

## Life history notes on the Dusky Knight, *Ypthima arctous* - (Fabricius, 1775) Lepidoptera: Nymphalidae - Wesley Jenkinson

This is another of Australia's common butterfly species that has very limited published biological detail.



Dusky Knight (*Ypthima arctous*)

The Dusky Knight (*Ypthima arctous*), also previously known as the Dingy Ring, is encountered along much of the eastern coastal and sub-coastal districts from north-eastern Queensland southward into Victoria and also the Northern Territory. Ross Kendall collected a specimen 25km northeast of Hughenden during September 2011, some hundreds of kilometres west of its previously reported range in Queensland (Kendall, 2011).

This small to medium sized species can be very seasonally common north of Brisbane where it chiefly favours woodlands and open forests with a grassy understorey. The adults are located flying in full or dappled sunlight usually within a couple of metres from ground level. They have a similar 'bobby' flight pattern typical of the ringlet's (*Hypocysta* genus) with which they can be confused. While basking and feeding at flowers their wings are periodically opened and closed, revealing the upper-side wing pattern. Both sexes frequently settle on grasses and low-growing plants and feed from a variety of small native and exotic flowers. Flight is often slow, however once disturbed they can fly quite rapidly, being difficult to follow through understorey vegetation.

The sexes are quite similar in appearance. In comparison with the males, the females wing termen (outer margin) is more rounded, the abdomen is slightly shorter and wider. Overall, females are generally larger in size.

The average wingspan for those pictured is males 25mm and 31mm for the females.



*Ypthima arctous* (Dusky Knight)

Images left to right: male, female, male underside, female underside



On a recent trip during April 2012 to the Perry River west of Bundaberg, a female was collected and kept in captivity. She laid several eggs and was then released. These eggs were kept for life history studies. Subsequently, larvae were successfully raised on native Green Couch Grass (*Cynodon dactylon*) with full sized male and female adults emerging. The native host grasses appear to be largely unknown, however larvae have been raised successfully on Blady Grass (*Imperata cylindrica*) and Kangaroo Grass (*Themeda triandra*) (Braby, 2000; Moss, 2010) as well as Queensland Blue Couch (*Digitaria didactyla*) (Braby, 2000).



Freshly laid eggs were smooth and bright green, fading to pale yellowish green, slightly off spherical and approximately 1mm high x 1mm wide.

Freshly laid egg of *Y. arctous*



1<sup>st</sup> instar larva



2<sup>nd</sup> instar larva



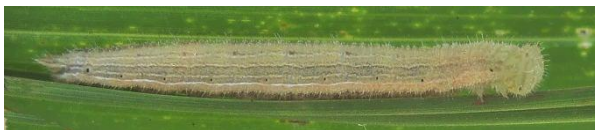
3<sup>rd</sup> instar larva



4<sup>th</sup> instar larva



4<sup>th</sup> instar larva showing bifid anal segment



5<sup>th</sup> instar larva

In captivity the first instars emerged by 8.00am and consumed their eggshells shortly afterwards. The larvae were observed feeding solitarily during daylight hours and resting on either side of the leaves of the utilised host plant. They were very slow moving and fed from the outer edge of the leaf. Ecdysis was very difficult to detect between the early instars due to their slow progression and similarity. It appeared the larvae completed five instars (as pictured) and the final larval instars attained a length of 23mm.





Pupa lateral, dorsal and ventral view

The attractive pupae were attached by silk to grass stems, hanging by the cremaster with the head suspended down. They were green in colour and measured 12mm in length.

The total time from egg to adult was about three months, with egg duration of 6 days, larval duration 67 days and pupal duration of 16 days.

I don't have any records of this species within the boundary of the new Scenic Rim Regional Shire south of Brisbane. However given its general distribution range it should be present in this region in suitable habitat.

Photos Wesley Jenkinson

References:

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

Kendall, R., 2000. A new location for the Dusky Knight, *Ypthima arctous* (Fabricius, 1775) Lepidoptera: Nymphalidae : Satyrinae. *Metamorphosis Australia: Magazine of the Butterfly and Other Invertebrates Club* **63**:33.

Moss, J.T., 2010. Butterfly Host Plants of South-east Queensland and Northern New South Wales. 3<sup>rd</sup> edition, BOIC.

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**Social Behavioural Studies of *Laxta granicollis* - Michelle Clark**

Does the *Laxta granicollis*, Australian native cockroach, express social behaviour and can therefore be considered a social organism?

**Abstract**

Knowledge of the social behaviour of cockroaches can be used for developing more effective controls for those which are considered pests, and can also give insight into how cockroaches came to play a large role



Juvenile *Laxta granicollis* with the mother

