## **ORIGINAL ARTICLES**

# Daudin's Monitor (Varanus ornatus, Daudin 1803) and its association with Ubani (Bonny Island), Southern Nigeria

MARK K. BAYLESS<sup>1</sup>, GODFREY C. AKANI<sup>2</sup>, and LUCA LUISELLI<sup>3</sup>

11406 Holly Street, Berkeley, California 94703 U.S.A. Email: mkbVa1802@aol.com [author for correspondence]

<sup>2</sup> Department of Biological Sciences, Rivers State University of Science and Technology, P.M.B. 5080, Port Harcourt, Rivers State, Nigeria

<sup>3</sup> F.I.Z.V. and Environmental Studies Centre 'Demetra', via Olona 7, I-00198, Roma, Italy

DAUDIN'S Monitor (Varanus ornatus) is indigenous to the coastal mangrove and deltaic swamp forests of West and Central Africa (Bayless, 1997; Angelici & Luiselli, 1999; Luiselli et al., 1999; Akani & Luiselli, 2000; Bayless & Luiselli, 2000). Traditionally considered as a simple subspecies of the Nile Monitor (Varanus niloticus), Daudin's Monitor has been recently elevated to full specific rank (Böhme & Ziegler, 1997). In anticipation of definitive analyses on the V. niloticus species complex, our intention in this paper is to follow the nomenclature given in 1997 by Böhme and Ziegler.

In the past, V. ornatus enjoyed a considerable range across West Africa, as habitat partition seems not to have occurred at that time to the degree that it does today (Bayless, 1997). Currently in southern Nigeria, V. ornatus is prized for its meat and skin (Akani & Luiselli, 2000), and is thus vulnerable at the local level (Politano, 1998), yet this has not always been the case. Some two hundred years ago, in the delta region of the Niger River, on the Island of Bonny (more precisely at Ubani), V. ornatus and humans appear to have co-existed in a non-aggressive fashion. In this note we report briefly on the cultural interactions between local people and monitor lizards at Bonny, and attempt to draw parallels between the previous situation and that occurring today in the same area.

#### THE STUDY AREA

Today, Bonny Island has become one of the most important ports and commercial zones of southern Nigeria as a result of the enormous industrial activity which links it closely to the extraction of oil and to the production of derivatives such as petroleum, natural gas, etc (De Montclos, 1994). A highly developed and large town, with several satellite suburbs, Bonny has developed in an otherwise environmentally important area where coastal barrier forests and large mangrove formations are also to be found (Politano, 1998). Bonny Town, one of the most southerly centres in Nigeria, is located at the mouth of the Bonny estuary which empties into the Bight of Bonny (formerly the Bight of Biafra). The area is richly endowed with abundant natural resources. including petroleum, fish and fisheries, wildlife, as well as mangrove and freshwater forest resources. The extraction and processing of oil and its derivatives has in recent times attracted various companies and ancillary industries. Consequently, the town is becoming rapidly urbanised and the hub of activities for many firms and other enterprises. Bonny's strategic position along the coast makes it an important port of call for many ocean-liners. Indeed, the dredging of the estuary a few decades ago has turned Bonny into a major traffic artery within the Niger Delta, from which ocean-liners, seafarers and tourists alike are

directed into the hinterland via Port Harcourt, the capital of Rivers State. The Bonny Estuary is, however, not an exclusively separate system, but is linked to neighbouring estuaries by tidal creeks and channels. NEDECO (1959) noted that a beach originally separated the Bonny and New Calabar estuaries but, following repeated 'brace action', the beach gave way, thus creating one joint entrance to both rivers. Rainfall around Bonny is remarkably heavy. In some years as much as 4520 mm of rain is recorded while conventional rainfall is normal, even in the dry season, on account of the region's proximity to the ocean.

### AN HISTORICAL ACCOUNT

In the early nineteenth century, Bonny was a wholesale market place for slaves, with no fewer than 20,000 slaves being sold and deported annually to the Americas and to Europe. The people of the Brass country (presently in Bayelsa State), called Allakoos, Ibbibbys (= Ibibio) or Quaw, and the Heebo (= Ibo) people constituted the majority of the slave-trade market. During the reign of King Opubo Fubara Pepple (1792-1830), himself originally of Ibo descent, as were many of the principal slave traders, life in Bonny was rigorous. In time, commodities such as salt, yams and trading in slaves grew in importance and commerce began to increase, both for the King and for the traders of Bonny. The once continuous block of flooded forest and mangrove forest was broken up by a crisscross of roads, especially along the main river courses which became crucial trading axes (the Rivers of Bonny, New Calabar, and Sombreiro). As a result of these environmental changes, people of different ethnic groups and traditions started to mix, with the result that a halfcaste culture grew up (De Montclos, 1994).

