

Short communications

Notes on the nesting site of the Wattled Ibis *Bostrychia carunculata* in the central uplands of Ethiopia

The Wattled Ibis *Bostrychia carunculata* is an Abyssinian highlands (Ethiopia and Eritrea) endemic bird (Rannestad 2016) that occurs only in the Eastern Afromontane Biodiversity Hotspot Key Biodiversity Area (KBA). Classified as a species of 'Least Concern' by the IUCN, it is one of the least known ibis species, with very little information available on its population, ecology, habitat use, breeding biology, or behaviour (BirdLife International 2016). The Wattled Ibis breeds in the Ethiopian highlands during the 'little' rains in March–April (the *Belg* season), and during the 'big' rains in July–September (the *Meher* season), with occasional nesting during the dry season in December (del Hoyo *et al.* 1992, Ash & Atkins 2009). At lower altitudes, breeding is mostly in October (Esayas 2017). It usually nests in small to large colonies on rocky cliffs and trees (Hancock *et al.* 1992, Esayas 2017), but it has also been reported to nest singly, in small groups, and then the nests are more likely to be high up in trees or on ledges of building at lower elevations (1800–2000 m) (Brown *et al.* 1982, del Hoyo *et al.* 1992). In all cases the nest is a modest platform of branches and sticks, mosses, weed stems and other materials, with a diameter between 27 and 37 cm (Esayas 2017). Esayas (2017) reported 30 of 170 occupied nests of Wattled Ibis in 'settlements' on *Acacia* spp., 3–5 m above the ground, without any further information. The observations presented here are my first findings on breeding sites of Wattled Ibis as part of an ongoing ecological study of the species.

The study was done in Seru district (7°35'–7°52' N, 40°11'–40°42' E), 90 km northeast of Bale Mountains National Park (Fig. 1). Seru ranges in altitude from 850 to 2500 m; my observations were made in the central uplands (2000–2500 m). The study area is in the Erteb Weinadega (moist-cool) agro-ecological zone (Ministry of Agriculture 2000). Cropland (mainly wheat) is dominant, average annual rainfall exceeds 1000 mm, and minimum and maximum temperatures average 10° and 25°C, respectively.

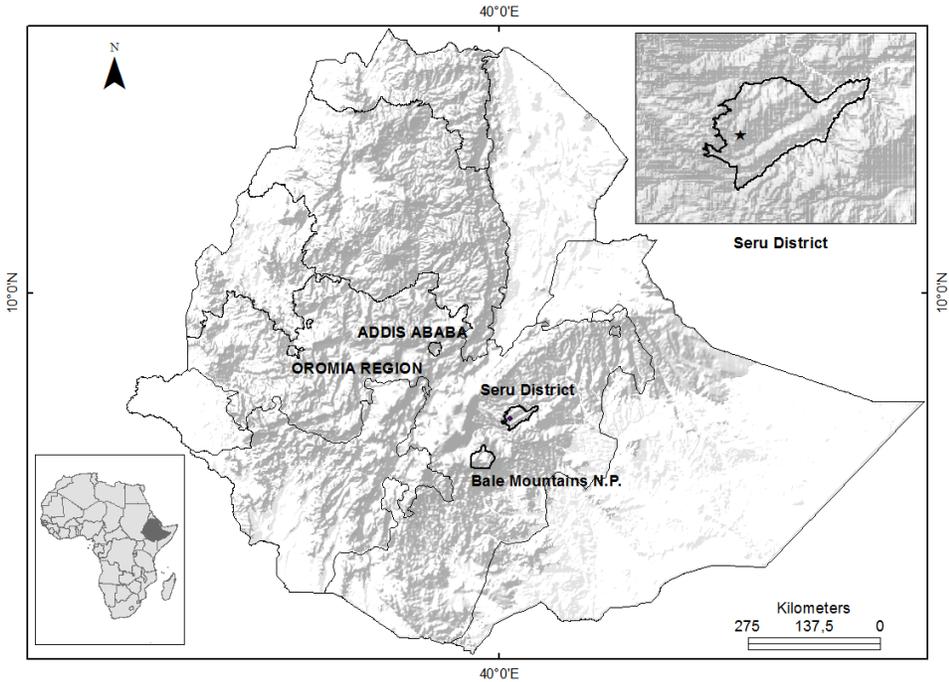


Figure 1. Location of the study area and Bale Mountains National Park in Ethiopia. Star mark shows the location of Seru town and the nest sites.

