

# **Field Ethics, Disciplines and Field Notes**

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**Butterfly Conservation Society of Sri Lanka**



## ✗ Desire and Commitment



# 🦋 Team spirit





🦋 Information sharing

🦋 Respecting and listening to each other





🦋 Keen eyes and ears



# 🦋 Earthy colored dresses





# 🦋 Do not congregate



- Be silent
- Be patient
- Observe with minimum disturbances to the wild life



# 🦋 photographing



- Be respectable to wild life
- Be knowledgeable on wild life
- Be patient

🦋 Keep field records



🦋 Discuss, analyze and share field records





# Requirements for field identification

## Field note book



- 🦋 Must be easy to handle
- 🦋 Able to withstand adverse field conditions
- 🦋 Must have an updateable content page
- 🦋 Better to have a scale on back
- 🦋 Do not tear pages

## Pencil



- 🦋 Must be easy to handle
- 🦋 Type – 2B

## Field guide book



- 🦋 Must be easy to carry
- 🦋 Must be able to provide quick information

# Things to record for the identification of a butterfly

**Date** – 2007/05/18

**Time** – 1750 hrs

## **Location**

**Exact location** – Akkara 50

**Area** – Sinharaja

**Co-ordinates** – 6.4207 N, 80.4189 E

**Weather condition** – Cloudy/ Gloomy/ Sunny

Cloud cover as a percentage

Wind speed as a relative measure

**Habitat** – foot path on a thick forest

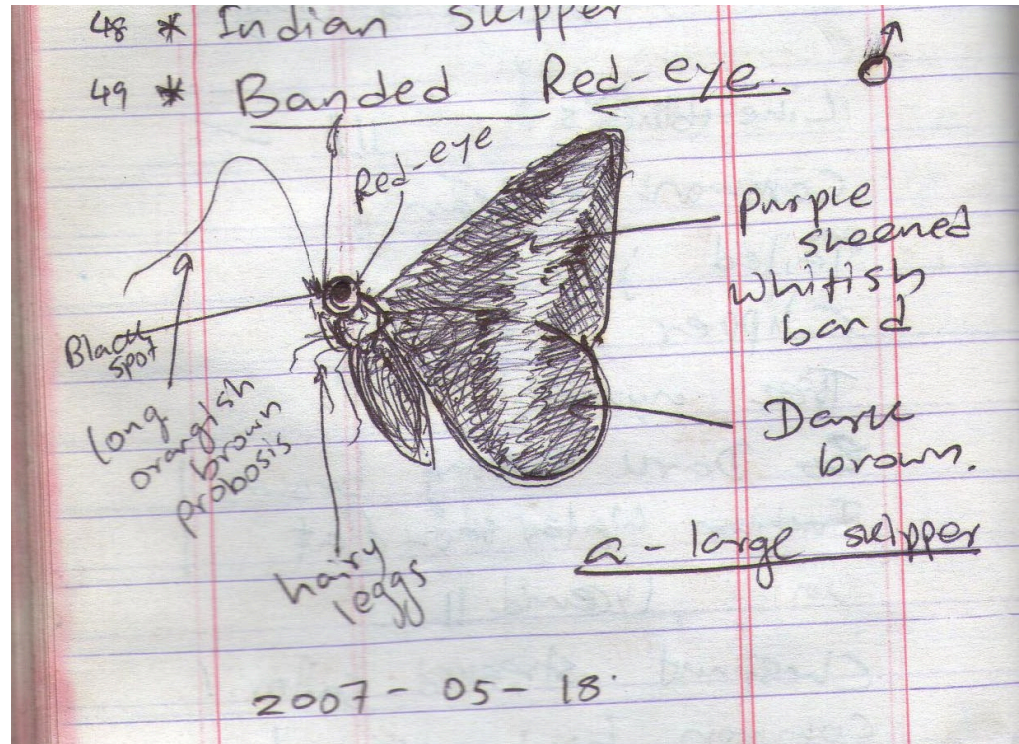


# Things to record for the identification of a butterfly

Contd.....

## Sketch –

If you take a photo write the photo number for reference



**Size** - a large skipper (Always compare with a known spp.)

**Habits** – Flies fast, never sit on a flower for long time

**LFPs** – *Calamus* species

**Remarks** – Sucks nectar from *Strobilanthes* species

# Do not try to include every butterfly for an exact species

## CHECKLIST OF THE BUTTERFLIES OF SRI LANKA – NORTHERN PROVINCE & EASTERN PROVINCE PROJECT

DATE: 13/08/21; START TIME: 1300; END TIME: 1500

LOCATION: Lahugala

TEMPERATURE: dot WIND SPEED/DIRECTION: — SUN/CLOUD: 50% ELEVATION: 25m

HABITAT: forest; LEAD OBSERVER: Himesh

### DANAINAE

Brown King Crow	
Common Indian Crow	05
Common Tiger	01
Dark Blue Tiger*	03
Double Branded Black Crow	
Glassy Tiger	
Great Crow*	
Plain Tiger	02
<u>Euploea sp.</u>	04

### SATYRINAE

Common Bushbrown	
Common Evening Brown	
Common Palmfly	
Dark-Brand Bushbrown*	
Gladeye Bushbrown	
Medus Brown	
Tamil Bushbrown*	
<u>White Four-Ring</u>	05
<u>Common/Tamil BB sp.</u>	

Do not try to include every butterfly for an exact species contd.....

