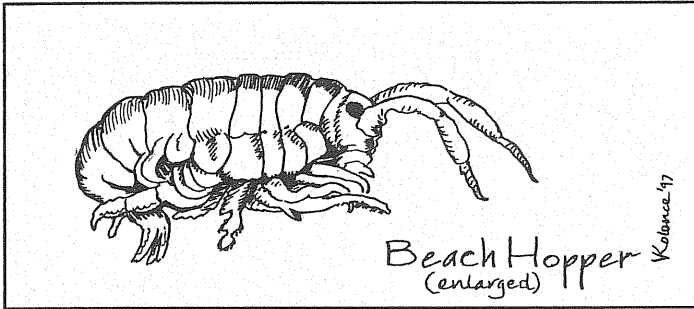


BAYLANDS

Beach Hoppers



Remember the "sand fleas" jumping on the beach, when you kicked a pile of washed-up seaweed or turned over a piece of driftwood? "Sand fleas" are not fleas at all, nor do they bite people or any other warm blooded animal. They are close relatives of crabs, lobsters, and shrimp, and thus part of the large group of animals known as *crustaceans*. Most books call them either *Sand* or *Beach Hoppers*. Their scientific name (*Amphipods*) refers to their legs, three of which are used in the water and three of which are used on land. Over a thousand different species have been classified by scientists, but many species are difficult to tell apart.

These animals have adapted to most of the environments found in salt water marshes. They also live in the brackish water sloughs that run through marshy fields and occasionally receive an influx of tidewater. There are even several species which lead a pelagic (free floating or swimming) life in the ocean. Such species are found in such large numbers during certain seasons that they serve as food for many larger kinds of ocean life, including whales.

These interesting little animals also live in the Palo Alto Baylands. Most people never notice them, because Hoppers live in the marshes and on the mud. To locate some, just turn over any piece of driftwood in the marsh. They will immediately demonstrate their impressive jumping skills.

One Beach Hopper species rates among nature's champion jumpers. It has enormously developed

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rear legs and can leap 40 times its own length - the equivalent of a man jumping 240 feet. The driving power for the leap is obtained by suddenly snapping backward the posterior portion of their abdomen.

Their legs are used for many purposes other than swimming and hopping. The last joint of their legs is curved in to form a claw used to cling to plants and other objects. They breathe using gills located on the underside of the basal joints of their legs. And females have plate-like structures on certain legs which form brood pouches for carrying eggs.

A Beach Hopper's body is flattened from side to side, rather than from top to bottom like crabs. It has numerous freely moving segments, covered with a shiny cuticle material which serves as a protective armor. Most species are only a fraction of an inch long, but some grow to two inches. The males are usually larger than the females, and have the curious trait of carrying the females about under their bodies during the time the eggs are laid.

Beach Hoppers are active scavengers, feeding on rotting seaweed, dead animals, or even picnic leftovers. They are frequently found in decaying seaweed that has been thrown high up on the shore by waves. As one book says, "they do their best to keep the beach clean".

During the daytime the Hoppers usually stay in shallow burrows. At night they move down the beach to feed near the water's edge and at dawn they return to their own - or another fellow's - burrow. They often can be seen fighting for a burrow just before dawn, perhaps because it is easier to obtain a hole by fighting a weaker Hopper than to dig a new one. Hoppers will also fight for bits of food and, presumably, for females.

Edited and illustrated by Virginia Kolence