

"MAKAHA" — R.I.P.



Photo: Schoenberg

By OLIVE SCHOENBERG

I found a baby textile cone at Makaha, the district in Leeward Oahu (Honolulu) famous for its championship surfing, in November 1967. It was among small pieces of rubble in a few meters of water, and it measured 25mm.

I brought "Makaha" home and put it in my saltwater aquarium as company for my bigger textile, "Haleiwa." (as you can easily guess, I had found the older shell at Haleiwa, on Oahu's North Shore.) "Makaha" promptly dived into the sand and I didn't see it again for months. When it reappeared it had grown to about 40mm.

It continued to grow, eating dozens and dozens of live shell goodies I had brought from my diving and snorkeling forays.

"Makaha" was put it in my saltwater aquarium as company for my bigger textile, "Haleiwa." (as you can easily guess, I had found the older shell at Haleiwa, on Oahu's North Shore.) "Makaha" promptly dived into the sand and I didn't see it again for months. When it reappeared it had grown to about 40mm.

Then she gave up and retired to a life of eating, resting and growing.

Twice I displayed "Makaha" in HMS Shell Shows, once when she was 10 years old and a second time in 1979 when she was 12. She enjoyed every minute of it, especially the part where she showed how she captured her food. Her fans loved it.

As a youngster, "Makaha" was beautiful. Her shell was clean and bright, and the brown tent markings against the white background were outstanding. But the years took their toll. Her shell became less and less attractive. Algae and other material grew on her dorsum. A deep crack appeared in her shell.

She started to lose weight. She became so lethargic that I would have to put a live shell directly in front of her before she would put a dart into it to kill and eat it. Finally she refused all food. She pulled her foot inside her old shell and just "went to sleep."

When I realized in May 1980 that "Makaha" was dead, she was about 13 years old. The last twelve and a half years of her life had been spent in my home.

Look What's Hiding In The Pinna Beds

By WES THORSSON

Each year appears to bring significant changes to the *Pinna* beds situated off the leeward shores of the Hawaiian islands. Not only are the pen-shells themselves subject to periods of prosperity and poverty as a consequence of weather and other stresses, but the animals that live in and around the beds go through fluctuations, also.

The pen-shell beds in Honolulu's Maunalua Bay, for example, yielded about 20 *Terebra pertusa* (Born) to my diving partner, Ray McKinsey, and me in 1978. Previously, the species had been very scarce. During the winter of 1979-80, however, we found no adult *T. pertusa* at all, and only one or two juveniles. The species is a normal resident of the small open-sand areas among the broad *Pinna* beds on flat sandy bottoms. (Juvenile *T. affinis* Gray usually are quite common in the same area.)

Until 1979 we had found only one live specimen of Hawaii's endemic *Strombus helli* Kiener — at Haleiwa on Oahu's North Shore in about 90 feet



Strombus helli

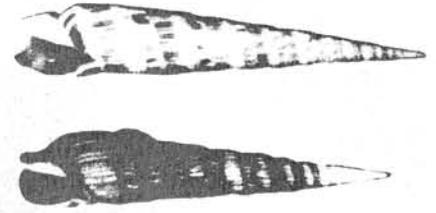
Photo: Schoenberg

among weed on a rock bottom. Many crabbed *S. helli* shells turned up, however, faded to white from their normal light tan with white spots and purple aperture.

Now, in Maunalua Bay, we discovered that if we fanned a sand area with broken *Pinna* shells we could find an occasional *S. helli* among the broken shells. Their lighter ventral side made them visible. When undisturbed, their alga-covered dorsum blends almost perfectly with their background.

Anyhow, after a measure of success in finding *S. helli* with the fanning technique, the day finally dawned when we started fanning the living *Pinna* bed and soon found live *helli* there. It was attached to a pen-shell about half an inch below the sand surface. Since we discovered their habitat we have found several more there, although they remain scarce and hard to detect.

While looking for the *S. helli*, we sometimes find *Costellaria pacificum* Reeve in the *Pinna* area. Two or three specimens in a day is our usual quota. In mid-March 1980, however, while lightly fanning sand among some dead and broken pen-shells, I discovered a globular mass of *C. pacificum*. Looking closer, I realized 10 or 12 shells were clinging



Terebra thaunumi
T. gouldi

Photo: Salisbury

to the aperture side of a dead *Cymatium nicobaricum* Roding. Two more miters were nearby.

About 10 feet away was an identical assembly of *C. pacificum*, also massed on a dead *Cymatium nicobaricum*. Whether the gathering was a community pot-luck supper or fertility rites, we left them alone to enjoy. We hunted all around the spot, hoping to find congregations of other species — possibly even some endemic *Strombus vomer hawaiiensis* Pilsbry — but to no avail. *C. pacificum* were present in unusual numbers, however.

Occasionally, when I fan down through the sand for a foot or so between *Pinna* colonies, I find *Tellina crucigera* Lamarck and *T. perna* (Spengler). There is no surface indication of their presence. No wonder we rarely find them alive!

Small white *T. robusta* (Hanley) are fairly common nearer the surface.

We saw more shells attached to *Pinna* off Waikiki than in Maunalua Bay. A few appeared to be boring predators, but it seems likely that most merely were seeking a firm foothold during the winter storms.

In open patches between *Pinna* beds we often see mounds of loose sand about 20cm high, or coils of sand bound by mucus. Fanning the sand away we sometimes find *Terebra thaunumi* Pilsbry, *T. gouldi* Deshayes or (particularly off Waikiki) *T. achates* Weaver and *T. subulata* (Linne).

Fanning deeper, we encounter a firmly shaped hole with a yellow flat wormlike tube about 3cm in diameter rapidly disappearing. We never have been able to fan the sand away deep enough and fast enough to see the whole animal.

It perhaps is significant that we have seen no *Pinna* beds in the Haleiwa area on Oahu's North Shore, although we have spent a substantial amount of time in the sandy patches there at about the same depths as in the productive Maunalua Bay and Waikiki beds. Our diving at Haleiwa is limited to the summer, when the famous big surf is down. I suspect that the heavy surf prevents the formation of viable *Pinna* beds at scuba depths. We occasionally bring up a few pen-shells when dredging in sand at 100 to 400 feet, but *Pinna* obviously do not find the windward side of the island congenial.