

A close-up photograph of a black butterfly with yellow and blue spots on its wings, perched on a cluster of small pink flowers. The butterfly is facing left, and its wings are spread. The background is a soft-focus green, suggesting foliage.

# Moth & Butterfly Rearing

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# Rearing Moths & Butterflies

A bit about myself:

- Decade+ of bug rearing, and loving it
- Began with monarch butterflies
- Why bugs? ➔ To see elusive creatures

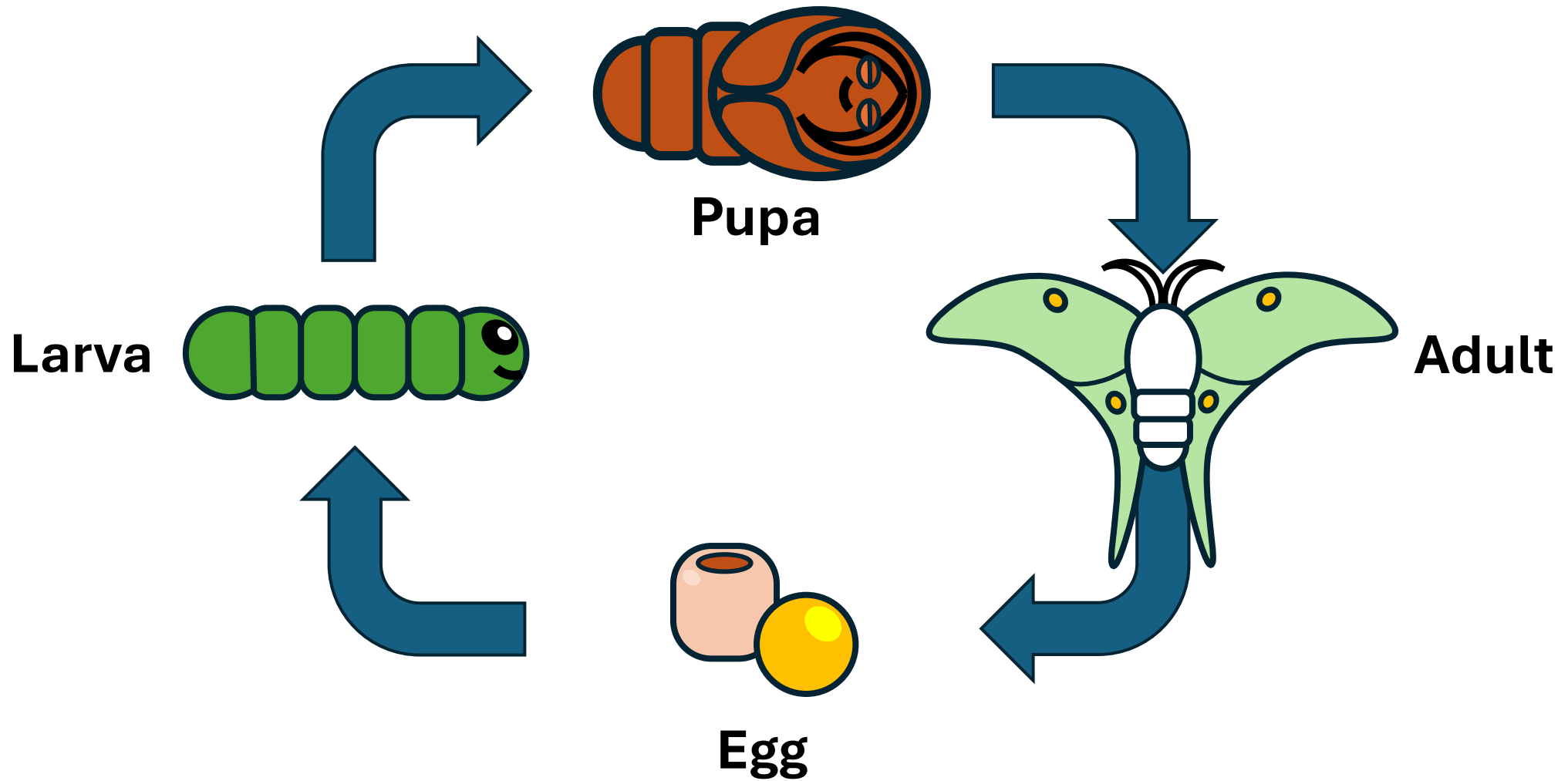
Prereqs to rearing:

