

# Ornithological Observations



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Ornithological Observations accepts papers containing faunistic information about birds. This includes descriptions of distribution, behaviour, breeding, foraging, food, movement, measurements, habitat and plumage. It will also consider for publication a variety of other interesting or relevant ornithological material: reports of projects and conferences, annotated checklists for a site or region, specialist bibliographies, and any other interesting or relevant material.

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## **EVIDENCE OF YELLOW BILLED KITES *MILVUS AEGYPTIUS* FISHING DURING THE BARBEL RUN IN THE OKAVANGO PAN-HANDLE, BOTSWANA**

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## EVIDENCE OF YELLOW BILLED KITES *MILVUS AEGYPTIUS* FISHING DURING THE BARBEL RUN IN THE OKAVANGO PAN-HANDLE, BOTSWANA

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In 2009, Glynis Humphrey and Luke Saffarek observed Yellow-billed Kites *Milvus aegyptius* in proximity to the annual Barbel run, a feeding frenzy of sharp tooth catfish *Clarias gariepinus* in the Okavango pan-handle, Botswana. This phenomenon occurs primarily during the low flows in the pan-handle during July/August and September each year (Hancock, 2009). This area is a popular destination for flyfishermen in search of the commonly known "striped waterdog", the Tigerfish *Hydrocynus vittatus*. The Barbel run could be described an "ecological-human web" of fish, birds and flyfishermen. The prolific birdlife that exploit the run is an indicator amongst other environmental signals of the fish frenzy to the recreational fishermen utilizing the Okavango River.

This event occurs almost exclusively in the northern corner of Botswana during a brief window when the environmental conditions are at their optimum. As the flood waters of the Okavango River recede from the submerged floodplains of the Delta, schools of juvenile fish and other baitfish that shelter under the Papyrus *Cyperus papyrus* and Phragmites reeds *Phragmites australis* lining the banks of the pan handle and in shallow bays are forced out into the deeper channels where they become the prey of the predatory

fish (Field, 2012). The Barbel, Bream and the Tigerfish also take to flushing out the sheltering fish from underneath the vegetation, and in doing so expose the smaller fish to the open water surface and occasionally flush them onto the riverbanks. Notable fishing bird species and the more recently observed Yellow-billed Kites seize this opportunity and swoop down or dive to catch the surfaced fish. The final snapping and clattering of the Barbel near the river edges, together with the birdlife harvesting fish on the run, including the turbid, disturbed waters indicate to the flyfishermen where to hoist their fishing lines. In 2010-2011 there were as many as 6-8 Yellow-billed Kites observed by flyfishermen in proximity to the Barbel run, whereas on prior fishing trips their seem to be only 2-4 in the vicinity (Luke Saffarek, pers. comm).

Yellow-billed Kites are considered the worlds most ubiquitous and successful raptor (Brown *et al.* 1982), and are most commonly associated with scavenging behaviour with regular sightings of these diurnal raptors flying above motorways in search of road kills. Interestingly, they are acknowledged as accomplished fishers, and have been observed scavenging fish from the surface of harbour waters, as well as following coastal ships and snatching scraps from the surface by only immersing their legs (Steyn, 1982); behaviour not commonly known among most. In foraging in these aquatic habitats the Kites feed on molluscs, crustaceans, amphibians and small fish (Brown *et al.* 1992). This paper reports preliminary observations of fishing associated with the Barbel run in the Okavango pan-handle with photographs to illustrate observations as to how common this behaviour may or not be for the species in this region.

A Yellow-billed Kite was photographed swooping low over the open surface of the pan-handle waters and throwing its feet forward to seize a fish in its talons (Figure 1a-d), and subsequently eating the



caught fish in the air (Figure 2). The fish in the kite's talons is identified as a silver catfish *Schilbe intermedius* (Luke Saffarek pers.comm) otherwise locally known as butter barbel, which has a smooth skin (Skelton, 2001). This fishing strategy is closely similar to the foraging activity of the African Fish Eagle *Haliaeetus vocifer*, though the latter commonly eats its prey from a perch in a nearby tree. The African Fish Eagle fishing success rate is noted to be only one in seven or eight attempts (Ferguson-Lees & Christie, 2001).

The Osprey *Pandion haliaetus*, a winter visitor to Africa is another piscivorous forager, and like the Fish Eagle, has sharp spicules on the soles of the feet for the grasping of slippery prey (Maclean, 1990). The Kites however do not have spicules on the undersides of their feet to catch slippery fish, yet they have mastered the catching of fish with smooth skins. Further, the observation of fishing success by this species indicates that it may also be able, like the Fish Eagle and Osprey, to correct for parallax (Maclean, 1990) – the apparent displacement of the position of the prey caused by the different refractive indices of air and water.

Typically silver catfish feed from the mid to surface waters on fish, insects, shrimps, snails, plant seeds and fruit (Skelton, 2001). The younger fish are primarily insectivorous and the larger fish are piscivorous (Mospelle *et al.* 2005), and are active at night or in sheltered light (Skelton, 2001). The Barbel run and the predator fish feeding frenzy zones typically result in turbid, muddy waters, and in these sediment disturbed waters the body colour of the silver catfish changes to a very light olive or silvery grey with yellow edges, and in clear, dark waters it obtains a dark chocolate mottling (Skelton, 2001).

