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A significant range extension for the Australian wet tropics skink *Eulamprus frerei* (Reptilia: Squamata: Scincidae)

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ABSTRACT

The known range of *Eulamprus frerei* is extended approximately 110 km north-northwest to Mt Lewis (16.510°S, 145.269°E) on the Mt Carbine Tableland, North Queensland. This record is from 200 m lower than the reported minimum elevation for the species. Despite extensive surveys throughout the Australian Wet Tropics, this is the first record for *E. frerei* outside the Bellenden Ker Range. Additional details are given for a previously reported record from Mt Bellenden Ker. □ *Mt Lewis, Bellenden Ker Range, Mt Carbine Tableland, Queensland.*

Eulamprus frerei Greer, 1992 is a rainforest skink known only from elevations above 1400 m on Mt Bartle Frere and the adjacent Mt Bellenden Ker (the two highest mountains in Queensland) (Cogger 2000; Goodman 2012; Williams *et al.* 2010; Wilson & Swan 2010). It is a heliothermic, presumably viviparous lizard considered to be largely dependent upon rock and boulder habitats and occasionally on tree trunks, but otherwise little is known of its ecology (Goodman 2012; Turner 2007). It is listed as vulnerable under the Queensland Nature Conservation Act 1992 due to its presumed localised distribution. Because it appears to be restricted to cool montane rainforest, the potential for climate change to negatively affect the distribution and biology of *E. frerei* is considered to be high (Williams *et al.* 2003).

On 7th December 2012, a specimen of *E. frerei* was collected by one of us (BRS) during canopy surveys at approximately 1200 m elevation on Mt Lewis (16.510°S, 145.269°E), located west of Mossman on the Mt Carbine Tableland, North Queensland (Figs 1–2). The skink was found protruding from a tree hollow approximately 15 m up the trunk of a canopy tree (Fig. 3). The tree possessed extensive insect damage and appeared to be dying. The specimen was identified by the following characters using the key to *Eulamprus* in Wilson (2005): third pair of enlarged chin scales separated by 3 longitudinal rows of small scales; no supranasal scale; prefrontal scales in point contact; lower secondary temporal scale overlaps upper; 72 paravertebral scales. Examination of the holotype (QMJ47985) and paratype (QMJ39531) of *E. frerei* by one of us (SMZ) confirmed identification, which was further supported by



FIG. 1. *Eulamprus frerei* (QMJ92282) collected from Mt Lewis, North Queensland.

molecular data (CJH unpublished data). The specimen is now lodged at the Queensland Museum (QMJ92282).

The known distribution of *E. frerei* was determined by searching all Australian museum collections as well as consulting relevant literature (Cogger 2000; Goodman 2012; Greer 1992; Williams *et al.* 2010; Wilson 2005; Wilson & Swan 2010). Searches of museum collections revealed only the two type specimens, both collected near the Mt Bartle Frere summit. Williams *et al.* (2010) showed a single locality for *E. frerei* near the summit of Mt Bellenden Ker but did not provide any additional information. We elaborate on this record here: The record was obtained on 1st January 2000 by SEW. This individual was found on the side of a tree 1.5 m above the ground at an elevation of approximately 1437 m. Mt Bellenden Ker is Queensland's second highest mountain, reaching an elevation of 1593 m. It is separated from the adjacent Mt Bartle Frere by a lowland divide lying at 320 m elevation. All known localities

FIG. 2. Map illustrating known localities of *Eulamprus frerei*, including the 2012 Mt Lewis and 2000 Mt Bellenden Ker records.

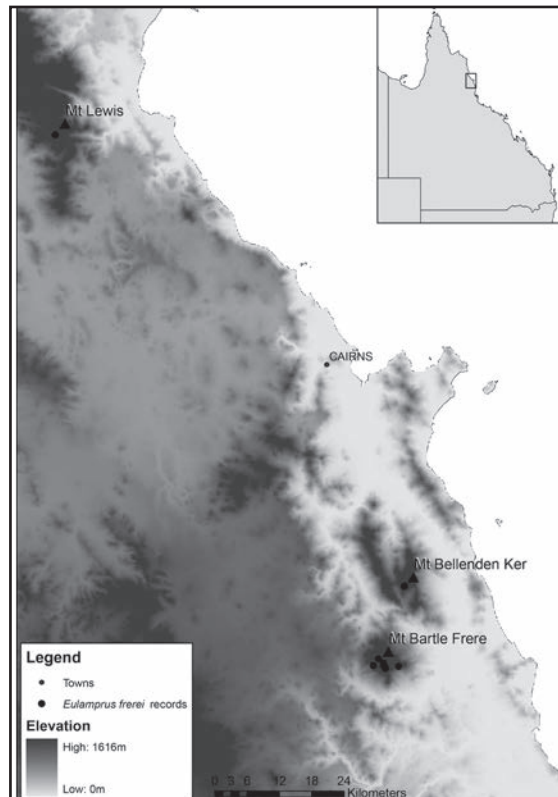




FIG. 3. The tree on Mt Lewis from which QMJ92282 was captured.

of *E. frerei*, including the Bellenden Ker and Mt Lewis animals, are presented in Fig. 2.

Once thought to exist on a single mountaintop, these observations demonstrate that *E. frerei* occurs on at least three separate mountains in the Australian Wet Tropics. The discovery of this species on the Mt Carbine Tableland extends the known range approximately 110 km north-northwest and confirms the existence of *E. frerei* north of the Black Mountain Corridor (BMC), a significant biogeographic barrier to rainforest fauna (Schneider *et al.* 1998). Furthermore, this record is 200 m lower than the reported minimum elevation for the species (>1400 m; Goodman 2012). Notably, the records from Mt Bellenden Ker and the Mt Carbine Tableland are from areas lacking boulder habitats, which are extensive near the summit of Mt Bartle Frere and typically regarded as the preferred habitat of *E. frerei* (Goodman, 2012). This suggests that the species is not reliant upon boulders and can occupy arboreal habitats. The ability to use a variety of habitats, its existence on opposite sides of the BMC, and a broader altitudinal range than previously thought indicates that *E. frerei* might be even more widespread than reported here.

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