



### OVERVIEW

Pheidole — the big-headed ants — are one of the most species-rich genera on Earth, with over 1,000 described species found across tropical, subtropical, and temperate habitats worldwide. The defining feature is dramatic caste size difference: minor workers handle foraging, brood care, and colony tasks while major workers (soldiers) carry massively enlarged heads and powerful mandibles built for cracking seeds and defending the nest.

Several North American desert species are trimorphic — producing a third super-major caste that ranks among the most visually impressive workers in the hobby. Pheidole colonies grow quickly, forage actively, and produce visible caste diversity that makes them endlessly interesting to observe.

### DIFFICULTY

#### BEGINNER

Fast-establishing, fast-growing, and tolerant of minor care mistakes. Queens are fully claustral and found reliably. Diet is flexible — seeds, protein, and sugars. The main care discipline is escape prevention: these are small, determined ants that find gaps. Get the fluon applied and the enclosure sealed and they're straightforward to keep.

### TEMPERAMENT

Active, aggressive foragers that recruit heavily to food and are defensive of the nest. They will bite when disturbed directly, but produce no sting or formic acid — minor inconvenience at most. Major workers process seeds, carry oversized prey, and guard entrances when disturbed.

### FEEDING

**Seeds:** Important for most North American species, especially desert Pheidole. Majors crack seeds minors can't process. Good options: dandelion, grass seeds, millet, shelled sunflower pieces, chia, sand dropseed. In seed-heavy species, seeds can cover carbohydrate needs, reducing the need for separate sugar supplementation.

**Protein:** 2–3×/week — fruit flies for young colonies; cricket pieces, mealworm pieces, or roach nymphs as the colony grows. Essential for brood and caste development. Remove within 24 hours.

**Sugars:** Honey water or sugar water daily in small amounts. Reduce if the colony takes seeds heavily — observe and adjust.

### HABITAT

**Recommended:** Test tubes (16–20mm) for founding; bamboo tube nests (preferred for growing colonies); gypsum or ultracal formicariums (excellent moisture management); tub-and-tube outworld setups.

**Escape prevention:** Fluon or PTFE on all outworld rims; all lid seams tight; all tubing connections secure. Check after every maintenance session.



Photo by Jake Nitta

### TEMPERATURE

Development slows significantly below 72°F.

- **Optimal range:** 75–90°F (species dependent)
- **Founding:** 78–82°F; increase once workers eclose
- **Gradient:** 78–88°F via heat cable on one side; cooler zone for self-regulation

Warmer temperatures produce faster brood development, larger colonies, and more major worker production.

### HUMIDITY

Pheidole prefer moderately humid nesting conditions. Target 60–70% in the nest; brood area moist, outworld drier. Gypsum and cement nests self-regulate naturally. For acrylic setups, hydrate one end only. Avoid oversaturation — minors can drown in standing water and excess moisture promotes seed mold. Fresh water in the outworld at all times.

### GROWTH

Fast — among the quicker-growing genera in the hobby. First majors appear once the colony reaches a threshold size; super-majors appear later in trimorphic species. Queens are fully claustral — keep founding setups dark and undisturbed. Mature colonies can reach tens of thousands of workers; upgrade the enclosure proactively or escape attempts will increase.

### COMMON CHALLENGES

Problem	Likely Cause	Fix
Escapes	Gap in fluon, lid, or tubing	Reapply fluon; inspect all seams
Queen eating eggs	Disturbance or dehydration	Stop checking; verify water; keep dark
No majors yet	Colony not large enough	Normal — appears at threshold size
Seeds molding	Moisture near seed storage	Improve airflow; keep outworld dry
Slow growth	Temp too low or underfeeding	Raise heat; increase protein
Trash pile mold	Outworld not cleaned	Remove debris every few days