

# Laboratory of Entomology



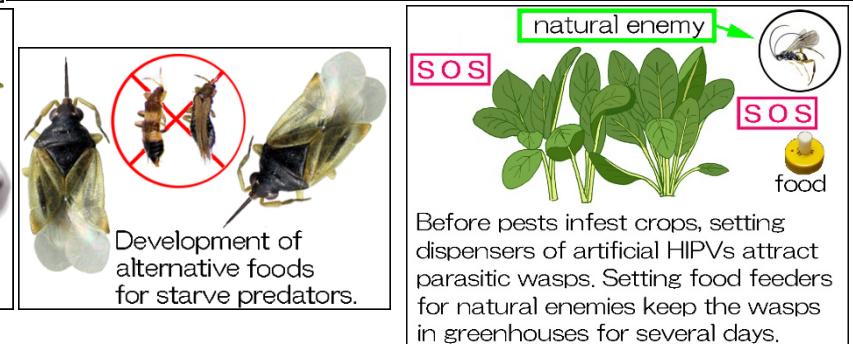
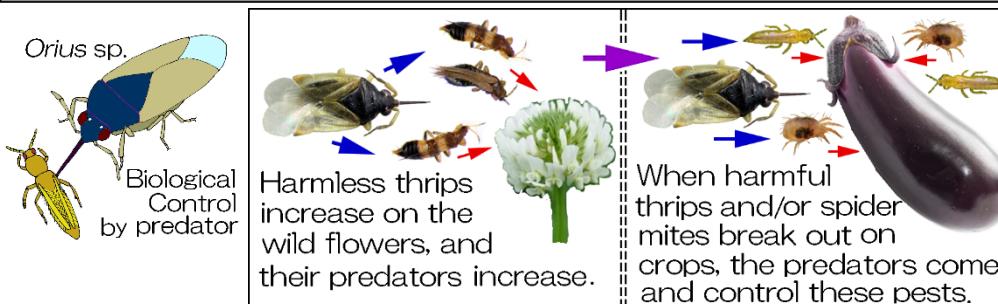
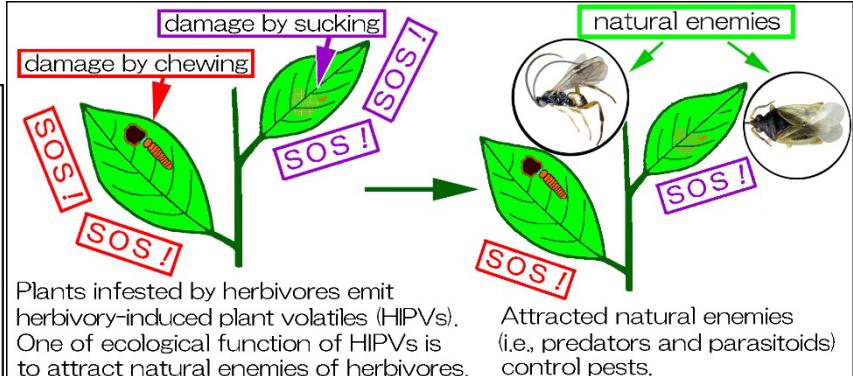
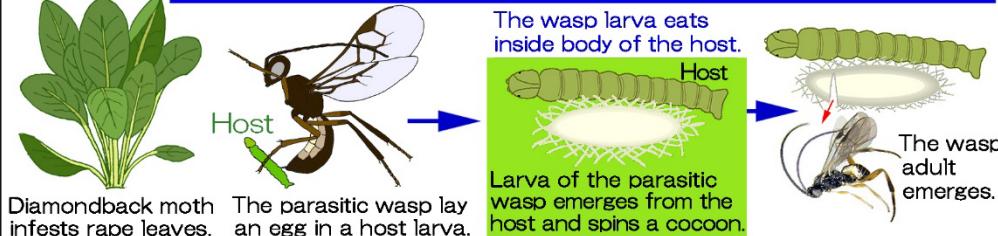
Professor Masayoshi Uefune

