

The utilization of oil-palm kernel by *Necrosyrtes monachus* in The Gambia

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The Hooded Vulture *Necrosyrtes monachus* is a common to abundant gregarious species in The Gambia and is abundant throughout surrounding Senegal. It is a frequent scavenger on beaches especially at fish landing sites, and is ubiquitous near human settlements throughout the country, especially along the Gambia River. It occupies practically every ecological niche available in this area and is often seen singly or in twos or threes foraging in leaf litter on the floor of coastal forest thicket (Barlow *et al.* 1997).

Along the shoreline of the Atlantic Ocean it is often seen in association with single or small groups of Palm-nut Vultures *Gypohierax angolensis*, another common and widespread species in The Gambia (Barlow *et al.* 1997). Very often both species are seen feeding commensally on the bodies of washed up fish (pers. obs.). These two species are often seen loosely associated in the vicinity of extensive stands of the oil-palm *Elaeis guineensis* at sites at the coast well inland of the coast (pers. obs.).

Known food items of the Hooded Vulture in The Gambia include dead fish and fish offal found in profusion on beaches, less so along the banks of the Gambia River and at fish smokeries (pers. obs.). In these situations the Black Kite *Milvus migrans parasitus* often shares this foraging opportunity with the Hooded Vulture. Beached corpses of dolphin and turtles are another common dietary item of this vulture in The Gambia. The carcasses of small and large domestic animals, domestic dog traffic casualties, and moribund donkeys, the occasional horse, small ruminants and cattle laid out in fields near villages are a regular source of food. These situations are generally but not always attended by the larger vulture species that are also present in The Gambia which include Rüppell's Griffons *Gyps rueppellii*, African White-backed Vulture *Gyps africanus*, European Griffon *Gyps fulvus* and Lappet-faced Vulture *Torgos tracheliotos*.

In The Gambia these latter vultures are not often seen on the ground much before c. 80-100 km inland. There is little opportunity for avian scavengers to find dead game in The Gambia. Waste is gleaned at urban and rural rubbish tips including dumped chicken offal and at abattoirs where coagulated blood is taken (Trevor Key pers. comm.). Animal faeces, alate termites and

other seasonally abundant insects have all been noted as food items in The Gambia (pers. obs.). Near human settlements, I have often seen small groups of *N. monachus* feeding at piled, discarded dumps of the fruit of *E. guineensis*. It is the ingestion of this dietary item which is the focus of this note.

Oil-palm is considered one of the most useful trees in West Africa and plantation propagation is common throughout the region. In The Gambia dependence on naturally occurring oil-palm forest is however more the norm. Profitable exploitation of palm oil and other related products is very important to rural communities in the region of Senegambia. The oil is extracted from the seed kernels by crushing or by a solvent process, which involves boiling in old petroleum drums on an open fire, and is generally done on a small scale village enterprise basis.

On the morning of 22 September 2003 Trevor Key and I collected a very freshly road-killed adult *N. monachus* near Tujering, Western Division, southern Gambia (13°19 N, 16°47 W). The carcass was put in the car and the throat plugged with paper tissues to prevent leakage, as I intended to use the specimen as a study skin (Figure 1). The bird was successfully skinned the following day but seasonal high humidity prevented sun drying and the skin preparation became acutely maggoty and had to be discarded. The skin carried large deposits of yellow sub-cutaneous fat.

On dissection the stomach was found to be packed with 11 fresh whole fruit kernels of *E. guineensis*, which had not been boiled, crushed or seemingly interfered with by farmers. It also contained two bone fragments of a puffer-fish *Tetradon* spp. The bird, weighing 2 kg, and was a female with a small ovary. Pectoral muscle tissues and liver samples were saved in EDTA solution for laboratory work.

It is assumed that the vulture had foraged in the crown of the oil-palm in order to collect the kernels from the female part of the fruit-bearing palm (Figure 2).

I also opened the stomach of another *N. monachus* found dead in The Gambia. This was a decomposed bird found in a rice-field at Kampant, Western Division (13°14 N, 16°05 W), 100 km inland on 9 February 2002. The body cavity had five desiccated oil-palm seeds in it and these are saved with the full skeleton now at University of Michigan, Museum of Zoology, USA.

To augment our own observations of food in The Gambia which includes mention of oil-palm in the omnivorous diet (Barlow *et al.* 1997), Brown *et al.* (1982) and Mundy *et al.* (1992) quote the following as dietary components for *N. monachus*: carrion, any kind of meat

and skin scraps from any carcass, small bones, alate termites, insect larvae *e.g.* army worm caterpillars, locusts, maggots, human and carnivore faeces and fish.

This appears to be the first published record of *N. monachus* utilizing non-human harvested oil-palm fruit as a food source. This finding further demonstrates the non-specialization and scavenging versatility of this vulture.

Acknowledgements.

Mark Anderson encouraged this note after CRB had distributed a number of jpg's depicting the Hooded Vulture's viscera, in view of the health of the dead bird's kidney related to the current discussions concerning the Asian vulture crisis. MA also made useful comments on earlier drafts. In The Gambia Trevor Key gave generous and friendly support in the field.

References

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Figure 1. 7

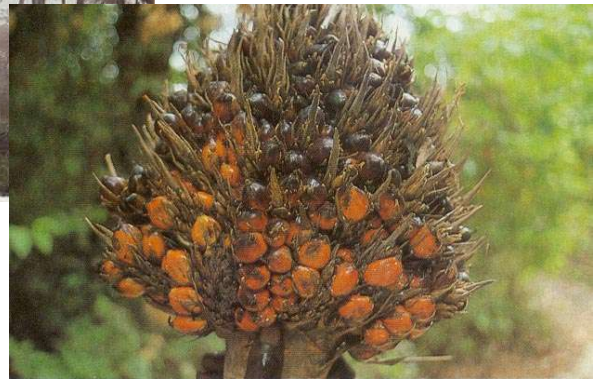


Figure 2. Oil palm fruit cluster & and or vista of oil palm stand in The Gambia.

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