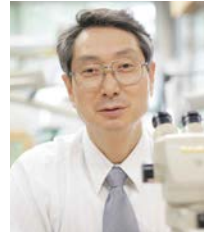


Laboratory of Entomology



Professor
Kenzou YAMAGISHI

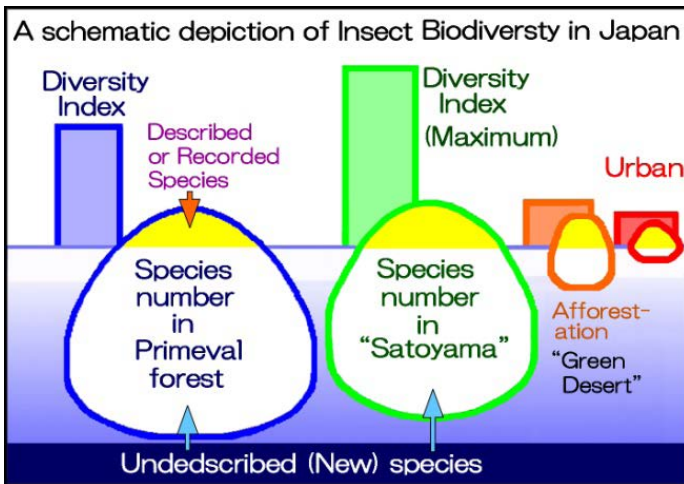
STAFF	Professor Kenzou YAMAGISHI
TEACHING	Fundamental Entomology
	Applied Entomology
	Zoological Systematic and Morphology
	Advanced Entomology and Biodiversity (MC)

Research

Biodiversity & Classification

Tens of thousands of insect species are bound to be in Japan. One of the studies of "biodiversity" is to discover and describe all species. Numerous species, however, may be exterminated by us, *Homo sapiens*, before they can be named.

In our laboratory, we accumulate a lot of specimens of micro-sized parasitic wasps and study its classification.

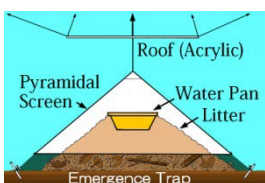


Investigation of Insect Fauna



To study insect biodiversity, a huge number of specimens were collected by various traps, and mounted on card points.

Many new genera and new species will be included in the above specimens. Identification is not easy but exciting. The basis of biodiversity is classification.



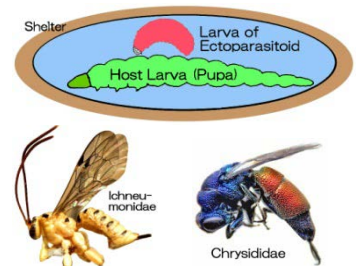
Parasitic Wasps & Biological Control

Females of parasitic wasps (parasitoids) deposit their eggs on (in) the body of larvae or pupae of specific insect that become their host. The hatched wasp larvae eat up the host's body and grow into new imagoes.

We study such unique parasitic wasps. More specifically, we classify them and to investigate the possibility of utilizing them as the natural enemies for agricultural pests.

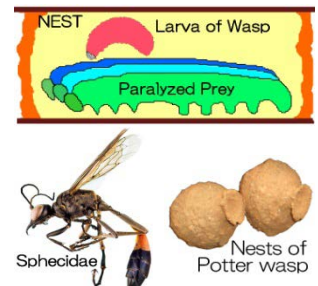
Ectoparasitism

The ecto-parasitic wasps lay egg on the host's body and the hatched larva absorbs host's blood externally. The wasp larva needs a shelter for itself, because the larva is exposed.



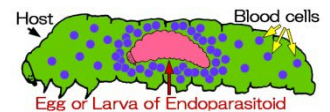
Evolution of Wasps

The "hunting" wasps evolved from the ecto-parasitic wasps. It was thought that the ancestor would provide a "nest" sheltering her offspring, and bring a prey which become the "host" in her nest.



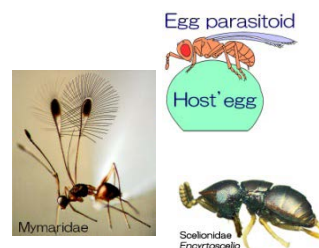
Endoparasitism

The endo-parasitic wasps deposit their egg (s) into the host body and the hatched larva eats the host body internally. The endoparasitism, however, is very difficult, because the host's body reacts to these egg(s) of the parasite by supplying a lot of white blood cells.



Egg Parasitoids

The egg-parasitic wasps deposit their egg(s) inside the eggs of various other insects or spiders. Wasps are usually very small in size, about 0.4 mm. They are limited to the size of the host's egg.



Recent publications:

- Yamagishi, K. (2004) Generic Composition of Scelionidae (Hymenoptera) in Agricultural Land. *Jpn. J. Entomol.*, (N. S.), 7: 39-54. (in Japanese). *Jpn. J. Entomol.* (N.S.), 7: 39-54.
- Fursov, V., Shiota, Y., Nomiya, T., & Yamagishi, K. (2002) New fossil Mymaromatid species, *Palaeomyar japonicum* sp. nov. (Hymenoptera: Mymaromatidae), discovered in cretaceous amber from Japan. *Entomol. Sci.*, 5: 51-54.
- Yokoyama, E., Yamagishi, K., & Hara, A. (2003) Structures of the mating-type loci of *Cordyceps takaomontana*. *Appl. Environ. Microbiol.*, 69: 5019-5022.