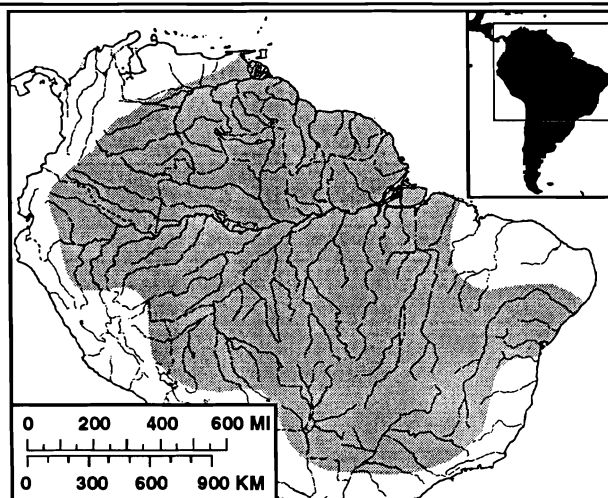


## Catalogue of American Amphibians and Reptiles.

Magnusson, W.E. 1992. *Paleosuchus*.***Paleosuchus* Gray**  
**Dwarf Caiman***Crocodylus* Laurenti, 1768:53. Type-species, *Crocodylus niloticus* Laurenti. See Remarks.*Crocodylus* Schneider, 1801:161.*Alligator* Merrem, 1820:34. Used as a subgenus of *Crocodylus*.*Jacaretinga* Spix, 1825:1. See Nomenclatural History.*Champsia* Wagler, 1830:140.*Caiman* Duméril and Bibron 1836:63.*Paleosuchus* Gray, 1862:330. Proposed as a subgenus of *Caiman*.Type-species, *Crocodylus trigonatus* Schneider, 1801 by monotypy.*Aromosuchus* Gray, 1862:330. Proposed as a subgenus of *Caiman*.Type-species, *Crocodylus palpebrosus* Cuvier, 1807 by monotypy.*Palaeosuchus*: Waterhouse, 1902:418. Wermuth and Mertens (1977) list this as a *nomen substitutum*, but the author has not seen the original reference.*Crocodylus*: Müller, 1924:316. Justification for use of Laurenti's name. See Nomenclatural History.

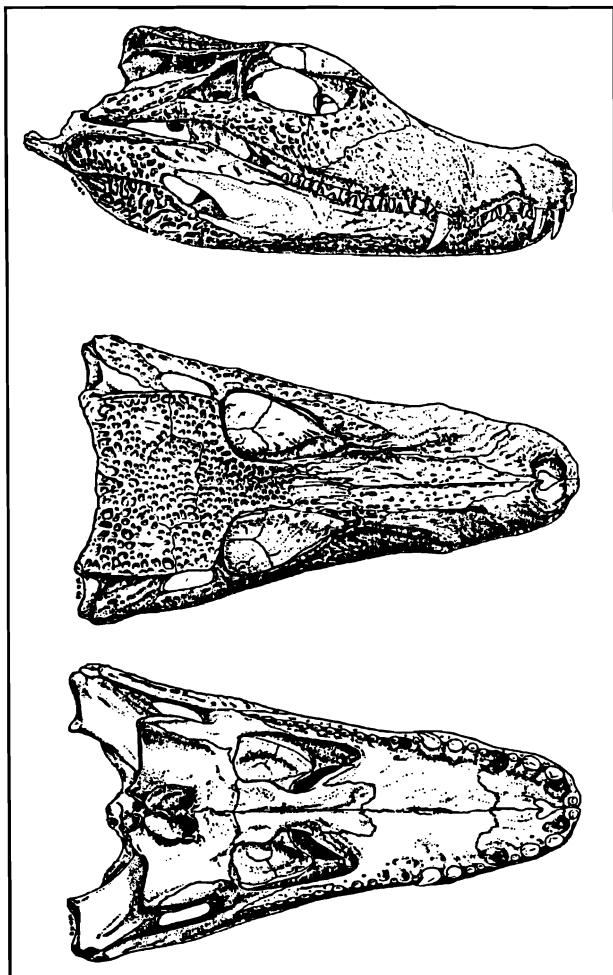
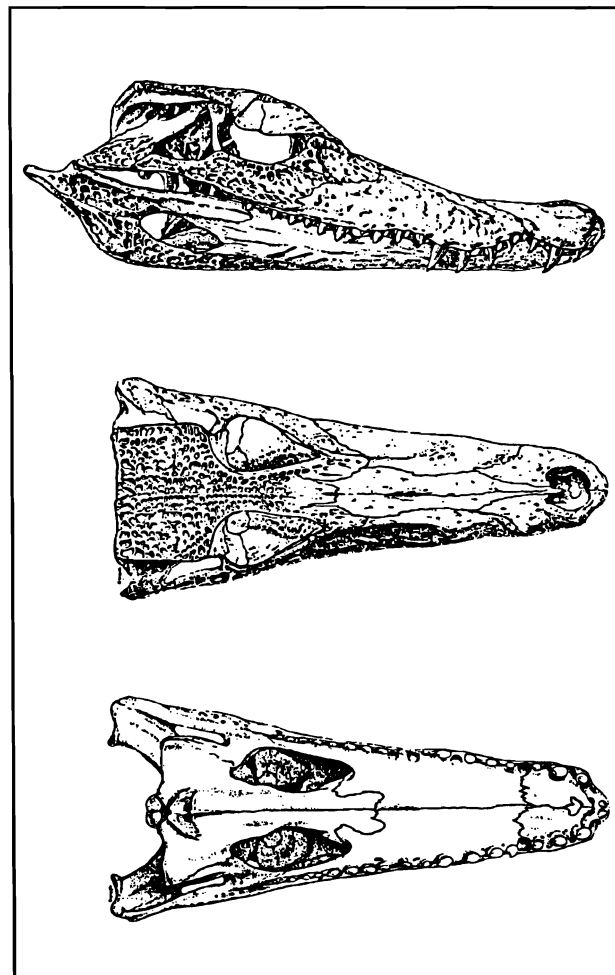
- **Content.** Two species are recognized: *P. trigonatus* and *P. palpebrosus*.

