north throughout the warmer parts of Middle America to northern Mexico and southern Texas. The northern end of its range, like that of the ocelot, appears to be bifurcated by the southern extension of the interior plateau. As in other American cats of wide dispersal, notably the ocelot, jaguar, and puma, the species is subdivisible into geographic races. The races are little known, however, as too few specimens have appeared in museum collections. Only two examples of the margay were obtained by E. W. Nelson and the writer, in making a general collection of more than 15,000 mammals, in the course of biological investigations extending, during 12 years, into every state and territory on the mainland of Mexico. It is possible, however, that special efforts to obtain specimens by modern methods will reveal that the species is not so rare as is generally believed.

The reference by Pocock of the races of the margay of Middle America, as well as South America, to *Felis wiedii* is a contribution toward the clarification of specific relationships not previously well understood.

The following treatment of subspecies should be regarded as provisional.

#### *Felis wiedii pirrensis* Goldman

##### Panama Margay

*Felis pirrensis* Goldman, *Smiths. Misc. Coll.*, vol. 63, no. 5, p. 4, Mar. 14, 1914.

*Leopardus wiedii pirrensis* Pocock, *Zool. Ser., Field Mus. Nat. Hist.*, vol. 27, Pub. 511, p. 360, Dec. 8, 1941.

*Type locality*.—Cana, eastern Panama (altitude 2,000 feet). Type no. 179162, adult female, skin and skull, U. S. National Museum (Biological Surveys collection); collected by E. A. Goldman, March 22, 1912.

*Distribution*.—Eastern Panama, and south perhaps to Ecuador and Peru.

*General characters*.—Size large; ground color of upper parts in type specimen "ochraceous tawny" (Ridgway, 1912), nearly uniform from nape to base of tail, becoming somewhat paler on head and paling through "cinnamon-buff" to "pinkish buff" along lower part of sides; skull of type large and elongated, the vault of brain case highest near frontoparietal suture; frontal region rather depressed and sloping downward anteriorly; zygomata narrowly spreading posteriorly, the squamosal arms not strongly bowed outward; orbits prominent, the jugals broad and laterally expanded; palate narrow. Similar in general to *nicaraguae* of Nicaragua, but apparently somewhat larger; color pattern very similar, with the differences in detail usual in the group, but spaces between black markings over dorsum more "ochraceous-tawny"; skull larger, more elongated; brain case narrow throughout, the vault higher, more narrowly convex in transverse section; zygomata relatively less strongly bowed outward posteriorly, the sides more nearly parallel; dentition similar.

*Measurements (type)*.—Total length, 963 mm; tail vertebrae, 440; hind foot, 131.5. Skull: Greatest length, 100.6; condylobasal length, 95.8; zygomatic breadth, 63; breadth of brain case, 45.7; squamosal constriction, 40.9; interorbital breadth, 18.7; postorbital constriction, 33.9; maxillary tooth row to back of carnassial, 29.4; upper carnassial, crown length (outer side), 11.8.

*Remarks*.—The skull of the type of *pirrensis*, a female, is considerably larger than that of an adult female specimen of *nicaraguae* from Matagalpa, Nicaragua. The adult male type of *nicaraguae*, however, is larger than the female type of *pirrensis*. The comparative size of the two remains, therefore, somewhat uncertain. *F. p. nicaraguae* was placed by Pocock (*op. cit.*, p. 360) in the synonymy of *pirrensis*, but seems to differ in color and cranial details as pointed out. The same treatment of *Felis (Margay) glaucula ludovici* Lönnberg from Pichincha, Ecuador, was accorded by him. No South American material has been considered by me in this review.

*Specimens examined*.—One, the type.

### *Felis wiedii nicaraguae* (Allen)

#### Nicaragua Margay

*Margay glaucula nicaraguae* Allen, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 357, Oct. 3, 1919.  
*Felis glaucula nicaraguae* Miller, North Amer. Rec. Mamm., Bull. 128, U. S. Nat. Mus., p. 156, 1923 (1924).