**There may be -**

Very much similar species



Common Grass Yellow



Three Spot Grass Yellow



One spot Grass Yellow



Do not try to include every butterfly for an exact species contd.....

**There may be -**

Variations (both in pattern and color)



Common Albatross (female)

Do not try to include every butterfly for an exact species contd.....

**There may be –**

Worn out individuals





Do not try to include every butterfly for an exact species contd.....

**There may be –**

A need to see both sides of wings





# Things to look at for the sketch

**Color pattern** – do not rely too much on color

**Wing shapes** – Pointed apex, rounded outer margin etc.

**Proportional dimensions** – antennae length etc.

**Special features** – long tails, red eyes, sex brands etc.



Silver Streaked Blue

# Things to look at for habits

**Flight** – speed, direction, height etc.

**Feeding materials** – flowers, fruits, tree sap, mud puddling etc.

**Feeding behaviors** – nectaring with flapping wings etc.

**Courtship behaviors** – Tree nymph's dance etc.

**Basking behaviors** – open wings, leaning etc.

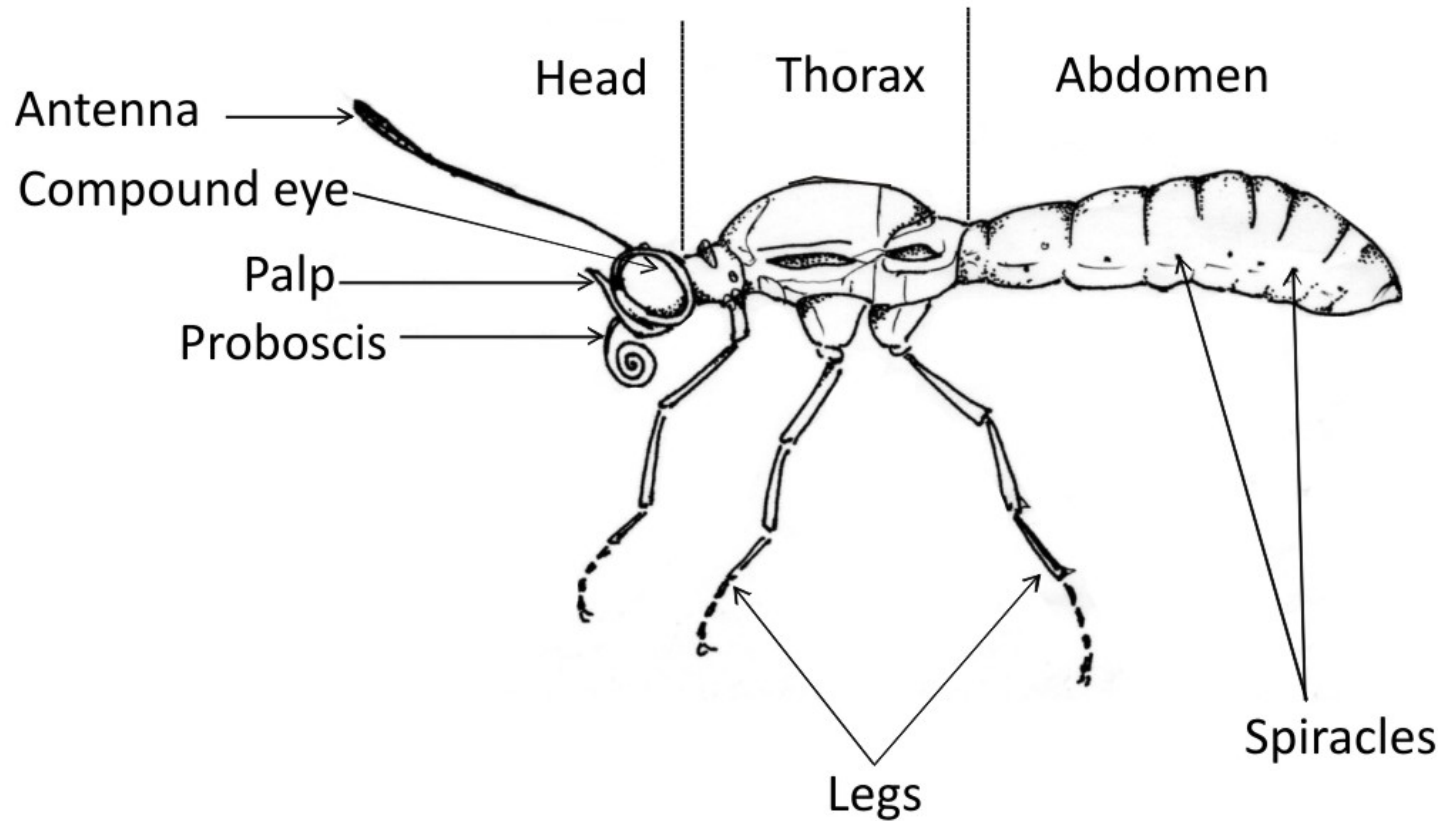


# Identification of Butterflies



# Adult butterfly

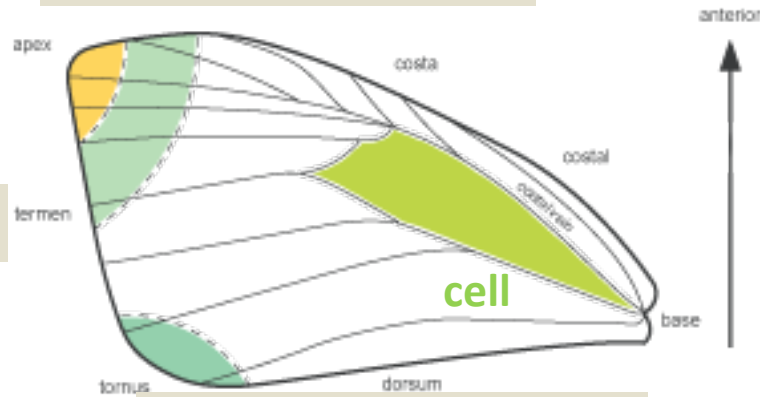
- Parts of body of an adult butterfly



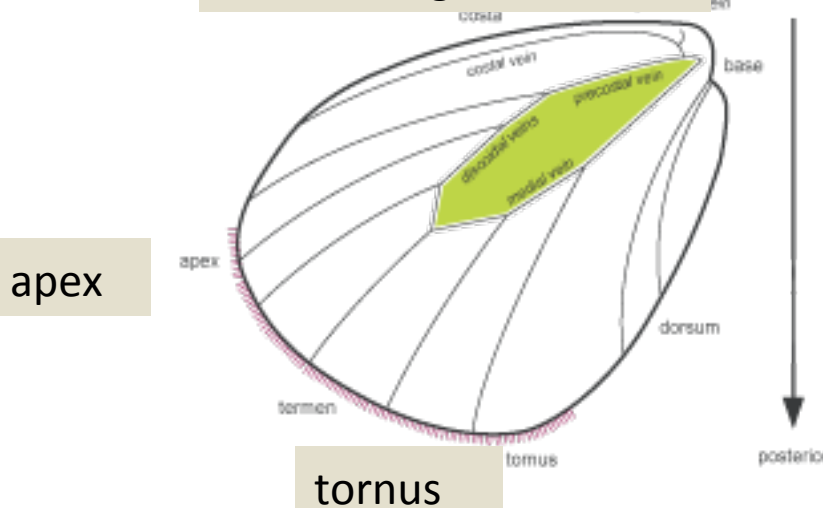
- Parts of wings of a butterfly

upper margin / costa

outer margin

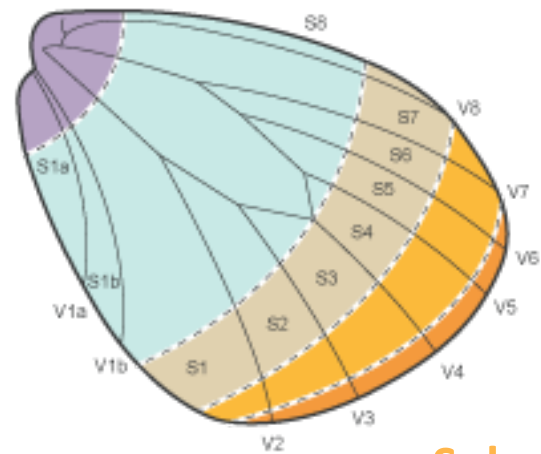
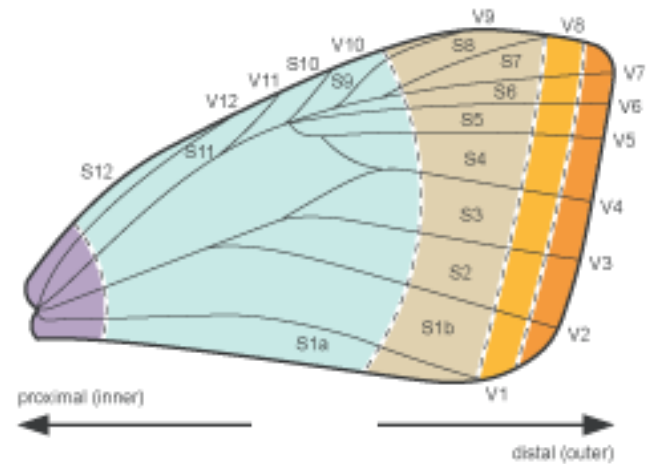


