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Ground nesting Capped Wheatear Oenanthe pileata in the Western Cape South Africa

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Abstract

Capped Wheatear *Oenanthe pileata* is a medium-sized passerine inhabiting dry open habitats such as open plains, recently burned areas or over-grazed fields. They appear to have adapted well to highly modified landscapes and are common across agricultural regions in South Africa. Several *Oenanthe* species occur worldwide, many of which are considered cavity nesters.

Here I present what is, to my knowledge, the first recorded case of an exposed Capped Wheatear nest built above ground versus in a rodent tunnel or sheltered under a structure. The nest was located on the ground in a sheep pasture on the 21st of October 2021, 20 km south of Swellendam in the Western Cape, South Africa. The nest was discovered during construction. No structure or foliage covered the nest. A clutch of three eggs was produced over the following five days. The eggs were a very pale blue, with two having fine black 'scribble' marks on the shells. The nest failed six days after its discovery. Small eggshell fragments and dried yolk suggest the nest might have been trampled by sheep.

Despite having failed, this record suggests a degree of flexibility in the nesting preferences of Capped Wheatears. The ability to exploit novel nesting locations should be advantageous to a species inhabiting rapidly changing landscapes where rodent burrows or other underground cavities could become a limiting resource.

Keywords

Nest location, *Oenanthe pileata*, Capped Wheatear, South Africa, agriculture, Overberg Received: 10 December 2021; Accepted: 23 February 2022 DOI: <u>https://doi.org/10.15641/abb.v2i.1156</u>

The Capped Wheatear *Oenanthe pileata* is a relatively common, medium-sized passerine in sub-Saharan Africa (Keith et al. 1992; SABAP2: <u>https://sabap2.birdmap.africa/species/568</u>). Like many fairly common species in sub-Saharan Africa, it is poorly studied, and many aspects of its breeding biology remain unknown (Tarboton 2001; Dean 2005). Capped Wheatears are commonly associated with open habitats: open plains, recently burned areas, as well as grazed pastures (Dean 2005; Ginn 2014). They appear able to persist in heavily modified agricultural landscapes.

Capped Wheatears construct substantial cup nests in underground chambers, generally 0.5–1 m below the surface in rodent burrows or holes in banks excavated by other birds (Tarboton 2001; Dean 2005; Ginn 2014). In addition, there are isolated records of nests built under discarded railway sleepers (James 1947) or in the eaves of buildings (Tarboton 2001).

Here I present the discovery of a cup nest built above ground, using no protective or sheltering structures. The nest was discovered by chance while walking through a sheep pasture on the 21^{st} of October 2021 (Figure 1A) on a farm 20 km south of Swellendam in the Western Cape, South Africa (34°18'18.7"S 20°21'49.3"E).

At its discovery, the nest was empty but already a substantial structure. It appeared fresh with no sign of damage or wear.

Given the relatively large size of the nest, it was suspected to be a Capped Wheatear nest. This sparked further observations as published records indicate that the species' nests are placed in concealed locales such as cavities/ burrows or under structures. A motion-triggered Cuddeback 20MP IR - Infrared Flash (H-1453) camera was positioned one meter away from the nest to confirm species identity.

The nest was found in a stony pasture with short grass (less than 10 cm high). It was placed on a gently sloping hill with a southwestern aspect. The nest was large, cup-shaped, constructed from thatch and lined with wool (Figure 1A). The shape of the nest was circular, with a slight bulge in the nest wall at one end (Figure 1A). The approximate diameter of the nest was 60 mm (cup diameter) and 103 mm (outside diameter). These dimensions are in line with the values reported by Tarboton (2001).

Three days later (24 October 2021), the nest contained two pale-blue eggs (Figure 1B). Five days after the initial discovery (i.e. 26 October 2021) there were three eggs (Figure 1C). Two eggs had very fine, black 'scribble' markings on the shells. Analysis of camera trap images and video recordings confirmed the identity of the species as Capped Wheatear (Figures 2A and 2B).

Unfortunately, the nest failed on the 27th of October 2021 but the camera failed to capture the cause of the nest failure





Figure 1A. A Capped Wheatear nest under construction was discovered on the ground in a sheep pasture on 21st October 2021. It was a substantial structure built from coarse grass (thatch) and lined with sheep wool.



Figure 1B. Two eggs were laid by mid-day on the 24th of October 2021.



Figure 1C. On the 26th of October, there were three eggs. All three eggs were very pale blue, almost white, and two eggs had faint black 'scribble' marks on the shell.



Figure 2A. An adult Capped Wheatear shading eggs over mid-day.



Figure 2B. An image captured from a Cuddeback video recording showing an incubating adult (26^{th} October 2021). Both images also indicate the location of the nest in the sheep pasture.



Figure 3. The nest after failing as observed on 27th October 2021. The damaged nest structure and dried yolk suggest the nest may have been trampled by sheep and the eggs subsequently consumed by a predator.

as it was knocked over by sheep. However, circumstantial evidence suggests the nest was trampled by sheep, possibly followed by consumption of the eggs by a predator. Figure 3 indicates damage to the nest and the presence of dry yolk, suggesting the eggs were crushed before being consumed. The footage shows that the attending adult (it is unknown whether both female and male incubate) was regularly flushed off the nest by sheep, and that sheep investigated the nest. On three occasions between 24 and 27 October 2021, the sheep knocked the camera over while grazing. Despite having failed, this nesting record suggests a degree of flexibility in the nesting locations of Capped Wheatears. Interestingly, another Capped Wheatear nest with nestlings was discovered in a cavity within a large pile of rocks in the same week of October at the same locality. These examples indicate that Capped Wheatears can display a degree of flexibility in their nesting preferences. Rodent burrows may likely be a limiting resource in this agricultural area around Swellendam. Like many other avian species, Capped Wheatears will need to be adaptable if they are to persist in these transformed habitats.



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