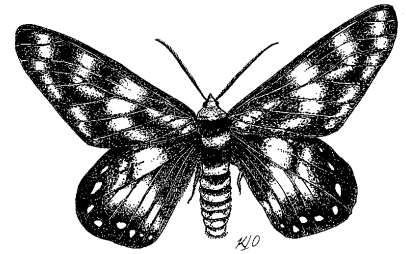


Tropical Factsheets

Butterfly and moth colours

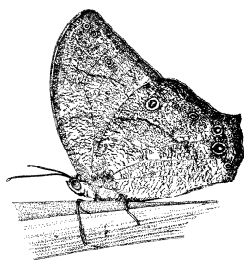
- The wonderful colours and patterns of butterfly and moth wings are produced by many **tiny scales** which **overlap** like tiles on a roof.
- The wings of a large butterfly can hold a million and a half of these scales.
- Some scales are coloured with pigments.
- Many scales are structured so that they **split light** and produce an **iridescent sheen**.
- **Transparent scales** on top of coloured scales make the wings look soft, velvety or metallic.
- **Lack of scales** on parts of the wing can produce a **transparent** effect, as in the Big Greasy Butterfly, or the 'window panes' on the wings of the Four O'clock Moth.



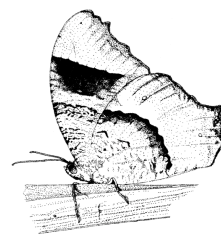
Four O'clock Moth

Coloured wings serve several purposes:

- Colours are often used in **courtship**, so that males and females recognise each other as the same species.
- **Bright colours** may also warn birds and other predators that a particular butterfly **tastes bad**. Other edible butterflies and moths may **mimic** a bad-tasting species to gain protection for themselves.
- Certain colour patterns may help the butterfly or moth **blend** into its background and **hide from predators**.
- Butterflies are cold-blooded. **Dark colours** help to soak up warmth from the sun in cool environments.
- The upperwing of the female Purple Azure Butterfly is affected by **humidity**. Those from Townsville are more blue, those from the more humid Cairns area are more purple.
- Some wing colours change according to the **weather**. (The summer Evening Brown Butterfly has larger eye-spots underneath, while the winter version has darker underwing markings and a central area of pale orange-brown on the upperwings.)



*Evening Brown Butterfly
summer version*



*Evening Brown Butterfly
winter version*