

Entomophagy: Consumption of insects by humans

Why should we eat insects?

They are an alternative with...

...environmental benefits.

...livelihood and social benefits.

...health benefits such as

unsaturated fatty acids, rich in protein, vitamin, fibre and mineral content.

What about health issues?

- Potential allergic reactions in case of pre-existing allergies to crustaceans, dust mites and molluscs.
- Additionally, allergens from their feed (e.g. gluten) may end up in the insect that is consumed.
- Possible chemical & microbiological contaminations

What insects species are commonly consumed?



Beetles
Coleoptera (31%)



Cicadas, leaf & planthoppers, scale insects & true bugs
Hemiptera (10%)



Caterpillars
Lepidoptera (18%)



Termites
Isoptera (3%)



Bees, wasps & ants
Hymenoptera (14%)



Dragonflies
Odonata (3%)



Grasshoppers, locusts & crickets
Orthoptera (13%)



Flies
Diptera (2%)

What are the ways insects are consumed?

They are consumed as a snack or as a food ingredient, e.g.:



Flour
Pulverized, freeze-dried insects (e.g. cricket flour)



Bread
Bread baked with insect flour (mostly house crickets)



Burger patties
made from insect powder / insect flour (mainly from mealworms or house cricket)



Snacks
Crisps, flips or small snacks (bites) made with insect powder and other ingredients



Protein bars
containing insect powder (mostly house crickets)



Insect-based beer



Pasta
Made of wheat flour, fortified with insect flour (house crickets or mealworms)



Ice cream



Which insects are listed as novel food in the EU?



Yellow mealworm
Tenebrio molitor larva

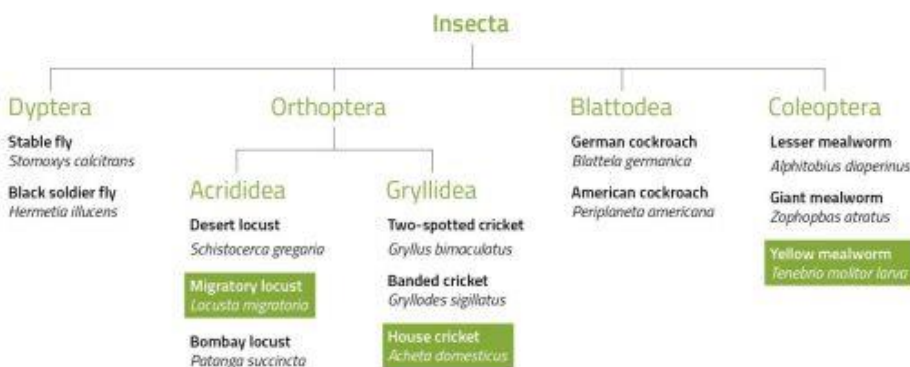


House cricket
Acheta domesticus



Migratory locust
Locusta migratoria

Simplified classification of the insect species



Adapted from: De Marchi L, Wangorsch A, Zoccatelli G. Allergens from Edible Insects: Cross-reactivity and Effects of Processing. *Curr Allergy Asthma Rep.* 2021 May 30;21(5):35. doi: 10.1007/s11882-021-01012-z. PMID: 34056688; PMCID: PMC8165055.