lower margin / dorsum



apex

tornus



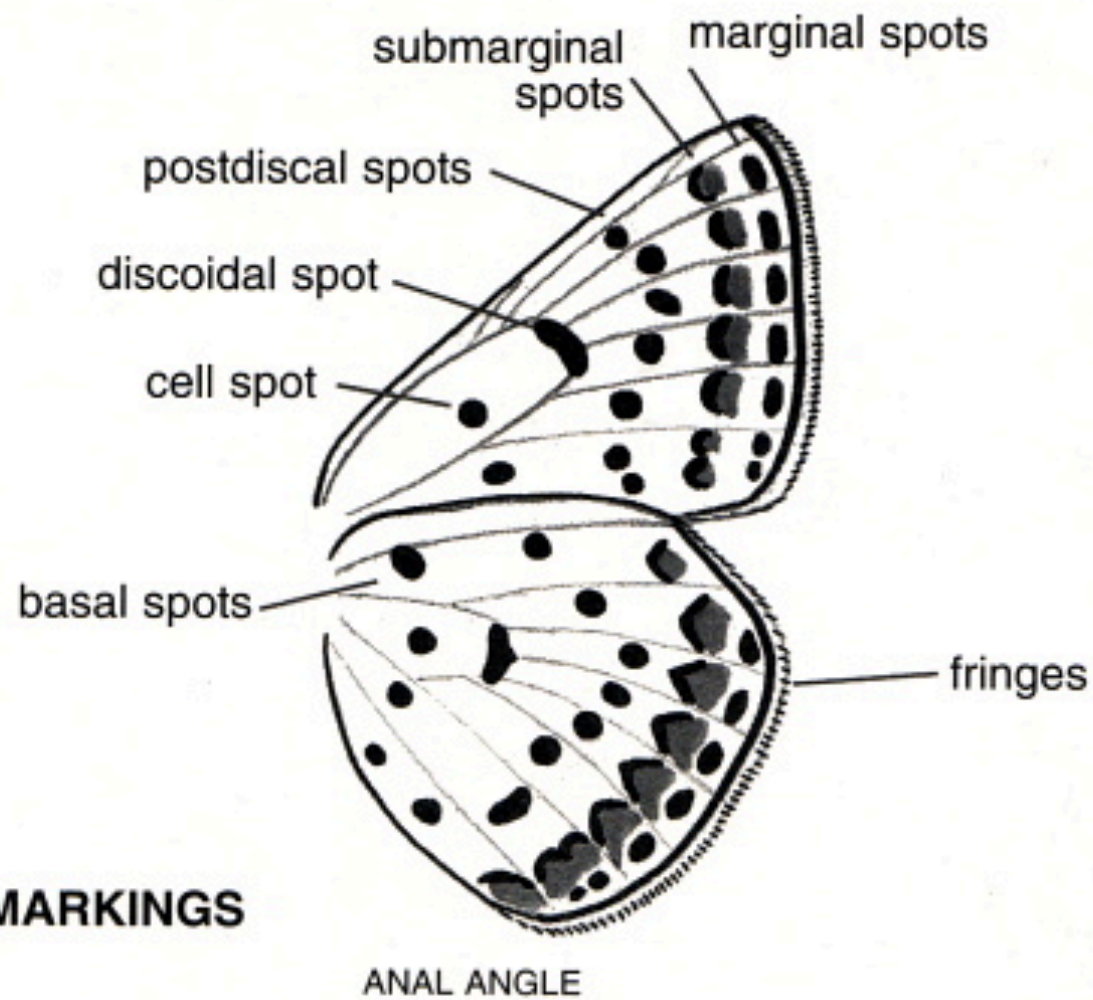
Marginal

Sub marginal

Post discal

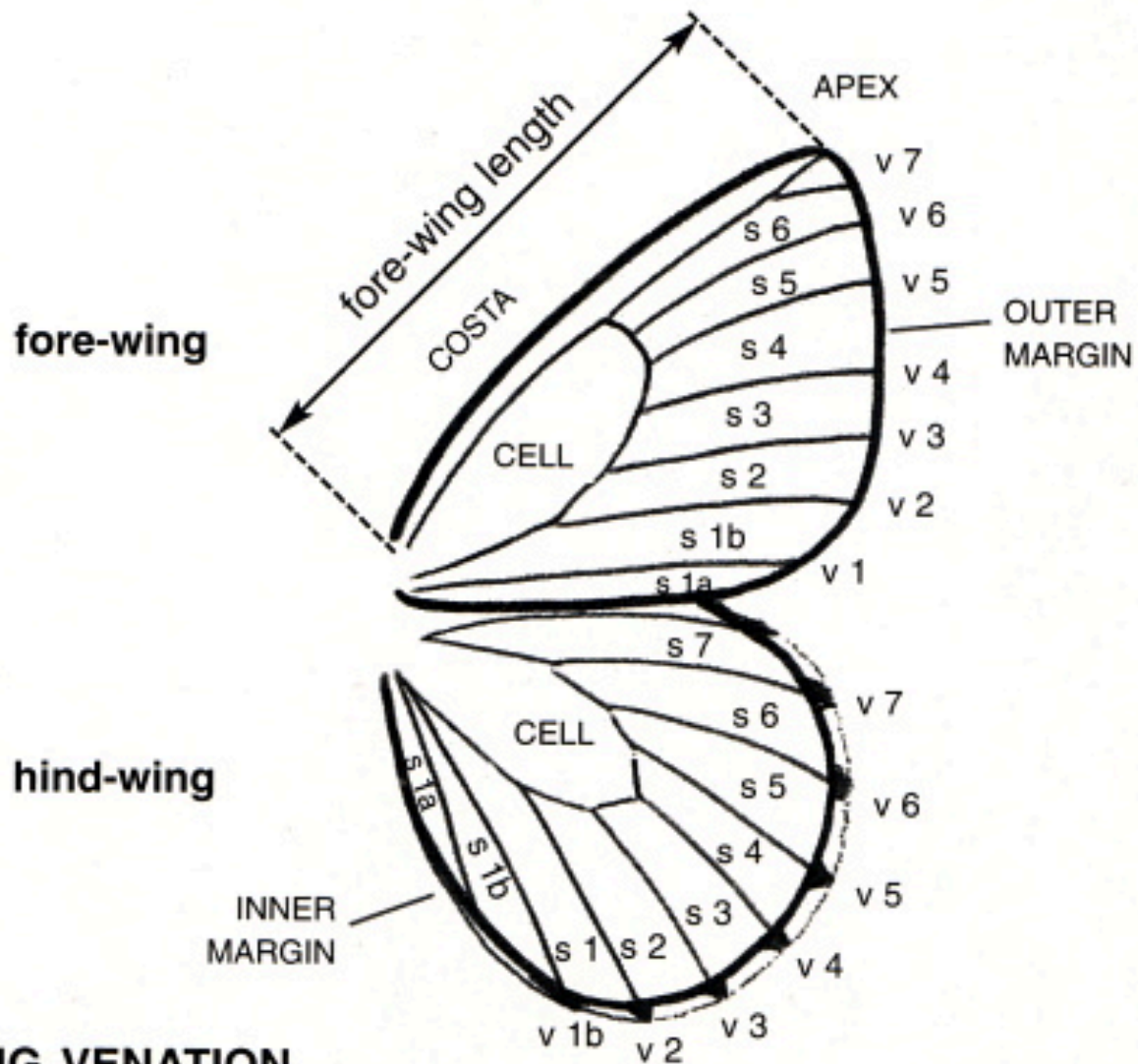
Discal

Basal



## WING MARKINGS





## WING VENATION

s : space    v : vein

# • Papilionidae

- ✗ Large to medium size
- ✗ All legs fits for walking
- ✗ Short palpi, short & stout antennae, well developed proboscis
- ✗ Closed cells in both wings
- ✗ Tail on hind wing in some species
- ✗ perched in opened wings



Lime Butterfly



Sri Lankan Rose



Common Jay

# • Pieridae

- ✗ Medium to small in size
- ✗ white or yellow colored
- ✗ All legs fits for walking
- ✗ Closed cells in both wings
- ✗ Usually perched in closed wings, abdomen is covered by wings



Psyche



Chocolate Albatross



Jezebel



# • Danainae

- ✗ Large to medium in size
- ✗ Fore legs modified into brushes
- ✗ Most males have sex brands and anal hair pencils
- ✗ Closed cells in both wings
- ✗ perched both in wings opened and closed
- ✗ Abdomen is covered when in closed wings



Sri Lankan Tiger



Plain Tiger (female)



Blue Tiger (male)