In 1823, Captain John Adams, trader, ship's captain and explorer, wrote down his impressions of all those aspects of native life that he had encountered in his travels along the West African coastline. In particular, Adams's very precise observations of Bonny, situated on the eastern side of the River Niger region and approximately five miles from the sea are invaluable. In the first decades of the nineteenth century, the Brass people

who inhabited the small town of Peterside, situated on the banks of the Bonny River, but on the opposite side of Bonny town, practised a cult which prescribed special veneration of the Rock Python (Python sebae), a large-sized (up to 9 m long) snake which is still present in the region to the present day (Luiselli, Angelici & Akani, 2001). This sacred reptile was permitted to roam freely throughout the huts and grounds of the villages. Should one of these snakes ever seize a small child the grieving mother would display pride in the fact that such a sacred creature had taken her child (Adams, 1823; Johnston, 1923). This cultic snake worship was repulsive to the English sailors who thought of this savagery as utterly wretched. In Bonny, the Ibo natives had their own sacred reptile, Daudin's Monitor (V. ornatus), as their deity, referred to by King Opubo Pepple as his 'fetiche' [= fetish] or ju-ju [sometimes spelled jew-jew].

According to Kingsley (1897), neither fetiche nor ju-ju were native words. Fetiche comes from the word old portuguese explorers used to designate the objects they thought the natives worshipped, and in which they were wise enough to recognize a certain similarity to their own little images and relics of Saints, 'Feitico'. Ju-ju, on the other hand, is french and comes the word for toy or doll, while other scholars believe it to originate from 'gru-gru', a Mandingo word for charm. Fetiche is more precise and has more affinity to the image of a Saint, as it is not venerated for itself, or treasured because of its prettiness, but only because it is the residence, or the occasional haunt, of a spirit (Kingsley, 1897).

These monitor lizards were seen by Captain Adams and others crawling about the town, where they were caressed and fed by the Ibo natives. A widely held local belief was in circulation that anyone entering a house which had also been entered by a monitor would enjoy specially good fortune. Indeed, Captain Adams experienced a further demonstration of this 'lizard worship' and noted it; One day, thirty or forty canoes were surrounding a larger vessel in the river when a 'fetiche' or monitor lizard was observed in the centre of the river, swimming to Peterside, just

across the river from Bonny. All the canoes left the larger vessel in pursuit of their fetiche to see who would reach it first and take it to the opposite shore. On their return to the shore on the Bonny side, Captain Adams asked the natives, 'What would have happened if the New Calabar fetiche, the shark, had reached their lizard fetiche first?' The natives apparently replied that the shark would never have dared to touch their deity! Thus, it seems that within one small region of the Niger Delta, the Brass in Peterside worshipped the Rock Python, the Ibo in Bonny, just across the river, worshipped Daudin's Monitor while, in New Calabar, the people worshipped the shark. Such fetiche worship was common throughout Africa. In the Kasai region of the Congo around Brazzaville, for example, the Lele people worshipped the Pangolin (Manis tricuspis), and persecuted the Nile Monitor (Varanus niloticus) (Douglas, 1957).

While theology was clearly not an important aspect of life in Bonny, Peterside, Calabar or elsewhere in the Niger Delta, King Opubo Pepple had shown Captain Adams the numerous Christian artifacts displayed on a table in the royal palace, used merely as ornaments and possessing no other significance for him which had been brought to Bonny decades before by Portuguese missionaries. According to Adams (1823), a cross, once the central symbol of the Portuguese church, appears to have still been in use as a sign at the cross roads in Bonny. By the time the slave trade had been abolished in Africa, the trade in other than human goods was vigorously pursued. After 1846, when the first missionaries were allowed to settle in West Africa, the towns of Calabar, Brass and Bonny experienced an increase in size, most markedly from 1861 to 1864, and particularly amongst immigrants and converts to Christianity (Ikime, 1980). By the 1860s, Christianity was becoming increasingly important. In 1869, a man named Peter Obonanta, was probably the first to renounce traditional animistic religion, and was baptized as a Christian (Isichei, 1982).

