

# A new subspecies of *Neolucia hobartensis* (Miskin, 1890) (Lepidoptera: Lycaenidae) from Mainland Southeastern Australia, with a Review of Butterfly Endemism in Montane Areas in this Region

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**ABSTRACT.** *Neolucia hobartensis albolineata* ssp. nov. is illustrated, diagnosed, described and compared with the nominate subspecies *N. hobartensis hobartensis* (Miskin, 1890) from Tasmania and *N. hobartensis monticola* Waterhouse & Lyell, 1914 from northern New South Wales, Australia. The new subspecies is restricted to montane areas (mainly >1000 m) in subalpine and alpine habitats on the mainland in southeastern Australia (southern NSW, ACT, VIC) where its larvae specialize on *Epacris* spp. (Ericaceae). It thus belongs to a distinct set of 22 butterfly taxa that are endemic and narrowly restricted to montane areas (>600 m, but mainly >900 m) on the tablelands and plateaus of mainland southeastern Australia. Monitoring of these taxa, including *N. hobartensis* ssp., is urgently required to assess the extent to which global climate change, particularly temperature rise and large-scale fire regimes, are key threatening processes.

**KEYWORDS.** Butterfly conservation; climate change; key threatening processes; Polyommatae; taxonomy

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The lycaenid genus *Neolucia* Waterhouse & R.E. Turner, 1905 comprises three species all endemic to southern Australia (Braby, 2000). It is currently placed in the subfamily Polyommatae, a large polyphyletic assemblage nested within the Theclinae (Espeland *et al.*, 2018). Within this group, *Neolucia* is morphologically distinct with no close relatives (Hirowatari, 1992): the dorsal surface of

the wings are uniformly dark bronze-brown, the egg is truncate dorsally with three prominent horizontal series of projections, and the larvae feed mainly on Ericaceae (with one species on Fabaceae) and are usually not attended by ants. *Neolucia hobartensis* (Miskin, 1890), commonly known as the ‘Montane Heath-blue’, is a polytypic species endemic to southeastern mainland Australia and Tasmania

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