



Nick Cavagnaro

They spend the next several years in darkness, hunting insects, spiders, and even small lizards at night.

Unlike other spiders, tarantulas don't use webs, jump or run to capture prey. Instead, they hunt by waiting motionlessly near their burrows. They have poor eyesight but special hairs smell, sense vibrations, and detect air currents from passing prey. The spider then grabs the insect and utilizes its venomous bite.

### Sharing the World

Tarantulas, like all spiders, play a crucial role acting as biological controls of insect populations. They also provide food for other creatures, including spiders, mammals, lizards, birds, and wasps.

Human threats to tarantulas include cars, habitat destruction, collection or extermination. The East Bay Regional Park District preserves habitats of grassland and oak/pine woodland preferred by tarantulas. Watch for tarantulas crossing roads and trails in late summer/fall.

Remember that collection of tarantulas in parklands is prohibited. Enjoy a visit with these gentle giants, but allow them the freedom to live their lives as tarantulas always have—as important players in the intricate web of life.

### A Spider's Life

The female delays egg laying until the right time. She manufactures a silken masterpiece—her egg case. The soft cushiony inner layer protects her fragile brood. The strong outer layer is lined with barbed hairs to protect against parasites. Hundreds of eggs nestle within. On sunny days, the mother warms her developing offspring by dragging the case to the burrow entrance.

The rubbery eggs hatch into deutova, or “eggs-with-legs.” They cannot walk or move until after their first molt. Then they leave the sheltered case, forming a fuzzy carpet of spiderlings.

Hunger drives them out on their own. They seek shelter until they can excavate their own burrows, using their pedipalps and chelicerae (fangs). Sometimes they use webby sheets to haul dirt from the hole.

### QUESTIONS:

If you have any questions about tarantulas in the East Bay, call or email a Park District naturalist at one of the Visitor Centers listed below.

ARDENWOOD HISTORIC FARM  
Fremont 510-544-2797, awvisit@ebparks.org

BLACK DIAMOND MINES  
Antioch 510-544-2750, bdvisit@ebparks.org

BOTANIC GARDEN  
Berkeley 510-544-3169, www.nativeplants.org

COYOTE HILLS REGIONAL PARK  
Fremont 510-544-3220, chvisit@ebparks.org

CRAB COVE at CROWN BEACH  
Alameda 510-544-3187, ccove@ebparks.org

SUNOL REGIONAL WILDERNESS  
Sunol 510-544-3249, svisit@ebparks.org

TILDEN NATURE AREA/EEC  
and LITTLE FARM  
Berkeley 510-544-2233, tnarea@ebparks.org

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# Tarantulas



East Bay  
Regional Park District



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# Tarantulas



It is summer in the rolling hills of the East Bay. The shade of oaks and pines offers some respite from the intense heat. In the darkness of a silk-lined burrow extending into the cool earth, the male California brown tarantula (*Aphonopelma* sp.) transforms. Flipping over, the arachnid begins to shed his outer skin. His new exoskeleton is fully formed beneath. His cephalothorax (head-chest) hinges open. He drags his body out through this door. Legs must be quickly pulled from their old skeletal coverings, lest they become trapped forever.

Fluids pump through his body, swelling the soft skin to proper size before it hardens. He has become an adult after 8-12 years and has acquired tools for mating. His front legs now have tibial spurs, which resemble hooked thumbs. Pedipalps, leg-like “helping hands” by his mouth, have become bulb-like and are prepared for mating.

In late summer, he moves to the burrow’s entrance, awaiting the protection of night. He, and thousands of other males born nearly a decade ago, will spend the rest of their lives wandering in search of females.

Although stories of mass tarantula migrations abound, this late summer movement is not truly a migration. There is no synchronization, no destination or direction. Instead, males tend to wander great distances randomly searching. Thus far life has been spent under cover of darkness—now he searches day and night.

He may succumb to the elements or predators. His defense is not his venomous bite, which, though painful, is generally harmless to humans. Instead, his legs flick barbed hairs from his abdomen into predators’ eyes and noses, causing burning, stinging or even blindness. He is relatively defenseless, however, against his most fearsome foe.

## Deadly Enemy

In late summer, a female tarantula hawk wasp (*Pepsis* sp.) cruises the grasslands seeking tarantulas. She needs food—not for herself, but for her offspring. If she spots a wandering victim or entices one from its burrow, a deadly dance commences. The tarantula defends itself with fangs while the wasp dives underneath to give a paralyzing sting—one of the most painful in the insect world, though not lethal. She drags her victim into a hole, lays a single egg, and seals the still-living spider into its grave. The larva hatches and begins to feed, avoiding vital organs. After a month, even these are consumed before the wasp completes its cycle.



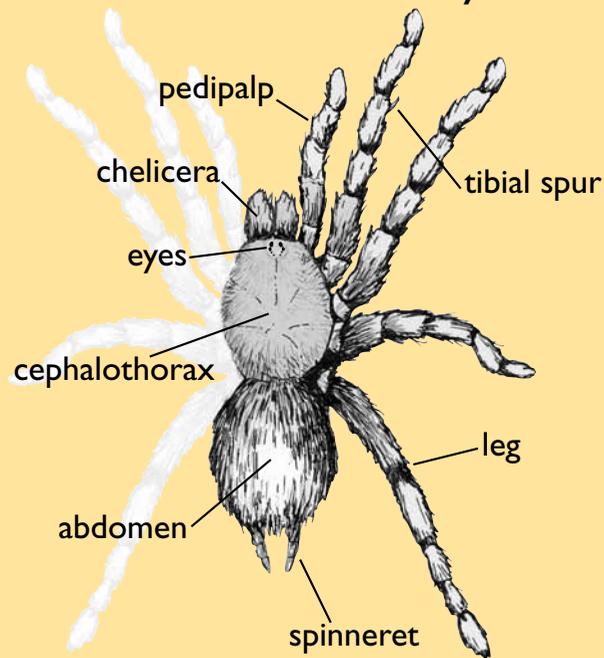
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## Courtship

If the tarantula survives these threats, he may discover a female’s burrow. Courtship begins with rhythmic tapping of the ground with pedipalps. His body vibrates. He slaps the ground with his legs—much like knocking on the door. She scrambles out with raised fangs and pedipalps. To insure his safety against the larger female, he uses his new tibial spurs, hooking them under her fangs. He carefully props her upwards, and during a mad tangle of dancing legs and pedipalps, mating occurs.

Contrary to common belief, he will probably not become her next meal. Though not unheard of, cannibalism is rare. Instead, they may mate several times or he’ll search for another female. Whether the male mates or not, his days are numbered. After reaching maturity, he won’t see another spring. Females live up to 30 years.

## Tarantula Anatomy



Tarantula Hawk

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