I followed Hughes' (2006) methods. Although the survey started at the beginning of the rainy season, visibility was good, and transects and some potential point counts were made and tested in the morning (usually between 06:30 and 09:00) when many birds were active and visible.

On 21 September 2016 at 06:40, I saw a Wattled Ibis flying directly towards a 10-m high mukumari tree *Cordia africana* in the backyard of a private house, where it landed and rested low in the tree's canopy. Closer and immediate inspection of the tree revealed a nest containing two feathered chicks with white wing-patches, like the adult's (formed by mainly white wing-coverts), but without wattles. The nest was a modest platform of sticks and small branches, with the cup lined with *Eucalyptus* spp. leaves, 7 m above the ground on a secondary branch of the tree.

After discovering the first nest, I made a rapid tree-by-tree survey in Seru to locate and inspect all private backyard trees that were visible from public streets. On 22 September 2016 at 07:40, I found a second nest, in a 12-m mukumari tree, 332 m from the first nest, at 2480 m, (6 m above ground). The nest contained two feathered chicks at the same stage of development as the first nest (Fig. 2). The nest incorporated some bizarre items such as plastics and ropes as well as the usual sticks and small branches. Because of the security situation in Oromia, I could not visit the area again until 26 December 2016, by which time both nests were totally dismantled. Both householders, who were interviewed in the Oromo language, reported that 2016 was the first year that the ibises had nested in their backyards, and that the birds had dismantled their nests soon after the all chicks fledged.



Figure 2. Two feathered chicks with white wing-patches in the second nest on 22 September 2016.

In 2017, both trees were roosting sites for two pairs of Wattled Ibises, and both started building in May, but breeding was not successful. However, on 31 August 2017, a third nest was found in the compound of the mosque in the nearby town of Bele Gesgar (2471 m), 25 km from Seru. The nest was constructed on a secondary branch of a 25-m *Eucalyptus globulus* tree, 12 m above the ground. Two chicks hatched and fledged successfully.

Even though these preliminary observations are based on a small sample size, they show that some Wattled Ibises use buildings as nesting sites in urban areas (Brown *et al.* 1982, del Hoyo *et al.* 1992) and not only breed in colonies on acacia trees in settlements (Esayas 2017), but that some pairs nest in trees in backyards in small rural towns. This may provide some biological advantages, such as higher reproductive success, as it has been reported for other ibis species (Smith 2009). It might also suggest a specific preference for mukumari trees, which provide an adequate structure to support the nest and a good leafy canopy for insolation, protection, and concealment. The mukumari tree is valued by local people as a good source of timber and livestock forage and is widely planted in backyards.

These observations also establish that, in contrast to some authors (Redman *et al.* 2009, Johnsgard 2009), white wing-patches are present in juveniles and thus are not useful for distinguishing juveniles from adults. Finally, the report of nest-dismantling behaviour after fledging by two different pairs could be the first records of this behaviour in the Wattled Ibis. Nest-dismantling after breeding has been reported in birds under different hypotheses (Li *et al.* 2009), therefore further research is required for this species. It may also explain the difficulty of finding Wattled Ibis nests outside of the breeding season as Hughes reported in the Bale Mountains National Park (Hughes 2006).

Future observations on the Wattled Ibis will concentrate on its breeding behaviour, nesting biology, nest site attendance by the adults, growth of chicks, feeding ecology and behaviour, and daily activity budgets. An effort will be made to determine the prevalence of post-fledging nest-dismantling behaviour in this species, and the Wattled Ibis's possible preference for mukumari trees as nesting sites in small rural towns in eastern Ethiopia.

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