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SHORT NOTE

Sustained song from the ground by a male chaffinch (*Fringilla coelebs*) in the Karori Wildlife Sanctuary, Wellington, New Zealand

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At 0845 h on 4 Sep 2005, I watched a male chaffinch (*Fringilla coelebs*) fly down onto a track in native forest in the Karori Wildlife Sanctuary, Wellington, New Zealand, whereupon it started singing while searching for food items (Fig. 1). The weather was dry, mostly sunny and relatively mild. It continued to sing on the ground for 21 min, responding to a neighbouring male singing in the forest canopy *c*.50 m away. Both males sang frequently, though occasionally the ground feeding bird would cease song for 5-10 s while it fed. In general, however, it continued to search for food and sing at the same time, also periodically uttering "chwink" calls and fewer "chuit" calls (terminology following Cramp 1994). The male was in its 1st year (Fig. 1), as indicated by its primary coverts (paler than greater coverts), inner tail feathers (paler than outer tail feathers) and other areas of plumage (Svensson 1975; Ginn & Melville 1983; Cramp 1994; Jenni & Winkler 1994).

I also visited the site during fine, sunny and generally calm conditions on 5 mornings over 11-25 Sep 2005. On 14 Sep, the 2 neighbours briefly chased each other, otherwise their recorded interactions were vocal. On each visit the 2 sang in similar locations, and again one of them – presumably the same male as on 4 Sep – sang consistently from the ground while looking for food. Ground singing was heard from him for 8 min (0805–0813 h) on 11 Sep, in 2 bouts of 23 min (0735-0758 h) and 31 min (0810-0841 h) on 14 Sep, more or less continuously for 80 min (0750-0910 h) on 21 Sep, for 18 min (0827–0845 h) on 22 Sep and for 15 min (0955–1010 h) on 25 Sep (when also observed by Matu Booth and Gill Brackenbury). During 196 min of song heard over 6 mornings, the male rarely left the ground, except at the end of singing on 14 Sep, when it sang twice from a tree at a height of 5 m, and on 22 Sep when it was initially seen singing for *c*.1 min on branches 3 m above ground.

Male chaffinches foraging on the ground within the territory are known to deliver sub-song, as well as birds visiting the territory in winter (Marler 1956; Thorpe 1961; Cramp 1994). On 21 and 25 Sep the male on the ground produced bouts of sub-song lasting 3-5 min, which included distinctive and audible 'rattles', before he recommenced territorial song. Thorpe & Pilcher (1958) note that such sub-song seems to be most frequently and consistently produced by 1st-year males in early spring. The ground song heard from the present bird may represent a continuance of such ground-based vocalisations, without the switch to a higher perch.

The song of the chaffinch has been widely studied (e.g., Marler 1956; Hinde 1958; Thorpe 1958a, b; Slater 1981, 1983; Riebel & Slater 1998, 2000, 2003; Leitão & Riebel 2003; Leitão *et al*. 2004), and is typical of a species with a small repertoire that sings with 'eventual variety' (Catchpole & Slater 1995). Witherby *et al*. (1938) note that song is occasionally given on the ground and quite frequently on the wing. In New Zealand the male chaffinch sings from at least late Jul (Sibson 1983), usually from a tree or other elevated perch (Bull 1985; Heather & Robertson 1996), as noted for the species in Europe (Witherby *et al*. 1938; Cramp 1994). Such song is typically delivered in upright posture with the head held back, the plumage relaxed and wing-bars concealed (Cramp 1994; Marler 1956). The ground singing male at Karori Wildlife Sanctuary had its head raised and wing-bars partially concealed (Fig. 1). Bergman (1953) separated 'territorial' song, given during morning and evening song peaks, from 'courtship' song

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Fig. 1 Male chaffinch (*Fringilla coelebs*) singing on ground in the Karori Wildlife Sanctuary, 14 Sep 2005. Photo: Ben D. Bell.

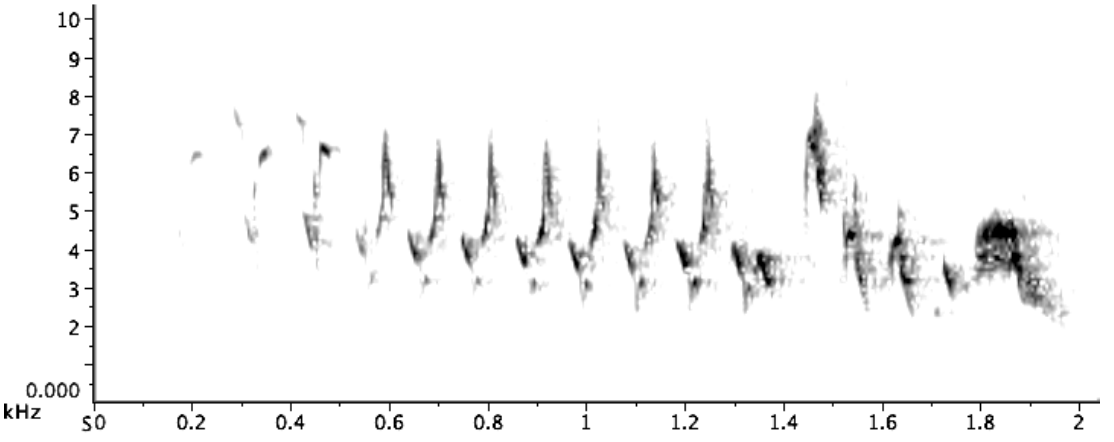

Fig. 2 Sonogram of territorial song delivered from the ground by male chaffinch (*Fringilla coelebs*) in the Karori Wildlife Sanctuary, 21 Sep 2005. Frequency (kHz) on vertical axis, time (s) on horizontal axis.

heard mainly at other times of day. Courtship song, he argued, was distinguished essentially by delivery, being given from a lower perch in forward posture, with tail lowered, head sleeked and flanks somewhat ruffled. The Karori male was not seen with a female and it uttered the typical territorial song, as shown by the sonogram in Fig. 2 (from a recording using a Sony TCD-PRO II

DAT recorder and Sennheiser ME66 microphone, analysed using *Raven* 1.2 software).

The song delivery rate of the male on the ground was equivalent to that of the neighbouring male and to that of other local males, for it was not significantly different between the birds (*t*-tests, $P > 0.10$): timed over 23 min, the ground bird uttered 2-9 songs min^{-1} (mean ± SE = 5.1 ± 0.4), while over 11 min its neighbour sang 1-9 songs min^{-1} (mean ± SE = 5.3 ± 1.0), and over 11 samples of 1 min 5 other males sang 2-8 songs min^{-1} (mean ± SE = 5.2 ± 0.5). Brief song from on or near the ground was heard from 2 of these other males on 25 Sep. One gave several songs from the ground while feeding, before singing from a nearby tree; another sang for *c*.2 min from the ground, again while feeding, before continuing to sing from a low bench seat, finally flying up to a tree to sing.

Sustained bouts of song from the ground may reflect the lack of mammalian ground predators or familiarisation with humans within the Karori Wildlife Sanctuary, or both, allowing birds to spend more time on the ground and to become tamer. The focal male chaffinch allowed my approach to within 1 m without ceasing its foraging and song, which was behaviour that would clearly be more risky outside the protection of a predatory mammal-free sanctuary. The other 2 males seen singing from the ground were also relatively confiding, both feeding in the vicinity of kaka *(Nestor notabilis)* feeders, which often attracted members of the public visiting the Sanctuary.

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