Australian Field Ornithology 2016, **33**, 156–158
http://dx.doi.org/10.20938/afo33156158

Two records of an Australian Owlet-nightjar *Aegotheles cristatus* roosting in forestry boom-gates in Tasmanian forests

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Abstract. Two observations are presented of the infrequently encountered Tasmanian subspecies of the Australian Owlet-nightjar *Aegotheles cristatus tasmanicus* roosting in the horizontal tubular bar of forestry boom-gates in Tasmanian forests.

Introduction

Tubular metal boom-gates are scattered throughout the Tasmanian landscape, controlling access to private property and to Crown land. This paper details two observations of the Australian Owlet-nightjar Tasmanian subspecies *Aegotheles cristatus tasmanicus* flushing from tubular metal boom-gates while being unlocked.

Observations

Observation 1: Strickland State Forest

On 25 February 2000, in the Strickland Forest Block in Tasmania's eastern Central Highlands, a colleague and I stopped amongst relatively undisturbed shrubby Gum-topped Stringybark *Eucalyptus delegatensis* dry sclerophyll forest to unlock a forestry boom-gate. As the gate was opened, an Australian Owlet-nightjar flew from the horizontal opening in the end of the boom-gate. It circled around within the mature canopy of a Gum-topped Stringybark before entering the end of a hollow branch. It did not re-appear from the hollow branch during our observation period (*c*. 15 minutes). This behaviour of roosting Owlet-nightjars flushed from hollows and flying to another nearby hollow is typical (e.g. Bryant 1932, 1934; Hyett & Gottsch 1963) as this species uses multiple roosts (Doucette 2010). This observation was previously reported informally (Wapstra & Thompson 2006).

Location details: Unnamed side road (west) off McGuires Marsh Road, Strickland Forest Block, State Forest; 42°18'16"S 146°44'56"E; elevation 660 m above sea-level (asl).

Roost-site details: Yellow forestry boom-gate; horizontal hollow steel tube (~ 9 cm internal diameter, ~5 m in length, ~1 m above the ground); no observable material in tube.

Observation 2: Table Mountain Road

On 21 April 2015, while with colleagues visiting the Table Mountain private property estate in the Tasmania's eastern Central Highlands, we stopped amongst relatively undisturbed shrubby Mountain White Gum *E. dalrympleana* dry sclerophyll forest to unlock a forestry boom-gate. My colleague, who opened the gate, reported

Figure 1. The flushed Australian Owlet-nightjar (Table Mountain Road site). Photo: Mark Wapstra

Figure 2a. View of external end of boom-gate, showing accumulation of droppings at the entrance and ~20 cm in from the entrance, 17 December 2015. Photo: Mark Wapstra

Figure 2b. The boom-gate at the Table Mountain site. This is a typical-boom gate used to control access to forestry and mining areas in Tasmania. Photo: Mark Wapstra

that a bird had 'dive-bombed' her, and when we returned in the late afternoon to exit the property an Australian Owlet-nightjar was flushed from the gate's pipe (Figure 1). It flew to a fallen branch of a nearby tree ~5 m away. After *c*. 10–15 minutes of close observation and photography, it took flight and sat in the canopy of a nearby tree for a few minutes before flying farther away.

The gate has been opened and closed several times since, with no birds flushed (L. Chappell pers. comm.). I revisited the site on 17 December 2015, at which time the tube of the gate was also unoccupied but had possible frequent use, as indicated by droppings at the entrance (Figure 2a) and a strong odour inside the tube.

Location details: Table Mountain Road, ~1 km west of Interlaken Road, private property, Inverlaken; 42°13'02"S, 147°13'25"E; elevation 745 m asl.

Roost-site details: Yellow forestry boom-gate; horizontal hollow steel tube (~ 9 cm internal diameter, ~5 m in length, ~1 m above the ground: Figure 2b), no observable material in tube.

Discussion

In Tasmania, the Australian Owlet-nightjar is considered uncommon and poorly known, despite being widespread, and is confined mainly to the humid and subhumid effective rainfall zones in the east of the State (Thomas 1979; Green 1993; Higgins 1999). Interestingly, Sharland (1945) described it as common, and a recent examination of the *Natural Values Atlas* database (DPIPWE 2015) indicates only 139 formal records (Figure 3). In a survey targeting Tasmanian Masked Owls *Tyto novaehollandiae castanops*, Todd (2012) visited each of 211 sites on four occasions, which resulted in 55 incidental detections of the Australian Owlet-nightjar, contributing a high proportion of the total number of formal records of the species.

