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Review of Dickinson's Kestrel *Falco dickinsoni* and Grey Kestrel *Falco ardosiaceus* within Namibia

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Introduction

Dickinson's Kestrel *Falco dickinsonii* and Grey Kestrel *Falco ardosiacus* are both considered rare and localised, with restricted ranges within Namibia (Brown et al. 1982, Brown et al. 1995, Hockey et al. 2005). Both species are suspected to have declined somewhat in the past ten years or so, and seem to have become relatively rare in their respective ranges within Namibia during this time (pers. obs.). This report deals with both recent and past observations of these species, as well as accumulated measurement data obtained from captured birds.

There are only two confirmed breeding records for Grey Kestrel and only suspected breeding of Dickinson's Kestrel within Namibia. This is also discussed under the relevant species review.

Dickinson's Kestrel *Falco dickinsonii*

Brown et al. (1982) refer to Dickinson's Kestrels as being locally common, but within a restricted range in Namibia. Neither Hockey et al. (2005) nor Brown et al. (1982) report any confirmed breeding of this species from Namibia. These authors, as well as Harrison et al. (1997) refer to the preferred habitat of this species, as being associated with Hyphaene palm trees, but this was not found to be the case in Namibia.

Discussion

Dickinson's Kestrels are fairly restricted within Namibia and occur in the Tsumkwe district of the Otjozondjupa Region, north eastern parts of Oshikoto and Ohangwena where woodlands are well developed, Kavango and eastwards along the Caprivi Strip to the Katima Mulilo area, but rare in the eastern floodplains east of Bukalo. Although rare in the Rundu area, the well-developed woodlands west of Rundu towards Eenhana support a small population (C. Hines pers. com.).

Dickinson's Kestrels in Namibia occur mainly in well-developed woodland, especially the Baikiaea/Burkea woodland of the Caprivi Strip, in contrast to most other references, which state their preferred habitat as being Hyphaene palm tree areas, such as in Botswana and Zambia where the species has been found to breed.

Although no confirmed breeding has been recorded for Namibia, Chris Hines reports two possible breeding observations. The first was of a bird with a bent tail, just north of the Mahango Game Park in August (being a hole nester, the bent tail may imply possible incubation). The second was of a pair sitting together, one of which flew out of a dead tree stump north of Leeupan in the Khaudum Game Park. This may suggest breeding as this species would not normally enter a hole or hollow tree stump, if not busy breeding or preparing a nest site (Raptor measurement forms 1987). The latter correlates with the months that these birds breed in neighbouring countries. Brown et al. (1982) report breeding in July and September to November in Zimbabwe, Zambia and Malawi and July to August in Tanzania. Hockey et al. (2005) report breeding in September to late October in other neighbouring countries.

In January I observed two fully fledged immature birds soliciting from a pair of adults 71 km west of Katima Mulilo and a young bird recently fledged was captured at the end of December, 80 km west of Katima Mulilo. Both these observations were along the main tar road surrounded by well-developed Baikiaea woodland where the birds were suspected to have bred. The ages of these birds, especially the two soliciting birds, almost certainly indicated breeding within the Caprivi.

Dickinson's Kestrel numbers seem to have declined, especially along the Caprivi Strip and the main road to Katima Mulilo, over the past 16 years (pers. obs.). Having lived and observed this species in the Caprivi for two years (1988/89), as well as capturing and ringing several birds, subsequent visits to the area have yielded fewer and fewer sightings, especially over the past seven to 10 years. The most encouraging visit was in December 2005, when three birds were again seen and one caught and ringed. A single bird was observed at the Horseshoe on the Kwando River and the other two were 100 km and 105 km west of Katima Mulilo respectively. Fifteen years ago, Dickinson's Kestrels were fairly commonly observed in and around the Mahango Game Park. In the past seven years occasional birds have been recorded, but not near the numbers recorded previously.

Prior to Namibia's independence, the South African Defence Force had cleared a 100m wide "cut line" between the Kwando River in the west, up to the Zambezi River, just north of Katima Mulilo. Although this cut line was starting to become vegetated once again in 1988/89, many Dickinson's Kestrels were regularly seen along this stretch. Brown et al. (1995) report that the clearing or overgrazing of the natural environment may drastically modify the habitat, which in turn may then provide more suitable habitat for certain species. This may well have been the case along the cut line for the time that it was kept clear. Today it is so overgrown that the road can no longer be found!