*Type locality*.—Volcan de Chinandega, western Nicaragua. Type no. 28957, adult male, American Museum of Natural History; collected by W. B. Richardson, August 20, 1908.

*Distribution*.—Nicaragua, Honduras, and Costa Rica.

*General characters*.—Similar in general to *pirrensis* of Panama, but apparently somewhat smaller; ground color less "ochraceous-tawny"; skull smaller, less elongated; brain case lower, more expanded posteriorly, the vault less narrowly convex in transverse section; zygomata more strongly bowed outward posteriorly, the sides more convergent anteriorly, dentition similar. Not unlike *salvinia* of Guatemala in color, but apparently larger.

*Measurements*.—Type (from original description, quoted in selected parts only): "Total length, 1260 mm; tail vertebrae, 510. Skull: Total length, 107; condylobasal length, 100.9; zygomatic breadth, 72.2; interorbital breadth, 19.2; upper carnassial, 12.4." An adult female from Matagalpa, Nicaragua: Condylobasal length, 89.2; zygomatic breadth, 6.6; breadth of brain case, 47.6; squamosal constriction, 40.8; interorbital breadth, 17; postorbital constriction, 35.2; maxillary tooth row to back of carnassial, 27.5; upper carnassial, crown length (outer side), 11.4. A female approaching full-grown, from Guimaca, Honduras: Greatest length, 89.7; condylobasal length, 87.9; zygomatic breadth, 60.3; breadth of brain case, 43.4; squamosal constriction, 37.8; interorbital breadth, 16.4; postorbital constriction, 30; maxillary tooth row, crown length to back of carnassial, 26.4; upper carnassial, crown length (outer side), 10.8.

*Remarks.*—The Nicaragua margay was placed by Pocock (Zool. Ser., Field Mus. Nat. Hist., vol. 27, p. 360, Dec. 8, 1941) in the synonymy of *pirrensis*, although no specimens from Nicaragua were examined by him. The very limited material available for comparison, however, indicates that they represent closely allied but recognizable geographic races. A female, apparently approaching full-grown, from Guaymaca, Tegueigalpa, south-central Honduras is small but probably referable to *nicaraguae*.

*Specimens examined.*—Five, from localities as follows: **Honduras:** Guaymaca, 1 (Amer. Mus. Nat. Hist.); Santa Barbara, 1 (Amer. Mus. Nat. Hist.). **Nicaragua:** Matagalpa, 1 (Amer. Mus. Nat. Hist.); Volcan de Chinandega, 1 (Amer. Mus. Nat. Hist.). **Costa Rica:** Cañas Gordas, 1 (Amer. Mus. Nat. Hist.).

*Felis wiedii salvinia* Pocock

Guatemala Margay

*Leopardus wiedii salvinia* Pocock, Zool. Ser., Field Mus. Nat. Hist., vol. 27, p. 366, Dec. 8, 1941.

*Type locality.*—Vera Paz, Guatemala, no. 1875.2.27.1, adult male, skin and skull, British Museum (Natural History); collected by O. Salvin.

*Distribution.*—Guatemala, and perhaps British Honduras.

*General characters* (from original description).—"Intermediate between *nicaraguae* and the western Mexican race *glaucula*, resembling the former very closely in color, but with a much smaller skull, about the same size as in *glaucula*.

"The type has the coat 16 mm. long on the back, 9 mm. on the nape. The color of the back is pale ochraceous tawny, matching almost exactly that of the specimen from Central America assigned to *nicaraguae*; the flanks are buff and the pattern on the sides consists mostly of isolated, irregular rosettes with narrowish dark brown rims and dull ochraceous centers, very much as in that specimen, but the rosettes are smaller and the centers paler and the black markings on the tail are not dominant over the pale interspaces. . . ."

*Skull.*—The skull of the type is evidently small and perhaps nearest in size to that of *yucatanica*.

*Measurements* (from original description).—" . . . no flesh measurements were taken.

