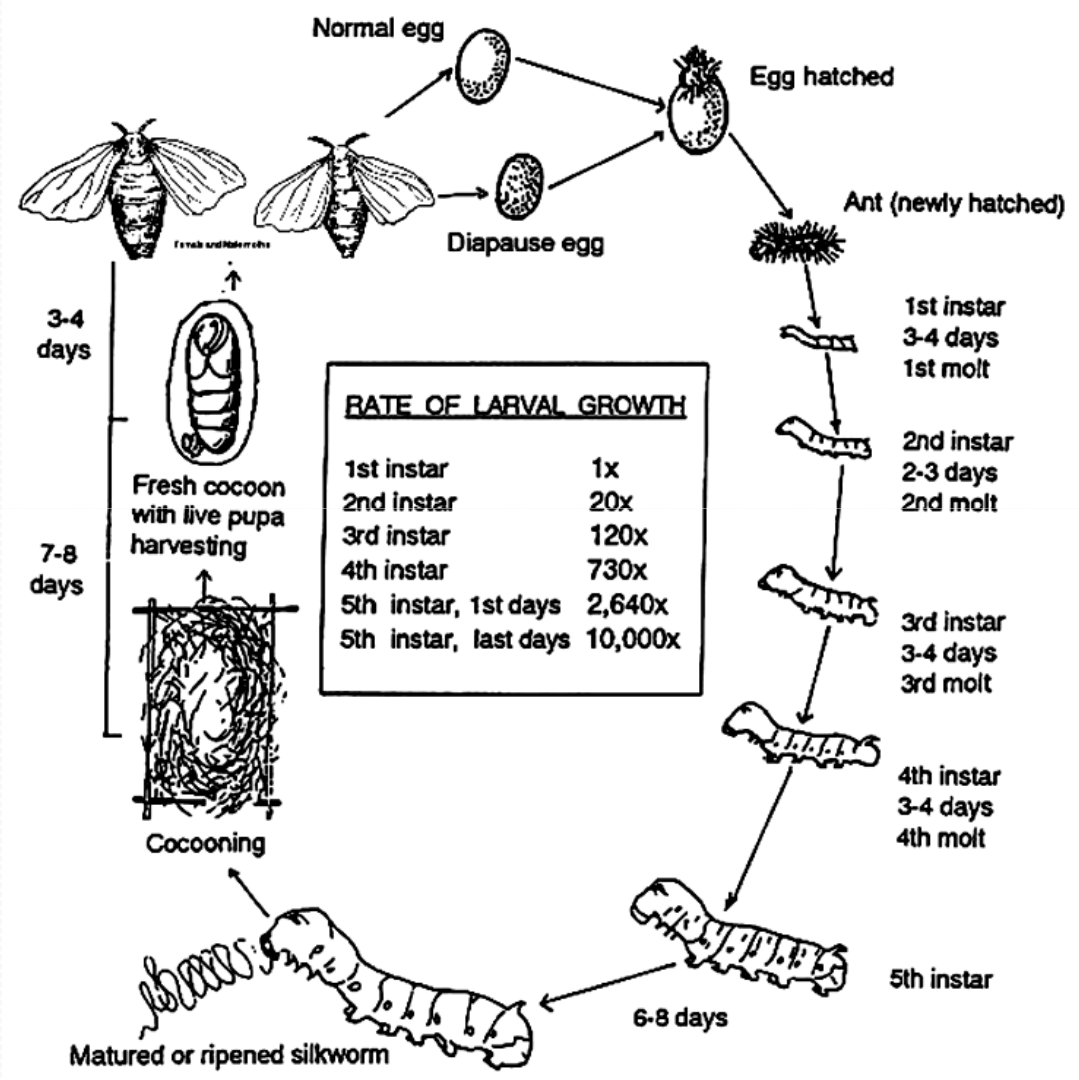


**LIFE CYCLE OF *BOMBYX MORI*
AND
MORPHOLOGY
OF
EGG, LARVA, PUPA & ADULT**

**Dr. Mahesha H B
Professor of Sericulture
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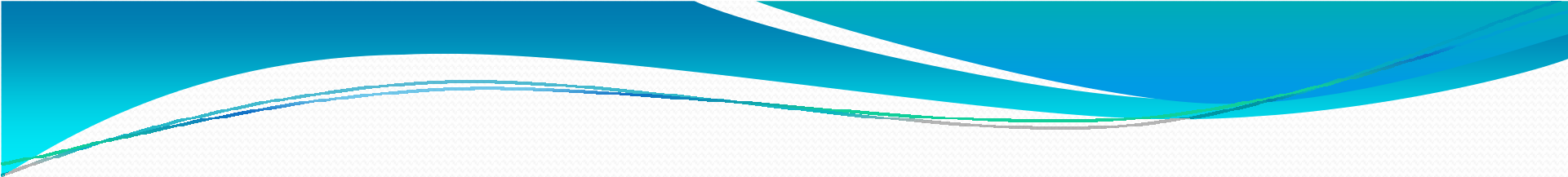
LIFE CYCLE OF *BOMBYX MORI*



MV -----BV
Egg- 9-12-----11-14
Larva- 20-24-- --24-28
Pupa- 10-12---- 12-15
Moth- 3-6-----6-10

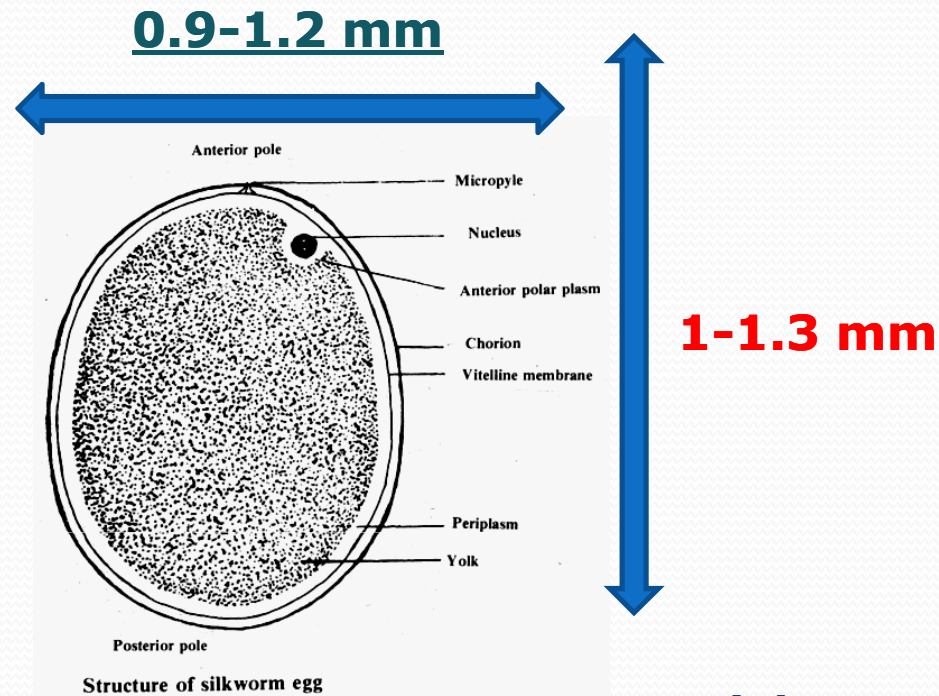
Types of Eggs
Larval Stage
Moulting
Mature Worm
Spinning of the cocoon
Pupation
Emergence and
Reproduction

Duration of different instars and moulting periods						
			Multivoltine races		Uni and bivoltine races	
			Duration	Temperature and humidity conditions	Duration	Temperature and humidity conditions
I	instar	3 days	27°C 80-85% R.H.	3 days	27°C 85% R.H	
I	moult	20 hours		20 hours		
II	instar	2 days		2 days		
II	moult	20 hours		20 hours		
III	instar	3 days	25-26°C 70-80% R.H.	3 days	25°C 80% R.H	
III	moult	1 day		1 day		
IV	instar	4 days		5 days	1 day	22-24°C 75% R.H
IV	moult	1 day				
V	instar	6-7 days	9-10 days		20-23°C 70% R.H	
Mature Worms						
Spinning		1-2 days	24 °C 60 - 70 %	2-3 days	24 °C 60 - 70 %	
Total Duration		23-24 days		28-30 days		



