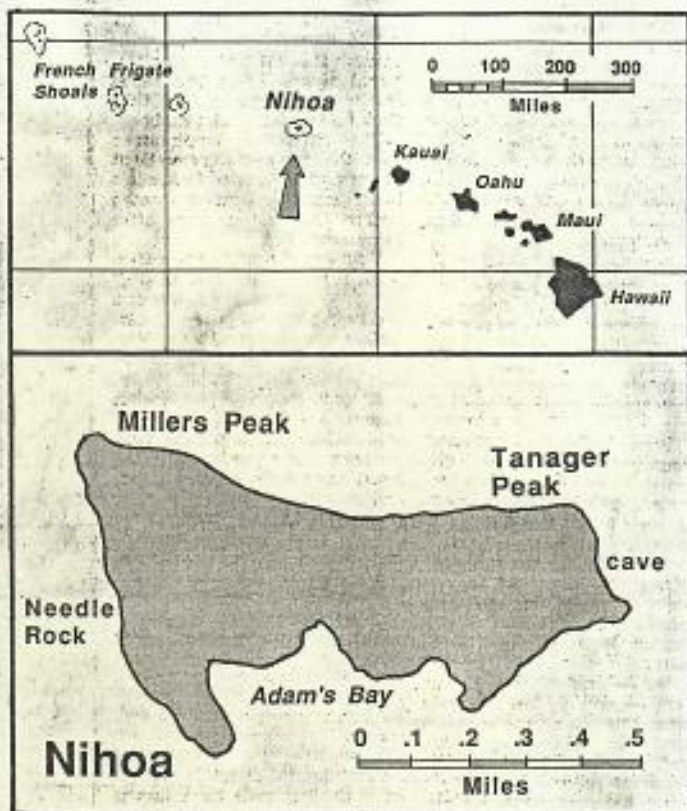




At left, above, is a photo taken of the Tanager Peak portion of Nihoa. At right, a map showing Nihoa and its location in the chain.



For its sprouting, flapping, scurrying life

Nihoa island a world unto itself

There are plenty of special places in Hawaii, but few so special as to have a nearly complete array of native plants, birds and other creatures.

Nihoa island is such a place. This 125-acre chunk of land 150 miles northwest of Kauai hasn't been completely isolated from human contact, and some of its creatures may have become extinct because of such contact, but it's clearly special.

"Nihoa remains biotically the 'gem' of the Northwestern Hawaiian Islands. It may be one of the only places in the entire Hawaiian archipelago where there is a diverse and relatively intact low-elevation dry-land ecosystem, with its complement of native terrestrial plants, arthropods (things like insects, spiders and crabs) and birds," said zoologist Sheila Conant, chairwoman of the University of Hawaii's Department of General Science.

Conant visited the island four times in the early 1980s, and found there are only 26 different kinds of plants on Nihoa, and only five of them are alien species. Four are endemic, meaning they're found no-



Jan
tenbruggencate
staff writer

where else in the world. Among these is the island's only palm, the fan palm *Pritchardia remota*. Seventeen of Nihoa's plants are also found elsewhere, but are believed to have gotten to the island long ago and by natural means rather than by human transmittal.

The island plays host to 17 kinds of seabirds, which use the speck of land for nesting. There are two kinds of land birds found only on Nihoa, the Nihoa finch and the Nihoa millerbird, remnants of Nihoa's distant past as a much larger island.

Conant said the finch is a relative of the Hawaiian honeycreepers, and the millerbird is an "Old World-type warbler, but its call isn't very melodic."

There are six land snails, and at least 35 insects and spiders found nowhere else, and which still have-

n't been fully studied by scientists.

People lived here once, that's clear from the many agricultural terraces, stone house sites, and the fishhooks and idols that have been found on the island. Archaeologists are fascinated by artifacts that indicate the society here was somewhat distinct from that in the main Hawaiian Islands. By the time Europeans visited the islands, Nihoa had become a place known only in legend, and it was rediscovered in the mid-1800s.

Nihoa today forms the southeastern end of the Hawaiian Islands National Wildlife Refuge, which includes all of the Northwestern Hawaiian Islands except Midway and Kure Atoll.

Nihoa is no paradise. There isn't a great deal of shade, and its few springs provide water that's acrid and barely drinkable, apparently because it's contaminated by the guano from the thousands of seabirds that nest there. No matter which kin of Hawaii's people lived here, the stay was relatively brief, Conant said, and it left Nihoa with most of its unique qualities.

"The scientific value of the island is outstanding," Conant said.

One of the studies possible on a very small island with a relatively intact biology is to get a nearly complete biological picture of an organism. With the small size, and the limited number of creatures, it might be possible to get an understanding of how each of the creatures interacts with the others, in a way impossible in larger places with more variables, she said.

Too, it can be a good place to study the effects of limited resources on creatures. For instance, there are about 300 millerbirds and 1,500 finches. In a good breeding season, the numbers might rise dramatically, but the limiting factors bring it back down. Perhaps food limits them, or perhaps overcrowding, perhaps something else.

It's the kind of study that might be useful to humanity as population increases along with competition for resources.

Nihoa, the stub of an ancient volcano, has 155 miles beyond it a still-smaller islet, Necker, at 67 acres. Conant said Necker has only five species of plants and no aliens. It might be a good place for studies, except that it's so steep and difficult to land there that it's hard to carry on scientific studies, she said.