STUDY OF THE AUSTRALIAN ADMIRAL BUTTERFLY

Introduction

The Australian admiral (*Vanessa itea*) is a butterfly that is widely distributed but whose habits are poorly known. I have prepared these sheets in an attempt to find out what determines the admiral's varying abundance in south-western Australia. The times of year when it is most often seen are not when it might be expected to be most abundant. In Perth, for example, the breeding-season is late winter into spring. One would expect the admiral to be most numerous in mid to late spring, when the adult admirals emerge from pupae; but in fact it is seen oftenest in late winter to early spring, the time of egg-laying.

Fluctuations in the numbers of admirals observed could be due to migration. The species is recorded as being migratory in eastern Australia, and therefore may also migrate in south-western Australia. It is a robust, powerfully built butterfly that flies strongly and rapidly; being also long-lived, it probably has the capacity to travel long distances. Other possible behaviours, however, that could explain the admiral's apparent low numbers in Perth in summer and early winter are aestivation and hibernation. Hibernation has been recorded in the admiral in the colder parts of southern Australia. Aestivation has not been observed.

Recording the Admiral

On the reverse side of this sheet are pictures in black and white of the butterfly and its egg, larva, larval shelter and pupa; they are at life-size except for the egg (greatly enlarged), which is the size of a small grain of sand. The larva shown is fully grown; younger larvae are of course smaller. The main feature that identifies the adult butterfly is the large oval patches of pale yellow on the forewings (sometimes white in faded specimens). Publications on Australian butterflies (see references below) can be consulted for colour illustrations and further information.

The attached sheet is for your, or your group's, recorded observations. Observations of the admiral and its larvae in different parts of W.A. should give a much clearer picture of this butterfly's seasonal habits. Any observations, even if over only a few weeks, will be useful, but they will be particularly valuable if they can be kept up for longer, extending into times of the year when the larvae or butterflies can no longer be found. Recordings are best made weekly or fortnightly when the larvae are present or the butterflies abundant; at other times they can be made monthly.

Queries

If you have trouble finding the butterfly or its larvae, or have any questions about filling in this form, you may like to ring me, on (09) 245 2411.

Results

Once I have collected observations from individuals and groups over a period of a year, I shall send the participants a summary of the results.

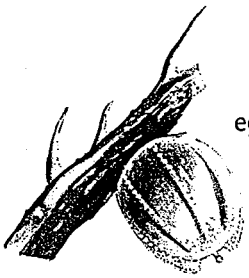
R Powell
Robert Powell
February 1994

References

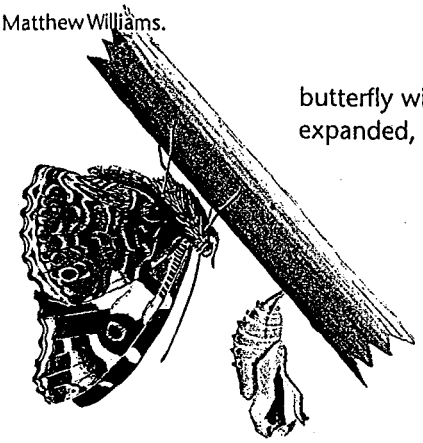
Common, I.F.B., and D.F. Waterhouse. *Butterflies of Australia*. Angus and Robertson, 1981.
Houston, T.F. (ed.). *Bring Back the Butterflies: Butterfly Gardening for Western Australians*. Western Australian Museum, 1994.
Powell, R. 'Australian Admiral'. *Landscope*, Vol. 7, No. 4: Winter, 1992, 21-7.

THE LIFE CYCLE OF THE ADMIRAL

Reference photographs by Matthew Williams.



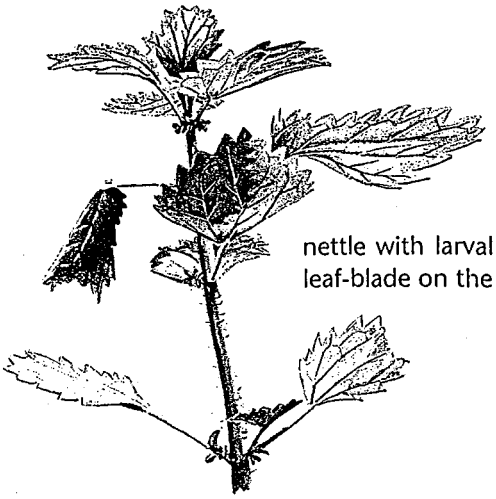
egg (greatly enlarged)