Morphology
of
EGG, LARVA, PUPA & ADULT

One Laying



0.55-0.6mg weight
Ovaoid/ Spherical
Flat at ventral side
Micropyle
Respiratory channels

Silkworms At Different Ages

Newly hatched larvae



Enlarged



Second Instar larvae



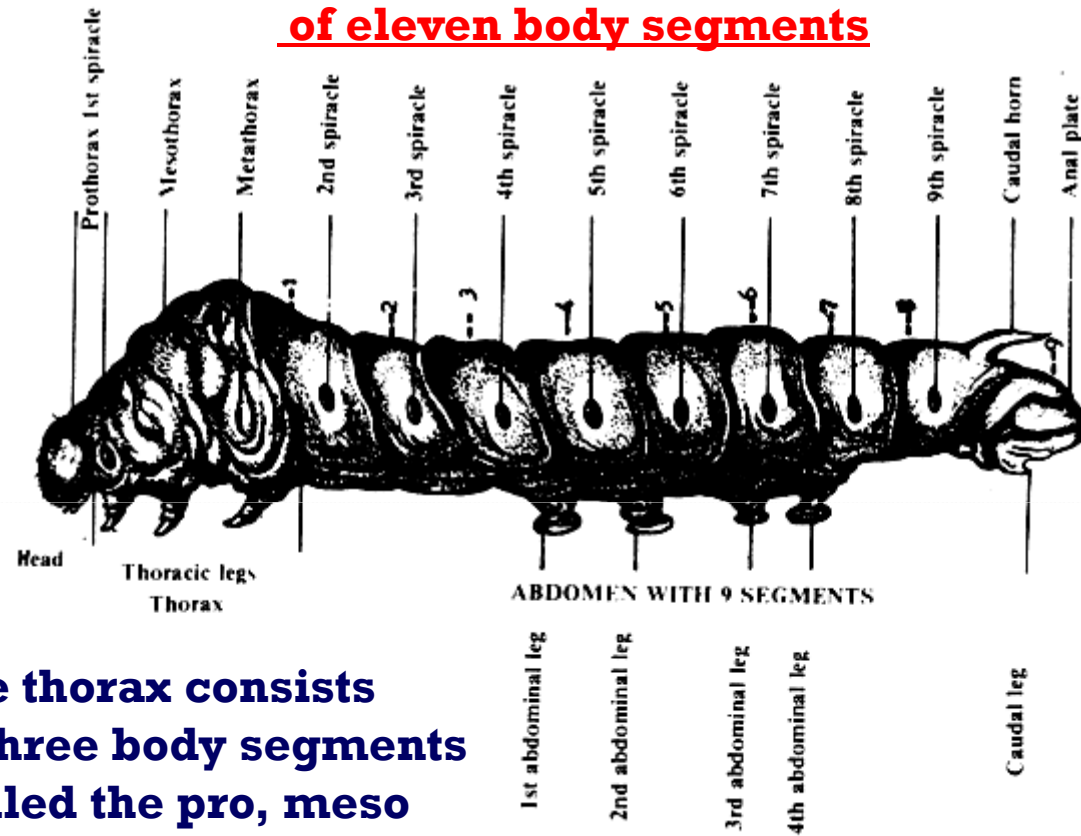
Third Instar Larvae



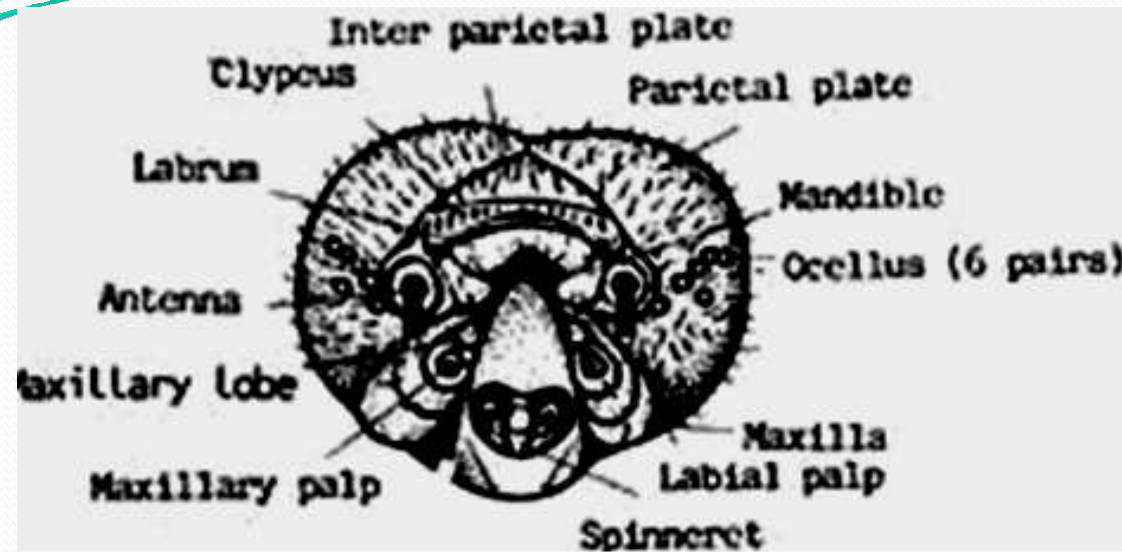
Fifth instar Larvae

The abdomen is comprised of eleven body segments

The head consist of six body segments fused together with a cranium



The thorax consists of three body segments called the pro, meso and meta-thorax.



