

**Life history notes on the Chequered Swallowtail, *Papilio demoleus sthenelus* W.S. Macleay, 1826. Lepidoptera: Papilionidae –**

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The Chequered Swallowtail is one of Australia's well-known butterflies and has been recorded from much of the Australian mainland, including the drier interior regions. It has not been recorded from Tasmania.

Unlike many of our Australian butterflies this species is generally more numerous in drier inland areas rather than coastal areas. The adults prefer an open environment including woodland and grassland where host plants are established. During migrations, generally triggered by significant rainfall, adults may also visit the outer margins of dry vine scrub, rainforest and outlying suburban gardens in search of nectar, with the females also searching for host plants for opportunistic ovipositing.

Adults are rapid fliers and can be observed flying in a direct path within one or two metres of the ground during hot, sunny conditions. Whilst feeding momentarily at flowers, the wings continue fluttering rapidly as is typical of the *Papilio* genus. Both sexes feed on a variety of small native and exotic flowers as well as imbibing moisture (mud puddling) along gullies and creek banks during hot conditions. The adults also perch on vegetation close to the ground including the ends of seed stalks, and settle with the wings open. The males do not appear to hilltop.

Variation in this species is only very minor, chiefly being the shape and size of the yellow markings. The sexes are very similar and are best separated by examination of the external genitalia. The blue markings on the upperside hindwing (above both the black costal spot and the orange tornal spot) are also more prominent on the female (Braby, 2000).

The wingspan of the males and females pictured are 73mm and 76mm respectively.



*Papilio demoleus sthenelus* (Chequered Swallowtail)

Images left to right: male, female.





*Papilio demoleus sthenelus* (Chequered Swallowtail)

Images left to right: male underside, female underside

Larvae have been recorded feeding on host plants within the Fabaceae and Rutaceae families by various authors as in Braby 2000. Various species of *Cullen* (Fabaceae) are the preferred host plants for this butterfly.

In January 2006 a female was observed laying several eggs on cultivated *Cullen tenax* in my garden at Beaudesert in south-eastern Queensland. She typically fluttered busily around the host plant. Once a suitable spot was located she settled on the host plant, with wings beating rapidly she then curled her abdomen onto a leaf, ovipositing a single egg. Six eggs were laid in a similar fashion and then she flew away. These eggs were laid on the upperside of the leaves and one on a stem of host plant. The larvae were subsequently raised on this host.



The eggs were pale white when fresh (turning pale yellow after a day), smooth, spherical and approximately 1.2 mm in diameter.

Freshly laid egg



1<sup>st</sup> instar larva



2<sup>nd</sup> instar larva



3<sup>rd</sup> instar larva



4<sup>th</sup> instar larva



5<sup>th</sup> instar larva

When the first instar larvae emerged the eggshells were consumed. The early instars chewed the upper surface of the host plant. As they began to grow they ate from the



outer edge of the leaves and also consumed the thin stems of the host plant. Larvae fed openly during the day and rested along the upper side of leaves and stems of the host plants. As a defence mechanism the larvae have a strongly pungent scented fleshy osmeterium that they protrude from behind the head to deter predators when disturbed. The larvae completed five instars and largest larva attained a length of 42mm.



Pupa dorsal view



Pupa lateral view

The green pupae measuring up to a length of 32 mm, were located below stems of the host plant. They were attached with silk by the cremaster.

The first adult to emerge had egg duration of 4 days, larval duration 16 days and pupal duration of 11 days. The other pupae emerged several days later but some pupal duration for this

species is known to last for several months.

Within the new boundary of the Scenic Rim Regional Shire south of Brisbane, I have adult records from August through to May. In this region there appears to be a spring brood with adults flying during late August and September, then appearing more numerous from January to March. This most likely coincides with local and inland rainfall during these periods.

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#### References:

Braby, M.F., 2000. *Butterflies of Australia – Their Identification, Biology and Distribution*. vol 1. CSIRO Publishing, Melbourne.

Photos Wesley Jenkinson

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