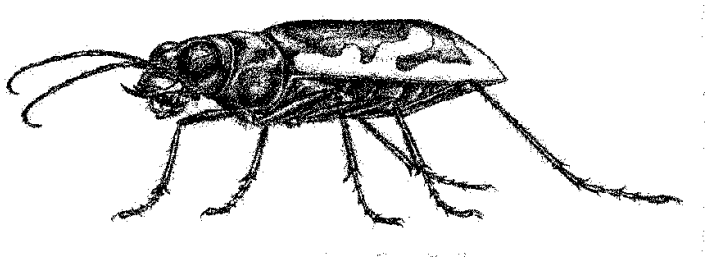
Great Sand Dunes ···**Insects**···

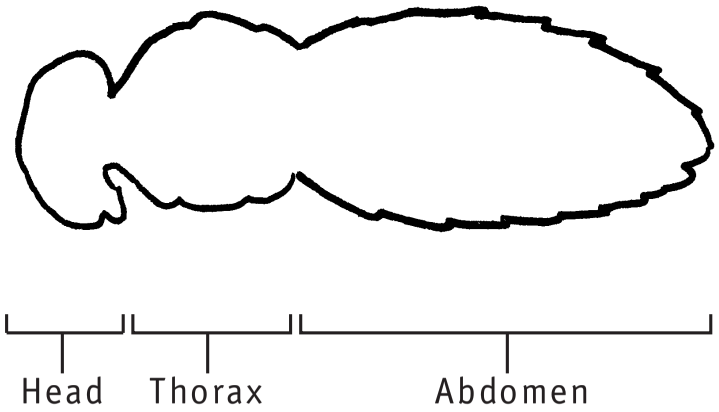
···Insects···
of
Great Sand Dunes



• • • Insect Basics • • •

Over one thousand different kinds of insects live at Great Sand Dunes. Some live in the sand, some climb in the trees, some swim in the water, and some wander on the mountaintops in search of food.

Insects are closely related to shrimp, crabs, lobsters, spiders, and mites. All of these have segmented bodies. Scientists call these animals arthropods (arthro = jointed, pods = feet).



Insects have three main parts: head, thorax, and abdomen. The head contains the mouth, sensory organs, eyes, and brain. The thorax operates an insect's six legs and wings. The abdomen provides digestive, excretory, reproductive, and breathing abilities.

Convert this body into your favorite insect.

• • •

Insect Name

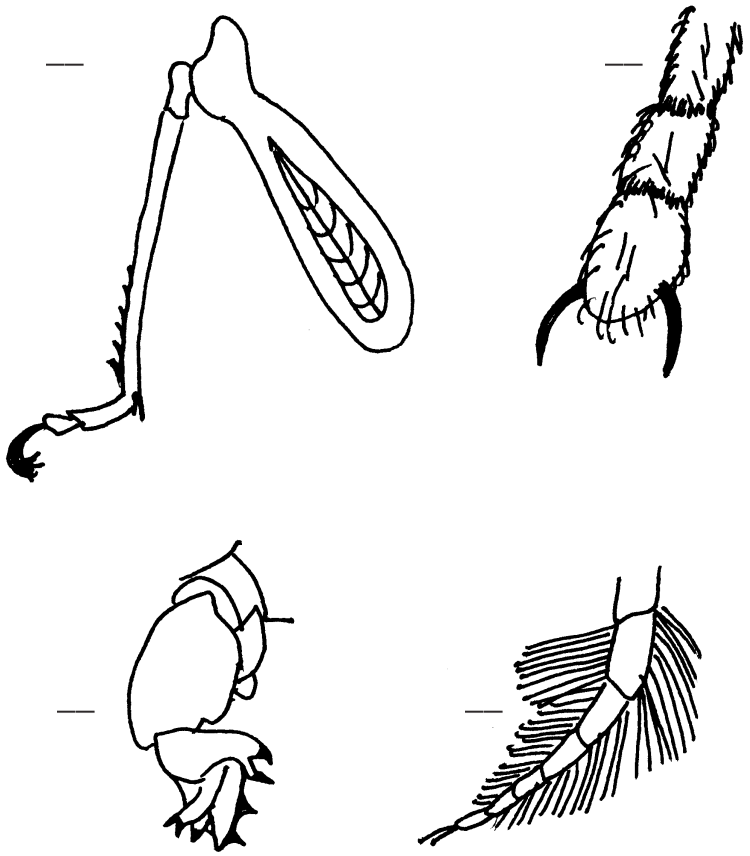
Scientific Name

Using the knowledge that you have gained through this workbook, create your own insect. It must have the following features: head, thorax, abdomen, six legs, one pair of antenna, a mouth, two eyes, two or four wings, and either camouflage or warning coloration.