Head

Hypognathous

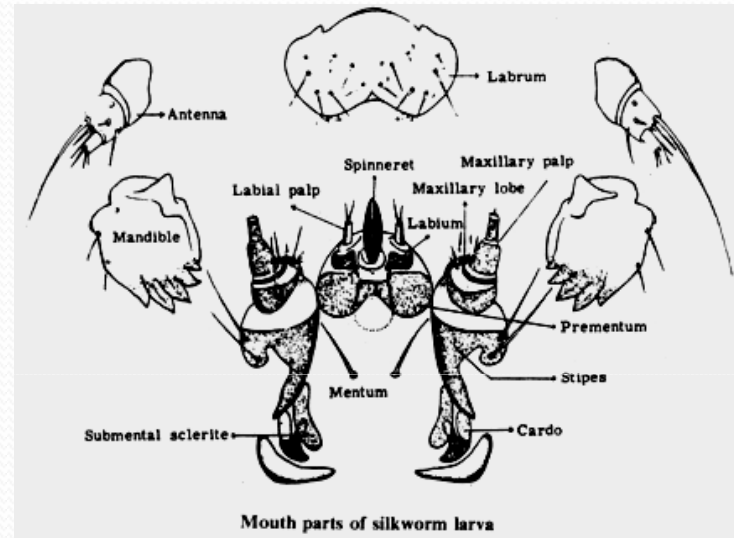


**Colored scanning electron micrograph (SEM)
of Dorsal side of the head of a silkworm larva**

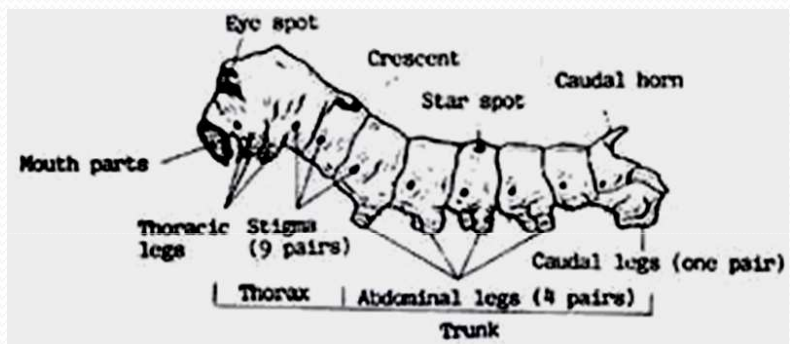


