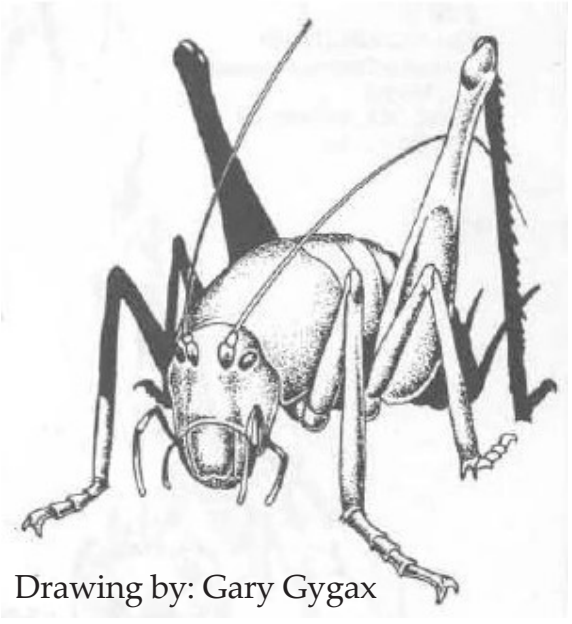


Wildland Conservation Division

Texas Cave Invertebrates



Drawing by: Gary Gygax



Created by Colin Strickland - For educational use only



Ceuthophilus secretus

Trogloxene cricket

Common Names:

Texas Cave cricket, Secret Cave cricket

Defining Characteristics:

Long legs, large dark chevrons on back. Adult body length up to ~30 mm. Found roosting on cave ceilings. Stay in caves during day, forage for food on surface at night. Major source of energy into caves.

Photo: Colin Strickland



Ceuthophilus Species B

Undescribed species
in genus *Ceuthophilus*

Common Name:
None

Defining Characteristics:
Looks very similar to *C. Secretus*, but its back only has faint lines instead of dark chevrons. Also, its back has a "peach fuzz" look instead of glossy. Found roosting on cave ceilings.

Photo: Mark Sanders



Ceuthophilus cunicularis

Troglobitic* cricket

Common Name:

None

Defining Characteristics:

Light to dark orange. Sometimes more brownish. Legs shorter than *C. secretus*. Tend to be found on cave floors.

*Rarely if ever leaves cave to forage.

Photo: Mark Sanders





Robust vs Slender

Species of Concern

Rhadine austinica

Troglobitic beetle

Common Name:

None

Defining Characteristics:

Slender species. Fast moving. Found only south of the Colorado River. Specialized in foraging on cave cricket eggs.

Photo: Colin Strickland

Diagram: Gómez et al. / Molecular Phylogenetics and Evolution 98 (2016) 161-175





Species of Concern

Rhadine subterranea

Troglobitic beetle

Common Name:

None

Defining Characteristics:

Slender species. Fast moving. Found only north of the Colorado River. Specialized in foraging on cave cricket eggs.

Photo: Mark Sanders

Diagram: Gómez et al. / Molecular Phylogenetics and Evolution 98 (2016) 161-175



Endangered Species

Rhadine persephone

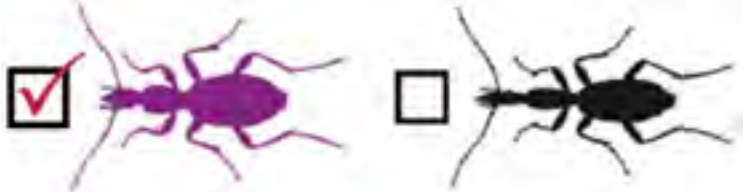
Troglobitic beetle

Common Name:

Tooth Cave ground beetle

Defining Characteristics:

Robust species. Fast moving. Found only north of the Colorado River.



Robust vs Slender

Photo: Mark Sanders

Diagram: Gómez et al. / Molecular Phylogenetics and Evolution 98 (2016) 161-175



Texoreddellia texensis

Troglobitic bristletail in the order Zygentoma (silverfish & firebrats)

Common Name:
Cave-adapted Silverfish

Defining Characteristics:
Fast moving. Very long antennae. Three long bristles (cerci) at end of abdomen.

Photo: Colin Strickland



Adult



Larva

Mycetophilidae

A family in the order Diptera

Common Name:

Fungus gnat

Defining Characteristics:

Adult: Very small flying insect.

