

## WING VENATION

Wing venation is considered a stable and one of the diagnostic character for identification of moths and butterflies for the last 210 years.

### PROCEDURE FOR MOTHS WING VENATIONS

Zimmerman (1978)

Separation of right wing by giving an upward jerk with the help of a fine forceps



Dipped in 30% alcohol followed by 50% alcohol to make them soft



Descaling will be done with the help of Sodium hypochlorite



Washed in distilled water and dipped in upgrading alcohol up to 100% (i.e., 50%; 70%; 100%)



Stained in Alcoholic Eosin for 12-14 hours



Cleared in xylene before mounting in DPX

Forewing=12 veins

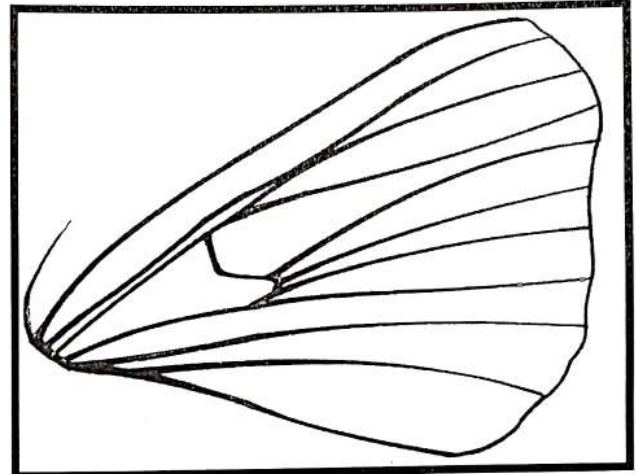
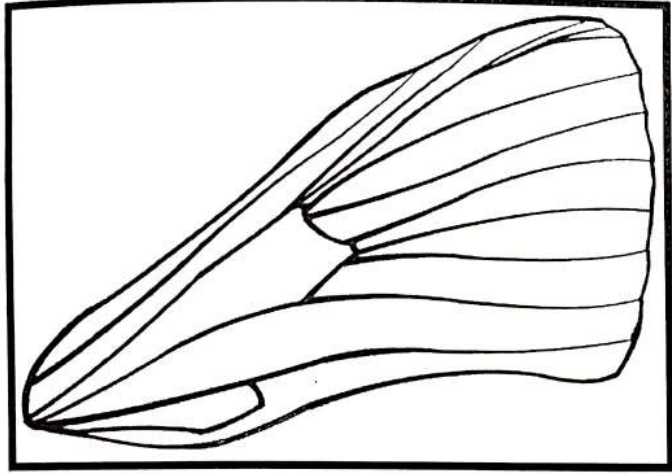
- 3A : 3<sup>rd</sup> Anal Vein
- 1A : First anal vein
- 2A : Second anal vein
- M<sub>1</sub> : First median vein
- M<sub>2</sub> : Second median vein
- M<sub>3</sub> : Third median vein
- R<sub>1</sub> : First radial vein
- R<sub>2</sub> : Second radial vein
- R<sub>3</sub> : Third radial vein
- R<sub>4</sub> : Fourth radial vein
- R<sub>5</sub> : Fifth radial vein
- Sc : Subcosta
- ~~Sc+R<sub>1</sub> : Stalk of Sc + R<sub>1</sub>~~

Hindwing=8 Veins

- 3A : 3<sup>rd</sup> Anal Vein
- 1A : First anal vein
- 2A : Second anal vein
- M<sub>1</sub> : First median vein
- M<sub>2</sub> : Second median vein
- M<sub>3</sub> : Third median vein
- Rs : Radial Sector
- ~~Sc : Subcosta~~
- Sc+R<sub>1</sub> : Stalk of Sc + R<sub>1</sub>