Professor Kenzo Yamagishi

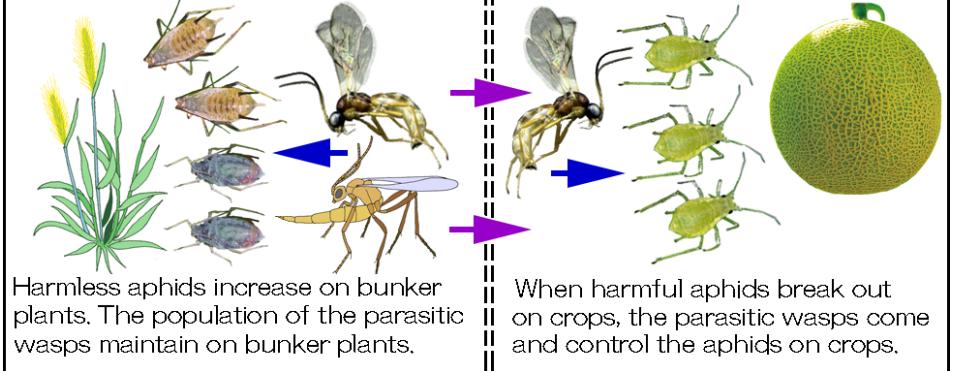
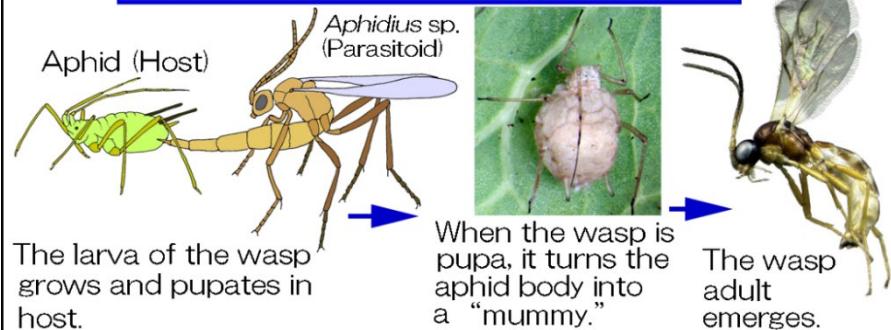
STAFF	Professor Masayoshi Uefune	Professor Kenzo Yamagishi
TEACHING	Applied Entomology, Laboratory Works in Entomology, Statistics of Agricultural Science, Experiments in Biology, Laboratory Works in Agrobiological Resources, Introduction to Agrobiological Resources, Seminal I & II, Advanced Entomology, Advanced Seminar in Plant Protection and Biodiversity, Advanced Experiments in Plant Protection and Biodiversity	Fundamental Entomology, Laboratory Works in Entomology, Zoological Systematic and Morphology, Experiments in Biology, Laboratory Works in Agrobiological Resources, Introduction to Agrobiological Resources, Seminal I & II, Advanced Entomology, Advanced Seminar in Plant Protection and Biodiversity, Advanced Experiments in Plant Protection and Biodiversity

## Biological Control

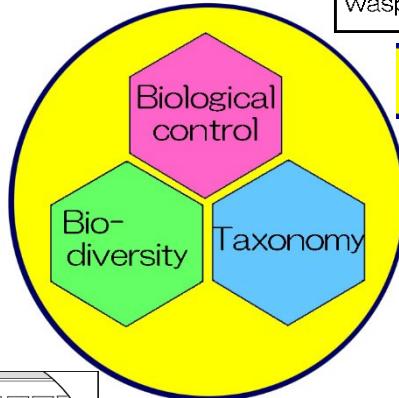
### Life cycle of parasitic wasp of diamondback moth



### Life cycle of Aphid parasitic wasp



## Biodiversity



Insects are collected by the Malaise traps and the yellow pan traps, etc., and dried up by the freeze dryer, then mounted on the card point. From 1992 to 2022, various traps set on here and there in Japan, about 500000 specimens of insect were mounted and sorted each family.