# • Nymphalinae

- ✗ Medium in size
- ✗ Diversified wing shapes
- ✗ Very colorful, some are having 'eye spots'
- ✗ Unclosed cells in both wings
- ✗ Fore legs modified into brushes
- ✗ perched in open wings in sun, in closed wing in shade



Tawny Rajah



Blue Admiral



Red Spot Duke

# • Libytheinae

- ✗ Small in size
- ✗ Elongated labial palpi
- ✗ Front projected antennae
- ✗ Falcate fore wing
- ✗ Fore legs fit to walk only in females
- ✗ Perched in closed wings concealing abdomen, rarely opens wings
- ✗ Fore legs modified into brushes
- ✗ perched in open wings in sun, in closed wing in shade



Club Beak



Club Beak



Beak



# • Acrainae

- ✗ Small in size
- ✗ Mainly yellow in color
- ✗ Thinly layered scales on wings, exposing the membrane in old specimens
- ✗ No sex brands
- ✗ Perched in partially opened wings or in closed wings exposing abdomen
- ✗ Fore legs are not fit to walk



Tawny Coster

# • Amathusiinae

- ✗ Medium in size
- ✗ Mainly brown in color
- ✗ Cell is closed only in fore wing
- ✗ Males has sex brands
- ✗ Fore legs are not fit to walk
- ✗ Perched in closed wings



Southern Duffer (female)

# • Satyrinae

- ✗ Medium to small in size
- ✗ Rounded wings in small species, Serrated wing margins in others
- ✗ Brown background color
- ✗ Cells in both wings are closed by a faint vein
- ✗ Fore legs modified into brushes
- ✗ Perched in closed wings, rarely open even for basking



Jewel Four Ring



Tamil Tree Brown



Cingalese Bush Brown



# • Lycaenidae

- ✗ Small to tiny in size
- ✗ Upper sides mostly having metallic sheen in blue, purple etc.
- ✗ Females always lack the sheen
- ✗ Under side varies from white to dark brown
- ✗ Having 0 – 3 minute tails in HW tornus, 1 is the common
- ✗ Cells in both wings unclosed, but indicates it by having a colored line in US
- ✗ All legs distinct
- ✗ Perched in closed wings, partially exposing the abdomen



Transparent Six Lineblue



Common Tinsel



Large Guava Blue

# • Riodinidae

- ✗ Small in size
- ✗ Upper sides mostly having metallic sheen in purple
- ✗ closed cells in both wings
- ✗ HW slightly projects into a tail
- ✗ Light colored eyes
- ✗ Perched in partially opened wings



Plum Judy

# • Hesperiidae

- ✗ Medium to tiny in size
- ✗ Background color is brown
- ✗ Unclosed cells in both wings
- ✗ Hairy body with large abdomen
- ✗ Some are perch in open wings regularly
- ✗ Others perch in closed wings
- ✗ They bask in HW spreading flat while FW keeping vertical



