

PLUMMERING JEWELS FLUTTERING JEWELS

Butterflies are among the best known of all insects, admired even by those who have only the most generalised understanding of science. Their splendid colours and graceful flight patterns have always been a source of fascination, although most people know

diversity, brilliance - and the kaleidoscopic assortment of patterns exhibited by butterflies, is unrivalled anywhere in the animal kingdom, except possibly by the birds. Colour is not just a form of eye-catching advertisement, but may be also used for camouflage and defence.

These insects are particularly active during the day. This is another important factor drawing them to our attention, because it not only ensures that their colours will be fully appreciated, but it contrasts sharply with the behaviour of a great majority of animals which are elusively nocturnal.

Butterflies, together with moths, are insects comprising more than 100,000 species world-wide in the second largest insect order, Lepidoptera. The name, derived from the Greek 'lepis', meaning 'scale', and 'pteron', meaning 'wing', refers to the distinctive colouring of minute scales, overlapping like shingles, on the wings.

In the Maltese Islands there are nineteen different species of butterflies that lay eggs. Six of these species migrate. These include the Cabbage White Butterfly and the Red Admiral. The remaining butterflies are residents, including the magnificent Swallowtail - perhaps our most beautiful butterfly,

with its brilliant yellow, blue and red colours and its singular erratic flight pattern... Unfortunately a not so common sight in the countryside nowadays.

The butterfly lifecycle is no less remarkable than the beauty of the adult. The transformation of the frequently ugly and often unusual caterpillar into an elegant butterfly is one of the typically performed tricks of nature. This miracle is of considerable ecological significance; the larvae and the adult can lead totally different lifestyles and therefore avoid competing with each other for the same food.

All butterflies pass through four distinct stages of development: the egg, caterpillar, pupa and adult. Female butterflies usually lay their eggs on, or very near to the food plant on which the larvae feeds. Most frequently they are laid on the under surface of the leaf; here the eggs are protected from the rain and sunshine and, to some extent, from predators.

The larva, or caterpillar, develops within the egg, then eats its way out. It then feeds and grows, periodically moulting its old skin several times. Each butterfly species

has its own food plant, and caterpillars will not eat plant material of any other plant. For instance, the caterpillar of the Red Admiral will only feed on Stinging Nettles or the Wall Pellitory, while the Swallowtail will only feed on the Rue or the Fennel. The caterpillar may complete its growth in about one month, but some species remain larvae for as long as two years.

Eventually, the last larva moults and produces the pupa, typically a smooth, mummylike, almost immobile object. Within the pupa, the larval structures transform to those of the adult butterfly, in some species in as little as a few days, in others as long as several months.

When fully formed the adult breaks out of the pupal shell. Its outer structures toughen and its wings, at first



little about their habits. They seem to escape the general revulsion reserved for most other insects, perhaps, because they do not bite, sting, carry disease or (in adult form) do any serious damage.

