

Helpful organisms in Philippine rice fields

PREDATORS



MIRID BUG
Cyrtorhinus lividipennis (Reuter)
Filipino name: *berdang atangaya*
Identifying marks: adults are black with green long folded wings and long black antennae, nymphs have short undeveloped wings
Food: prefer eggs of planthoppers, leafhoppers and striped stem borer; small larvae and young nymphs of planthoppers and leafhoppers



GROUND BEETLE
Ophionea nigrofasciata (Schmidt-Goebel)
Filipino name: *tigreng salagubang*
Identifying marks: adults are guitar-shaped and reddish brown; have long thin necks connecting the head and abdomen; black shiny larvae (grubs) go into the soil prior to pupation.
Food: prefer planthoppers, but prey on hairy caterpillars, semiloopers, leafrollers, leafhoppers, and newly-hatched larvae of stem borers



LADY BEETLE
Micraspis croatlia (Mulsant)
Filipino name: *pagung-pagongan*
Identifying marks: shape of adults are like that of a Volkswagon (oval) car; mostly orange with or without spots on the wings; larvae (grubs) are dark grey to brown, wingless, and resemble a crocodile
Food: prefer to feed on the nymphs of planthoppers and leafhoppers; feed on newly hatched larvae of leafrollers and stem borers



DAMSELFLY
Agrocnemis spp.
Filipino name: *tutubing karayom*
Identifying marks: narrow wings and slender bodies; nymphs do not have fully developed wings; aquatic and often attach themselves to the lower part of the rice tillers
Food: prey on adults and nymphs of planthoppers, leafhoppers, leafroller, and adult stem borer



DRAGONFLY
Anisoptera
Filipino name: *tutubi*
Identifying marks: forewings are bigger than damselfly wings; adults can fly long distances; nymphs lack fully developed wings, aquatic and are often attached to lower parts of the rice tillers
Food: prey on adult and nymphs of planthoppers, leafhoppers, and moths of lepidoptera



CRICKET
Anaxipha longipennis (Serville)
Filipino names: *kuliglig, itim na kagaykay, kantitit*
Identifying marks: adults and nymphs are light to dark brown; antennae are longer than the body
Food: feed on eggs of striped stem borers, dark-headed stem borer, leafroller, armyworm, whorl maggot, and nymphs of planthoppers and leafhoppers



LONG-HORNED GRASSHOPPER
Conocephalus longipennis (de Haan)
Filipino name: *tipaklong sa kaparangan*
Identifying marks: adults and nymphs are green; antennae are longer than the body; female ovipositor is very long and curved
Food: prefer egg masses of stem borers, leafeeder, golden apple snail, and earhead bugs; nymphs of planthoppers and leafhoppers



WATER STRIDER
Limnagonus fossarum (Fabricius)
Identifying marks: large, long-legged, and extremely fast; adults are black with two pairs of very long hind legs
Food: adults and nymphs prey on rice hoppers, moths, and larvae that drop onto the water surface



RIPPLE BUG
Microvelia douglasi atrolineata (Bergroth)
Identifying marks: adults are dark brown to black, broad-shouldered in shape, and minute in size; they sting
Food: adult and nymphs wait on the water surface to kill the planthopper and leafhopper nymphs that fall onto the water



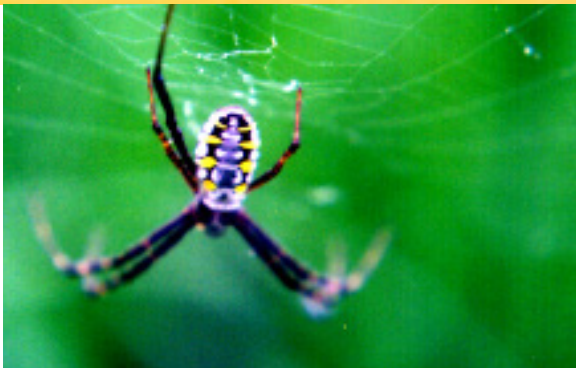
WOLF SPIDER
Pardosa pseudoannulata (Boes. & Strand)
Filipino name: *gagambang lobo*
Identifying marks: oval abdomen; legs are long and tapered; colors are usually dull, with gray, brown, and black predominating
Food: prey on planthoppers, leafhoppers, caseworm, leafroller, whorl maggot, newly-hatched larvae, and moths of stem borers