**Colored scanning electron micrograph (SEM)
of ventral side of the head of a silkworm larva**

Mouth Parts of silkworm

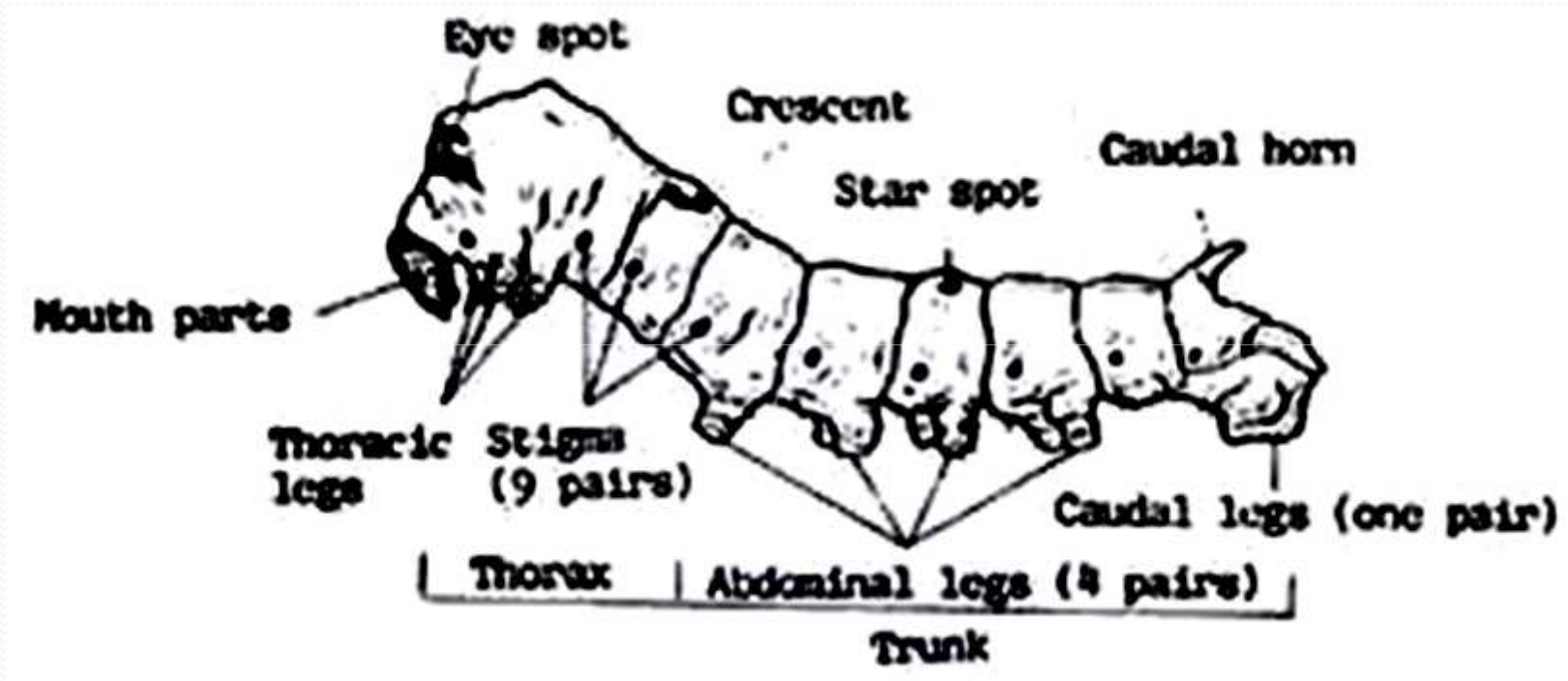


