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, when they shed their exoskeleton (outer skin) in order to grow. 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. 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 that help them smell, sense vibrations, and detect air currents from passing prey. The spider then grabs the insect and utilizes its venomous bite to kill its prey.

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. Be careful not to step on 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.

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.

Bay Area blonde tarantula (Aphonopelma smithi)

East Bay Regional Park District

Healthy Parks Healthy People

2950 Peralta Oaks Court, Oakland, CA 94605
1-888-EBPARKS or 1-888-327-2757 *(TRS 711)*
ebparks.org

Visitor Centers

Ardenwood Historic Farm, Fremont
510-544-2797, awvisit@ebparks.org

Big Break Regional Shoreline, Oakley
Big Break Visitor Center at the Delta
510-544-3050, bigbreakvisit@ebparks.org

Black Diamond Mines Regional Preserve, Antioch
510-544-2750, bdvisit@ebparks.org

Coyote Hills Regional Park, Fremont
510-544-3220, chvisit@ebparks.org

Crown Memorial State Beach, Alameda
Crab Cove Visitor Center and Aquarium
510-544-3187, ccove@ebparks.org

Del Valle Regional Park, Livermore
510-544-3146, svisit@ebparks.org
Open summer weekends

Garin/Dry Creek Pioneer Regional Parks, Hayward
510-544-3220 *(Coyote Hills)*, chvisit@ebparks.org
Open summer weekends

Sunol-Ohlone Regional Wilderness, Sunol
510-544-3249, svisit@ebparks.org
Open weekends only

Tilden Regional Park, Berkeley
Botanic Garden: 510-544-3169, bgarden@ebparks.org
Tilden Nature Area/Environmental Education Center
510-544-2233, tnarea@ebparks.org

REGIONAL PARKS Foundation
Supporting East Bay Regional Parks

Regional Parks Membership
ENJOY FREE DAY-USE PARKING, SWIMMING, DOG PASS, AND MORE. 510-544-2220
REGIONALPARKSFOUNDATION.ORG

***On the cover:** Bay Area blonde tarantula (Aphonopelma smithi)*

Soy Ink Bug goes here

20200513

Tarantulas
in the East Bay Regional Park District

East Bay Regional Park District

Healthy Parks Healthy People

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 Bay Area Blonde Tarantula *(Aphonopelma smithi)* 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.

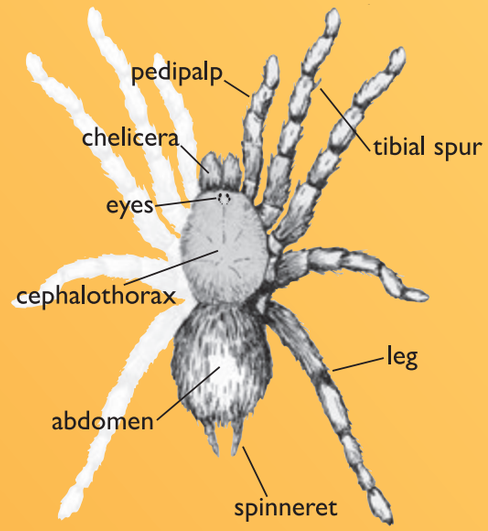
Fluids pump through his body, swelling the soft skin to its proper size before it hardens. He has become an adult after about seven years and has acquired tools for mating. His front legs now have tibial spurs, which resemble hooked thumbs. Pedipalps, leg-like "helping hands" by his mouth, have become bulb-like and are now ready 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 by 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 a predators' eyes and nose, causing burning, stinging, or even temporary blindness. He is relatively defenseless, however, against his most fearsome foe, the tarantula hawk wasp.

Tarantula Anatomy



Female Tarantula Hawk Wasp

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, which keeps its host alive and fresh. After a month, even these are consumed before the wasp completes its life cycle.

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 front legs—much like knocking on the door. She scrambles out with raised fangs and pedipalps. To ensure 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 likely won't see another spring. Females live up to 30 years.

Tarantulas preparing to mate. Female on left.