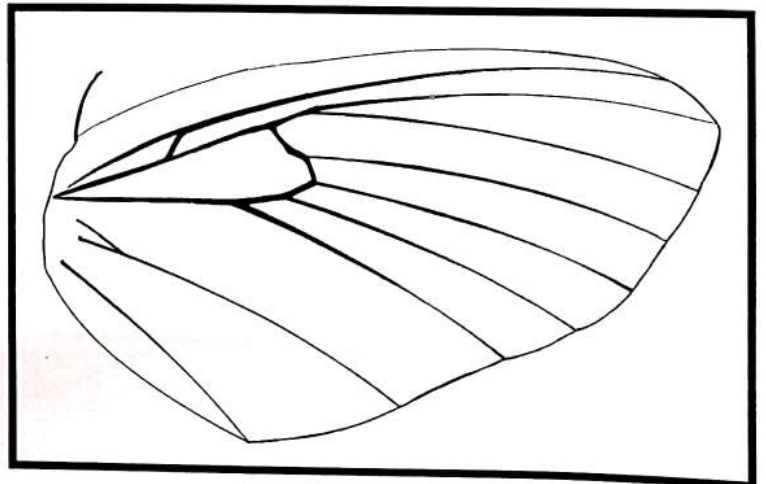
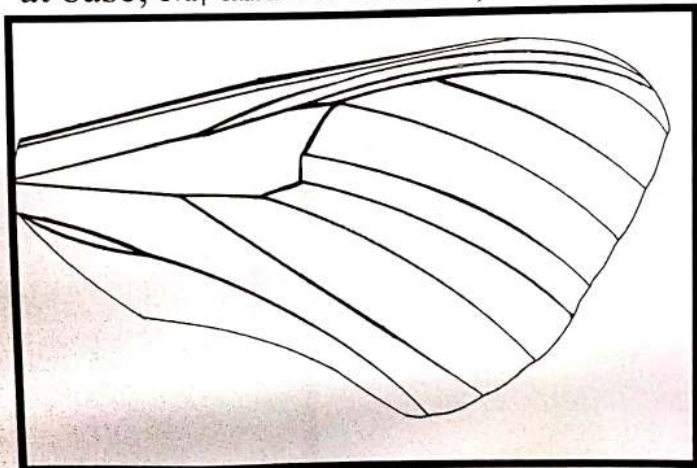
## FAMILY CRAMBIDAE

**Diagnostic features:** Forewing with discal cell closed; 3A forming a balloon-like shape with 2A;  $CU_1$ ,  $M_3$  and  $M_2$  arising from nearly same point. Hindwing with discal cell closed,  $CU_1$ ,  $M_3$  and  $M_2$  arising from nearly same point and  $Sc+R_1$  stalked from beyond the discal cell.



## FAMILY SPHINGIDAE

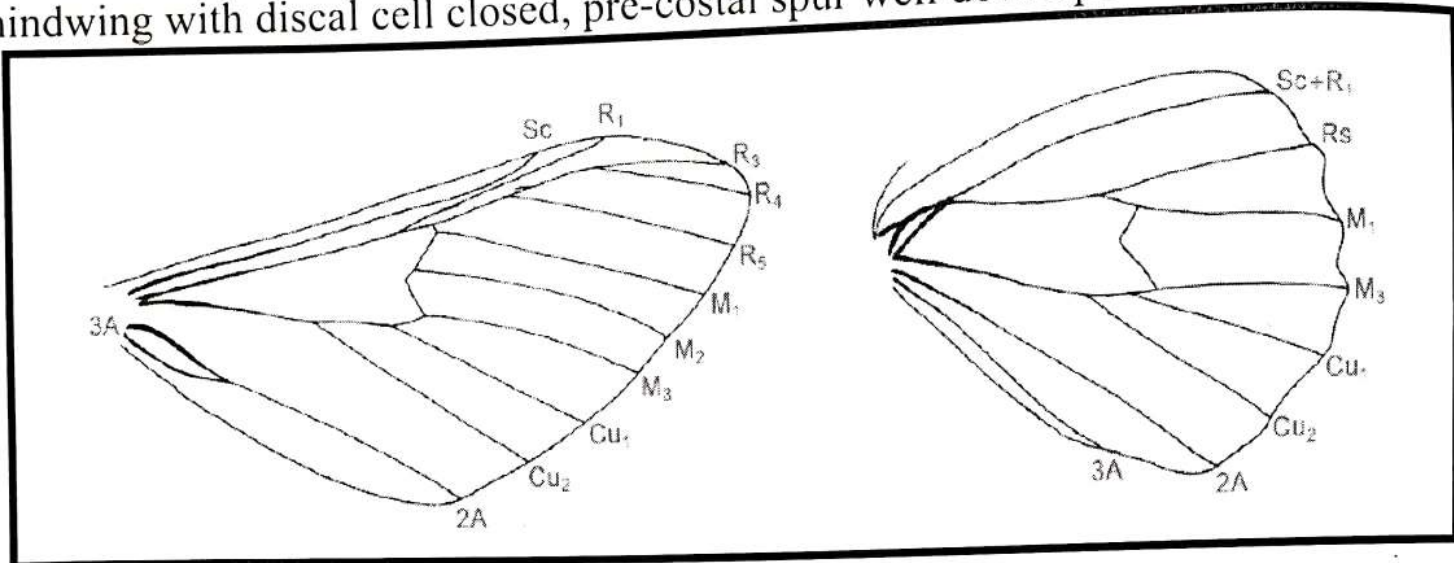
**Diagnostic features:** Forewing with discal cell closed;  $CU_2$  arising from well above lower angle of cell; vein  $R_{(3+2)}$  fused; Hindwing with discal cell closed, vein 2A forked at base;  $M_1$  and  $Rs$  stalked;  $Sc+R_1$  forming a bar with discal cell.