Morphology of silkworm larva

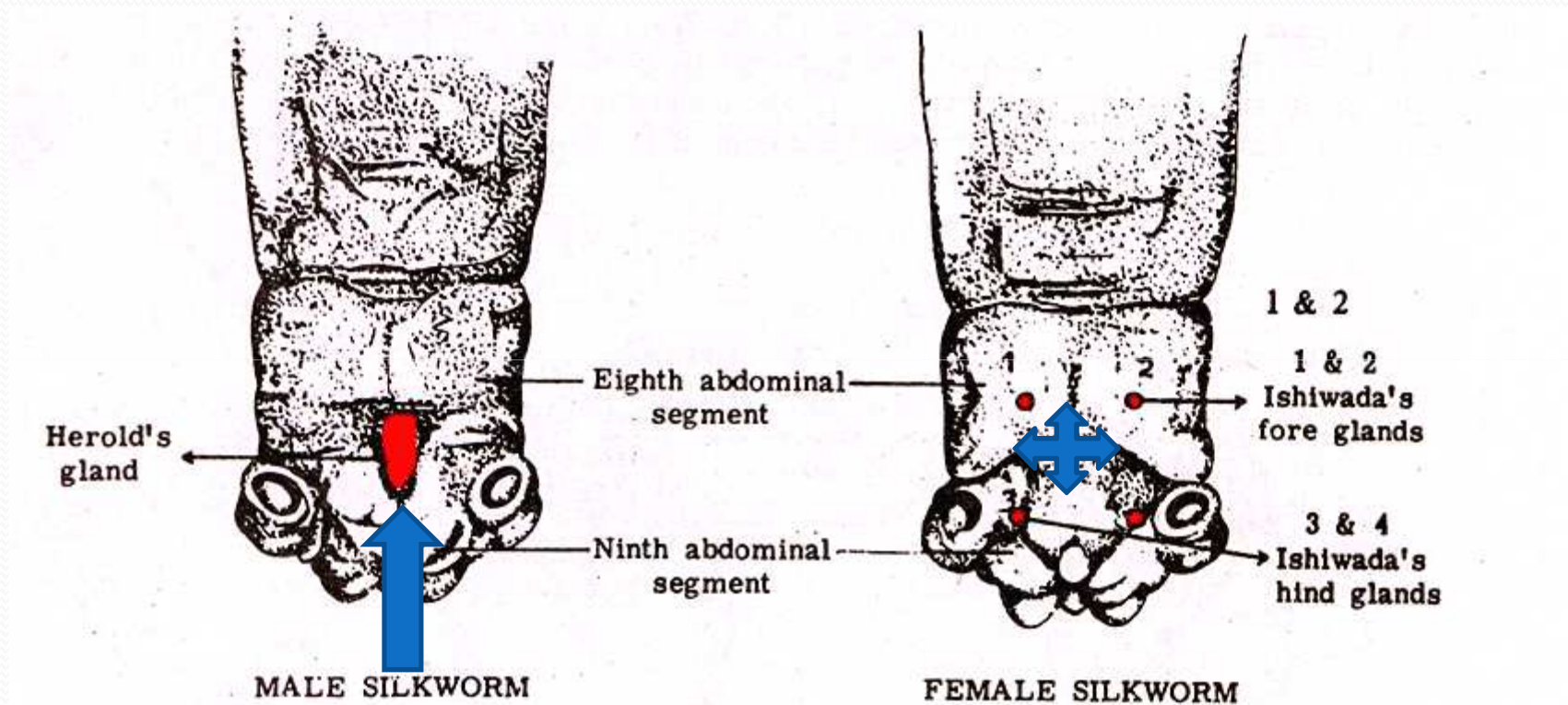


Coloured scanning electron micrograph (SEM) of silkworm proleg

Abdomen



Sexual Marking at larval stage (For identification)

