

Catalogue of American Amphibians and Reptiles.

Vasquez, P.G. 1991. *Melanosuchus, M. niger*.

***Melanosuchus* Gray**
Black Caiman

Alligator Cuvier, 1807:25. Type-species: *Crocodylus lucius* Cuvier, 1807 = *Alligator mississippiensis* (Daudin), by subsequent designation (Stejneger and Barbour, 1917).

Caiman Spix, 1825:3. Type-species: *Caiman fissipes* Spix, 1825 = *Caiman latirostris* (Daudin), by subsequent designation (Schmidt, 1928).

Champsia Wagler, 1830:40. Type-species: *Crocodylus lucius* Cuvier, 1807 = *Alligator mississippiensis* (Daudin) by subsequent designation (Fitzinger, 1843).

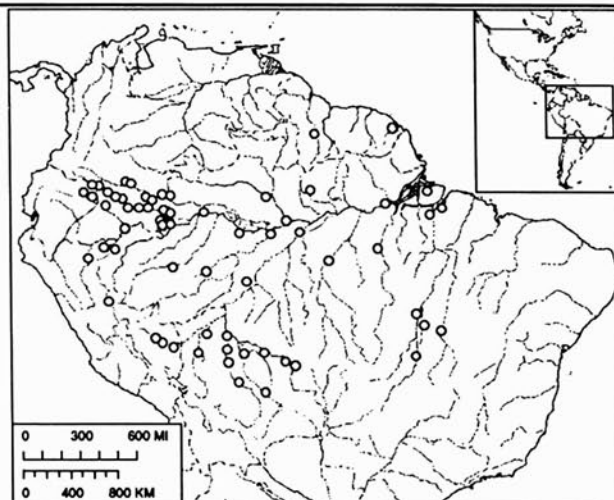
Jacare Gray, 1844:64. Type-species: *Caiman crocodylus jacare* (Daudin), by tautonymy.

Melanosuchus Gray, 1862:328. Type species: *Caiman niger* Spix, 1825, by monotypy (see species account).

• **Content.** One species, *Melanosuchus niger*, is recognized (Mook and Mook, 1940; Wermuth, 1953; Medem, 1963, 1981, 1983; Wermuth and Mertens, 1961, 1977; King and Burke, 1989).

• **Definition.** *Melanosuchus* is the largest caiman in the Amazon region, males rarely exceed 400 cm (Thorbjarnarson and McIntosh, 1987), although some reports of 600 cm specimens exist (Medem, 1963, 1981). The snout is broad, smooth, and moderately long. The interocular protuberance is not fully ossified. A palpebral bone, flat and finely striated above, is present in the upper eyelid. The vomers are ventrally situated, at the level of the premaxillary-maxillary symphysis, and are easily visible (Medem, 1963, 1981; Otte, 1978). The mandibular symphysis extends to the level of the 4th or 5th mandibular tooth (Wermuth, 1953), and the dental formula is Pmx 5e + Mx 13-14/Md 17-19 (Medem, 1963; Brazaitis, 1973; Otte, 1978). Scale patterns are as follows: 3-5 rows of post-occipitals, 4-5 rows of nuchals, 18-19 rows of dorsals, 24-29 rows of ventrals. Double crest caudal whorls number 16-20 and single crest caudal whorls 20-25 (Wermuth, 1953; Medem, 1963; King and Brazaitis, 1971; Brazaitis, 1973; Otte, 1978).

The dorsal color is predominately black, the ventral color creamy-yellow. In the young, the proportion of light zones is greater than in adults, and they also have some lateral bands and light spots.



Map. Distribution of *Melanosuchus niger*. Open circles indicate known localities. The type-locality is too imprecise to plot.

The head is yellowish-brown turning to greenish-brown (Medem, 1963; Otte, 1978).

• **Descriptions, Illustrations, Distribution, Fossil Record, and Pertinent Literature.** See species account.

• **Etymology.** The name *Melanosuchus* is derived from the Greek *melanos* (black) and *souchus* (crocodile) and refers to the predominant color on the body of this species. The gender is masculine.

***Melanosuchus niger* (Spix)**
Black Caiman

Caiman niger Spix, 1825:3. Type-locality, "Fluminis Amazonum et Solimoëns." Syntypes, Zoologisches Sammlung des Bayerischen Staates, Munich, ZSM 3/0 (now lost), 2480/0, and 3039/0. Lectotype, ZSM 2480/0, designated by Hoogmoed and Gruber, 1983:379, an unsexed juvenile, collector unknown (not examined by author).



Figure 1. *Melanosuchus niger* from Ilha Marajó, Pará, Brasil. Photograph by R. Powell, courtesy of the Museu Paraense Emílio Goeldi.

Champsia nigra: Wagler, 1830:140.

Jacare nigra: Gray, 1844:65.

Alligator niger: Strauch, 1866:17.

Caiman niger: Boulenger, 1889:292.

Jacare niger: Mook, 1921:218.