There are no other reports of this species using boom-gates in Tasmania, although elsewhere there are reports of Owlet-nightjars occasionally roosting in other artificial structures (aside from nest-boxes), such as roof-cavities of derelict houses and in chimneys (Higgins 1999), frequenting an old pipe in an engine room (Ford 1957), roosting in the radiator of an abandoned tractor (Hollands 1991), and nesting in the guttering of a shed and the roof of a caravan in arid South Australia (Debus *et al.* 2006). It seems likely that the Tasmanian birds were using the boom-gates as temporary roost-sites because the surrounding forest at both observation sites in the present study had many tree-hollows, suggesting that potential roost-sites were not a limiting factor.

The use of hollows by Australian Owlet-nightjars is described in several anecdotal accounts (Burrell 1913; Robinson & Whitbourn 1961), and in more detailed studies (Brigham & Geiser 1997; Brigham *et al.* 1998; Doucette 2010), including one that examines the thermoregulatory properties of different hollow types (Doucette *et al.* 2011). To my knowledge, there are no published references on the use of tubular metal boom-gates by hollow-dependent vertebrate species in Australian forests. There may be some thermal benefits to selecting a metal tubular 'hollow' over a tree-hollow in some circumstances, or this might

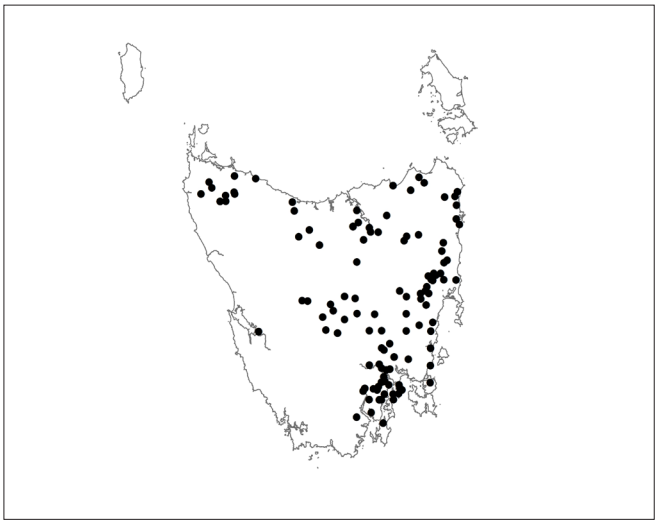

Figure 3. Records of the Australian Owlet-nightjar in Tasmania. Extract from the Department of Primary Industries, Parks, Water & Environment's Natural Values Atlas database (retrieved 12 July 2015).

indicate a high level of adaptability of the species to utilise a wide range of hollow configurations. Certainly, roosting close to the ground is not unusual (Brigham & Geiser 1997; Brigham *et al.* 1998). It may be interesting to examine any differences in the use of hollows between subspecies of the Australian Owlet-nightjar, especially the Tasmanian subspecies' use of hollows at different elevations, and whether certain behavioural traits may confer some advantage in colder climates.

There have been no specific studies of the Tasmanian subspecies. It is not currently listed on either the Tasmanian *Threatened Species Protection Act 1995* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. However, Garnett & Crowley (2000) suggested that the subspecies met the category of 'Vulnerable' using IUCN criteria because there were probably only ~5000 mature individuals in effectively one population, which may be declining. The key threats to the species were indicated as clearance for agriculture and intensive forestry operations, particularly firewood collection and clearfelling for woodchips. Of note is that the Tasmanian legislative and policy framework in relation to commercial forestry and land clearing has changed markedly, with significantly more extensive areas of forests added to the formal reserve system and tight controls on land clearing. This has been recognised in *The Action Plan for Australian Birds 2010* with the authors recognising "new knowledge", specifically "an increase in sightings suggests that, even if there was a decline, it is not continuing" (Garnett *et al.* 2010, p. 428). That said, there remains a need to carefully manage the tree hollow resource throughout Tasmania.

Acknowledgements

Thanks go to Vanessa Thompson (Forestry Tasmania) for assistance with writing up the first observation; Dan Ryan and Leanne Chappell (SFM Environmental Solutions) for sharing my excitement on the second observation; Stephen Debus for alerting me to records of the species using artificial structures in South Australia; and Lorilee Yeates, Jason Wiersma and Leanne Chappell for reviewing drafts of the manuscript. The manuscript benefited considerably from the comments of two referees.

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Received 28 December 2015, accepted 30 April 2016, published online 15 September 2016