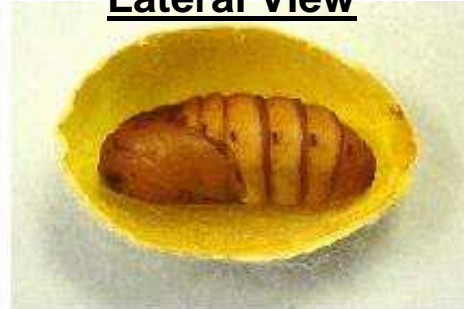


PUPA

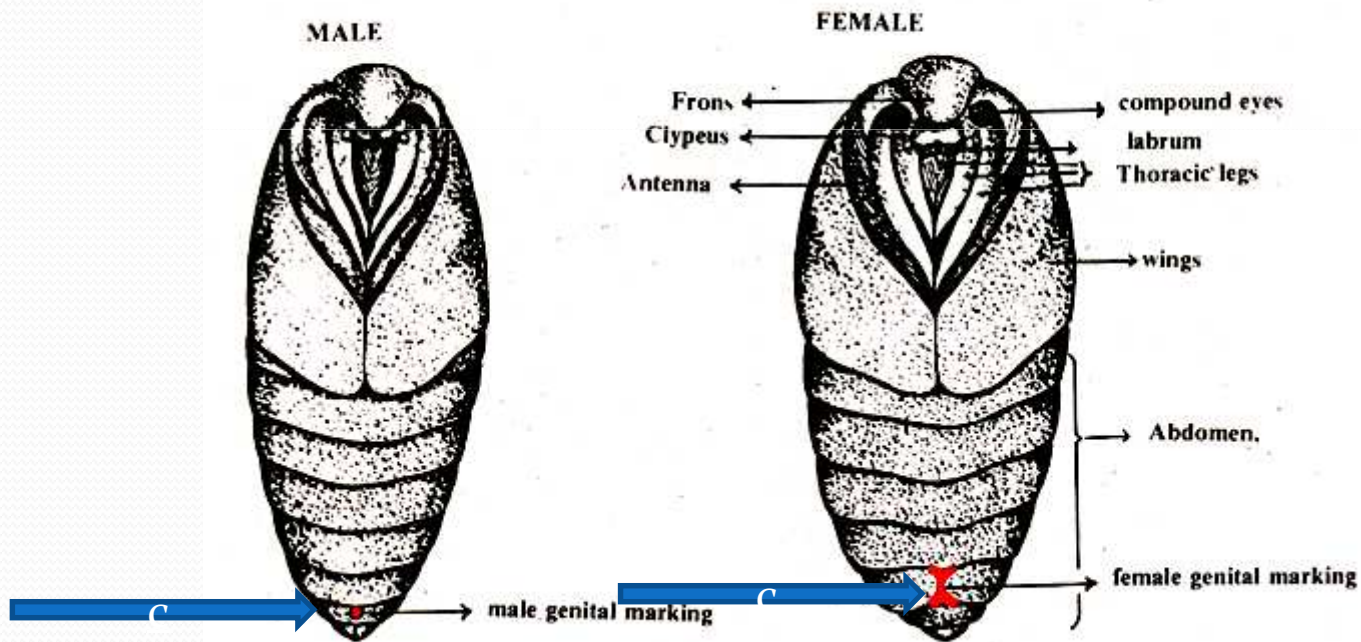
Dorsal View



Lateral View

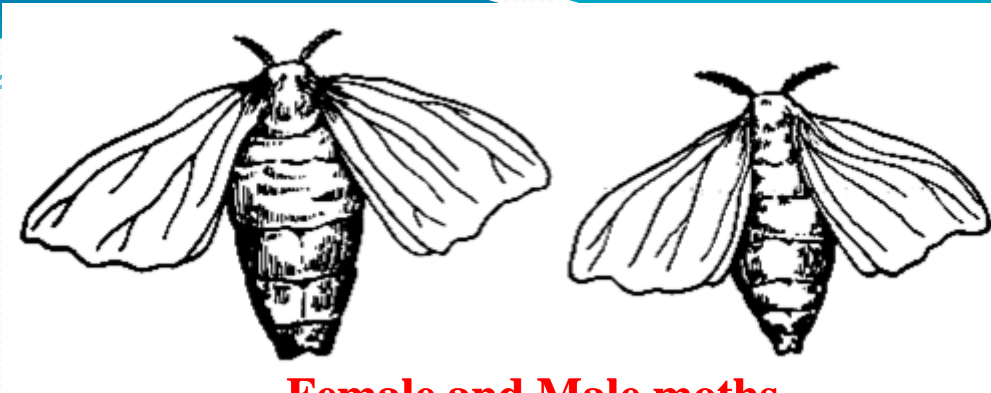


Ventral View



male and female pupa - *Bombyx mori* Sexual Marking at Pupal stage

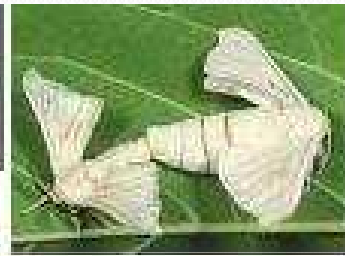
Moth



Female and Male moths



Female and Male moths



Paired Female and Male moths