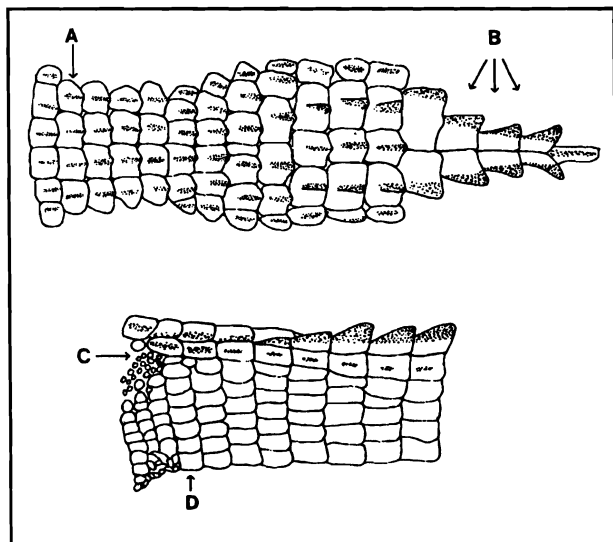
- **Definition.** *Paleosuchus* species are small alligatorids, normally less than 2 m in total length. They have no bony ridge connecting the orbits, and the eyelids, which are strengthened by large internal bony plates, almost completely obscure the orbits when

Map. Distribution of *Paleosuchus* spp.

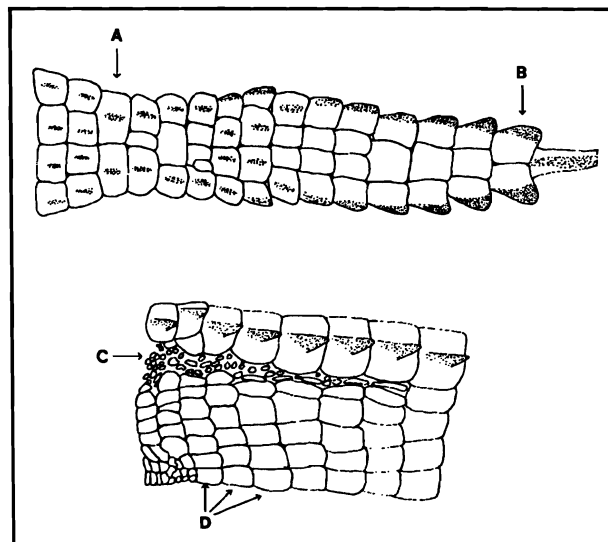
the skull is viewed from above. The dorsal and ventral osteoderms on the body and the dorsal, lateral, and ventral osteoderms on the tail about, forming bony shields; the supratemporal fossae are absent (very small fossae may be present in hatchling *P. trigonatus*); each maxilla has four teeth; the iris is chestnut brown.

- **Descriptions.** General descriptions have been given by Tiedemann et al. (1817), Natterer (1841), Schmidt (1928), Carvalho (1951), Wermuth (1953), Medem (1958, 1981, 1983), Wermuth and Mertens (1961), Brazaitis (1974), Wermuth and Fuchs (1983a),

Figure 1. Skulls of *Paleosuchus palpebrosus* (from Medem, 1958).Figure 2. Skulls of *Paleosuchus trigonatus* (from Medem, 1958).