By 1878, the fetish cult of iguanas, [used to designate monitors], a name imported from the West Indies into West Africa, and still widely used

in pidgin English by the people of the Delta (Angelici & Luiselli, 2000) was so considerable that the British Consular authorities of the deltaic Niger River, or 'Oil Rivers' region, lent it their sanction as well (Johnston, 1923). All Europeans under Consular jurisdiction were forbidden to kill the sacred fetiche of Bonny, or Rock Python of Brass. However, an incident occurred at Brass, in 1878, whereby an agent of the firm of Messrs Hatton and Cookson, discovering a large python in his house, had killed it outright. When this misdeed had become known to the Brass's Chieftain, the people descended on the factory of Hatton & Cookson, forcibly removing the agent who had killed their fetiche. They tied him down to the ground by his thumbs and toes, spat into his mouth and performed other indignities on his person. The Chieftain and followers broke into the nearby store owned by this agent, and took goods equal in value to twenty pounds' sterling as retribution. Consul Hopkins, learning of this disturbance in Brass, considered the case, and summarily fined the agent an additional twenty pounds' sterling! This was the usual punishment for any European sufficiently ignorant to harass, injure or kill a fetiche in Bonny, Brass, Calabar or elsewhere in Nigeria. But nowhere in deltaic Nigeria was the fetiche so strong as in Bonny.

In Bonny, the cult of monitor lizards had become a nuisance by early in 1878, for these reptiles devoured fowls, turkeys, ducks and geese belonging to the Europeans with impunity. It is reported in the original sources that these lizards would lie in the middle of the road or in doorways, and savagely lash the legs of those people walking a tail-length away, often leaving them bloodied by their assaults.

The Church Missionary Society, through its actions in converting the natives to Christianity, seem to have brought about changes from this absurd fetiche and associated practices in just one day! In March of 1882, a great 'infestation' of monitor lizards occurred at Bonny. There, they were to be found in every hut, house, garden, roof or churchyard. On Easter Sunday 1882, the missionaries convinced the converted Ibo people, including King George Oruigbiji Pepple I (1866-

83), to slaughter the saurian fetiche. So when the church bells sounded out that Easter Sunday morning upon Bonny, a large number of men and boys armed themselves with machetes, clubs and sticks and proceeded to slaughter the monitors, resulting in the slaughter of every Varanus they met with. The stench from the lizards' bloated bodies scattered throughout Bonny soon became unbearable. A similar slaughter had occurred two years' previously earlier in Brass, where all the fetiche pythons across the river from Bonny had been killed. This time the massacre had occurred in Bonny itself. Following this 'saurian holocaust', the people had left behind their animistic beliefs, and turned instead to Christian ones, in the shadow of the many hundreds of dead monitor lizards strewn across this small trading town (Johnston, 1923; Loveridge, 1949). Christianity has proved to be long lasting, for more than ninety per cent of the population of southern Nigeria remains Christian today (De Montclos, 1994).

The birth of Christianity in Bonny officially began on that Easter Morning of 1882, among the bloodshed of hundreds of monitor lizards, all in the Name of God replacing one Fetish for another, a man rather than a lizard.

#### THE CURRENT SITUATION

The presence of monitor lizards along both sides of the estuarine tract of the Bonny River, that is, both in Bonny Island and around Peterside, has been recently confirmed by Angelici & Luiselli (1999, see localities numbered 1 and 2 in Figure 2, at page 35). In the coastal area of the Bonny River, the monitors occur nowadays mainly around Peterside within pockets of freshwater habitat which mark the pipeline of the Shell Petroleum Developmental Company and of Manifold. Angelici & Luiselli (1999) also observed these lizards amongst the mangrove swamps. Many are trapped by the natives as they are relatively abundant there. Studies by two of us (LL and GCA) showed that no fewer than three adult monitors are caught bimonthly around the single village of Peterside. The monitor lizards are usually trapped using crabs as bait (mainly

Cardiosoma armatum, Uca tangeri, and Sersama huzardii, which abound in the place). It must be noticed that crabs are the main food type for freeranging V. ornatus from southern Nigeria (Angelici & Luiselli, 1999; Luiselli et al., 1999), and the fact that they are used as bait by natives is an indication of the fact that the crab-eating preferences of monitors are well known to local hunters. A few days after setting the bait, it begins to decay, supporting the growth of a large maggot population. The smell of putrifying crab attracts the monitor, which is then trapped. The decline in the monitor population finds an explanation in the legend that the monitor was only killed once it had eaten a child. Following this incident, the natives began killing and eating the reptiles and their numbers declined dramatically. Such legends aside, increased human activity and frequent oil spillages have contributed to the reduction in the population of monitors, caused by the destruction of eggs and the pursuit of adults for skin and meat. It is noteworthy that stuffed adult monitor lizards are frequently offered for sale as souvenirs in tourist shops in Port Harcourt, Aba, and Calabar, as well as in ju-ju markets throughout the region.