"The skull of the type, judging by its upper sutures, is fully adult. It has lost its lower occipital area, but its total length is 95 mm. and I infer from comparison with other skulls that its condylo-basal length was 88 or 89 mm., both this dimension and the total length being 12 mm. less than in the type of *nicaraguae*. Its width dimensions are also mostly less; but the cranium is unusually broad, nearly equaling half the length, namely, 46 mm as against 43 in the type of *nicaraguae*.

*Remarks.*—*F. w. salvinia* must be regarded as another imperfectly known form, owing to inadequate material for study. Aside from the type the describer records a specimen from Dueñas, Guatemala "too young to be worth measuring," and two skulls, without skins, from Belize, British Honduras, from the Zoological Society's Museum, marked "menagerie", are tentatively referred to it. The reliability of zoo specimens is always open to question for comparative purposes, owing to modification due to confinement. Most of the comparison is with *nicaraguae*, which had been placed by Pocock in the synonymy of *pirrensis*. The description of the type suggests that *salvinia* may be a rather small, dark form similar in size to *yucatanica*. A small female from Guaymaca, south-central Honduras, is provisionally referred to *nicaraguae*, but may possibly represent gradation toward *salvinia*. No specimens definitely assignable to this race have been examined by me.

*Felis wiedii yucatanica* Nelson and Goldman

Yucatan Margay

*Felis glaucula yucatanica* Nelson and Goldman, Jour. Mamm., vol. 12, no. 3, p. 304, Aug. 24, 1931.

*Leopardus wiedii yucatanica* Pocock, Zool. Ser., Field Mus. Nat. Hist., vol. 27, p. 368, Dec. 8, 1941.

*Type locality.*—Merida, northern Yucatan.

*Distribution.*—The peninsula of Yucatan and northern Chiapas; limits of range unknown.

*General characters.*—Distinguished by very pale buffy grayish ground color. Type decidedly paler than that of *oaxacensis*, with less dusky admixture along median line of dorsum, the enclosed markings narrower, more elongated, instead of broadly rounded. Skull of female from Tecpactan, Chiapas, compared with *oaxacensis*: Nasals still narrower posteriorly; dentition heavier, the upper carnassials broader. Contrasting still more widely in pale coloration with *nicaraguae* of Nicaragua. Dentition not unlike that of *nicaraguae*, but interpterygoid fossa narrower, and nasals narrower posteriorly.

*Measurements.*—Young female (permanent premolars not yet fully in place) from Tecpactan, Chiapas: Total length, 835 mm; tail vertebrae, 382; hind foot, 120. Skull (of preceding): Greatest length, 89.2; condylobasal length, 84.5; zygomatic breadth, 54.9; breadth of brain case, 44.2; squamosal constriction, 37.1; interorbital breadth, 14.7; post-orbital constriction, 30.4; maxillary tooth row, crown length to back of carnassial, 27; upper carnassial, crown length (outer side), 11.8. Cranial measurements of an adult female from northern Yucatan in the British Museum have been recorded by Pocock (*op. cit.*, p. 369) as follows: Zygomatic breadth, 62; width of brain case, 45.

*Remarks.*—Pallid coloration associated with the general aridity of the climate distinguishes various mammals of the Yucatan peninsula region, in contrast with those of more humid sections farther south, and this geographic race of the margay appears to be no exception.

*Specimens examined.*—Two, as follows: **Chiapas:** Tecpactan, 1. **Yucatan:** Merida, 1 (skin only).

#### *Felis wiedii oaxacensis* Nelson and Goldman

##### Oaxaca Margay

*Felis glaucula oaxacensis* Nelson and Goldman, Jour. Mamm., vol. 12, no. 3, p. 303, Aug. 24, 1931.

*Felis mexicana* Saussure, Rev. Mag. Zool., 2 ser., t. 12, Jan. 1860. From Alvarado, Vera Cruz. (Name preoccupied by *Felis mexicana* Desmarest, 1816, for the Serval.)