**Figure 3. Upper** - Dorsal armour of the sacral and caudal regions of a *Paleosuchus palpebrosus*: note that the sacral region contains more than 2 rows of enlarged dorsal scutes (A), and that more than 2 rows of the double caudal crests meet at the midline of the tail (B). **Lower** - Lateral scutes of the base of the tail: note that the small granular scutes at the base of the leg (C) do not interrupt the first column of large lateral scutes behind the cloaca (D). Drawing by author.



**Figure 4. Upper** - Dorsal armour of the sacral and caudal regions of a *Paleosuchus trigonatus*: note that the sacral region contains one row of enlarged dorsal scutes with only 2 members (A), and that the double caudal crests of the tail meet at the midline in only one row (B). **Lower** - Lateral scutes of the base of the tail: note that the small granular scutes at the base of the leg (C) interrupt more than three columns of large lateral scutes behind the cloaca (D). Drawing by author.

Magnusson (1989), and Ross and Magnusson (1989). King and Brazaitis (1971), Fuchs (1974) and Wermuth and Fuchs (1983b) described commercial hides, and Cohen and Gans (1970) described the karyotypes of both species of *Paleosuchus*.

• **Illustrations.** Carvalho (1951) illustrated the major external differences between the two species of *Paleosuchus* (line drawings), and Medem (1952) illustrated the same and skull differences (black and white photographs). Natterer (1841) presented outstanding line drawings of heads and necks, which have been copied by many subsequent authors. Mertens (1943) and Aoki (1982) presented black and white photographs of skulls. Medem (1970) presented diagnostic black and white photographs of heads and bodies of both species and a postulated hybrid. Detailed line drawings illustrating differences between the skulls of the two species were given by Medem (1958), and similar drawings illustrating differences between the skulls of *Paleosuchus* and other crocodylians were given by Medem (1981). Fuchs (1974) and Wermuth and Fuchs (1983b) presented photographs of the belly skin (commercial hide) of an unidentified *Paleosuchus* (the irregular small scales in the columns of lateral scutes at the base of the tail indicate that the skin was from a *P. trigonatus*).

• **Distribution.** The genus occurs throughout South America north of about 21°S and east of the Andes. The hiatus in the distribution in Central Brazil (see map) may represent a lack of collecting, but the absence of the genus from the arid states of Maranhão, Ceará, Rio Grande do Norte, and Paraíba in north-eastern Brazil is probably due to lack of suitable habitat.

• **Fossil Record.** Romer (1956) cited fossils from the Pliocene and Recent of South America, but gives no details. Steel (1973) did not mention any fossil record for either species of the genus.

• **Pertinent Literature.** The literature regarding habits, distributions, and habitat was reviewed by Medem (1981, 1983) and Magnusson (1989). Biochemical evidence for the distinctiveness of the genus *Paleosuchus* and its species was given by Densmore (1983). Brooks (1979) listed the digenean parasites of *Paleosuchus* and suggested phylogenetic relationships among crocodylian genera based on the distributions of their parasites.

• **Key to species.** Catalogue of American Amphibian and Reptile account numbers are given in parentheses.

1. External mandibular foramen at least as wide vertically as its dis-

tance to the inferior margin of the angular; one (rarely more) row of enlarged occipital scutes; one transverse row of two (rarely more) enlarged dorsal scutes between the rear legs; 5-8 (rarely fewer) columns of lateral tail scutes broken by irregularly distributed small scales; two or fewer of the posterior double caudal crests meet at the midline of the tail; enlarged scutes of the double caudal crest project laterally; dark pigmentation usually less extensive than light pigmentation on the ventral surface ..... *P. trigonatus* (555)

2. External mandibular foramen narrower vertically than its distance to the inferior margin of the angular; two (rarely fewer) rows of enlarged occipital scutes; more than two scutes in all rows of enlarged dorsal scutes between the rear legs; most or all columns of lateral tail scutes complete; three or more of the posterior double caudal crests meet at the midline of the tail; enlarged scutes of the double caudal crest project vertically; dark pigmentation as extensive or more extensive than light pigmentation on the ventral surface (see Remarks) ..... *P. palpebrosus* (554)