Melanosuchus niger: Werner, 1933:30. First use of combination.

- **Content.** No subspecies are recognized.
- **Definition.** See generic account.

• **Descriptions.** Spix (1825), Boulenger (1889), Schmidt (1928), and Ross and Magnusson (1989) provided general descriptions; the Spix description was reproduced by Medem (1963) and Otte (1978). Mook (1921), Kälin (1933), Wermuth (1953), and Medem (1963) described cranial osteology. Otte (1978) described general features of morphology, physiology, and ethology. Cohen and Gans (1970) gave information on karyotype and evolution. Daudin (1801), Medem (1963, 1981, 1983), Wermuth and Fuchs (1983a), and Ross and Magnusson (1989) provided information on the general distribution and ecology. Hagmann (1902), Medem (1960, 1963, 1980, 1981, 1983), and Otte (1978) provided information on breeding. Medem and Marx (1955), Brazaitis (1973), and Wermuth and Fuchs (1983a) gave key characteristics.

• **Illustrations.** Natterer (1840) and Mook (1921) included drawings of the head and cranium; these were reproduced in Wermuth (1953) and Wermuth and Fuchs (1978). Neill (1971) provided photographs of the bright facial pattern in juveniles. Photographs of the body, head, skull, and habitat are in Otte (1978). Injuries in natural habitats are illustrated by photographs in Otte (1978), Herron (1985), and Magnusson (1985). Medem (1963) provided color photographs of lateral and abdominal views of both adults and juveniles, and also included sketches of the cranium and jawbone. Medem (1981, 1983)

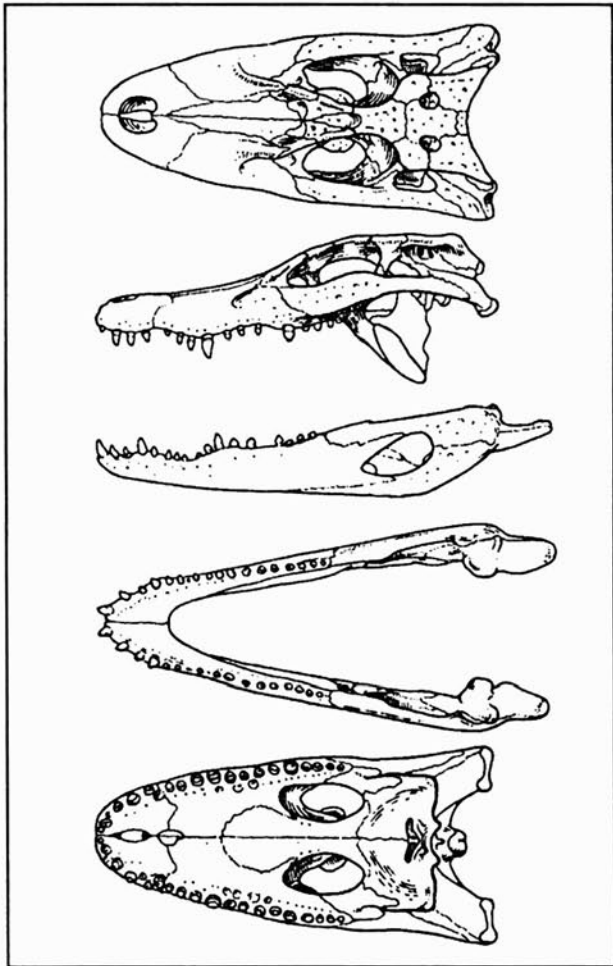


Figure 2. Skull of *Melanosuchus niger* (from Wermuth and Mertens, 1961).

provided additional photographs and Ross and Magnusson (1989) a color illustration.

• **Distribution.** *Melanosuchus niger* is restricted to the Amazon Basin (Medem, 1971b; Wermuth and Fuchs, 1983a; Groombridge, 1987), except for the Guyanas, where populations of this species are found in the Rupununi River (Medem, 1983; Plotkin et al., 1983), a tributary of the Essequibo River in Guyana, and in the Kaw Swamps in French Guiana (Goeldi, 1898; Hagmann, 1902; Neill, 1971; Condamin, 1976; Mittermeier et al., 1979; Plotkin et al., 1983). In Perú, the species is found east of the Andes Mountains in the Amazon (Solimoes), Marañón, and Ucayali rivers (Spillman, 1951; Pierret and Douroujeanni, 1966; Hofmann, 1967, 1968; Tovar, 1967; Carillo, 1970; Dixon and Soini, 1977; Moya et al., 1981; Vásquez, 1981, 1983), and also in tributaries of the Madre de Dios River, such as the Manú and Tambopata rivers (Otte, 1972, 1974, 1978; McDiarmid, 1980; Steward, 1987). In Ecuador, the species is found in the Pastaza River, Alto Napo River and some of its tributaries, such as the Aguarico and Curaray rivers, and also in lagoons such as Limón Cocha and Zancudo Cocha (Medem, 1983; Plotkin et al., 1983; Jahoda, 1987, 1990). In Colombia, *Melanosuchus niger* is present in the Caquetá and Putumayo rivers south of the equator (Nicéforo, 1955; Medem, 1960, 1963, 1981). In Brazil, the range has included the Jurúá, Purus, Madeira, Tapajoz, Xingu, Araguaia, Tocantins, Negro, Mapuera, Pará, and Amazon rivers (Schmidt, 1928; Medem, 1983; Plotkin et al., 1983), including Marajó and Mexiana islands near the mouth of the Amazon (Bates, 1863; Goeldi, 1898; Hagmann, 1909; Guggisberg, 1972; Medem, 1983). In Bolivia, the species has been found in the Madre de Dios, Beni, Mamoré, and Iténez rivers (Donoso-Barros, 1974; Medem, 1983; King and Videz Roca, 1989). Medem (1975, 1983) reported the possibility of the species occurring in the Río Paraguay drainage, but this was discredited by Scott et al. (1991 (1990)).

