
Notes and records

A new range record for the African palm civet *Nandinia binotata* (Carnivora, Viverridae) from Unguja Island, Zanzibar

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Introduction

Surveys for nocturnal mammals (principally galagos) were conducted on two occasions for 2 weeks in 1998 and 1999 in Jozani Forest Reserve, Unguja Island, Zanzibar (location coordinates, 06°15.9'S, 39°24.8'E). Jozani Forest Reserve contains moist ground water forest as well as significant areas of dry coral rag thicket forest. A minimum of 3 km² of ground water forest is said to remain in Jozani Forest Reserve, which is the largest remaining stand of near natural forest on the island (Burgess & Clarke, 2000). This forest is well known for hosting the largest population of the endemic Zanzibar red colobus monkey *Procolobus kirkii*, and the near endemic Ader's duiker *Cephalophus adersi* on Unguja Island (Pakenham, 1984; Burgess & Clarke, 2000). Unguja Island, Zanzibar is known to have other African herpestids and viverrids, *Bdeogale crassicauda*, *Galerella sanguinea*, *Civetticis civetta* and two introduced species: *Mungos mungo* and *Viverricula indica* (Moreau & Pakenham, 1940; Swynnerton & Hayman, 1951; Pakenham, 1984). Recently a new subspecies of servaline genet *Genetta servalina archeri* was described (Van Rompaey & Colyn, 1998). No other records of other herpestids and viverrids were known but Pakenham (1984) mentioned the local kiswahili names of animals reported from the Jozani forest area called 'Ukwiri' (said to look like *Viverricula*) and 'Uhange' (which is said to be 'like *Bdeogale*... and marked like *Civettictis*'). This paper presents evidence for the presence of *Nandinia binotata* in Jozani Forest Reserve.

Methods

Nocturnal walks were conducted in the both the ground forest and the coral rag thicket vegetation types of Jozani Forest Reserve. Tape recordings were made with a Sony WM-C6C tape recorder (Sony Corp., Osaka, Japan) and Sennheiser K6-ME66 (Sennheiser Electronic KG, Wedemark, Germany) directional microphone. All calls of owls, and mammals, particularly galagos and hyrax were recorded. Observations were made during nocturnal walking surveys with the aid of a Petzel headtorch with a halogen bulb to spot eye shine and a four cell Maglite torch together with binoculars (Zeiss DDR 10×50W Jena, Germany) to obtain closer observations of the animal(s). Notes were made of the estimated height of the animals' habitat use e.g. height in the canopy, food items, locomotion behaviour and animal interactions. Chardonneret traps (Charles-Dominique, 1977) baited with ripe bananas and mangos were used to capture galagos and other mammals alive. The traps were checked every 4–6 h, and animals were extracted by hand when possible without the need for anaesthesia and later released unharmed.

Results

Six sightings of palm civets in the ground water forest of Jozani Forest Reserve, Unguja Island, were recorded. One individual was seen in the same tree on three consecutive nights. Distant screaming calls similar to those known to be made by *N. binotata* on the African mainland (A. Perkin, unpublished data) were also heard on one occasion. One individual was trapped twice on consecutive days (the animal was distinguished by a small tear on the left ear). This may have been the same individual that was seen on the three occasions as previously mentioned as the trap was set close by the palm tree in which the animal was observed initially. The trapped individual was caught in an area on the edge of the ground water forest bordering the coral rag thicket forest. No biometric measurements were taken because of the lack of anaesthetic materials to handle the animal safely. The animal was estimated to be 1.5–2 kg in weight, head and body 40–50 cm long and

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Fig 1 A *Nandinia binotata* captured in a Chardoneret trap. One of the pale shoulder spots is visible on the left shoulder.

the tail 50-60 cm long. The characteristic twin whitish spots on the shoulders were not obviously visible and the colour of iris was golden yellow (Fig. 1.). On the dorsum the fur was grizzled brown with clearly defined dark spots. The tail was the same colour as the dorsum, bushy with ill-defined dark tail rings. This individual closely resembled the illustration in Kingdon (1997) apart from the eye colour.

Discussion

These records and one trapped individual confirm the presence of the species *N. binotata* on the Unguja Island, Zanzibar. As the recent description of a new subspecies of servaline genet *G. s. archeri* (Van Rompaey & Colyn, 1998) from Unguja Island indicates, more research may show this population of *N. binotata* to be a distinct subspecies because of the effects of isolation of Unguja Island from the mainland Africa for some 10,000 years (Hamilton, 1982; Kingdon, 1990). Mainland African populations of *N. binotata* are not considered threatened (IUCN, 2000) however if this is a distinct population there may be cause for conservation concern. The records of *N. binotata* came from the ground water forest and not the coral rag thicket, that may indicate a preference for the moister forest types of which, there is little left (Burgess & Clarke, 2000). Mainland east African populations of *N. binotata* are normally known from the moister forest types and not dry thicket, or woodland vegetation types.

However evidence suggests they are able to tolerate secondary forest and cultivation mosaics where enough fruiting trees survive.

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