In contrast to this, a lot more people have moved to the verges of the main Kwando/Katima road over the past fifteen years and have cleared large tracts of land, yet very few Dickinson's Kestrels have been seen in these areas subsequently. Staff at Susuwe Island Lodge on the Kwando River, who do regular game drives in the area to the west of the Kwando River, report occasional sightings but they are by no means common (Sean Braine pers. com.).

In the past I have encountered Dickinson's Kestrels feeding on grasshoppers and locusts. During a huge veld fire to the east of the Kwando River and north of the main tar road in August 1971, seven individuals were seen hawking insects, mainly grasshoppers and locusts that were fleeing the flames. All were taken on the wing and eaten while flying amongst clouds of Carmine Bee-eaters. The kestrels, however, must also feed on rodents and small birds, as many have been trapped using white domestic mice and on one occasion, a captured kestrel still had a few feathers attached to its bill. On another occasion, an adult was seen plucking an unidentified small bird.

Mensural data

Table 1 records the measurements of 24 Dickinson's Kestrels caught in Namibia, The birds were sexed mainly on weight, using other documented sources (e.g. Hockey et al. 2005). The procedures recommended by Biggs et al. (1978), were followed when measuring the birds. Most measurement forms were of unsexed birds. Individuals weighing 210 g and less were taken as males and those over 210 g as females. The lowest weight recorded was 165 g and the highest was 260 g (two birds). Birds were recorded in average to good body condition and captured in January, March, May, June, July, August, October, November and December.

TABLE 1: Measurements taken from 24 Dickinson's Kestrels captured in Namibia. The mean and (range) are provided

Measurements: grams/millimetres	**Measurements n=10 Male**	**Measurements n=14 Female**
Weight	191,4 (165,0-208,0)	225,0 (215,0-260,0)
Total Wing Length	284,4 (295,0-340,0)	351,4 (297,0-360,0)
Total Body Length	299,3 (285,0-326,0)	307,6 (295,0-320,0)
Ulna Length	62,5 (59,3-69,3)	68,8 (56,2-70,0)
Tarsus Length	37,4 (36,0-40,4)	41,3 (32,8-45,0)
Tail Length (centre)	125,6 (128.0-152,0)	144,0 (135,0-150,0)
Bill Length	15,9 (15,0-16,8)	16,5 (14,6-18,1)
Bill Chord	22,7 (21,3-25,0)	25,2 (21,4-25,0)
Bill Depth	14,1 (12,2-16,5)	14,1 (12,3-15,6)
Bill Width	12,7 (10,5-15,8)	14,3 (11,1-15,0)
Tooth Depth	5,0 (4,2-5,5)	5,7 (4,4-5,9)
Tooth Width	5,6 (5,1-6,3)	6,1 (5,0-6,2)
Bill Height	12,4 (11,6-13,4)	13,4 (8,5-14,1)
Gape Length	21,3 (20,9-23,2)	22,0 (20,9-23,6)
Gape Width	22,4 (20,0-24,0)	25,3 (22,2-24,3)
Skull Length	48,6 (43,4-51,0)	54,5 (49,0-52,9)
Skull Width	31,2 (30,0-32,2)	32,1 (31,1-34,0)
Std. Wing Length	221,9 (210,0-235,0)	225,0 (215,0-232,0)
Secondary Length	104,1 (100,0-110,0)	117,7 (97,0-120,0)

Grey Kestrel Falco ardosiacus

Brown et al. (1982) refer to Grey Kestrels as being locally rare elsewhere in Africa but rare and restricted in Namibia. Hockey et al. (2005) refer to a single breeding record, this being the same record reported by Brown et al. (1995). This report mentions another nest found north of the Oponono 'lake' by the author in July 1970.

Although Harrison et al. (1997) only report 6 grid cells in Namibia in which this kestrel was recorded, with a total of nine records and a breeding population of 40 pairs, Brown et al. (1995) reported 54 records from 19 confirmed quarter degree squares and a few additional probable squares, covering all months of the year. The last authors estimated a total population in Namibia of 39 pairs.

