

A little invasive algae goes a long way

Kia'i Moku

By Catherine Berg



Hawaii is at the crossroads of the Pacific Ocean. As a hub for transportation, thousands of vessels come in and

out of Hawaii's ports each year. Ships pose a particular risk to our marine environment because invasive marine organisms can lurk in bilge and ballast water and cling to ships' hulls only to be released upon arrival in Hawaii. Tourists or residents can also move aquatic pests by transporting fouled gear or boats between islands. One example of this risk is invasive algae, which can multiply at disastrous rates, threatening the health of our living reefs and impacting our quality of life.

Outbreaks of invasive algae create thick mats that essentially suffocate our fragile reefs. Coral reefs depend on sunlight to produce food and to grow. Fast-growing alien and invasive algae out-compete the slower growing corals for suitable habitat. Once a coral becomes covered with algae it cannot produce food and starves.

One invasive algae has proven especially problematic in South Maui. *Hypnea musciformis* was intentionally introduced to Kaneohe Bay in 1974 for commercial cultivation. Used in the production of many everyday items from ice cream to toothpaste it seemed like a viable economic opportunity. As a very successful invader, only one small fragment is necessary to start a new population. Unfortunately in only 8 years it had spread to other islands. *Hypnea musciformis* is now found on Oahu, Molokai and Maui.

Hypnea musciformis comprises nearly 2/3 of all the algae that drifts onto windward and leeward beaches of Maui, creating an unsightly and stinky mess and negatively impacting property values as well as tourism. On some coral reefs where *Hypnea musciformis* is found, more than 50% of the reef has been completely covered.



Forest and Kim Starr photo

Fast-growing and invasive alien algae threaten the health of reefs. This picture was taken on Maui's north Shore.

Removing these algae once they become established has proven to be very difficult. Maui recently had a trial run with a smaller version of the "Super Sucker" that has been used in Kaneohe Bay. Essentially an underwater vacuum run by a diver, the Super Sucker is indiscriminate in its harvest, so invasive and native algae are collected. After being sorted out by hand the native algae are returned.

Awareness of the problem is an important part of stopping the spread of invasive algae. Any algae, native or alien, has the potential for explosive growth if transported into a nutrient rich area.

Remember, it only takes a small piece of algae attached to a fishing net, anchor, or snorkel gear to start a whole new population. When snorkeling or diving, make sure you clean your gear with fresh water between sites. If you own a boat, keep a clean ship and schedule regular hull cleanings. Never dump aquarium plants or animals in the ocean or in streams; instead check with your local pet store to see if they will accept them. Only take what you need when fishing. Many of the popular sport fish are algae eaters and are responsible for keeping invasive populations in check.

For more information on invasive marine algae please check out the University of Hawaii's website at www.botany.hawaii.edu/invasive. You can report unusual algal blooms to the Department of Aquatic Resources at 243-5294.

- Catherine Berg is a field crew member for the Maui Invasive Species Committee, or MISC. "Kia'i Moku," (*Guarding the Island*) is prepared by the Maui Invasive Species Committee to provide information on protecting the island from invasive plants and animals that can threaten the island's environment, economy and quality of life. Their phone number is 573-6472.