Habitat: _____

Foods: _____

• • • Leg Kinds • • •

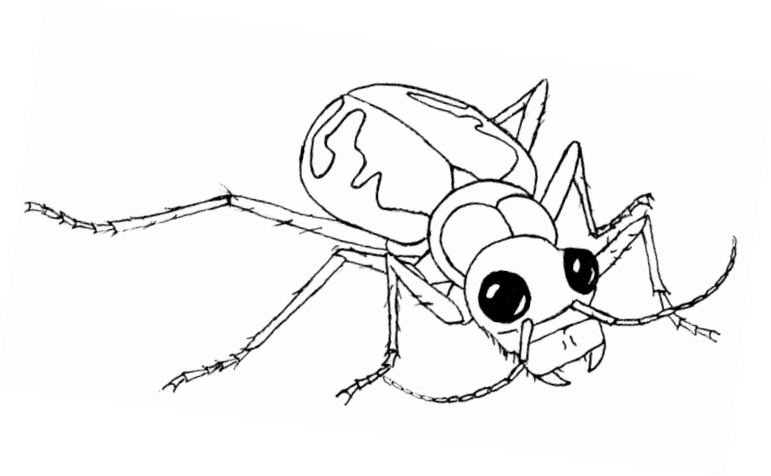


Leg Purposes:
A) climbing, B) jumping, C) swimming, D) digging

Match the leg with its purpose.

• • • Great Sand Dunes • • •
Tiger Beetle

Cicindela theatina



Found only at Great Sand Dunes, this tiger beetle has an irridescent (sparklely and shiny) coloration. Color this insect's head and thorax greenish-blue. The middle part of this beetle's forewings should be colored greenish-brown (hint: see page 11).

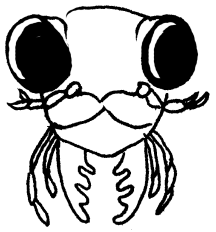
• • • Great Sand Dunes • • •

Darkling

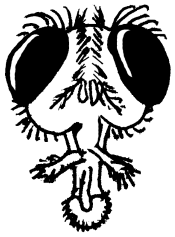
Eleodes hirtipennis

This scavenger beetle searches for fallen leaves and plant parts in the dunes. Draw a dune habitat around this insect.

