

Diversity of Functional Groups of Ants in Ecological Communities

Habitat (plant shelter ants) + **Food** (→ target, ant subfamily: genus)

Specialist ←

Food Habit

→ Opportunist / Generalist

Scavenger

Detritus-based food chain

→ dead or weakened insect, bird dropping, animal waste, fruit fragments, vertebrate carcasses
MYRMICINAE: Veromessor

MYRMICINAE: Tetramorium (9), Monomorium (8), Solenopsis (2), Pheidole (12), Myrmica (4), Leptothorax (2)

DOLICHODERINAE: Iridomyrmex (2) (scavenge in nest cavity)

leaf-cutting ants → fungi

MYRMICINAE: Atta, Acromyrmex (use antibiotic-producing bacteria Ascomycotina: Escovopsis)

Symbiotic Association:
parasitic-mutualistic-commensalistic

Herbivore

attending ants → plant + honeydew source

1. MYRMICINAE: Acanthomyrmex (1), Acropyga → homoptera aphid on roots
2. → lycaenid butterfly larvae
3. MYRMICINAE: Crematogaster (11) → mealybug in swollen acacia thorn

harvesting ants (granivore) → seed

PONERINAE: Brachyponera

FORMICINAE: Melophorus, Prolasius (in Australia)

MYRMICINAE: Acanthomyrmex (1), Aphaenogaste (3), Monomorium, Pheidole (12), Pheidologeton (5), Pogonomyrmex, Messor, Veromessor

tree-guarding ants → plant + extra-floral nectaries

DOLICHODERINAE: Azteca

PSEUDOMYRMECINAE: Pseudomyrmex (protect acacia)

PONERINAE: Pachysima

Plant-based food chain

Omnivore

social parasites (slave-making ants) → other ant species' brood

DOLICHODERINAE: Bothriomyrmex (1)

PONERINAE: Gnamptogenys (1), Cerapachyinae (1 → Pheidole ants)

LEPTANILLINAE: Leptanilla (1)

MYRMICINAE: Monomorium (8), Solenopsis (2, thief ants), Strongylognathus

FORMICINAE: Formica sanguinea group, Polyergus, Lasius (4)

→ entomobryomorph + collembolans

MYRMICINAE: Pentastruma (2), Smithistruma (7), Strumigenys (10), Trichoscapa (1)

PONERINAE: Hypoponera (8)

Predation

Carnivore

solitary hunter → active insects

MYRMICINAE: Daceton

PONERINAE: Odontomachus (1)

swarm-raiding army ants → variable food

ECITONINAE

DORYLINAE: Aenictus (5)

termite mimic ants → termites

PONERINAE: Centromyrmex (1), Leptogenys (4), Pachycondyla (8), Megaponera, Termitopone

MYRMICINAE: Pheidole (12)

Parasitism

→ diplurans, centipedes, softbody anthropods

PONERINAE: Discothyrea (1) + Proceratium (2)

(→ spider's eggs), Amblypone (3), Prionopelta (1)

MYRMICINAE: Epitritus (3), Eurhopalothrix (1)

LEPTANILLINAE: Leptanilla (1)

Trophic Role In Ecosystem