Tropic Dart



Orange Tailed Awl

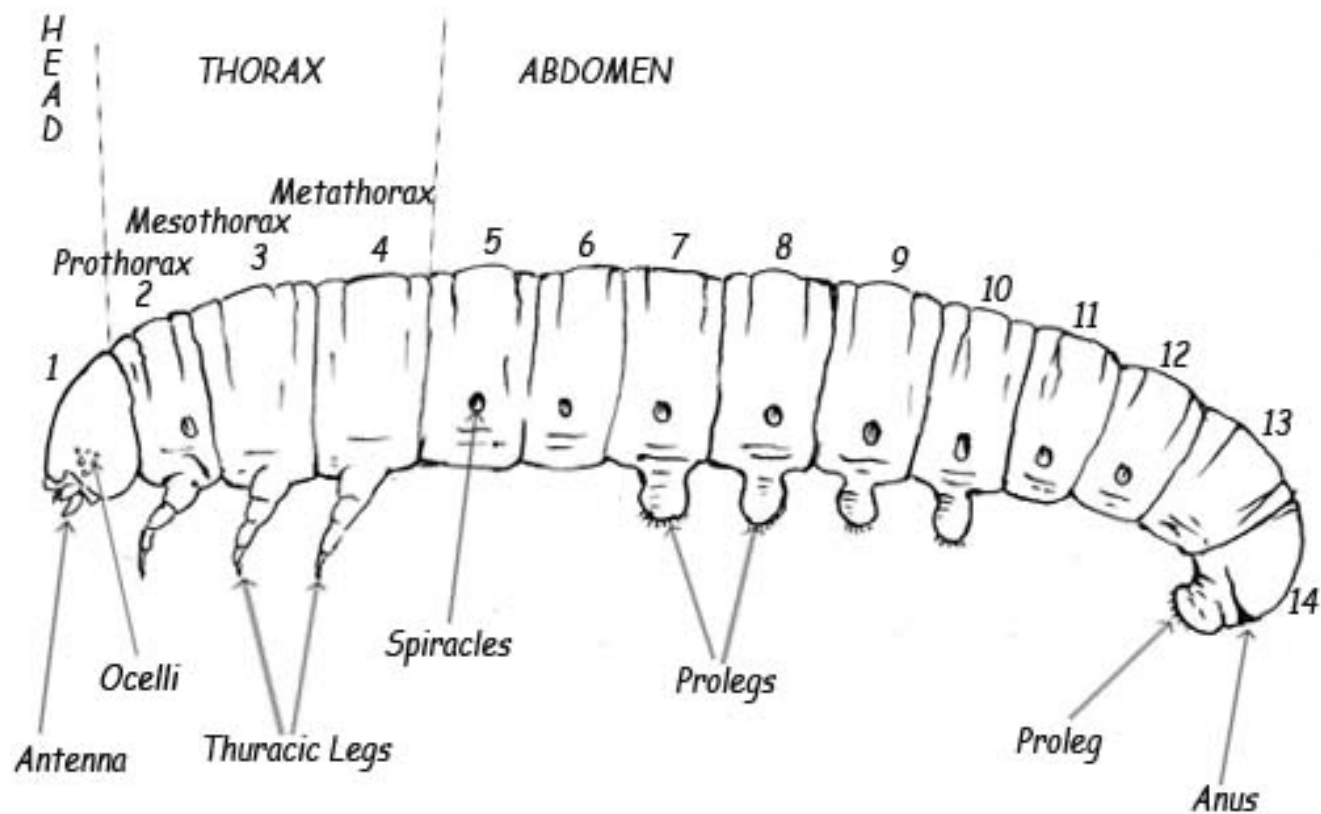


White Banded Awl



# Larva

- Parts of body of a larva



# • Papilionidae larvae

- ✗ All having osmaterium
- ✗ Hidden head
- ✗ Have enlarged 4<sup>th</sup> segment
- ✗ *Papilio*, *Graphium* resembles bird dropping in early instars
- ✗ *Troides*, *Pachliopta* have rows of tubercles



Blue Mormon



Sri Lankan Rose



Blue Bottle

# • Pieridae larvae

- ✗ Uniformly cylindrical body
- ✗ Rounder head
- ✗ Many are having dew drops on hairs
- ✗ Many are like to rest along the mid vein except gregarious species



Jezebel



Chocolate Albatross



Large Salmon Arab



# • Danainae larvae

- ✗ Uniformly cylindrical body
- ✗ rounded, shiny head
- ✗ Few fleshy tubercles
- ✗ Not hairy



Sri Lankan Tree Nymph



Blue Glassy Tiger



King Crow

- **Nymphalinae larvae**

- ✗ Uniformly cylindrical body
- ✗ Distinct head
- ✗ Branched spines
- ✗ Both head and body hairy



Indian Fritillary



Grey Pansy



Angled Castor

# • Satyrinae larvae

- ✗ Body tapering towards end
- ✗ Distinct rounded head
- ✗ Minutely hairy
- ✗ Bifid tail at end



Common Bush Brown



Jewel Four Ring



Tamil Tree Brown



# • Lycaenidae larvae

- ✗ Very small head
- ✗ Distinct body segments, disk like last segment
- ✗ Dorsally flattened body
- ✗ Many are having DNOs and TOs
- ✗ Body color varies to great extent



Angled Pierrot



Centaure Oak Blue



Ceylon Silverline

# • Hesperiid larvae

- ✗ Distinct neck
- ✗ Uniformly cylindrical body, disk like last segment
- ✗ Special color patterns on head in 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> instars
- ✗ Testicles of males can be seen through the skin