*Type locality.*—Cerro San Felipe, near Oaxaca, Oaxaca, Mexico (altitude 10,000 feet). Type, no. 68169, adult male, skin and skull, U. S. National Museum (Biological Surveys collection); collected by Nelson and Goldman, August 31, 1894.

*Distribution.*—Oaxaca, and Veracruz; limits of range undetermined.

*General characters.*—Similar to *glaucula* of Jalisco; buffy gray and black color tones about the same, but pattern different, large, rounded rosettes with heavy black borders instead of narrower, more elongated markings tending to prevail over upper parts; skull very similar in general form, but nasals broader, more flattened and depressed anteriorly, narrower, more compressed posteriorly; auditory bullae smaller, less fully inflated; maxillary tooth row longer. Distinguished from *yucatanica* of Yucatan by darker color and apparently larger size.

*Measurements.*—Type: Total length, 910 mm; tail vertebrae, 368; hind foot, 130. Skull: Type, an adult male, and an adult, apparently female, from Cordoba, Veracruz, respectively: Greatest length, 95.7, 86.1; condylobasal length, 90.1, 82.7; zygomatic breadth, 67.4, 59.6; breadth of brain case, 44.5, 42.5; squamosal constriction, 39, 37.4; interorbital breadth, 17.9, 15.3; postorbital constriction, 33.5, 29; maxillary tooth row, crown length to back of carnassial, 29.4, 24.7; upper carnassial, crown length (outer side), 11.6, 9.5.

*Remarks.*—*F. w. oaxacensis* was described from a specimen taken at an elevation of 10,000 feet, near the summit of the Cerro San Felipe, a high mountain near Oaxaca. The record seems to represent an extreme in altitudinal range, and as the general drainage is toward the east it seems probable that this subspecies is generally distributed in the warm humid region including most of Veracruz. It was placed by Pocock (Zool. Ser., Field Mus. Nat. Hist., vol. 27, p. 367, Dec. 8, 1941) in the synonymy of *glaucula*, but the type and a specimen from

Cordoba, Veracruz, differ as indicated by two adults males from Los Masos, Jalisco, which are assumed to represent typical *glaucula*. As pointed out by Pocock, individual variation in color pattern in these cats covers an extensive range, but there seems to be some evidence that this variation, as in many other species, is within limits beyond which it does not usually pass; and geographic considerations should be given due weight, especially in the absence of ample material. Pocock (*op. cit.*, p. 367) refers to *glaucula* a skin labeled "Mexico" from the Bullock collection which he states is not so gray as the type, having a faint buff cast over the dorsal surface and in the centers of the rosettes, which have thick, blackish brown rims, coalescent into bands or isolated. As I have understood that the Bullock collection probably came from southeastern Mexico, and the thick rims of the rosettes suggest those of *oaxacensis*, it seems possible that this specimen should be referred to that form.

*Specimens examined.*—Two, the type and one from Cordoba, Veracruz.

***Felis wiedii glaucula* Thomas**

Western Mexican Margay

*Felis glaucula* Thomas, Ann. Mag. Nat. Hist., ser. 7, vol. 12, p. 235, August 1903.

*Margay glaucula glaucula* Allen, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 357, Oct. 3, 1919.

*Leopardus wiedii glaucula* Pocock, Zool. Ser., Field Mus. Nat. Hist., vol. 27, p. 367, Dec. 8, 1941.

*Type locality.*—Beltran, Jalisco, Mexico. Type, no. 1890.1.4.1, female, skin and skull, British Museum; collected by W. Lloyd, April 25, 1889.

*Distribution.*—Western Mexico, from Jalisco north to southern Sinaloa; limits of range unknown.

*General characters.*—Similar to *oaxacensis* of Oaxaca; buffy gray and black color tones about the same, but pattern different, the enclosed areas on upper parts narrower, more elongated or confluent with comparatively narrow borders, instead of the large rounded rosettes and heavier black markings of the type of *oaxacensis*; skull similar in general form, but somewhat smaller; nasals narrower, more highly arched anteriorly, broader, less compressed posteriorly; auditory bullae larger, more fully inflated; maxillary tooth row shorter.