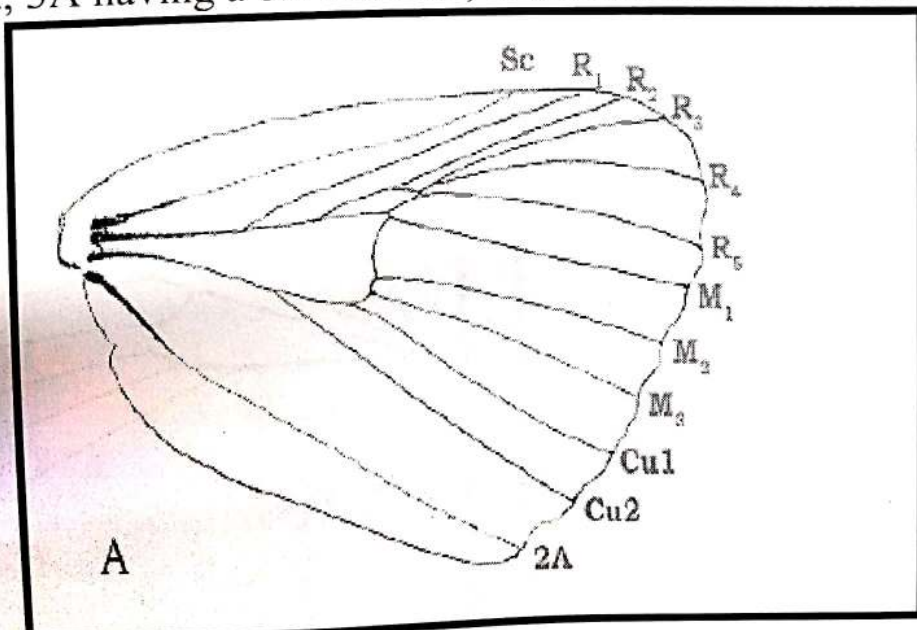
➤ **FAMILY GEOMETRIDAE**

**Diagnostic features:** Forewing with discal cell closed;  $R_5$  arising from  $R_4$ ;  $R_2$  absent; hindwing with discal cell closed, pre-costal spur well developed.