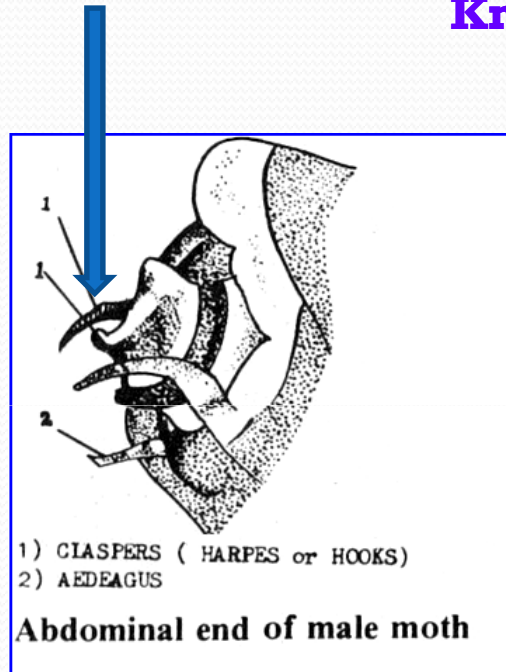
Female moth



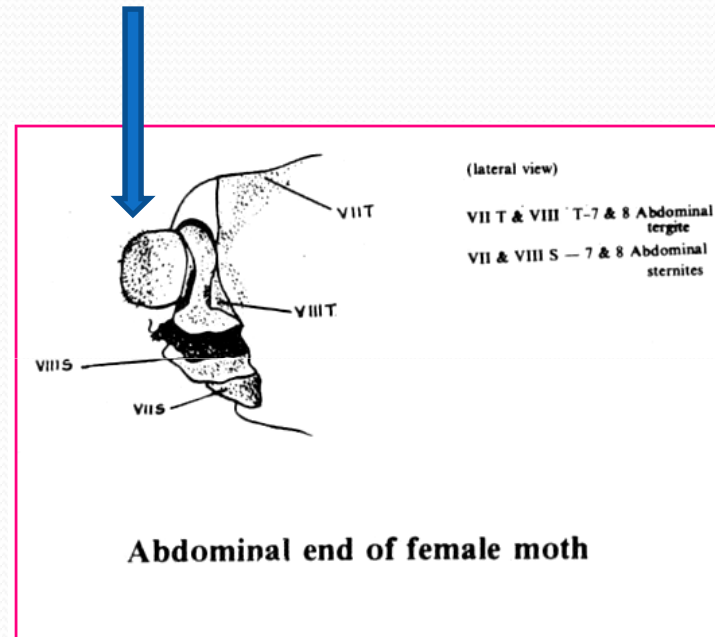
Egg laying Female moths

Sexing at Moth stage

Claspers in male moth



Knob like Ovipositor in female moth



External Markings for Identification of Male and Female Moths



**Acknowledgements/References
to**

- 1. Internet**
- 2. Sericulture Manual II, FAO, Rome.**