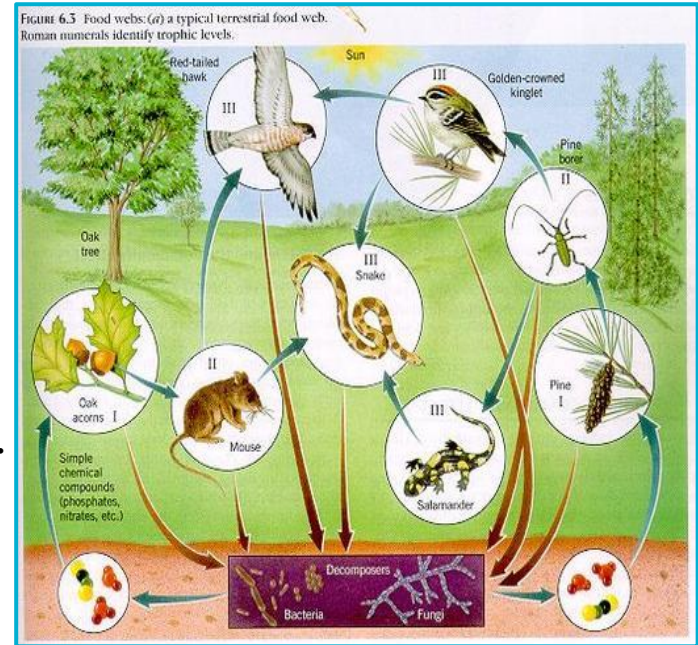# ECOLOGY

Old Town San Diego State Historic Park

WHAT IS ECOLOGY?

Ecology is the study of interrelationships among plants, animals and the environment.

In Greek the term means "at home". Just like you and your family make your home comfortable, we must also remember that outside in nature it is also our home. So we must do our part to help maintain the balance of life.

FIGURE 6.3 Food webs: (a) a typical terrestrial food web. Roman numerals identify trophic levels.

WHAT IS A HABITAT?

A habitat is where a plant or animal lives. For example, birds live in nests and fish live in water. Living things need food, water, and shelter to survive, and we can preserve natural habitats by not disturbing the environment when we visit.

What types of habitats do you see in Old Town?

What kind of animals do you think live there?

What kind of habitat do you live in?

BIOTIC & ABIOTIC FACTORS

Biotic factors are living things that interact with their environment. These are labeled producers, consumers and decomposers.

Abiotic factors are nonliving things that affect the environment. These include chemical elements, sunlight/temperature, wind and water.
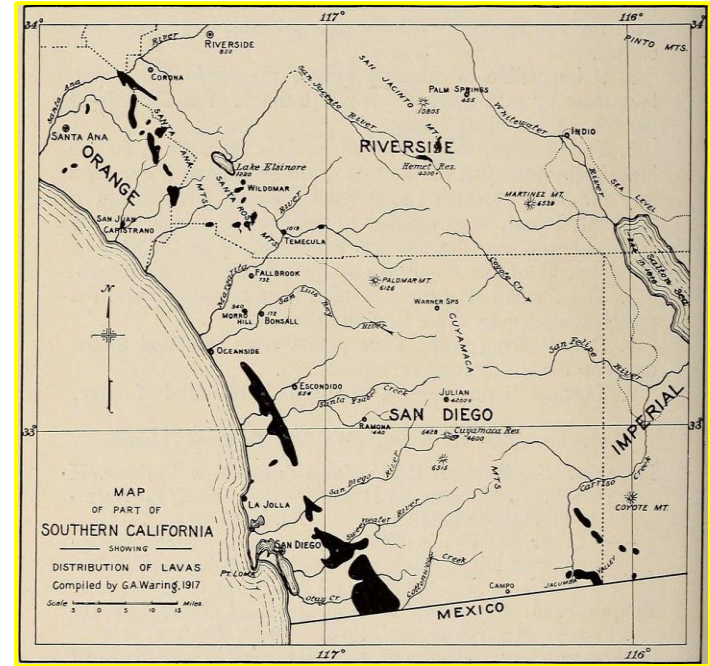

Are you a biotic or abiotic factor?

Look at the picture. Name one biotic factor and one abiotic factor.

WHAT IS BIODIVERSITY?

Biodiversity (bio=living, diversity=variety), refers to all living things in an ecosystem such as insects, reptiles, plants and animals. Biodiversity enables ecosystems to withstand environmental stress and adapt to change. Humans value biodiversity because we rely on ecosystems for food, medicine, building material, clean air and water, and more.

What part of San Diego do you think has the most biodiversity and why? The coast, mountains, desert, or Old Town State Park? Use your imagination.

