

## DO CAIMANS EAT FRUIT?

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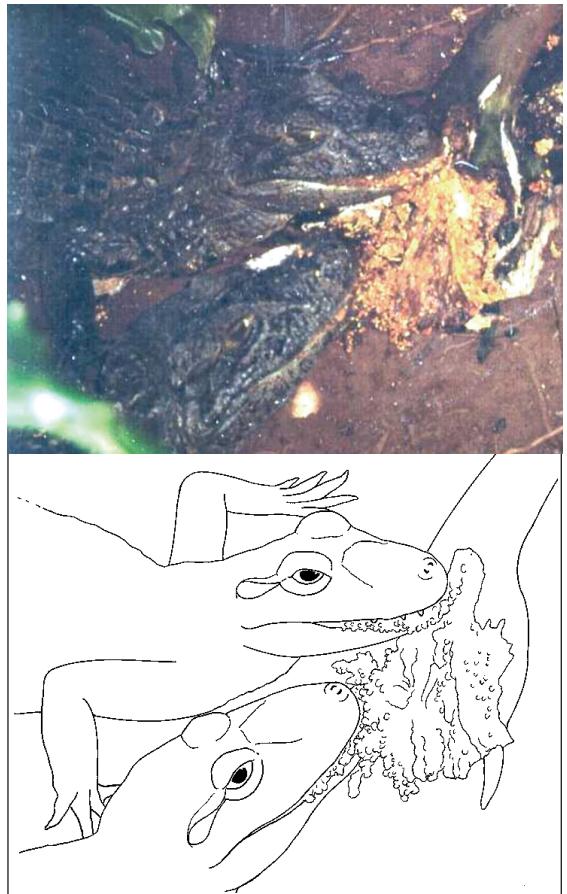
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Crocodylians are indiscriminate feeders and include any available animal protein in their diet. They feed on any animal they are able to overpower and, therefore, an astonishing diversity of prey types, ranging from insects, molluscs, crustaceans, fishes, birds, and bats, to large ungulates and other reptiles, can be present in a crocodylian's diet (Diefenbach 1979; Lang 1987). Nevertheless, some species are prey specialists and ontogenetic variation in feeding habits is also known to occur (Lang 1987). For example, adults of the broad-nosed caiman, *Caiman latirostris*, rely heavily on predation on ampullarid snails, although they still consume some other prey items such as fishes, birds, and mammals, whereas juveniles are mainly insectivorous (Diefenbach 1987). Up to now, it seemed indisputable that all crocodylians are strictly carnivorous, since no report of herbivory exists for any species. Herein, we report the occurrence of frugivory in *C. latirostris*.

Observations were made at the Laboratório de Criação de Jacarés, UNESP, Rio Claro municipality, São Paulo state, southeastern Brazil, where a breeding/management program for the species has been conducted. Animals were kept in an outdoor pen (10 x 12 m) with a water tank (2 x 10 m) and many plant species providing shelter and shade. At the time of the observations, the pen was inhabited by a group of 35 3-yr-old captive-born caimans (SVL 35-45 cm). A group of 20 2-yr-old captive-born tegu lizards, *Tupinambis merianae* (SVL 25-40 cm) were kept along with the caimans. Tegus and caimans were fed with live chicks or raw ground meat until satiation twice a week..

The first observation was made coincidentally around noon on 18 December 1999 during routine maintenance activities. We observed two *C. latirostris* feeding on multiple fruits of *Philodendron selloum* (Fig. 1) growing inside the pen. *Philodendron selloum* is a member of the Araceae, native to Brazil, widely distributed, and

used as an ornamental plant; it produces multiple fruits with sweet orange flesh of approximately 1-cm thickness that covers a central fibrous stem 20-30 cm long (see Lorenzi and Souza 1999). The caimans started to ingest the fruits without any external stimulation, but it was not possible to determine whether they started to eat a fruit lying on the ground or whether if they actually "picked"



**Figure 1.** Two juveniles of *Caiman latirostris* feeding on fruits of *Philodendron selloum*. Some orange flesh of the fruit can be seen in the mouth of the upper individual in the photo. Note the partially eaten fruit lying on the ground in front of the animals.

the fruit from the plant. In three other instances, following the first observation, we offered *P. selloum* fruits to the caimans, and frugivory was confirmed with other caimans from the pen.

Despite the limitation imposed by the unnatural conditions in which our observations were made—behaviors witnessed in captivity may not necessarily reflect those occurring in free-living animals—we can offer three possible explanations for the occurrence of frugivory under the reported conditions: (1) Since the caimans shared the pen with tegu lizards well-known for eating fruit (Dessem 1985), including those of *P. selloum* (pers. obs.), we raise the possibility that the caimans could have acquired frugivory behavior from the tegus. (2) *Philodendron selloum* fruits attract a multitude of insects, particularly coleopterans, and it could be that while trying to prey on these insects the caimans accidentally ingested fruits. However, we have observed caimans eating *P. selloum* fruit which we previously checked and freed of insects, and this may indicate that caimans are able to recognize the fruit itself as a food item. (3) We see no reason to rule out the possibility that frugivory does occur under natural conditions, and that *C. latirostris*, in the field, could sporadically ingest some kinds of fruits.

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#### LITERATURE CITED

- Dessem, D. 1985. Ontogenetic changes in the dentition and diet of *Tupinambis* (Lacertilia: Teiidae). *Copeia* 1985:245-247.
- Diefenbach, C.O. da C. 1979. Ampullarid gastropod—staple food of *Caiman latirostris*. *Copeia* 1979:162-163.
- Diefenbach, C.O. da C. 1988. Thermal and feeding relations of *Caiman latirostris* (Crocodylia: Reptilia). *Comparative Biochemistry and Physiology* 89A:149-155.
- Lang, J.W. 1987. Crocodylian behaviour: implications for management. In: G. Webb, S. Manolis, and P. Whitehead (eds.), *Wildlife Management: Crocodiles and Alligators*, pp. 273-294. Surrey Beatty & Sons Pty. Ltd, London, U.K.
- Lorenzi, H. and H.M. de Souza. 1999. *Plantas Ornamentais no Brasil. Arbustivas, Herbáceas e Trepadeiras*. Instituto Plantarum, Nova Odessa, São Paulo, Brasil.