• **Nomenclatural History.** *Paleosuchus* was the sixth of eight names (*Crocodylus* Laurenti, 1768:53; *Crocodylus* Schneider 1801: 161; *Alligator* Merrem, 1820:34 (proposed as a subgenus of *Crocodylus*); *Jacaretinga* Spix, 1825:1; *Champsia* Wagler, 1830:140; *Caiman* Duméril and Bibron 1836:63) applied to this genus (Stejneger and Barbour, 1917; Stejneger, 1933; Mook and Mook, 1940). The almost universal current acceptance of the system suggested by Schmidt (1928) stems from the detailed revision by Medem (1958): "The synonymy of *Paleosuchus* is peculiarly complicated by the varying use of *Jacaretinga* Spix, which included *moschifer* (= *trigonatus* (= *palpebrosus* - see species account)), a species of *Paleosuchus*, with *punctulatus* (= *sclerops*), a species of spectacled caiman. The transfer of Spix's name by Gray has occasionally been followed. Müller's still more radical proposal to restrict the name *Crocodylus* to the smooth-fronted caimans produces so much nomenclatural confusion that it should under no circumstances be followed. The type of *Jacaretinga* is fixed by Müller as *punctulatus* (= *sclerops*), and the long use of *Caiman* for the spectacled caimans makes it desirable to place *Jacaretinga* in the synonymy of *Caiman*."

• **Etymology.** The name is masculine in gender and derived from the Greek words *paleo*, meaning ancient, and *suchus*, meaning crocodile. Gray did not give his reasoning for the choice of the name, but presumably he considered some feature(s) of the species (*P.*

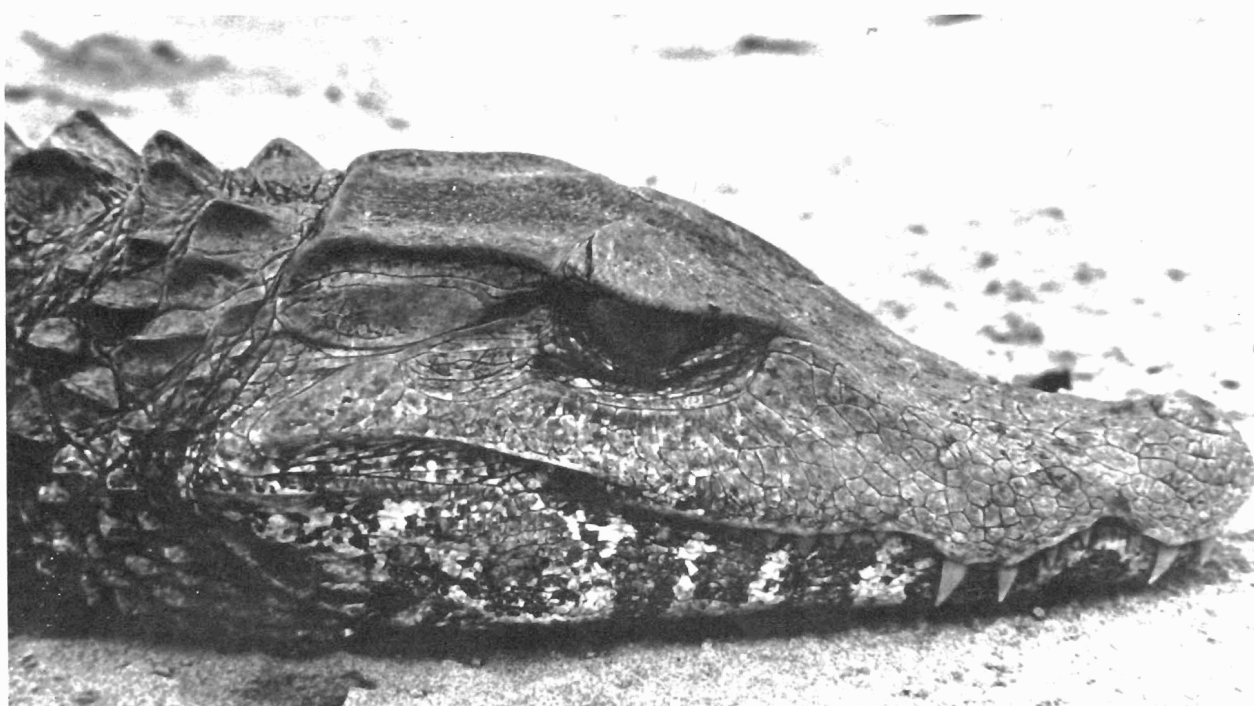


Figure 5. *Paleosuchus palpebrosus*. Photo by author.

*trigonatus*) to be primitive.

• **Remarks.** *Crocodylus* Laurenti, 1768:53 (type-species, *Crocodylus niloticus* Laurenti) is the oldest available name. However, it has been applied almost universally to the Nile crocodile for 200 years. Its use for South American caimans should be suppressed by the International Commission on Zoological Nomenclature.

Some individuals have head shapes and colors intermediate between the norms of the two species. Use of the external features given in the key will result in those being classified as *P. palpebrosus*. However, Medem (1970,1983) regarded such individuals as hybrids. I do not know whether the skull structure of "intermediates" is closer to *P. trigonatus* or to *P. palpebrosus*, but I suspect the latter. Resolution of the status of postulated hybrids will probably require biochemical analysis.

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