Hancock (2009) reported in a technical report on the Okavango River Basin that piscivorous bird species utilise the open waters and include amongst others African Fish Eagle, Pied Kingfisher *Ceryle rudis*, African Darter *Anhinga rufa* and Reed Cormorant *Phalacrocorax africanus*. These species use different foraging techniques, the first two fishing from the tree lined riverine branches and the latter two underwater (Hancock, 2009). Pel's Fishing Owl *Scotopelia peli* also fish in the pan-handle, although in nocturnal hours. Other species which exploit the pan-handle during the Barbel run are the Squacco *Ardeola ralloides* and Green-backed Heron *Butorides striata*, together with other egrets and herons. Green-backed Heron have been observed to successfully use insects, dropped onto the water, as lures to attract fish (Mark Muller, pers comm.)

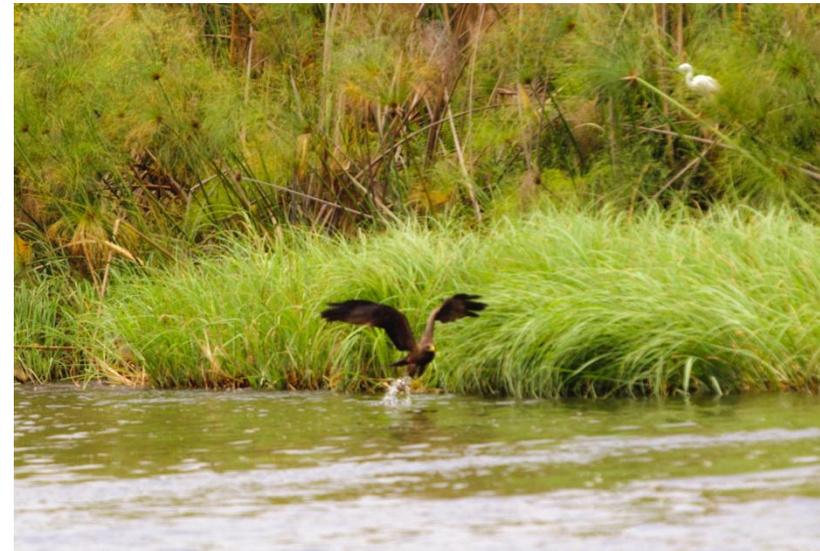
Hancock (2009) notes that the birds mentioned above are important as they are the only ones observed that are able to exploit this particular niche of clear open waters that are typically nutrient deficient and low in fish density.

This paper suggests that the Yellow-billed Kites ought to be recognized as a fishing raptor that utilises the unique occurrence of the Barbel run. It also highlights the adaptability of the species as being able to catch fish without rough soled feet as well as its potential ability to correct for parallax in open water during fish foraging activities. In light of the only other renowned piscivorous raptors, the African Fish Eagle and the Osprey, perhaps the Yellow-billed kite is required to be acknowledged as a successful fisher on the Okavango pan-handle during the run, however further observations and or research is required to quantify and qualify these preliminary observations.

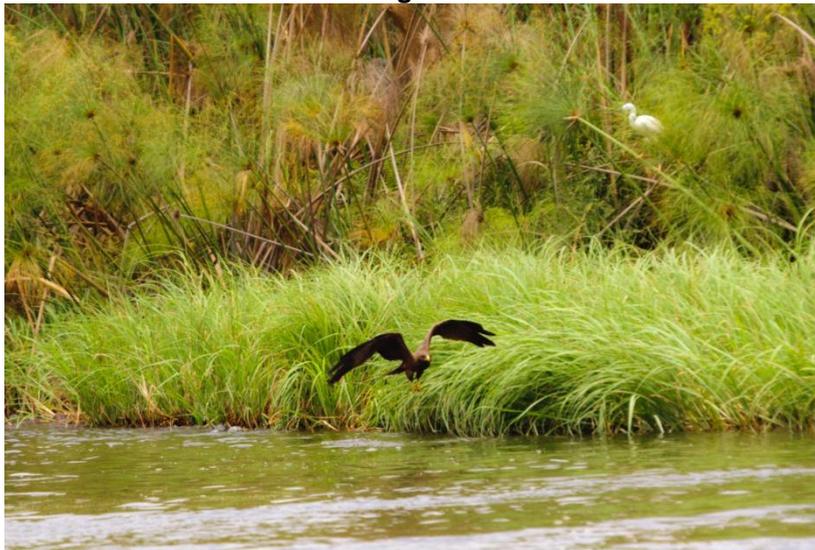
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**Fig 1a**



**Fig 1c**



**Fig 1b**



**Fig 1d**

*Sequence of images showing the Yellow-billed Kite swooping over the surface of the water and seizing a fish in the Okavango pan-handle (Photos: Luke Saffarek)*



**Fig 1** - Yellow-Billed kite eating a fish in mid air  
(Photo: Luke Saffarek).

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