JUMPING SPIDER
Phidippus spp.
Filipino name: *gagambang lumulundag*
Identifying marks: body is usually compact and their stout legs are short and powerful; have enlarged eyes with large front legs
Food: prey on planthoppers, leafhoppers, adult flies, and other small insects



LONG-JAWED SPIDER
Tetragnatha mandibulata (Walck)
Filipino name: *gagambang pangahan*
Identifying marks: long-bodied spider with long legs; egg masses are laid on the upper half of the rice plant and are enclosed in cottony silk
Food: prey on adults and nymphs of planthoppers, leafhoppers; adults of whorl maggot trapped in the web are quickly wrapped with silk



ORB SPIDER
Argiope spp.
Filipino name: *gagambang pari; gagambang gumagawa ng bilog na sapot*
Identifying marks: highly colorful; legs are curved; abdomen is large and swollen
Food: feed on planthoppers, leafhoppers, caseworm, whorl maggot, stem borer adults, large butterflies, and grasshoppers



DWARF SPIDER
Atypena formosana (Oi)
Identifying marks: often confused as a spider-ling due to its small size; abdomen is oval or globular with a double row of oval to triangular dark spots running lengthwise
Food: feed on planthoppers and leafhopper nymphs, whorl maggot, and springtails

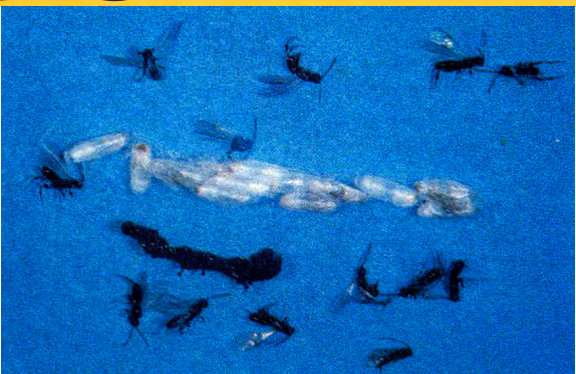


LYNX SPIDER
Oxyopes spp.
Filipino name: *gagambang may tinik*
Identifying marks: legs are long with spines; jump and climb rapidly and jerkily among stems and leaves
Food: feed on planthoppers, leafhoppers, caseworm, leafroller, stem borer moths, rice seed bug, and whorl maggot

PARASITOIDS



WASP
Tetrastichus schoenobii (Ferriere)
Filipino name: *malit na putakti*
Identifying marks: not clearly visible to the naked eye; adults are black, brown, dark yellow brown, or metallic blue-green; resemble small ants with wings; all four wings are developed
Food: eggs of leafroller, skipper, short-horned grasshopper, armyworm, green semilooper, whorl maggot, stem borers, planthoppers, black bug, and seed bug



WASP
Cotesia spp.
Filipino name: *malit na putakti*
Identifying marks: clearly visible to the naked eye; adults are red, black, brown, dark yellow, or metallic blue-green; abdomen has long injection needle-shaped projection for laying eggs on the larvae and pupae of harmful organisms
Food: larvae and pupae of leafrollers, skipper, armyworm, green semilooper, whorl maggots, and stem borers



WASP
Charops brachypterum (Gupta and Maheswary)
Filipino name: *malaking putakti*
Identifying marks: black body with yellow orange markings on the bases of the antennae, legs, and abdomen; abdomen is greatly enlarged at the end
Food: larvae of leafroller, green semilooper, and yellow stem borer



WASP
Xanthopimpla flavolineata (Cameron)
Filipino name: *malaking putakti*
Identifying marks: medium-sized stout wasp; yellow orange in color with black markings on each abdominal segment; no black spots on the abdomen; body is coarse textured and the ovipositor is black
Food: parasitize larvae of stem borers

PATHOGENS



Light brownish fungus with projections
Hirsutella citriformis
Filipino name: *amag*
Identifying marks: has protruding structures from the infected harmful organisms
Food: infect planthoppers and leafhoppers



White fungus
Beauveria bassiana
Filipino name: *amag*
Identifying marks: fungal growth remains white throughout; no projections
Food: infect planthoppers, leafhoppers, stem borers, leafrollers, skippers, earhead bugs, and black bug



Green fungus
Metarhizium anisopliae
Filipino name: *amag*
Identifying marks: has protruding structures from the infected host insect
Food: infect planthoppers and leafhoppers



Virus
Filipino name: *bayrus*
Identifying marks: infected larva hangs with its head upside down from the plant canopy; brown fluid oozes out of the larvae
Food: infect armyworm, leafroller, and hairy caterpillar

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