Brown et al. (1995) reported on distribution and habitat preferences as well as estimating numbers of birds in each of the habitat types. We concur on the estimates for the Cuvelai drainage area, but increase the numbers along the Kunene Valley on the evidence of recent sight records and birds captured over the past years. We also include additional mensural data received since the publication by Brown et al. (1995).

Discussion

Grey Kestrels in the Ruacana area seem to have declined over the past eight – ten years, based on observations during annual visits to the area. In July 1996, five individuals were seen between Ruacana airfield and the Hippo pools below the falls, while subsequent trips to the same area have yielded either single birds or no birds at all, with no birds being seen in the past seven years. By contrast, several sightings as well as three birds have been captured between Ruacana Falls and Swartbooisdrift. Although Brown et al. (2005) report sightings of apparently resident (i.e. presumably territorial) birds, we would agree that they would be fairly close to the nest site during the breeding period, but would possibly move vast distances outside of the breeding season, depending on annual rainfall and the availability of food at the time. The abundance of birds seen on a single day in July 1996 and the subsequent paucity since, may substantiate this and may be contrary to Brown et al. (1995), assuming that the birds

are at similar densities throughout the year. Brown et al. (1982) report Grey Kestrels as "mainly entirely" sedentary not moving seasonally even in West Africa: "mainly entirely" would suggest some uncertainty and a need for more observations on movements in this species. There is also a recent photographic recorded for January 2006 of a bird in the Etosha National Park (J v d Reep pers.com.). Brown et al. (1995) report the Grey Kestrel being confined to the north-central parts of the country and the eastern Kaokoveld to about 13° 30' E on the Kunene. A pair is regularly seen at the Epupa Falls at about 13° 13 E, where Bernd Brell had one of this pair settle on a Bal-chatri trap, but unfortunately it was not captured!

One of this pair was also observed by myself and a group of birders feeding on what looked like a Red-eyed Bulbul *Pycnonotus nigricans*.

Based on more recent sightings and birds captured between Ruacana Falls and Swartbooisdrift, I am confident of five pairs occupying certain stretches of the river. Suitable habitat between Swartbooisdrift and the Epupa Falls, which is very seldom travelled, could produce another five pairs, including the "resident" pair regularly seen at the Epupa falls. The extra ten pairs would be an increase of 28 % on the original estimate by Brown et al. (1995) bringing a revised total estimate to about 50 pairs. With more work and observations in the area the numbers may well be more than this, as much of the preferred habitat of this species is extremely poorly surveyed. As reported by Brown et al. (1995), the densities reported in Namibia are lower compared to their occurrence in other regions, such as southern Kenya and in the Ivory Coast, but this may be expected on the extreme edge of their range.

Breeding

Besides the breeding record reported on by Brown et al. (1995), the only other known breeding record is of an incubating bird found on the Oponono plains in July 1970. This nest was unlike that reported by Brown et al. (1995) and was placed high up in a living Hyphaene palm, the nest was in a hollow cavity just below the lower fronds, but unfortunately the nest was inaccessible and the contents could not be checked. The parent bird was reluctant to leave the nest, which could have indicated eggs about to hatch or newly hatched young. During this time, other interesting birds found breeding in the area were Crowned Cranes and a pair of Wattled Cranes with a three week old chick. The area had received good rains and supported a rich diversity and abundance of interesting wetland species, including the first authenticated record of Osprey for the country (Braine & Braine 1970).

Mensural data

To date eight Grey Kestrels are known to have been caught in Namibia. The measurements of these birds, including those previously given by Brown et al. (1995) are given in Table 2. All measurements follow the procedures recommended by Biggs et al. (1978.) Sexes were based on weights of birds from Angola (Hockey et al.2005) where five males ranged from 215 – 250 g (mean = 232 g) and five females ranged from 195 – 300 g (mean = 248 g). 195 g seem a little low for a female when comparing the weights from birds caught in Namibia. Two different birds each weighing 260 g, were recorded as females on the measurement forms.