In a recent ethno-zoological survey, Akani & Luiselli (2001) found that veneration for monitor lizards is still alive in sectors of southern Nigeria, being specially concentrated in Delta State and Rivers State, whereas they are persecuted nearly everywhere in Bayelsa, Akwa-Ibom, and Cross River States. In particular, a tendency was observed toward respect for these animals by animistic people in Bonny island, although the mixed ethnic and cultural composition of this developing town has nowadays compromised the positive traditions towards monitors. Consequent killing of many specimens now occurs amongst those who observe Christian traditions, now dominant in the area.

Across West Africa, belief in *Varanus* and other reptilian Fetish is still present, at Bamako's Fetish Market in Mali (Eason & Attum, 2002) and at the largest Fetish market in all of West Africa, at Cotonou in Benin.

#### **ACKNOWLEDGEMENTS**

The authors dedicate this paper to the Late Sean McKeown, Zoo Curator extraordinary. Current data on monitor lizards at Bonny was gathered during field expeditions supported by several companies, mainly the E.N.I.-AGIP group, and Award of the Linnaeus Fund (1999, 2000, 2001) by the Chelonian Research Foundation (Lunenburg, U.S.A.). Dr. Brenda Bolton (London) greatly improved the style of this manuscript.

#### REFERENCES

- Adams, Capt. J. (1823). Remarks on the country extending from Cape Palmas to the River Congo. London: G. & W.B. Whittaker. 265pp.
- Angelici, F.M. & Luiselli, L. (1999). Aspects of the ecology of *Varanus niloticus* (Reptilia, Varanidae) in southeastern Nigeria, and their contribution to the knowledge of the evolutionary history of *V. niloticus* complex. *Revue d' Ecol.* (Terre Vie) 54, 29-42.
- Akani, G.C. & Luiselli, L. (2001). A survey of the cultural attitudes of people towards Reptiles in the Niger Delta, Nigeria: Implications for conservation. *Herpetol. Bull.* 75,19-24.
- Bayless, M.K. (1997). The distribution of African monitor lizards (Sauria: Varanidae). African J. Ecol. 35, 374-377.
- Bayless, M.K. & Luiselli, L. (2000). The ecological distribution of monitor lizards (Reptilia, Varanidae) in Nigeria. *Mischea Zool.* 23,1-8.
- Böhme, W. & Ziegler, T. (1997). A taxonomic review of the *Varanus* (*Polydaedalus*) *niloticus* (Linnaeus, 1766) species complex. *Herpetol. J.* 7, 155-162.
- Buffrenil, V.de. (1991). Donnees bibliographiques et statistiques sur la biologie et l'exploitation des varans Africains. Lausanne: Secretariet CITES, Lausanne. 50 pp.
- De Montclos, M.-A. (1994). Le Nigéria. Paris: Kurthala. 213 pp.
- Douglas, M. (1957). Animals in Lele religious symbolism. *Africa* **27**(1), 46-58.
- Eason, P. & Attum, O. (2002). Mali Herp Adventure. *Reptiles* **10**(11), 52-60 and 62-71.

- Ikime, O. (1980). Groundwork of Nigerian History. Ibadan: Heinemann Educational Books Ltd. 615 pp.
- Isichei, E. (1982). Varieties of Christian Experience in Nigeria. London: Macmillan Press. 211 pp.
- Johnston, Sir H.H. (1923). The story of my life. Indianapolis: The Bobbs-Merrill Co.. 504 pp.
- Kingsley, M.H. (1897). Travels in West Africa. London: Macmillan and Co. Ltd. 743 pp.
- Loveridge, A. (1949). Some queer adaptations of African animals. *The Nyasaland Journal* II(2), 9-22.
- Luiselli, L. & Akani, G.C. (2002). An investigation into the composition, complexity and functioning of snake communities in the mangroves of south-eastern Nigeria. *Afr. J. Ecol.* 40, 220-227.
- Luiselli, L., Akani, G.C. & Capizzi, D. (1999). Is there any interspecific competition between dwarf crocodiles (*Osteolaemus tetraspis*) and Nile monitors (*Varanus niloticus ornatus*) in the swamps of central Africa? A study from southeastern Nigeria. *J. Zool.*, *Lond.* 247, 127-131.
- Luiselli, L., Angelici, F.M. & Akani, G.C. (2001). Food habits of *Python sebae* in suburban and natural habitats. *Afr. J. Ecol.* **39**, 116-118.
- NEDECO. (1959). River Studies and Recommendations on Improvement of Niger and Benue. The Hague, Netherlands: North Holland Pub. Co. (Riverine Engineering-Nigeria). 1000 pp.
- Politano, E., ed. (1998). A study of the fauna (Amphibia, Reptilia, Aves, Mammalia) of the Niger Delta region of Nigeria and evaluation of the impacts of two natural gas tracing pipelines. San Lorenzo in Campo: Aquater S.P.A. 516 pp.