Larva: Small, slimy, worm-like.

Often found on webs.

Photos: Adult - Richard Leung

Larvae - Mark Sanders



Japygidae

A family of hexapods
in the order Diplura

Common Name:
Japygid

Defining Characteristics:
Pale yellow, large pincers at end of abdomen. Anterior of body resembles Campodeidae. Fast moving.

Photo: Mark Sanders





Campodeidae

A family of hexapods
in the order Diplura

Common Name:
None

Defining Characteristics:
Pale, eyeless. Body length up to ~8 mm. Two antennae, two long cerci at end of abdomen.

Photos: Colin Strickland



Pseudosinella violenta

Subclass: Collembola (springtails)

Common Name:

P. violenta is in the family Entomobryidae (slender springtails)

Defining Characteristics:

Very small (~1 mm), white. Large numbers found on animal scat. Can jump using furcula, which is folded under abdomen. Form the base of food chain by consuming decaying plant material, bacteria and fungi.

Photo: Colin Strickland



Speodesmus spp.

Troglobitic millipede

Common Name:

Cave millipede

Defining Characteristics:

White, delicate looking. Flattened fins projecting off the sides of each segment. Do not react to light. Multiple species in Austin area.

Photo: Piers Hendrie





Reaction to light

Cambala speobia

Troglobitic millipede

Common Name:

None

Defining Characteristics:

Darker and more robust than Speodesmus. Length up to ~35 mm. React to light by curling up tightly.

Photos: Top - Colin Strickland, Bottom - Piers Hendrie



Scutigera sp.

Troglophilic centipede

Common Name:
In the family Scutigeridae
(House centipedes)

Defining Characteristics:
Yellowish-grey with alternating light & dark pattern on its back.
Lots of very long legs. Fast moving.

Photo: Colin Strickland



Symphyla

A class of soil-dwelling arthropods.
Subphylum: Myriapoda (millipedes, centipedes, symphylans, & pauropods)

Common Name:

Symphylan, garden centipede or pseudocentipede

Defining Characteristics:

Pale, small (length ~2-10 mm). Antennae resemble those of Campodeidae. Fast moving. Resemble tiny centipedes.

Photo: Colin Strickland



Species of Concern

Cicurina bandida

Eyeless troglobitic spider

Common Name:
Bandit Cave spider

Defining Characteristics:

Eyeless. Body length ~4.5-6.5 mm. Generally, will not leave the rock they are on. Tend to start & stop when moving. Little to no web. Found south of Colorado River. Closely related species: *C. travisae* (4-Points cave cluster), *C. buwata* (McNeil cave cluster).

Photo: Colin Strickland



Cicurina varians

Meshweaver spider

Common Name:

None

Defining Characteristics:

Resembles *C. bandida,* but has eyes. Will abandon its rock when disturbed. Often found under rocks and on extensive webs.

Photo: Colin Strickland





Eidmannella spp.

A genus in the family Nesticidae

Common Name:

Members of family Nesticidae
are known as scaffold web spiders

Defining Characteristics:

Fairly small (body ~3.5 mm), Long hairs on legs and abdomen. Large bulbous abdomen. Resembles *Agyneta*. *E. reclusa* is eyeless and is found in Tooth Cave and adjacent caves, *E. pallida* is has eyes and is a cosmopolitan species (widely distributed).

Photos: Colin Strickland





Agyneta sp.

