

V. Mimicry



- ⌘ Noncryptic resemblance btw. two or more species giving one or both a selective advantage in relation to predators or prey.

A. Batesian Mimicry



☞ Pseudoposematism

☞ Model = noxious/aposematic

☞ Mimic = non-noxious

☞ Dupe - receives signal



Batesian con't

- ∞ AR Wallace frequency criterion –
 - ∞ Presence of the mimic reduces effect of the model
 - ∞ Not necessarily so



Batesian con't

- ⌘ Geographical separation of model and mimic –
 - ⌘ Possible in cases of migrating birds
- ⌘ Models may have tougher exoskeleton than mimics – Why?
- ⌘ Eg. Bornean tree squirrels and tree shrews
- ⌘ Eg. *Heliobolus lugubris* lizards and Oogpister beetle



Batesian con't

☞ Behavioral Batesian Mimicry -

☞ Eg. Woodboring beetle and circus beetle

☞ Olfactory Batesian Mimicry

☞ Eg. Stink Bugs



Batesian con't



- ❧ The Classic Batesian Mimicry Example –
 - ❧ Monarch and Viceroy Butterflies
 - ❧ BUT - Some monarchs are non-noxious (Automimicry)
 - ❧ and there are occasionally noxious viceroys (Mullerian Mimicry)

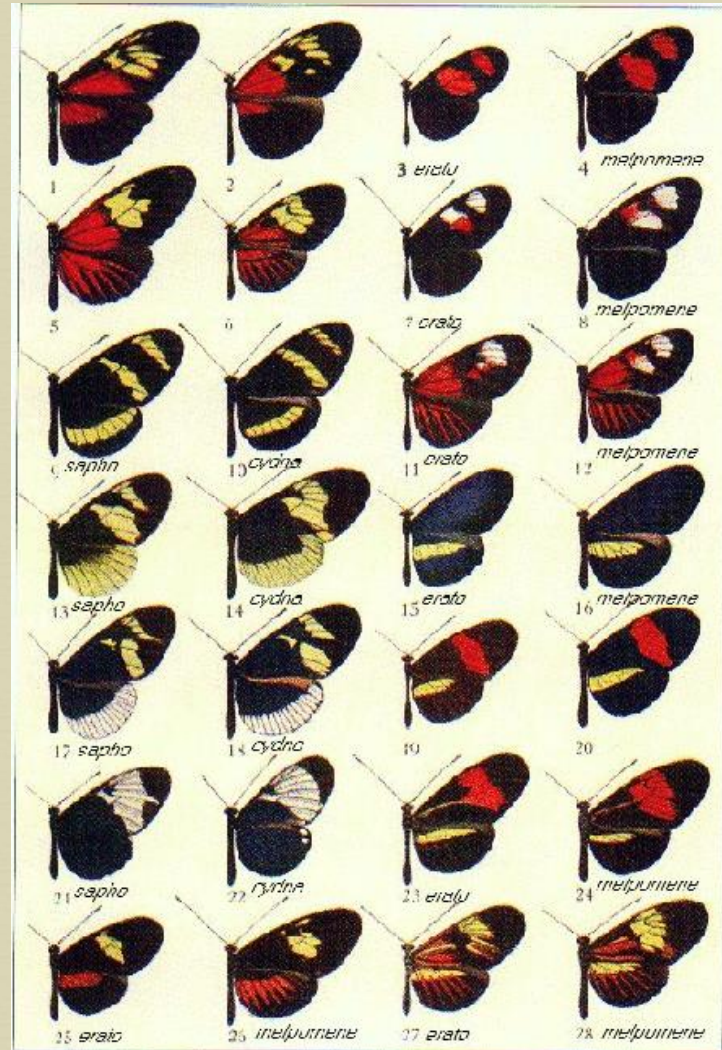


B. Mullerian Mimicry

- ☞ Synaposematism –
 - ☞ Shared aposematism
 - ☞ Co-models



Lycorea sp.



Helioconus spp.

C. Mertensian Mimicry



- ☞ Deadly prey mimic a less dangerous species
 - ☞ Eg. Coral snake (highly toxic) and moderately toxic false coral snake and non-toxic milk snake



D. Aggressive Mimicry

- ✧ Also called Peckhamian Mimicry
- ✧ Mimicry by “exploiter,” usually a predator
 - ✧ 1. Predator resembles prey “wolf in sheep’s clothing”
 - ✧ Eg. European cuckoo- eggs resemble other spp. eggs.
 - ✧ 2. Exploiter resembles helpful species



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 - ☞ 2. Exploiter resembles helpful species
 - ☞ Eg. Blenny and cleaner wrass



Aggressive con't



3. Exploiter resembles harmless species

Eg. Zone tailed hawk resembles vulture



Aggressive con't.

☞ 4. Exploiter resembles edible species

- ☞ Eg. Angler fish
- ☞ Eg. Cottonmouth
- ☞ Eg. Alligator snapping turtle
- ☞ Eg. Asian flower mantid



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Aggressive con't

- ☞ Eg. Freshwater mussels – Unionidae
- ☞ Parasitic glochidia larval stage
- ☞ Lures, Conglutinate, super conglutinate

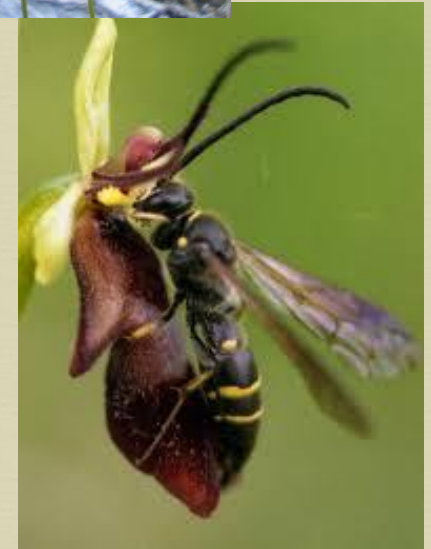


Aggressive con't

- ❧ 5. Auditory Aggressive Mimicry
 - ❧ Eg. African crowned eagle
- ❧ 6. Olfactory Aggressive Mimicry
 - ❧ Eg. Bolas Spider
 - ❧ Eg. Carrion flowers
- ❧ 7. Pseudocopulation
 - ❧ Eg. Orchids (Ophrys) and wasps



Mastophora hutchinsoni





Aggressive con't

8. Photomimicry

☞ Eg. Lightning bug/firefly/lightning beetle



9. Molecular Mimicry

☞ Eg. Parasites mimic host antigens

E. Wasmannian Mimicry

∞ Resemblance or mimicry by commensals

∞ Commensals – mimic receives benefit, but no exploitation
ex.inquilines – organisms that live within the home of another

∞ +/0 symbiosis

∞ Eg. Darkling beetle and ants



F. Predator Mimicry

- ❧ Mimicry of predator by prey “sheep in wolf’s clothing”
 - ❧ Eg. Central American Cichlids
 - ❧ Eyespots on tail resemble eye spots on their young predators
 - ❧ Eg. Passion vine / *Heliocoonius* butterfly
 - ❧ Vine has stipules, etc. that resemble eggs

