

Life history notes on the Dingy Bush-brown, *Mycalesis perseus perseus* (Fabricius, 18775) Lepidoptera: Nymphalidae –

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The Dingy Bush-brown is encountered regularly throughout much of Cape York Peninsula, the northern tablelands, sub-coastal and coastal areas with confirmed records south to the Dawson Bioregion (K. L. Dunn pers comm). There is one other record further south in the McPherson Bioregion listed in Braby 2000. Additional survey work in this region is required to determine the southern range limit. It has also been recorded in the Northern Territory.

In Queensland, this species is encountered in a range of habitats where tall grasses are growing including savannah woodland, eucalypt open woodland, paperbark swamps and occasionally rainforest margins. The adults have a preference for more open habitat and avoid closed rainforest.

Typically the adults fly throughout tall grasses usually within one or two metres of the ground. They settle frequently, with their wings closed, on grasses and also settle on the ground. They are not strong fliers but can fly quite rapidly if they have been disturbed. I have not observed the feeding habits of this species, but they are reported to feed on rotting fruit and rarely flowers (Braby 2000).



Whilst in flight, the adults could be confused with the Dusky Knight (*Ypthima arctous*) which is smaller in size, with the largest females having a wingspan of 33mm. This latter species has a more pronounced single, black, double-pupiled eyespot, enclosed by a thin brownish-orange ring, on both sides of the forewing and a smaller, single-pupiled one on the hindwing. However, *M. perseus*

has a single small ocellus on the forewing upperside and a series of ocelli on the underside of both wings. There are two other similar species in the genus, these being the Orange Bush-brown (*M. terminus terminus*) and the Cedar Bush-brown (*M. sirius sirius*). These two species can be separated by the colour differences as indicated by their common names.

The sexes are quite similar in appearance. The males have a tuft of off-white hairs towards the base of the upperside of the hindwing along vein Sc+R1. There is also a greyish sex brand on the upperside of the hindwing near the costa with corresponding patch near the dorsum on the underside of the forewing. In comparison to the males, the females also are slightly larger and have a shorter, wider abdomen. There is a wet season and a dry season form of this species.

The average size of the specimens pictured are wet season form males 34mm, females 36mm and dry season form males 35mm and females 40mm. The dry season form adults are generally larger in size.





***Mycalesis perseus perseus* (Dingy Bush-brown) Wet season form**

Images top left to right: male, female

Images above left to right: male underside, female underside



***Mycalesis perseus perseus* (Dingy Bush-brown) Dry season form**

Images top left to right: male, female

Images above left to right: male underside, female underside



A female was collected at Byfield in Central Coastal Queensland on 21st July 2010 and was kept in captivity with a host grass. Several days later she laid a few eggs and was then released. These eggs were kept for life history studies. Subsequently two larvae were successfully raised in captivity on native Kangaroo Grass (*Themeda triandra*), a known host for this species.



The eggs were pale green, smooth, off-spherical, approximately 1.0mm wide by 0.9mm high.

Freshly laid egg

The first instars consumed most of their eggshells shortly after emergence. The very sluggish larvae were observed resting on either side of the leaves of the utilised host plant where they were only occasionally observed feeding along the leaf edge during daylight hours. They chiefly feed during the night (Braby 2000). The larvae raised completed five instars and attained a length of 30mm.



1st instar larva



2nd instar larva



3rd instar larva



4th instar larva



4th instar larva head



5th instar larva



Pre-pupa

Both pupae, measuring 13mm in length, were located below a stem of the host plant. They were attached with silk, hanging by the cremaster with the head suspended downwards.

Of the two adults raised, the earliest period from egg to adult was over 2.5 months, with egg duration 9 days, larval duration 57 days and pupal duration 13 days. The second adult emerged 13 days later. Both specimens were females.





Pupa lateral view



Pupa ventral view

There are adult records for all months of the year shown in Braby 2000.

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Photos Wesley Jenkinson

References:

Braby, M.F., 2000. *Butterflies of Australia – Their Identification, Biology and Distribution*. vol 2. CSIRO Publishing, Melbourne.

RAINFOREST GARDENS - Continuing Graham McDonald's 5 part series of "Gardening for Butterflies" which was originally published beginning with issue #17.

PART 4 - DRY SCLEROPHYLL GARDENS

The majority of homes in the south-east corner of Queensland would be built on, or close to, previous dry sclerophyll forest, i.e. a fire-prone plant community dominated by a canopy of various *Eucalyptus* and *Corymbia* species with a sub-canopy of *Allocasuarina* and *Acacia* species. The ground layer may have been composed of native grasses such as *Themeda* and *Entolasia* with *Lomandra* and *Dianella* species. Some areas may have contained a shrub layer of *Pultenaea*, *Hovea*, *Dodonaea* and *Daviesia* species.

These areas are subject to the mindless 'selective' clearing of developers who clear out all the understorey and leave stark tall 'gum' trees which ultimately become weakened and dangerous. A point to understand here is that most of the butterfly host plants are in the understorey. Tall trees are for the odd mistletoe and perching crows. This is where the butterfly and native plant enthusiast comes to the rescue.

The soil type varies from heavy clay soils to sandy soils with all loam types in between, so select plants which are suited to those soils. Most will grow on clay if the structure of the soil is crumbly (enhanced by mulching) or if the plant beds are built up. Soil pH is usually acid (4.5 to 5.5 is normal for these soils) so the addition of small quantities of lime raises the pH to accommodate a wider range of plants (500g lime per square metre raises the pH by 1 unit).