MAP
OF PART OF
SOUTHERN CALIFORNIA
SHOWING
DISTRIBUTION OF LAVAS
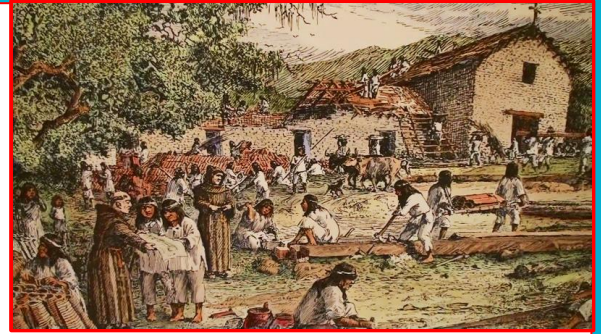Compiled by G.A.Waring, 1917

WHAT CAN GO WRONG?

Ecology is how all living and nonliving things work in harmonious balance. But what happens when something snaps, and changes all of a sudden? This affects the life cycle and cause disruption to the ecosystem. Here are some examples in Old Town's history when this occurred.

THE KUMEYAAY (THE FIRST PEOPLE)

The Kumeyaay were living in San Diego for thousands and thousands of years since time immemorial. They lived off the land by hunting and fishing. Local plants were their food, medicine, building material, and more. When Europeans arrived, they not only forced the Kumeyaay to change their ways of life, they also introduced cattle to the area. The cattle grazed on the native plants, taking away an important source of food for the Kumeyaay. With those plants gone, animals moved inland, therefore changing another food source.
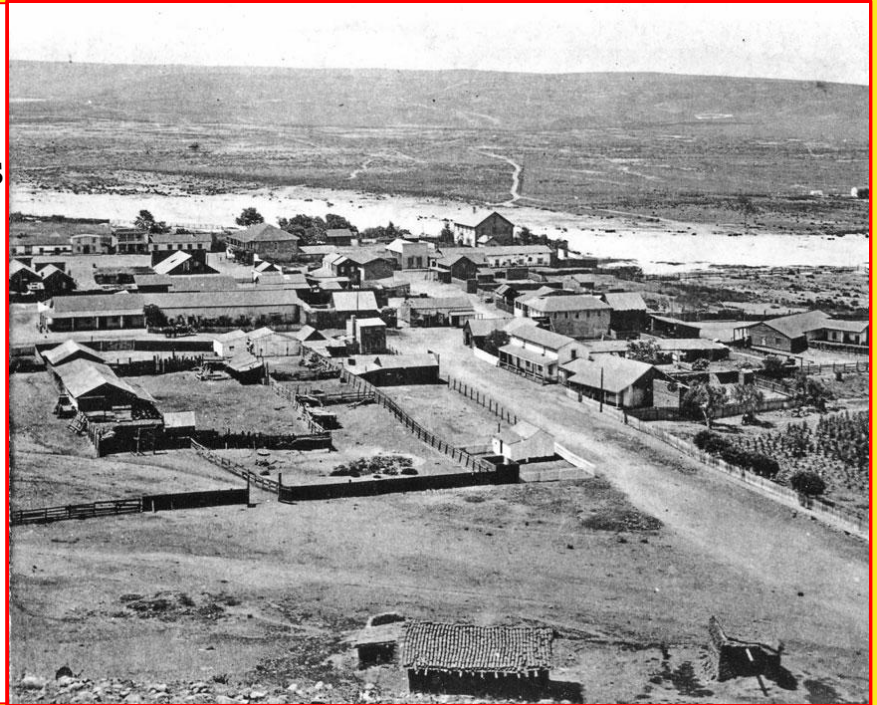
In your own words, explain how Kumeyaay's food sources changed.

FLOOD

In the winter of 1861, heavy rains poured into California including San Diego. An estimated 10 feet of water (rain, snow) came into the lands. The storms blocked the San Diego River from emptying into the bay which caused it to flood. Many inhabitants lost their crops and livestock.

See in this 1800s picture how close the river is to Old Town. The majority of the houses were made of adobe (mud bricks) and wood. If you lived during this time, what would be one thing you would be concerned about?

Animals

When people settled in Old Town, many of the animals had to either move to new homes, or learn to live with their new human neighbors. Some actually did exactly that!

See that cute bunny there? That's a Desert Cottontail. You will find them everywhere in Old Town if you come early in the morning. They are thriving here. Can you guess how they adjusted to living in this developed area?

WHAT WE CAN DO

Here are some things we can do to help our ecosystems keep balance. Recycle, not disturb the parks we visit by leaving natural things as they are, and don't feed the animals. It makes them dependent on humans for survival.

Can you think of other things we can do to assist the balance of nature?

REMEMBER

Send in your picture of your completed project on **page 6** of your Junior Ranger Guidebook. Email it to OldTown.SanDiegoSHP@parks.ca.gov.