

Scientific Note

Highest elevation record of endemic butterfly *Albulina orbitulus lobbichleri* Forster, 1961 (Lepidoptera: Lycaenidae) in Nepal

Registro de mayor elevación de la mariposa endémica *Albulina orbitulus lobbichleri* Forster, 1961 (Lepidoptera: Lycaenidae) en Nepal

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Abstract. *Albulina orbitulus lobbichleri* Forster, 1961 is a rare butterfly subspecies endemic of Nepal. This butterfly has been recorded for the first time living at highest elevation of 4,815 m from the Himalayan region Mustang in West Nepal. This note updates the information on change in the altitudinal preference of this subspecies of butterfly.

Key words: Himalayas; Mustang district; rare; subspecies.

Resumen. *Albulina orbitulus lobbichleri* Forster, 1961 es una rara subespecie de mariposa endémica de Nepal. Esta mariposa ha sido registrada por primera vez viviendo a 4.815 m de altitud en la región himalaya de Mustang en el oeste de Nepal. Esta nota actualiza la información sobre el cambio en la preferencia del rango altitudinal de esta subespecie de mariposa.

Palabras clave: Distrito de Mustang; Himalaya; rara; subespecies.

Albulina orbitulus lobbichleri Forster, 1961 is the rare high Himalayan small-sized butterfly (Smith 2011a) belonging to the family Lycaenidae. It is commonly known as Greenish Mountain Blue. Subspecies *lobbichleri* has been reported and described from Nepal only (Smith 2011a; Gasse 2013). It was recorded for the first time by the German entomologist W.A. Forster who was here with the German Expedition team in the sixties. It was found distributed precisely in the two western Himalayan regions; Manang and Mustang within the elevational ranges between 2,500–4,511 m (Smith 2011a) and the central region of Nepal (Smith 2011b; Gasse 2013). In total, twenty-six individuals of the butterfly subspecies were recorded so far from the regions (Smith 2011a).

On September 20, 2020, a single male individual of *A. o. lobbichleri* was recorded at the elevation of 4,815 m within the geographical stands of 28.874297° N / 84.003804° E in Mustang, West Nepal (Fig. 1). This butterfly subspecies was recorded during an opportunistic survey. During the half an hour observation, the behaviors of the taxon we observed were; it has short flying periods (20-30 seconds) covering a maximum 10 m distance flight, mostly basking with folded wings in the alpine meadow grassland for

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approximately two minutes, and also found preferring open steppe slopes with dry bushes coverage for short periods. During the observation period, the taxon was sighted foraging the vegetations namely; *Stellaria chamaejasme* (Linnaeus, 1753) (Fig. 2) and *Taraxacum officinale* (Wiggers, 1881). Close morphological features were studied following the captured and released method and photographed in a natural position.

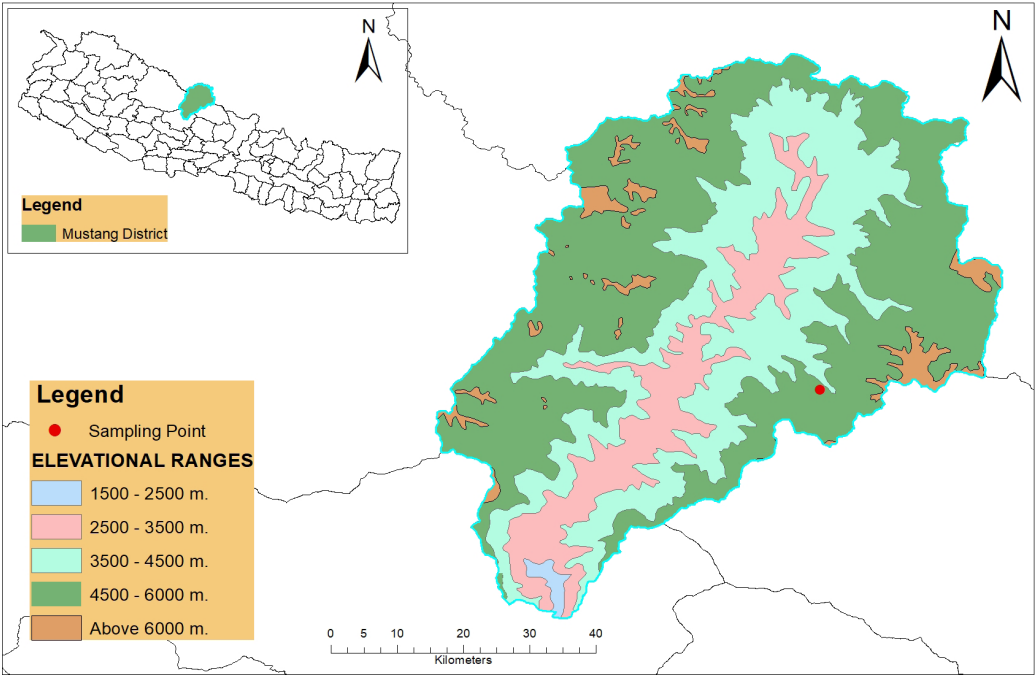


Figure 1. Recorded elevational range of *A. o. lobbichleri* in Mustang district, Nepal. / Rango de elevación registrado para *A. o. lobbichleri* en el distrito de Mustang, Nepal.

The most reliable identical features of *A. o. lobbichleri* includes; forewings (FW) apex pointed with wingspan 26-30 mm; Upperside- male blue and female brown. Wings are fenced with black borders over with white fringes. Underside: FW grayish brown with four discal spots and one subcostal black spot encircled white; underside hindwings (HW) are assigned by conspicuous four bigger post discal white spots, three subcostal spots, and discal area with white blotch-like marking; the base of the HW suffused with bluish-green dust.

The finding of the new elevation record depicts the current distribution range changes of the butterfly and details its behaviors. But, the current number of individuals we recorded is the deficit number of individuals with the previous record. Habitat degradation due to developmental activities and food plant depletion by unmanaged overgrazing in the study sites were the observed conservation threats that lead the butterfly toward upward shift and decreasing individuals. The previous study has also the finding of the new high elevation record of the butterfly species *Carterocephalus avanti* (De Niceville, 1886) (Shrestha *et al.* 2018). Such extension could have coincided with global climate change (Shrestha *et al.* 2018). However, the extensive scientific study related to the spatial and temporal patterns of the butterfly species and their relation with associated environmental variables will provide additional information to support the further conclusion. Therefore, systematic scientific assessments are of utmost importance in such a globally prioritized Himalayan region of Nepal.



Figure 2. *A. o. loblichleri* foraging on flower of *Stellaria chamaejasme*. Photo: Sanej Prasad Suwal. / *A. o. laubichleri* forrajeando sobre flores de *Stellaria chamaejasme*. Fotografía: Sanej Prasad Suwal.

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