Freeze Dryer

Platygastriidae *Inostemma* (♀)

*Synopeas*

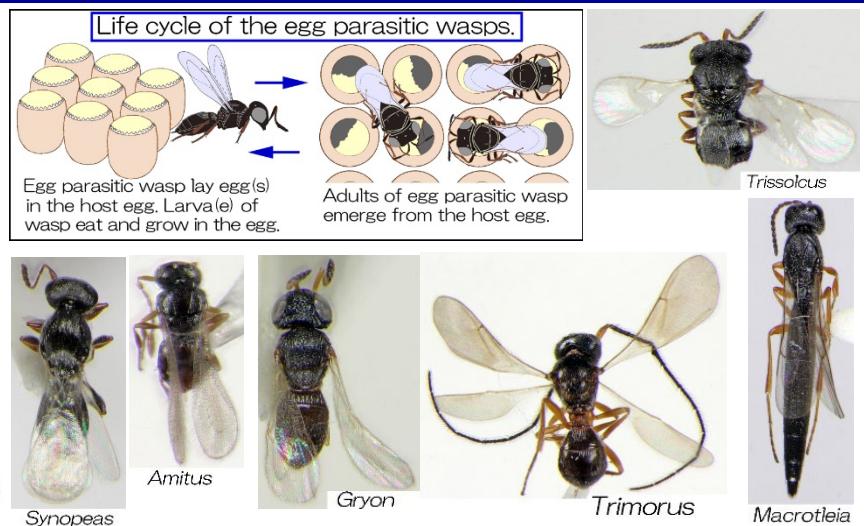
*Amitus*

*Gryon*

*Trimorus*

*Macroctelia*

## Taxonomy of Parasitic wasps



About 300000 individuals of parasitic wasps are sorted to families. Platygastriidae are classified to genera and species. Subfamily Platygastriinae are the egg-larval parasite of the family Cecidomyiidae (gall midges, etc), and Scelioninae are the egg parasite of various insects.

Recent publications: Yoshida K, Uefune M, Ozawa R, Abe H, Okemoto Y, Yoneya K, Takabayashi J (2021) Effects of prohydrojasmon on the number of infesting herbivores and biomass of field-grown Japanese radish plants. *Frontiers in Plant Science*, 12: 695701. Uefune M, Yoneya K, Yamamoto M, Takabayashi J (2021) The use of synthetic herbivory-induced plant volatiles that attract specialist parasitoid wasps, *Cotesia vestalis*, for controlling the incidence of diamondback moth larvae in open agricultural fields. *Frontiers in Ecology and Evolution*, 9: 702314. Uefune M, Abe J, Shiojiri K, Urano S, Nagasaka K, Takabayashi J (2020) Targeting diamondback moths in greenhouses by attracting specific native parasitoids with herbivory-induced plant volatiles. *Royal Society Open Science*, 7: 201592. Abe J, Uefune M, Yoneya K, Shiojiri K, Takabayashi J (2020) Synchronous occurrences of the diamondback moth (*Lepidoptera*: *Plutellidae*) and its parasitoid wasp *Cotesia vestalis* (Hymenoptera: Braconidae) in greenhouses in a satoyama area. *Environmental Entomology*, 49: 10-14. Rim H, Uefune M, Ozawa R, Takabayashi J (2018) An omnivorous arthropod, *Nesidiocoris tenuis*, induces gender-specific plant volatiles to which conspecific males and females respond differently. *Arthropod-Plant Interactions* 12: 495-503. Yoneya K, Uefune M, Takabayashi J (2018) Parasitoid wasps' exposure to host-infested plant volatiles affects their olfactory cognition of host-infested plants. *Animal Cognition*, 21: 79-86. Uefune M, Shiojiri K, Takabayashi J (2017) Oviposition of diamondback moth *Plutella xylostella* females is affected by herbivore-induced plant volatiles that attract the larval parasitoid *Cotesia vestalis*. *Arthropod-Plant Interactions*, 11: 235-239. Uefune M, Nakashima Y, Takabayashi J, Urano S, Kugimiya S, Shimoda T (2016) Offering honey containing a selective insecticide as food for pests and parasitoids: another effective use. *Journal of Applied Entomology*, 140: 796-800.