Measurements: grams/millimetres	**Measurements n=2 Male**	**Measurements n=6 Female**
Weight	30,0 (220,0 – 240,0)	288,9 (254,0-302,0)
Total Wing	327,5 (320,0 – 335,0)	327,2 (296,0-368,0)
Total Body	327,5 (330,0 – 325,0)	339,7 (323,0)-350,0)
Ulna Length	71,1 (68,3-74,0)	66,8 (65,0-69,0)
Tarsus	42,3 (42,0-45,7)	44,7 (42,7-50,0)
Tail Length (centre)	156,0 (155,0-157,0)	160,3 (149,0-170,)
Bill Length	17,9 (17,9-18,0)	18,3 (17,5-18,9)
Bill Chord	25,5 (25,0-26,1)	27,0 (24,6-28,0)
Bill Depth	15,2 (14,5-16,0)	15,2 (12,2-16.0)
Bill Width	11,9 (10,9-13,0)	12,9 (1,4-13,2)
Tooth Depth	6,7 (6,5-7,0)	6,2 (5,4-6,6)
Tooth Width	5,5 (5,0-6,1)	5,9 (5,6-6,2)
Bill Height	12,9 (12,9-13,0)	13,7 (13,2-14,0)
Gape Length	21,6 (21,0-22,3)	24,3 (22,0-26,0)
Gape Width	23,5 (23,0-24,0)	23,9 (21,2-25,8)
Skull Length	54,4 (54,0-54,9)	55,8 (53,5-57,3)
Skull Width	32,6 (32,5-32,7)	33,0 (31,0-34,0)
Std. Wing Length	222,5 (215,0-230,0)	247,7 (226,0-254,0)
Secondary Length	119,0 (118,0-120,0)	131,6 (129,0-136,0)

Summary

It is hoped that with the resurrection of the Namibian Raptor Road Counts, as well as the establishment of the newly formed Raptor forum of Namibia, that more emphasis will be put into not only these two species, but all our rare and localised raptor species so as to update their numbers and status.

Both Dickinson's Kestrels and Grey Kestrels remain to be rare and localised within Namibia. They are always an exciting find and it is hoped that this note may stimulate raptorphiles and encourage them to visit some of the more remote areas to add to our limited knowledge of these very special birds.