A genus of spiders in the family Linyphiidae

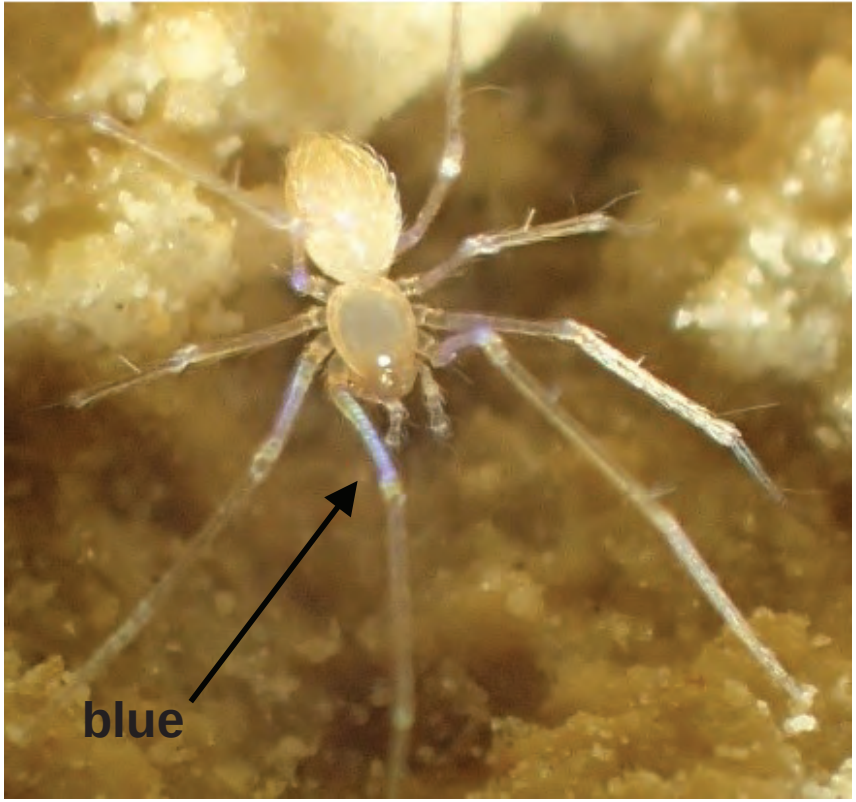
Common Name:

Members of family Linyphiidae are known as sheetweb spiders

Defining Characteristics:

Fairly small (body ~2-3 mm).
Large bulbous abdomen.
Resembles *Eidmannella*.
Found on sheetwebs.

Photos: Colin Strickland



Tayshaneta spp.

A genus of spiders in
the family Leptonetidae

Common Name:

Members of family Leptonetidae are known as midget cave spiders. *Tayshaneta myopica* is the Tooth Cave spider, an **endangered species**.

Defining Characteristics:

Very Small (body ~1.5 mm). Femurs reflect blue in light. Multiple closely related species in Central Texas.

Photo: Colin Strickland



Cryptachaea porteri

A species in the family Theridiidae

Common Name:

Members of family Theridiidae are known as cobweb spiders.

Defining Characteristics:

Large dark globular abdomen. Legs striped alternating dark and light. Body length: males 3 mm or less, females up to 5 mm. Scrunch up legs tightly if threatened. Very common in cave entrances.

Photo: Colin Strickland



Pholcus phalangioides

Species of spider in the family Pholcidae (cellar spiders)

Common Name:

Long-bodied cellar spider

Defining Characteristics:

Long legs: legs are about 5 to 6 times the length of its body. Body length up to. ~9 mm. Found near entrances of caves. Resembles *Leiobunum townsendi,* but has thicker legs and an elongated body.

Photo: Jessica Toth



Texella mulaiki

Troglobitic harvestman

Common Name:

None

Defining Characteristics:

Long legs, modified pedipalps with little hairs (setae) on the sides. Slow careful movements. Found in southern Travis Co. & northern Hays Co.

Photo: Colin Strickland



Photo: Jean Krejca

Endangered Species

Texella reddelli

Troglobitic harvestman

Common Name:

Bee Creek Cave harvestman

Defining Characteristics:

Pale orange harvestman, body length ~1.5 mm to ~3 mm. Slow moving. Almost always found under rocks. Nearly identical to *T. reyesi*. Smaller distribution.

Found in following BCP caves:
Bandit, Bee Creek, Jest John, Jester Estates
Kretschmarr Double Pit, Little Bee Creek,
Spider, and Stark's North Mine





Endangered Species

Texella reyesi

Troglobitic harvestman

Common Name:

Bone Cave harvestman

Defining Characteristics:

Pale orange harvestman, body length ~1.5 mm to ~3 mm. Slow moving. Almost always found under rocks. Nearly identical to *T. reddelli*. Separated into its own species in 1992. Larger distribution than *T. reddelli*. Found only in northern Travis Co. & southern Williamson Co.

Photos: Top - Colin Strickland
Bottom - Mark Sanders





Leiobunum townsendi

A species of harvestman
(Class: Arachnida, Order: Opiliones)

Common Name:
Daddy Long Legs

Defining Characteristics:
Round body. Very long legs. Tend to form clusters of up to 1,000 or more. Move bodies up and down rhythmically when disturbed.