• • • Mouth Parts • • •



__grasshopper or beetle



__fly

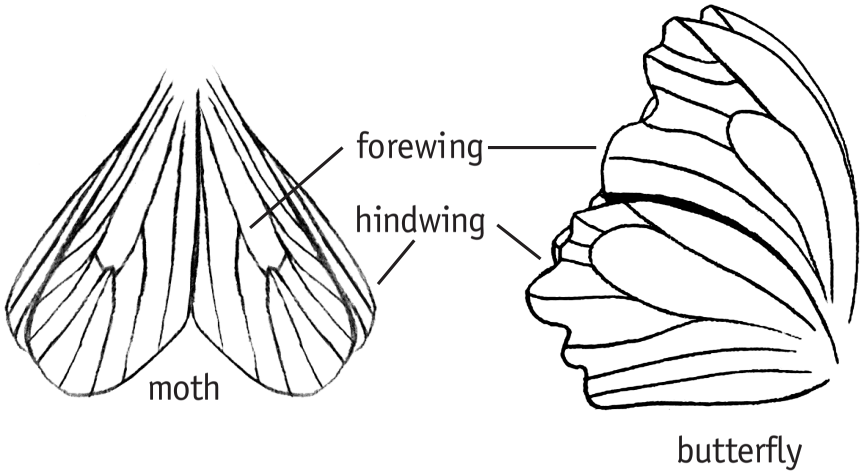
__mosquito

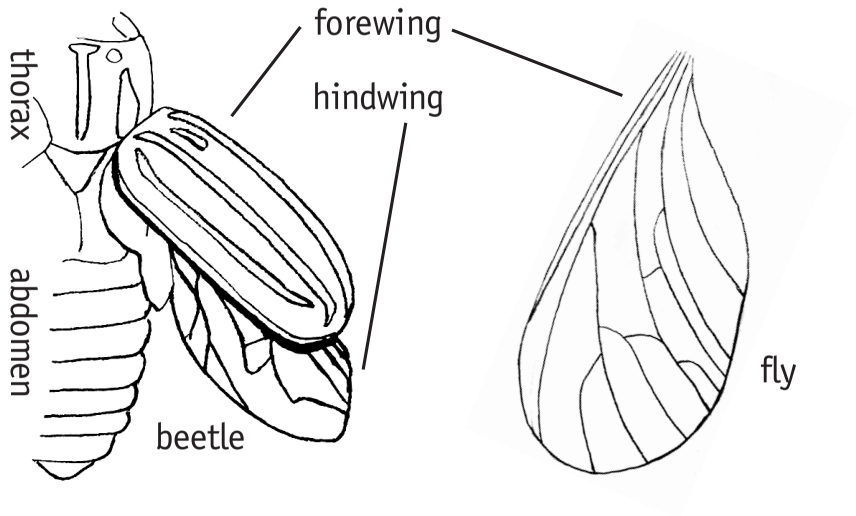
__butterfly

Feeding Types:
A) piercing and sucking, B) biting and chewing, C) siphoning, D) sponging

Match the feeding type with the insect.

• • • Wing Types • • •

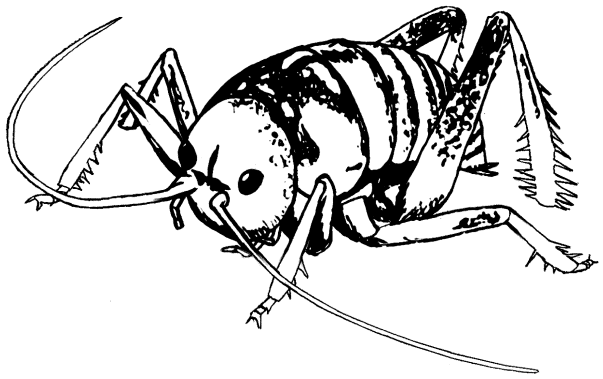




Insects use wing coloration and pattern for camouflage and warning. Color examples of camouflage and warning above.

• • Giant Sand-treader • • Camel Cricket

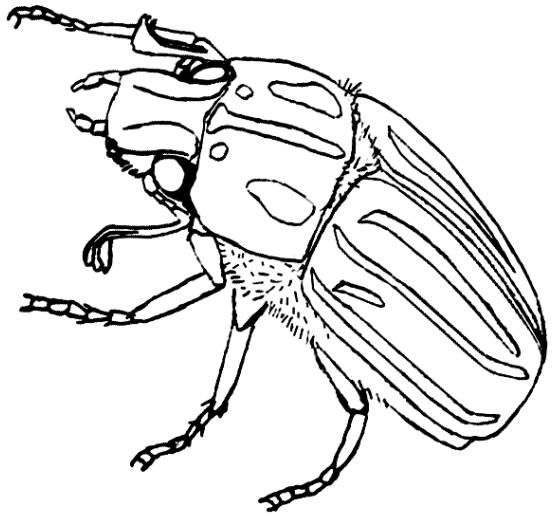
Daihinibaenetes giganteus



This special species of camel cricket has hind legs that are perfectly designed for digging and burrowing in the sand. Draw a night time dune scene around this nocturnal cricket.

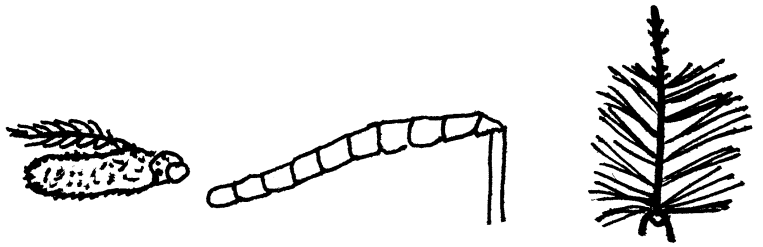
• • • Ten-lined • • •
June Beetle

Polyphylla decimlineata

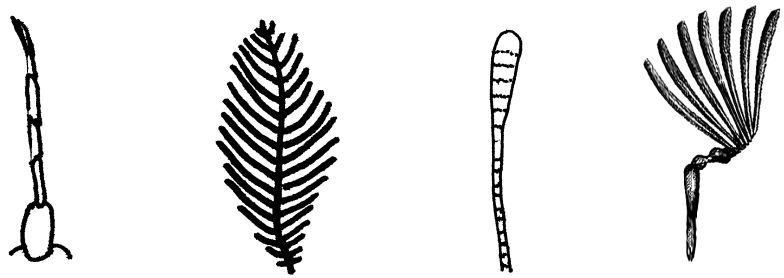


Draw this greenish June beetle feeding on plants within the dunes.