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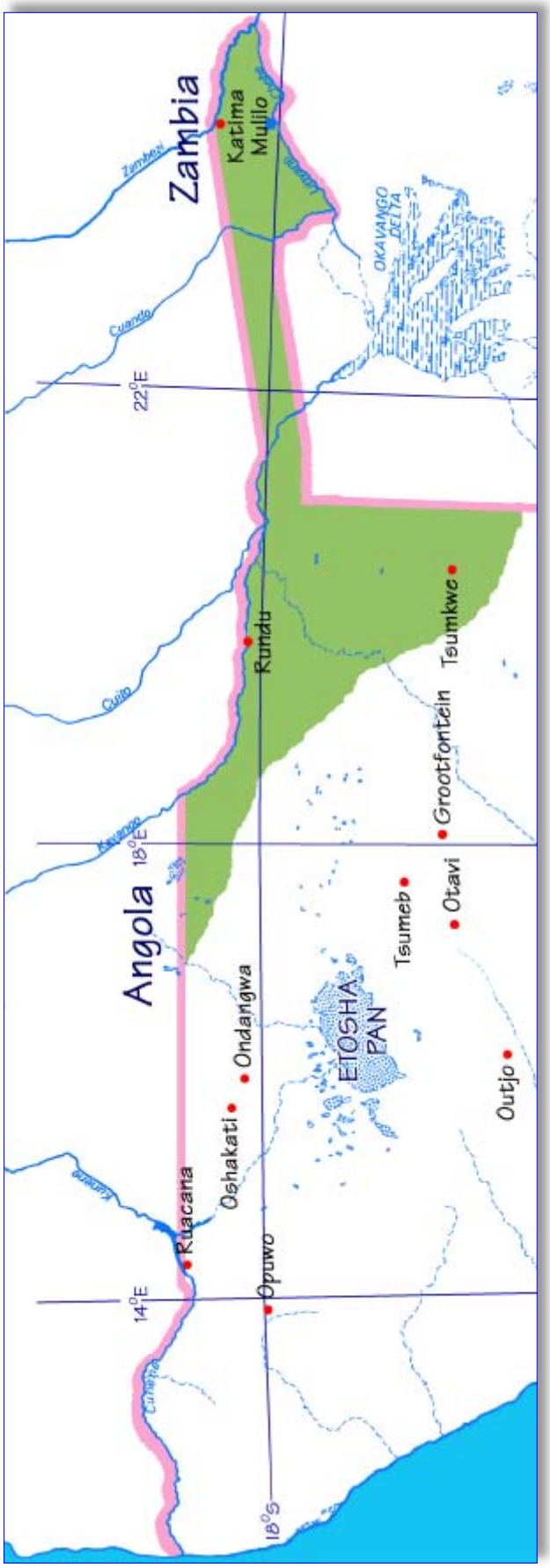
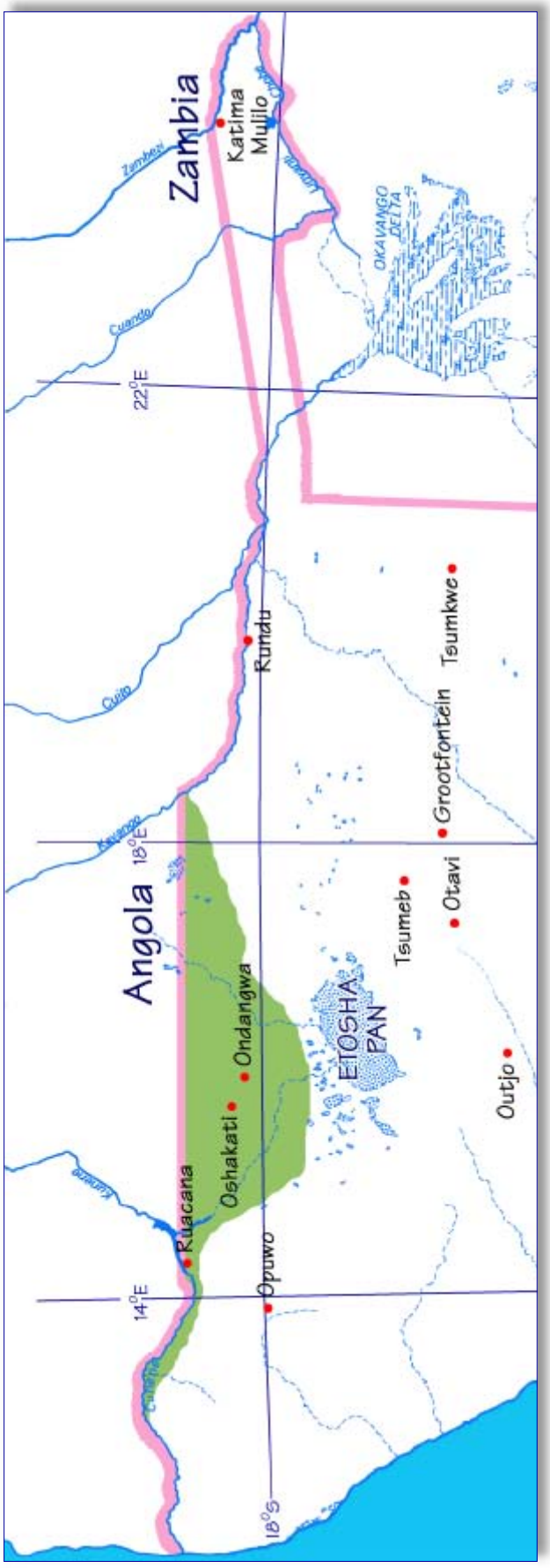
FIG. 1 & 2: Note heavily barred tail of Dickinson's Kestrel and pale head, in contrast to overall grey of Grey Kestrel

Fig. 3 & 4: Pale head and fine streaking of chest of Dickinson's Kestrel, in contrast with overall grey and fairly bold streaking of chest in Grey Kestrel



Distribution of Dickinson's Kestrel in Namibia



Distribution of Grey Kestrel in Namibia

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