Black Mountain Ringlet

Percnodaimon merula

Description

A native species of Butterfly that still needs farther study & whose life history is not well known. (See bottom of page for unanswered questions). It was a species that was considered to live about a year, but since the larvae can take 2-3 summers to grow to full size, this would mean it is a very long-lived Butterfly, certainly New Zealand's longest lived Butterfly. This is an adaption to the high altitude environment it lives in where there are long winters & cool summers. Some people believe there are 2 separate groups that live in opposite years as there seems to be a good year followed by a poor year. It was originally named *Erebia pluto* after it's European namesake whose English name is the Sooty Ringlet. There is only minor differences between the two species, mainly the style of pupation & the Black Mountain Ringlet doesn't have any orange wing markings that are found on the European species. It has some parasitism from a Tachinid fly in the *Plagiomyia* genus as a larva & a couple of mites that live on the imagos, which they probably pick up from other insects while sheltering.

Ovum

Are deposited singularly on the lower surface of sunny rocks that sometimes are not that near-by, so they can take advantage of the suns heat & develop quicker. The only New Zealand species that does this. Initially blue, which get mottled brown patches after a couple of days to blend in with the surrounding rocks. 2 days before hatching this mottling is lost as the dark brown head becomes visible. It is barrel-shaped with 32 vertical ribs. They hatch in about 12 days in lowland summer conditions, but this will be longer in the high mountain altitude. All but the base of the shell is eaten by the newly hatched larva for its first meal.

Larvae

Colour varies from a dull blue-grey to a straw-brown. The straw-brown variation could be confused with the Butler's Ringlet, but they are generally quite different. It has short black setae & short bifid projections on the tail end. They have 5 instars each taking at least 30 days in favourable summer temperatures, however this can be up to 8 months if over-wintering. They get to the end of the 1st instar or beginning of the 2nd by winter. Because they have slow growth, they can remain as larvae up to 2 years (over 3 summers). It can enter winter hibernation (probably diapause) at any instar. This long larval stage means that larvae can be found all year round in most instars. They are slow in all aspects of life & are generally night feeders, but will also feed on misty days on the tips of Tussock blades. They appear to spend very little time actively eating choosing to spend most of their time hiding in a near-by sheltered spot near the base of the foodplant. Their hiding behaviour meant that a larvae wasn't seen until 1968. This should save them from being eaten from predators like birds as they are easy to spot when they are eating the tips of Tussock. Grows up to 25mm when fully grown.

Pupa

Blue-grey with brownish markings that match the stone until a few days before emerging when the dark body & wings start to show through. They are about 16mm in length. They suspend themselves by a large cremaster & hang almost horizontally under a stone, this lets them take advantage of the heat stored in the stone. They have being recorded up to 1 metre from the nearest foodplant. Pupation is suspected to be 2-3 weeks.

Imago

The imago has a 39-54mm wingspan. They are velvety black with a paler underside, some have a greyish band on the underside. Has between 3 & 7 variable size ocelli which are grouped in two rows on the forewing & 3 faint ones on the hindwing. There is a reported trend of less ocelli in southern ranges. Generally has lighter brownish scales around the ocelli in the north, but this becomes darker in the south of its range. Generally larger from the west of the main divide, with the largest being from the Fiordland area. Sexual dimorphism is non-existent in colouration, but is evident in size as females are generally larger then males. Unlike most Satyrine Butterflies, they occur on the wing in equal numbers of both genders. They have a think hairy body to maintain warmth. They fly only when the sun is shining close to the ground with a lazy flight that zigzags taking advantage of rising air currents over scree slopes by often gliding with they wings in a shallow 'v' position. They can have strong flight if needed. Like the Boulder Copper, they rarely alight on vegetation preferring stones warmed by the sun. Often seen aligning itself to take advantage of the sun due to the generally cool temperatures in the montane environment. They will settle amongst rocks as soon as a dull period or cloud comes over. Since they are a difficult Butterfly to get close to, look out for a dark Butterfly that is flying over scree & boulders as opposed to vegetation, which is more likely to be a Butler's Ringlet. However beware your not caught out by a Red Admiral as the flash of red is not always easy to spot. Peak numbers are observed in January.

Dark Variety

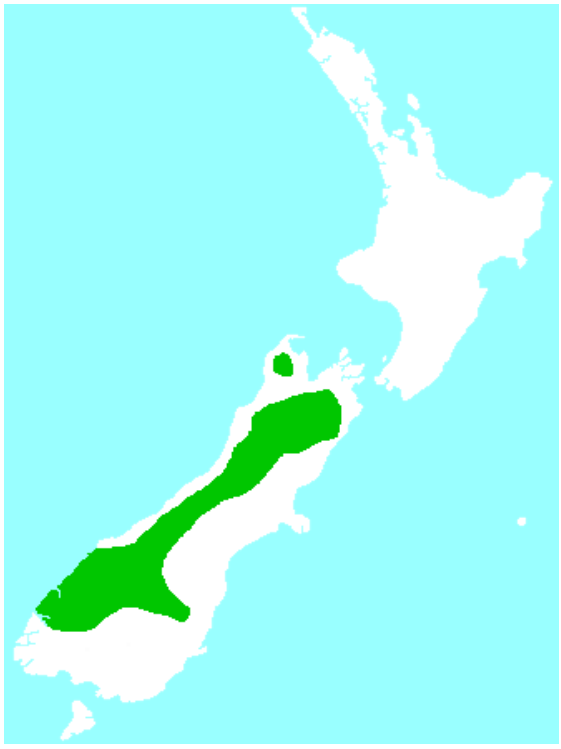
Light Variety

Habitat
A sub-alpine & alpine Butterfly that can be found from 800 to 2,000 metres on scree slopes. It is less common below 1200m & very occasionally strays to lower altitudes.

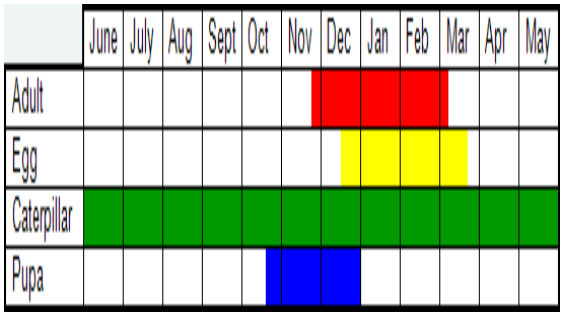
Food Plants
Only recorded on Blue Tussock Grass *(Poa colensoi)* but it's suspected other related Tussock grasses are also consumed.

Status
Rare Most of the alpine areas of the Southern Alps above 800m.

Distribution



Phenology



Factsheet Design lay out by Stuart Desjardins.