Melanosuchus niger appears to be diminishing in numbers throughout its range, except for three small population nuclei: Limón Cocha (Napo River) in Ecuador, Cocha Cashu (Manú River) in Perú, and the Kaw Swamps in French Guiana (Groombridge, 1982; Plotkin et al., 1983).

• **Fossil Record.** No fossil remains of *Melanosuchus niger* have been reported, although *Melanosuchus fisheri* Medina, 1976 has been described from the Miocene of Venezuela (Medina, 1976), and an adequate structural predecessor of this and other forms similar to the caimans existed in *Eocaiman cavernensis* Simpson, 1933 during the early Eocene (Langston, 1965).

• **Pertinent Literature.** Medem's (1963) excellent description of *Melanosuchus niger* and aspects of its biology, distribution, and cranial osteology was the first scientific publication that provided an integral study of the species. It is supplemented by Fitkau (1970, 1973), Medem (1981, 1983), and Magnusson et al. (1987). Otte (1978) described ecological characteristics, behavior, and population dynamics. Hagmann (1902) and Medem (1980) provided general information on breeding behavior. Greer (1971), Campbell (1972), Steward (1987), and Herron et al. (1990) provided additional information on breeding ecology and nesting. Herron (1985) provided information on spatial relations and growth. Medem (1971a, 1973, 1974, 1981, 1983), Groombridge (1982), Magnusson (1982), and Vásquez (1983) discussed conservation in different regions. Reintroduction into the wild was reported by Pacheco et al. (1991). Hvidberg-Hansen (1970), King (1978), Rebelo and Magnusson (1983), Medem (1985), and Fuchs et al. (1989) described hunting and the skin trade. Fuchs (1974) provided general characteristics of *Melanosuchus* leather. Wermuth and Fuchs (1983b) provided a key to leathers of this and other crocodylian species. Plotkin et al. (1983) compiled information on actual distribution and addressed conservation problems.

• **Etymology.** The name *nigeris* is from the Latin (*niger* = black), a reference to the principal color of the body in this species.

• **Remarks.** Spix (1825) was the first to notice that *Melanosuchus niger* differs from the genus *Caiman* and specifically from *Caiman sclerops*, which was separated earlier by Schneider (1801) from the genus *Lacerta* (*Lacerta crocodylus* Linnaeus, 1758; collective name). Later, the name underwent a series of modifications (Wagler, 1830; Gray, 1844) until Gray (1862) placed the species in the monotypic genus *Melanosuchus* (Mook and Mook, 1940). Subsequent years brought new analyses (Müller, 1924; Stejneger, 1933) and modifications (Boulenger, 1889; Vaillant, 1898; Mook, 1921) until Werner

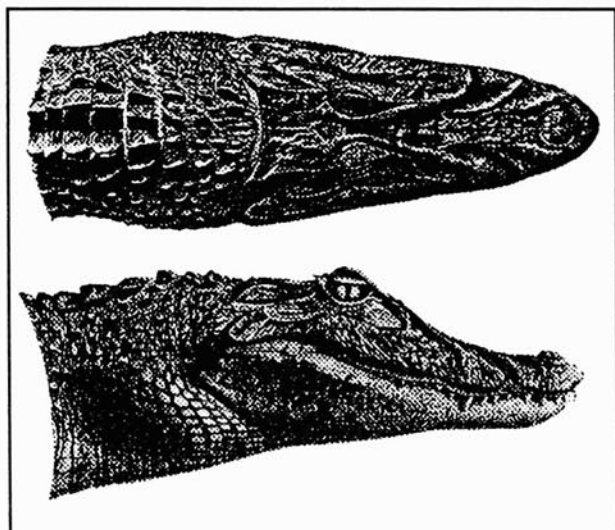


Figure 1. *Melanosuchus niger* (from Wermuth and Mertens, 1961).

(1933) utilized the combination *Melanosuchus niger* (Spix) 1825 for the first time.

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