- Education (books, iNaturalist, etc.)
- Equipment (takeout containers, etc.)
- Supplies (leaves)





# Life Cycle



# Sourcing – The Difficult Part

Finding eggs/pupae:

- Networking (entomologists, hobbyists)
- Attracting (host & nectar plants)
- Bug hunting in the wild\*



\*Some restrictions apply

# Species

## Luna moth

- Uniquely ethereal
- Slightly picky eater



## Monarch butterfly

- Eats a common weed
- **No overwintering!**
- Fast growing



# Species

## **Cecropia moth**

- Spectacular at every stage
- Tricky to find



## **Polyphemus moth**

- Robust
- Slightly less colour





# Species

## **Rosy maple moth**

- Delightful colours
- **Soil-pupation**



## **Black swallowtail butterfly**

- Loves common herbs
- Splendid dimorphism



# Species Spotlight: Rosy Maple Moth

## Bio

- A hobbit among saturniids
- AKA Greenstriped mapleworm
- Diet: sugar maple
- Gregarious → solo feeding
- **Adult phase does not eat**





# Early Steps

## Eggs

- Container w/o holes, out of direct ☀️
- Wait ~2 weeks
- **No 🌿 or standing water**

## Hatchlings

- Offer few clean 🌿 from host(s), allow exodus to begin
- Do not forcibly move



# The Routine

## Early instars

- Frass is small and fine, difficult to clean
- Leaf lifetime ~ 2 days before dried/fouled
- Check once/twice per day



## Green hippos

- Gradually reduce bugs per jar
- Check  $\geq$  twice per day ☀️ 🌙
- Leaves won't last to foul...



# Molting

## Signs

- Reduced appetite
- Wanderlust
- Immobility (+ silk)

## What can you do to help?

- Prime directive
- Isolation





# Pupation

## Signs

- Liquid purged with frass
- Colour change (luna moth)
- Similar symptoms to molting

## What can you do to help?

- Similar support to molting
- Provide robust twigs (or soil)



# Advanced Bugging – Overwintering Pupae

## Outdoors

- In sync with natural emergence
- Vulnerable to predators

## Indoors

- Safer, more maintenance
- Risk of molding / desiccation
- Emergence must be timed\*



\*Determine if your pupae are summer brood or overwintering brood

# Hazards & Solutions

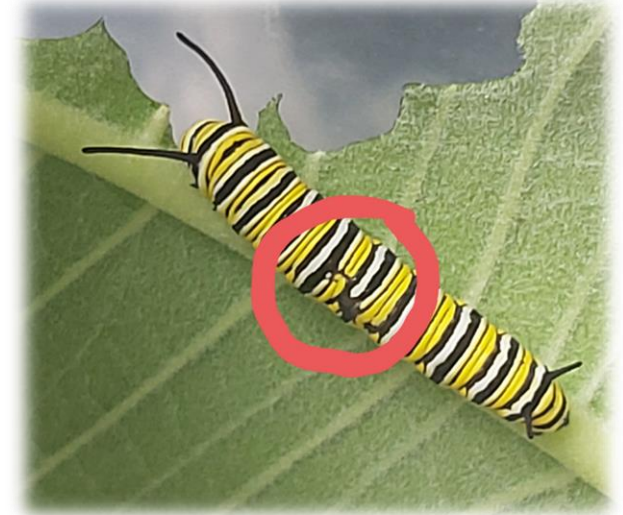
Dangers abound:

- Disease → Sanitation
- Humidity → (Damp) towel
- Parasitoids → Screening
- Pesticides → Leaf source
- Accidents → Headcount

a) Poisoned caterpillars



b) Healthy monarch



c) Very aberrant moth





# Conclusion

A rewarding hobby, featuring:

- Remarkable transformations
- Outdoor activity
- Affordability
- Strange looks from passersby



Many thanks to the TEA and Toronto zoo for organizing this event

# Questions?



## Bonus Slide – Frass Manure

