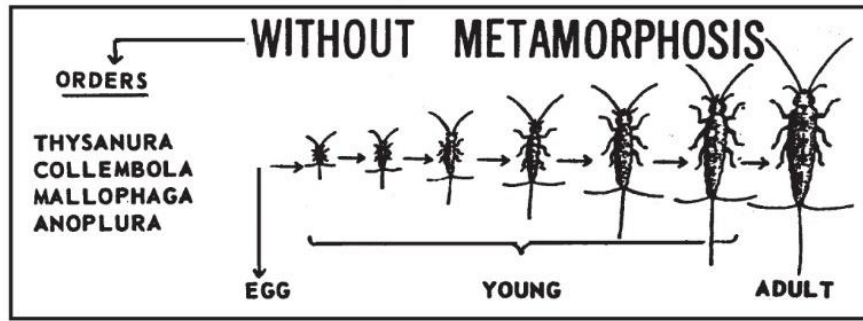


علاقة (تفاعل) الحشرات بالنباتات

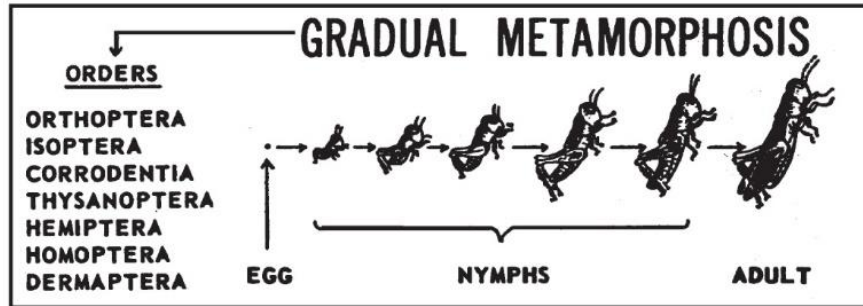
الحشرات الاقتصادية 343 وقن

ترسل الواجبات بالايمل قبل الخامسة مساءً

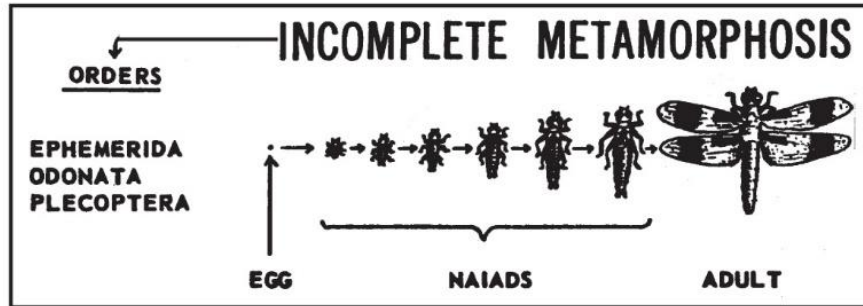
plpt343@Hotmail.com



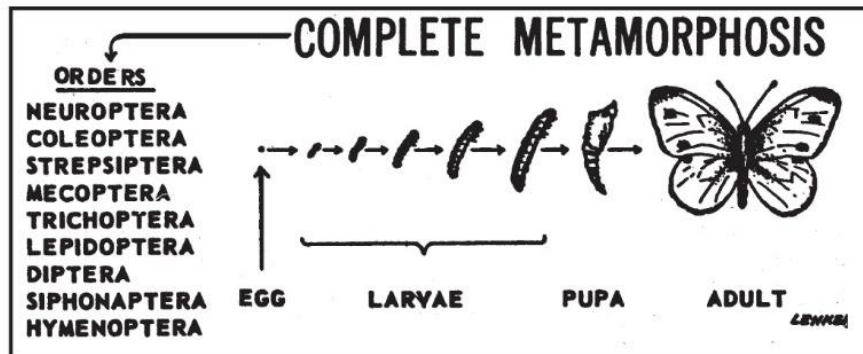
تطور معدوم



تطور تدريجي



تطور ناقص



تطور كامل

The hierarchical nature and processes of different *levels of ecological systems*:



Biosphere:
Global processes

المحيط الحيوي

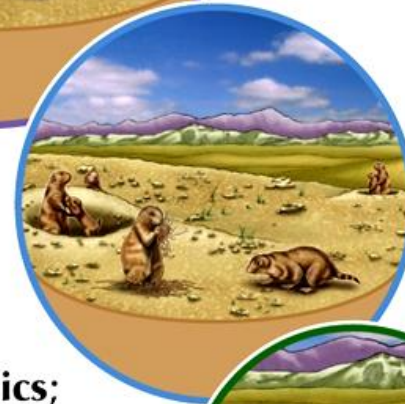


Ecosystem:
Energy flux and cycling
of nutrients

النظام البيئي
المجتمع



Community:
Interactions among
populations



Population:
Population dynamics;
the unit of evolution



Organism:
Survival and reproduction;
the unit of natural selection

الكائن



Peter McEvoy



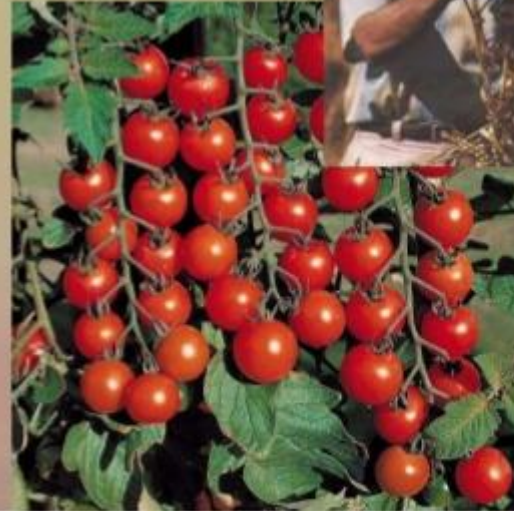
Peter McEvoy

Ragwort fleabeetle



Cinnabar moth

الزراعة الحديثة: زراعة أصناف عالية الإنتاج
Modern agriculture:
High yielding varieties (?)



انتاج عالي لا يتحقق إلا بتوفر
High yield - برنامج وقائي فعال ضد الآفات
only if there is adequate crop
protection against pests



Outbreaks of herbivorous insects can defoliate forests.

(a)



(b)



Spruce budworm

Leaf feeding damage



Larvae



Adult

Colorado potato beetle



Leaf cutter bee and its damage



Skeletonized leaf feeding



Alfalfa weevil

Leaf beetle larvae

Heavy feeding damage



Plant tissue damage discoloration



Thrips



Leaf curling and distortion



Aphids

Stink bug damage



Herbivory: Effects on plants



Caterpillar

Feces

Leaf mining damage



Gall-forming and leaf-mining pests...



Plant disease vector

Pierce's disease
symptoms



Glassy-winged
sharpshooter