• • • Antennae • • •
Guess



fly ant mosquito

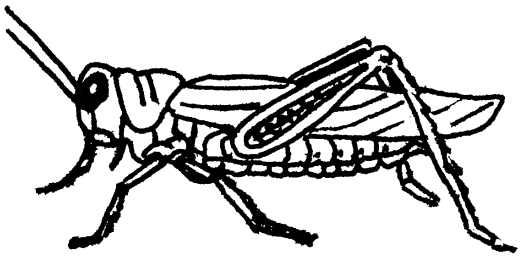


dragonfly moth butterfly beetle

Insect antennae differ greatly in size and shape, but they all perform simlarly. The antenna's main functions are to feel or touch and to smell. Some are even used to hear.

Think about why the antennae above are shaped the way they are, so that when you invent your own insect on page 14, your insect's antenna will be shaped in a way that helps it survive.

• • • Grasshoppers • • •



When in flight, the hind wings show a burst of color. While at rest, this grasshopper's coloration and pattern provide camouflage. Show this grasshopper escaping from a predator.

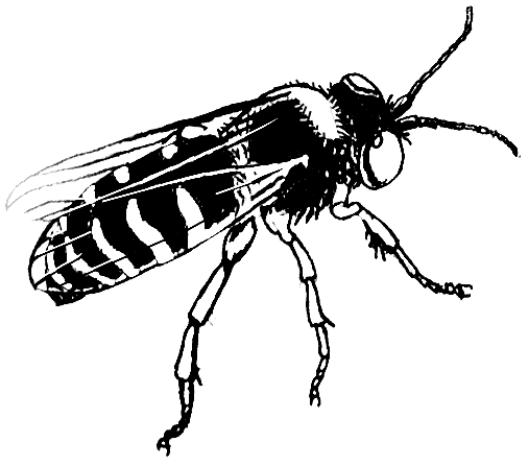
• • • Red Velvet-Ant • • •

Dasymutilla sp.

Velvet-ants are actually wasps. Females lack wings. Draw this velvet-ant seaching for nectar from a flower.

• • • Sand Wasp • • •

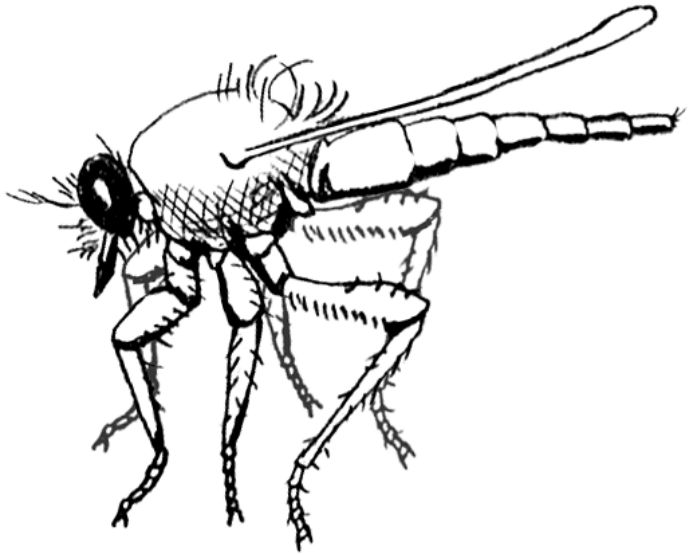
Species: *Bembix pruinosa, Bembix americana spinolae, Microbembix monodontaix*



Sand wasps lay their eggs in holes that they dig. Show this one digging a hole in the sand.

• • • Robber Fly • • •

Species: *Stenopogon martini, Promachus nigripes, Proctacanthus micans*



Robber flies are fierce predators. Draw a prey insect in its clutches.