butterfly with wings fully expanded, ready to fly

larva

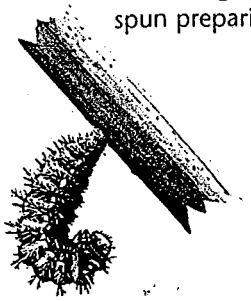
butterfly shortly after emerging



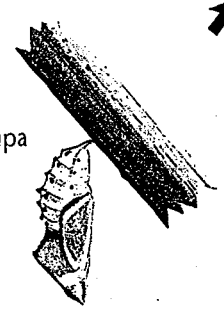
nettle with larval shelter (the folded leaf-blade on the left)

pupa a day before butterfly emerges, with wing colours showing

larva hanging from silken pad it has spun preparing to pupate



pupa



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OBSERVATION SHEET

Details of Person/Group

Name (of person or group) _____

Address _____

_____

Contact Person (if group) _____ Telephone No. _____

Observations of Adult Insects (Butterflies)

A. At a Regular Observation Site: Choose a good site for making regular observations, preferably either a prominent hilltop or somewhere where larval food-plants are present (see below for species of food-plant). (**Note.** To find admirals on a hilltop, choose a prominent hill, preferably with a small summit, rather than a large, flat one. Choose a sunny day if the weather is cool. The time of day is crucial. Admirals are usually present on hilltops only in the late afternoon, when males establish territories based on perching-sites near the summit of the hill. The time when admirals arrive on hilltops varies according to the season and temperature. As a guide, in Perth it is usually after 3:30 p.m. in winter, and after 5:00 p.m. in late spring. Look out for fast-flying insects, often interacting in pairs. Once fast-flying butterflies have been sighted, make sure they are admirals and not painted ladies, which have similar behaviour.)

Name and Location of Site _____

_____

Characteristics of Site (tick one)

☐ hilltop
☐ place where food-plants present
☐ other, describe why site was chosen: _____

Recordings at Regular Observation Site

date	time	number of specimens	comments (e.g. whether specimens fresh or faded)

B. At Other Places: If you wish, you can make recordings of any sightings of admiral butterflies at places other than your chosen site, in the following table: (**Note.** Look out particularly for admirals that are travelling. Travelling admirals maintain a fairly constant direction, flying 1-3 m above the ground, much faster than most butterflies. To distinguish them from other fast-flying butterflies - the Australian painted lady and the meadow argus - look for flashes of their pale-yellow wing markings. Think of particular places where travelling admirals might appear. For example, in spring they may travel south from Garden Island, where they breed, and be seen arriving at Mangles Bay or Cape Peron on the mainland.)

Recordings at Other Sites

site (e.g. school grounds, front garden)	date	number of specimens	comments (e.g. direction of travel for butterflies on the wing)

C. Other Observations of Interest: Record any observations of admirals that might be hibernating or aestivating. Such butterflies are likely to be found in dark, sheltered, secluded places.

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Observations of Larvae (Caterpillars)

A. At a Regular Observation Site: The food-plants of the admiral (the plants on which the eggs are laid and the larvae feed) are all in the nettle family, and include:

- European stinging-nettles (*Urtica urens*)
- Eastern States nettles (*Urtica incisa*)
- native pellitory (*Parietaria debilis*)
- introduced pellitory (*Parietaria judaica*)
- babies' tears (*Soleirolia soleirolii*)

Find a place where the food-plants are growing and admiral larvae are present, and record your observations in the table below. (Note. During the day the larvae hide in the shelters on the food-plant, or in leaf-litter on the ground, and come out at night to feed. They are most easily found by looking for their shelters, which are quite conspicuous. If in doubt the first time, open a shelter (care with nettles!) to see the larva.)

Recordings at Regular Observation Site

date	larvae observed? (yes or no)	comments (e.g. whether larvae large or small, whether pupae seen)

B. Recordings of Larvae at Other Sites

date	place (or nearest town)	comments (e.g. whether larvae large or small, whether pupae seen)

Return of Sheets

Please send these observation sheets, when you have completed your observations, to:

Robert Powell,
54 Bournemouth Crescent,
Wembley Downs, W.A. 6019