Photos: Upper - Arlo Pelegrin,
Lower - Luis Fernández García



Pseudouroctonus reddelli

Troglophilic scorpion

(Class: Arachnida, Order: Scorpiones)

Common Name:

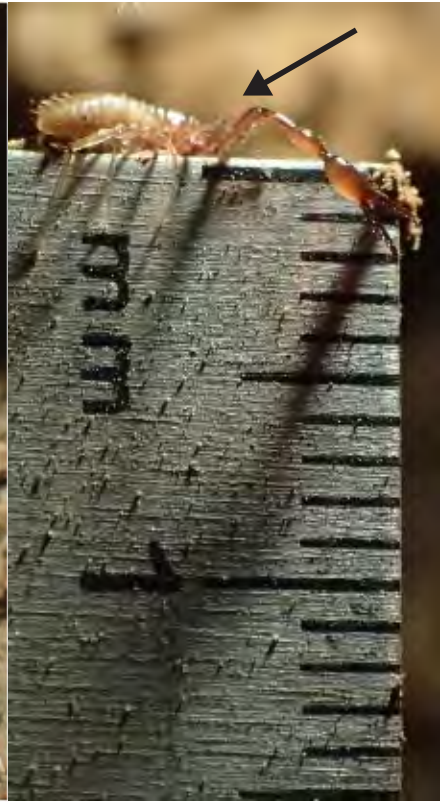
Texas Cave scorpion

Defining Characteristics:

Dark brownish black scorpion. Less aggressive than Striped bark scorpion (*Centruroides vittatus*).

Photo: Colin Strickland





Tartarocreagris spp.

A genus of pseudoscorpions
(Class: Arachnida,
Order: Pseudoscorpiones)

Common Name:

Tartarocreagris texana is the Tooth Cave pseudoscorpion, an **endangered species**.

Defining Characteristics:

Resembles a scorpion, but lacks a stinger at end of abdomen. Body can get up to ~4 mm. Multiple closely related species in Central Texas.

Photos: Colin Strickland



Ornithodoros turicata

A species within the
family Argasidae

Common Name:
Members of family Argasidae
are known as soft ticks.

Defining Characteristics:
Dorsoventrally flattened, tan. Adults
up to ~6 mm long. Vectors of
Tick-borne relapsing fever (TBRF).
Avoid being bitten if possible.

Photo: Colin Strickland



Ixodidae

(Class: Arachnida, Order: Ixodida)

Common Name:

Members of family Ixodidae are known as hard ticks.

Defining Characteristics:

Generally, have two colors: brown and tan. Adults ~3 to ~5 mm long. Vectors for Lyme disease. Not as common in caves as soft ticks.

Photo: Colin Strickland



Porcellionidae

A family within the order Isopoda

Common Name:
Woodlouse

Defining Characteristics:
Resemble pillbugs (Family: Armadillidiidae).
Pillbugs can roll in a ball, while these can't.
Porcellionidae are flatter and have two tails (uropods), while pillbugs have no tails.

Photos: Colin Strickland



Slender



Robust

Trichoniscidae

A family within the order Isopoda

Common Name:
None

Defining Characteristics:
Much smaller than Oniscidae (~4 mm). Also, paler and thinner than Oniscidae. Found in very moist areas. Some species slender, some more robust. Slow moving, hard to detect.

Photos: Colin Strickland



Caecidotea sp.

A genus of stygobitic isopods in the family Asellidae

Common Name:
Aquatic sowbug

Defining Characteristics:
Aquatic. Dorsoventrally flattened (flattened top to bottom).

Photos: Colin Strickland





Stygobromus spp.

Species of amphipods in
the family Crangonyctidae

Common Name:

Amphipods in general are called
scuds or side swimmers.

Defining Characteristics:

Aquatic. Laterally flattened. Body length:
~4 mm to ~7 mm. Swim on their sides.
Resemble tiny shrimp. Multiple species
found in Central Texas. *Stygobromus*
russelli is found in south Austin caves.

Photos: Colin Strickland



Helicodiscus eigenmanni

A species of land snail

Common Name:
Mexican coil

Defining Characteristics:
Small snail with flattened spiral shell. Found in moist areas.

Photo: Colin Strickland