➤ **FAMILY NOCTUIDAE**

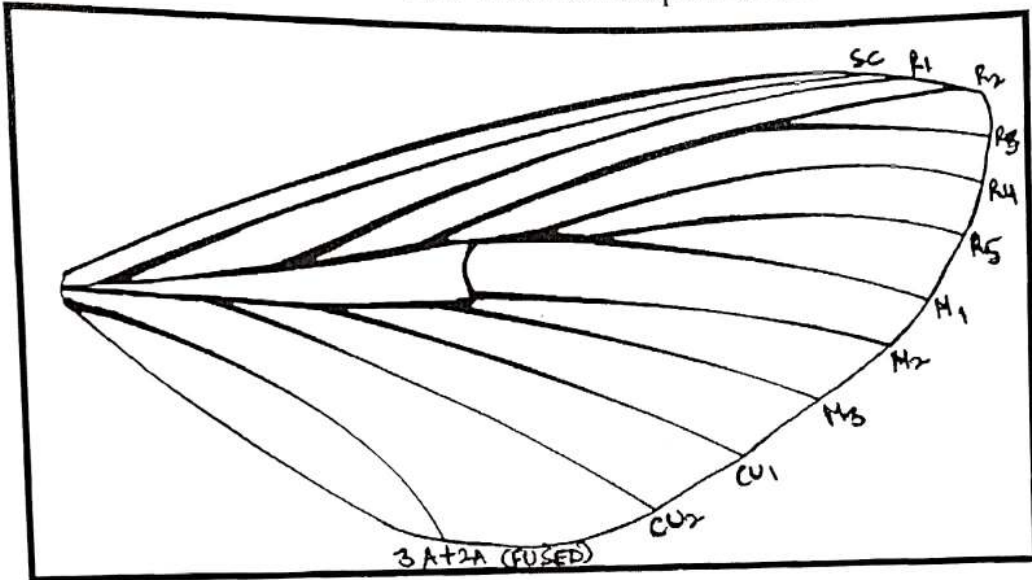
**Diagnostic features:** Forewing with discal cell closed;  $R_4$  given off from  $R_5$  and anastomosing with  $R_3$  which is given off from  $R_2$  to form an areole. Hindwing with discal cell closed, 3A having a bar with 2A; vein  $M_2$  indistinct/thin/not developed.



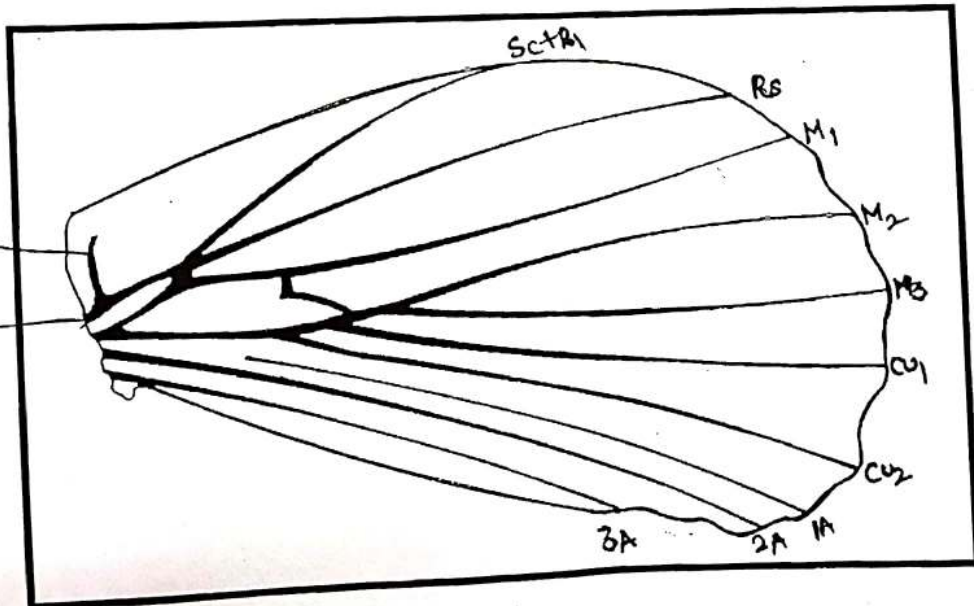
# FAMILY LASIOCAMPIDAE

Forewing with discal cell closed or open; vein 3A fused with 2A, without forming a basal fork; 1A present or absent; vein R<sub>4</sub> arise from the common stalk of M<sub>1</sub> and R<sub>3</sub>. Hindwing with discal cell closed or open; 3A and 2A present separately; 3A present or absent; humeral cell present; humeral cell may be shorter, longer, narrower or broader than discal cell; humeral veins well developed or sometimes obsolete.

DRAWING



Humeral vein  
Humeral cell



HINDWING