

What's in a Name?

Roots, Prefixes, and Suffixes

Many plant and animal species have more than one name. Plants and animals in Hawai'i often have at least three—a **scientific name**, a Hawaiian name, and at least one English name.

Scientific Names

Scientists around the world use Latin words to name living **organisms**. They use these ancient, “dead” languages to communicate with each other, regardless of their native tongues. If a Hawaiian biologist names a plant, scientists in Japan, England, and Bolivia can understand the name. Scientific names are universal.

Scientific names usually have three parts:

1. a **prefix** that precedes or goes before the word
2. a **root**, or the main part of the word
3. a **suffix** that goes at the end of the word

This English word has three parts: precooked.

1. What is the prefix? _____
2. What is the root? _____
3. What is the suffix? _____

List three common prefixes of English words and give their meanings.

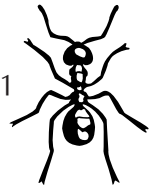
1. _____
2. _____
3. _____

When naming organisms, scientists use a binomial (bi – “two,” nomial – “name”) system. Humans are *Homo sapiens*, which means “wise man.” The term *Homo* is the **genus** name. The word *sapiens* is the **species** name. The genus is always capitalized, but the species name is not. They are both always italicized or underlined.



The native Hawaiian plant pictured is *naupaka kahakai*. Circle the correct spelling of its scientific name:

- a) *Scaevola sericea*
- b) *Scaevola Sericea*
- c) *scaevola sericea*
- d) *Scaevola sericea*



What is the genus name of *Scaevola sericea*? _____

What is the species name of *Scaevola sericea*? _____

Sometimes, an organism is given a name that describes its characteristics. For example, the genus name of *Scaevola* comes from the Greek word *scaevus* meaning left-handed or awkward, perhaps in reference to the “awkward” appearance of the plant’s half-flower. The species name probably refers to the plant’s sericeous (long, slender, silky) hairs growing on its leaves and branches. At other times, a plant is named to honor someone. For example, the endemic *Scaevola gaudichaudii* was named to honor Charles Gaudichaud-Beaupre, a French botanist who collected plants in Hawai‘i in the 1800s.

Prefixes

- a(n) – without
- bi – two
- endo – inside
- exo – outside
- hemi – half
- macro – large
- mono – one
- penta – five
- quad – four
- tri – three
- uni – one

Roots

- alb – white
- brach – arm
- caudum – tail
- cephal – head
- dactyl – finger
- dendro – tree
- gastro – stomach
- gnath – jaw
- homo – same
- hydro – water
- ichthyes – fish
- mana – hand
- melano – black
- morph – form
- osteo – bone
- pod – foot
- pseudo – false
- ptero – wing
- stoma – mouth
- tricho – hair

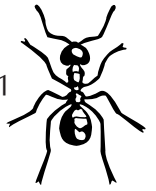
Suffixes

- aceus – resembling
- ensis – country or place of origin
- fer – to carry or bear
- florus – flowered
- folius – leaved
- iscus – lesser
- issimus – very
- ous – full of
- osma – fragrant
- phage – eater

What would be an appropriate scientific name of a three-footed arm-eater?



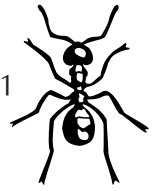
Illustration by Brooke Mahnken



Many, many native Hawaiian insects have yet to be discovered and named. What would you name a newly discovered insect, if you had the choice? Use the above list to name three fictional organisms and give their meanings.

1. _____
2. _____
3. _____

Pick the name you like best from your list and draw the invented organism below. Label and explain the features that will help it get nourishment and protect it from predators.



Common Names: A rose by any other name would smell as sweet...

Some plants have several “common names.” For instance, the plant known as *‘awa* in Hawai‘i is called *kava kava* in Vanuatu and Tonga, *ava* in Samoa, *yangona* in Fiji, and *sakau* in Pohnpei.

In other cases, a common name might refer to several different plants. Fireweed in Hawai‘i is the name of a small, yellow, daisy-like pest. In North America, fireweed is the name of a lovely native purple-flowered herb.

Since common names can vary from place to place, scientists use Latin names. Also called “scientific names,” they are universal, used by everyone regardless of his or her native language.

Hawaiian Names

The ancient Hawaiians were expert botanists. Many of their names for plants and animals also contained important information about how and where the species grows. Like the scientific name, the Hawaiian name for a type of *naupaka* has two parts.

Latin: *Scaevola sericea*

Hawaiian: *naupaka kahakai*

“*Naupaka*” refers to the plant’s half-flower, which represents two lovers in a legend.

“*Kahakai*” means near the ocean, which is where the plant naturally thrives.

The early Hawaiians recognized that *naupaka kahakai* was related to a similar looking plant up in the mountain: *naupaka kuahiwi*. *Kuahiwi* means mountain.

Both plants bears white flowers, sometimes streaked with purple, that look as if they are missing half of their petals.

Hawaiians described the origin of the twin flowers in legend. There are several versions of the *naupaka* tale in Hawaiian folklore, but all concern lovers who are separated forever, one banished to the mountains, the other to the beach.

A legend from Kaua‘i, as told by Jacob Maka of Haena, involves two lovers, Nanau and Kapaka. They broke a *hula kapu* the night before their *‘uniki* (graduation). Wrapped in their *pō‘ele* cloaks, they fled across Limahuli stream, passing Waialoha Spring and Maniniholo Cave. Their angry *kumu* pursued them across the flats of Naue. Reaching Lumaha‘i Beach, the lovers were separated. Nanau scaled the cliffs and Kapaka hid in the beach cave of Ho‘ohila. As the *kumu* approached the cliffs, Kapaka emerged from her cave and blocked the way, hoping to give her lover time to escape. Enraged, the *kumu* struck Kapaka dead and pressed up the cliff, intent on punishing the other disobedient student. Far up the ridge, Nanau heard the screams of Kapaka and turned back to rescue his beloved. The teacher caught him at Pu‘uomanu and struck him mortally. Later that same day, Lumaha‘i fishermen discovered a plant, never before seen, growing on the spot where Kapaka died. The plant had fleshy