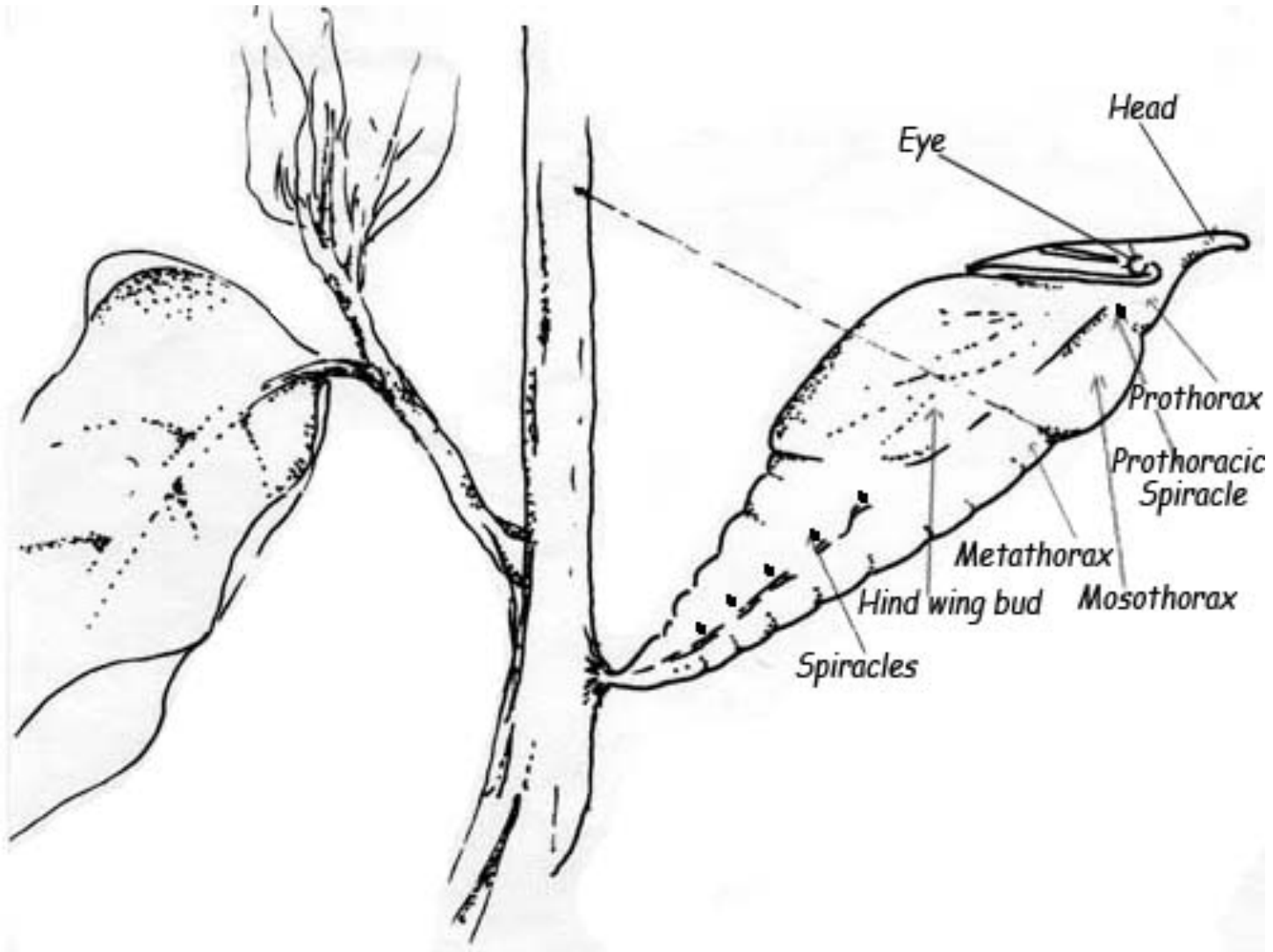
Paint Brush Swift



Indian Awl King

# Pupa

- Parts of pupa





- **Papilionidae pupae**

- ✗ In up right position
- ✗ Attached from the last segment
- ✗ Supported by a thread across the thorax



Crimson Rose



Banded Peacock



Tailed Jay

# • Pieridae pupae

- ✗ Attached from the last segment
- ✗ Supported by a thread across the thorax
- ✗ Usually green to yellow colored
- ✗ Pointed snout



Lemon Migrant



Chocolate Albatross



Common Grass Yellow

- **Danainae pupae**

- ✗ Bright colored, speckled in gold or silver
- ✗ Suspended almost vertically by the last segment
- ✗ Smooth surface



Sri Lanka Tree Nymph



Glassy Tiger



Common Tiger



- **Nymphalinae pupae**

- ✗ Attached by the last segment
- ✗ Suspended in an inclined manner
- ✗ Highly variable
- ✗ Surface rough or smooth
- ✗ Projections may present or not



Common Castor



Tamil Yoeman



Lemon Pansy

# • Satyrinae pupae

- ✗ Attached by the last segment
- ✗ Suspended in an inclined manner
- ✗ Surface smooth or nearly so
- ✗ No projections but may present sharp edges



Common Evening Brown



Dark Brand Bush Brown



White Four Ring

# • Lycaenidae pupae

- ✗ Compacted shape
- ✗ Always attached to a surface by last segment
- ✗ Thread across the thorax may present or not
- ✗ Color and texture varies, but no any distinct projections
- ✗ Some are hairy



Red Pierrot



Purple Leaf Blue



Spotted Pierrot



# • Hesperiiidae pupae

- ✗ Usually have a powder on and surround the pupa
- ✗ Attached by the last segment
- ✗ Thread across the thorax present
- ✗ Color and texture varies
- ✗ some species have distinctly long proboscis



Grass Demon



Golden Angle



Giant Red Eye



**Thank you...**