The development of colour - its range,

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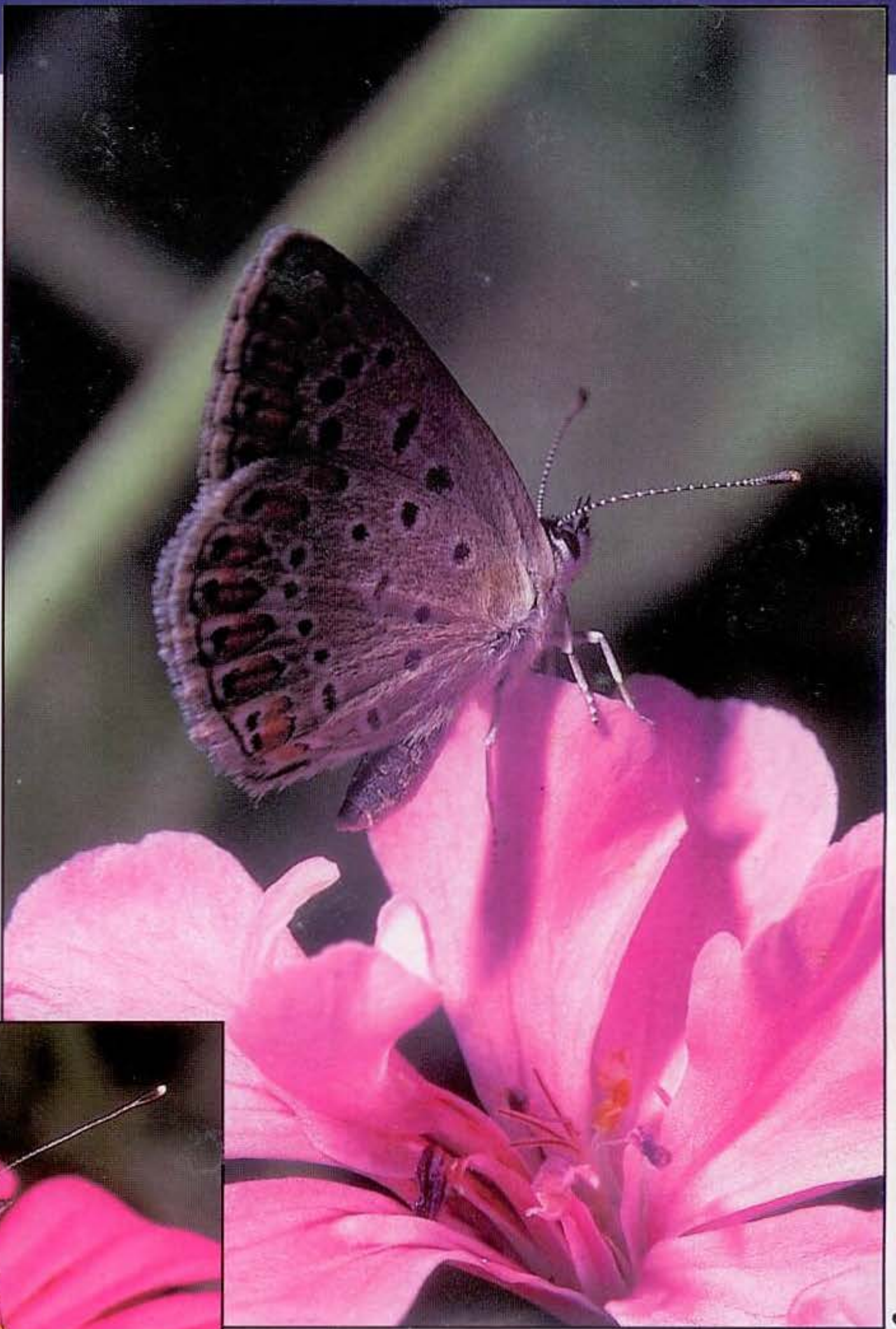
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small pads, expand greatly, flatten out, and harden.

The adult does not moult but may live for as long as several months in some species, flying about, seeking a mate and reproducing.

Butterflies play an important role in nature, inextricably linked to the world of plants and thus depending on its changing fortunes. Their larvae transform millions of tons of plant matter into animal matter and eventually are eaten by other animals or recycled into plant matter. Flower-visiting adults are second only to bees in the cross-pollination of many flowering plants. Farming practices, the indiscriminate use of chemical compounds in agriculture, the transformation of the countryside into building areas are all human activities that have a profound effect on the environment and hence on these insects.

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It is of no use protecting butterflies because they are attractive unless we take even greater care to conserve their unattractive larvae and the places where they live.

Mark C. Mifsud B.Ed. (Hons.), Dip. Env. Mgt.

1. Swallowtail egg.
2. Cabbage White Larvae.
3. Buttwwhite Butterfly.
4. The common Blue Butterfly.
5. Red Admiral feeding with its proboscis.
6. Red Admiral.