*Measurements.*—The accuracy of the external measurements of the type, as given in the original description, appears to be questionable. An adult male from Tatemales, Sinaloa, measured in the flesh by the collector: Total length, 892 mm; tail, 333; hind foot, 110. Skull: Two adult males from Los Masos, Jalisco, respectively: Greatest length, 93.2, 91.7; condylo-basal length, 87, 85.9; zygomatic breadth, 65, 63.2; breadth of brain case, 39.7, 39.1; inter-orbital breadth, 16.8, 17; postorbital constriction, 31.1, 31.6; maxillary tooth row, crown length to back of carnassial, 27.2, 27.4; upper carnassial, crown length (outer side), 11.3, 11.7.

*Remarks.*—*F. w. glaucula* has been recorded in Jalisco, and northward on the warm, western side of the Sierra Madre to southern Sinaloa. It appears to be most closely allied to *oaxacensis*.

*Specimens examined.*—Two, from Los Masos, Jalisco.

***Felis wiedii cooperi*, subsp. nov.**

Texas Margay

*Type.*—From Eagle Pass, Texas; no. 25, male adult, skin only, U. S. National Museum; collected by Col. S. Cooper, U. S. Army; entered in museum catalog February 13, 1852.

*Distribution.*—Known only from the type locality, but probably has an extended range in northeastern Mexico.

*General characters.*—Size medium; ground color "cinnamon-buff"; dorsal markings solid black, or with very small, indistinctly lighter centers. Similar in size to *oaxacensis* and *glaucula*, but differs conspicuously from both in longer pelage, and solid, or nearly solid black dorsal spots, instead of enclosed lighter areas.

*Color.*—Ground color of upper parts "cinnamon-buff," with a very thin, inconspicuous admixture of dusky hairs from top of head over nape and along median dorsal area to base

of tail, becoming clearer pinkish buff on flanks, outer sides of forearms and thighs; upper surface profusely spotted or striped with black as usual in the group, but spots of irregular size and shape 15 to 20 millimeters in diameter of solid, or nearly solid, black except on sides of thorax where very small buff centers are present; facial markings much as in other races, but black stripe interrupted between inner angle of eye and side of nostril; nape with three narrow black stripes; a rather broad black stripe continuous on median line from behind shoulders to base of tail; under parts "pale pinkish buff," with blackish brown spots across abdomen and on inner sides of limbs; a heavy black bar across throat, and three narrower, interrupted bars across under side of neck; feet pinkish buff, varied by small, indistinct brownish spots; outer sides of ears blackish, except whitish submarginal spots, the edges "pinkish buff"; tail marked with broad irregular brownish black bands, and narrower interspaces, the interspaces "pinkish buff" above, and "pale pinkish buff" below and at extreme tip.

*Measurements.*—Type: From dried skin and, therefore, not very trustworthy: Total length, 862 mm; tail vertebrae, 331; hind foot, 112. Length of pelage on rump, 22.5; length of longer hairs on upper surface of tail near middle, 28.

*Remarks.*—The skin on which *F. w. cooperi* is based was identified as *Felis pardalis* and entered as no. 25 in the mammal catalog of the National Museum, February 13, 1852. The catalog had been started only the day before, and it is therefore one of the earliest entries. The specimen has still attached a part of the original label bearing data corresponding with that in the catalog, but received little attention for many years. The back of the label bears the designation "*pardalis* group J.A.A." in the handwriting of J. A. Allen. The specimen was first assigned to the proper group by Ned Hollister, who wrote "*near glaucula*" on the label and published the record (Proc. Biol. Soc. Washington, vol. 27, p. 219, Oct. 31, 1914). No other example of the species from so far north has come to my attention, but there seems to be no reason for questioning the validity of the record and it indicates a range paralleling in northeastern Mexico those of northern representatives of various groups mainly tropical in distribution. This isolated specimen record tends to emphasize the comparative rarity of the species. The new race is named for the collector.

*Fish and Wildlife Service, U. S. Department of the Interior, Washington, D. C.*