

FEATURES

Sea hunt in Utah desert

The complex of warm salt water springs operated by George Saunders and Linda Nelson offers scuba lessons, snorkeling, flights over the desert and stargazing parties

BY STEPHEN REGENOLD
NY TIMES NEWS SERVICE, NEW YORK

◀ An aerial view of Bonneville Seabase in the desert near Grantsville, Utah. Coaxing aquatic life in an ersatz ocean was not an easy task for Bonneville Seabase's owners.

PHOTO: NY TIMES NEWS SERVICE



◀ Divers survey one of Bonneville Seabase's three saltwater pools. In the depths of one of the pools lurk two nurse sharks, among thousands of other fish.

PHOTO: NY TIMES NEWS SERVICE



Frozen squid was on the menu. Sardines, silver-skinned and dusted with frost, were already sliced up and on a plate. It was just after sunrise on a cool morning last month, time to feed the fish at the Bonneville Seabase, an aquatic center in, of all places, the desert outside Grantsville, Utah.

"Hope the sharks are hungry," said Lynn Findlay, an employee, his hand outstretched and clenching raw meat. In the water below, from the pit of a saltwater spring called Habitat Bay, dark shapes were emerging from the deep.

Thousands of fish — from flitting minnows to a pair of 2.7m-long nurse sharks — live in the murky waters at Bonneville Seabase, an independent experiment in marine biology started 20 years ago by George Saunders and Linda Nelson, husband-and-wife scuba divers from Salt Lake City. After years of development costing them about US\$1 million, they have created a private tropical-fish preserve off an empty road at 1,308m in a valley about 16km south of the Great Salt Lake.

It's open to snorkelers and scuba divers four days a week, year round, for US\$15 a day.

'THE SHARKS WON'T BITE'

"We call it an interactive aquarium," said Nelson, 62, a Utah native who, with her husband, 68, also runs a dive shop in Salt Lake City. "The sharks won't bite unless you pull their tails."

Seabase is little known in the diving world, but Patric Douglas, a shark expert, guide and commercial diver in San Francisco, sees it as a pioneer in a movement to create artificial environments where divers can swim with big fish that are increasingly rare in the wild. Resorts, casinos and public aquariums have begun investigating Seabase-like facilities, he said.

For now, divers like Todd Gardner, 38, of Riverhead, New York, travel to Bonneville Seabase to swim with tropical species from around the world in an environment that can be fully explored in a couple of hours. "You forget where you are," said Gardner, who works at Atlantis Marine World in Riverhead.

He described feeding tropical fish out of his hand at Seabase and then surfacing to winter weather. "It was snowing in the desert and I was scuba diving," he said.

A former chemist, Nelson came up with the concept of stocking desert springs with ocean fish in the 1980s. After analyzing salinity levels, she and Saunders bought 24 hectares from the town of Grantsville, including three warm-spring basins that receive water naturally from the ancient salt beds of prehistoric Lake Bonneville, which

once covered the region.

"Our water doesn't have enough magnesium or sulfate compared to the ocean, and the pH is too low, but the fish are doing fine," Nelson said.

Living in the Seabase waters are snappers, several kinds of angelfish and butterflyfish, silver seats, mono argents and more.

During the morning feeding, I watched aggressive Crevalle jacks swoop up to nab bits of chopped fish, whipping their tails and then disappearing back into the depths. But the sharks — two males adopted 10 years ago after outgrowing residential aquariums — never surfaced. "They don't like the cold weather," Findlay said.

To see the sharks, I'd have to jump in. I suited up and popped a regulator in my mouth, waddling to the water's edge in a 7mm wet suit with weights around my ankles and waist.

"No squealing when you get in," said Lori Fox, my instructor and guide. "You'll feel a cold rush of water down your back."

Coaxing aquatic life in an ersatz ocean didn't come easy for Nelson and Saunders, world-traveling divers and self-taught ichthyologists. Coral couldn't grow in the salty springs. Mussels died. Algae blooms, a constant problem, spread uncontrollably in the warm geothermic water, which is 32°C at the bottom but is cooled by the air at the surface.

AQUATIC EQUILIBRIUM

Last winter, a stock of 10,000 shrimp were introduced to Habitat Bay, a 0.2 hectare pool that's 7.3m deep. A flock of hundreds of ducks living in wetlands south of the Great Salt Lake soon discovered them. "They ate them all," Nelson said.

But after years of experimentation, an equilibrium has been accomplished at Seabase, which keeps three pools open for diving, including the Abyss, an 18m-deep hole that required thousands of hours of work with industrial cranes to dredge out in the desert. Of the dozens of species introduced, a handful have adapted to this high-altitude home, growing, reproducing and living for years in an ocean ecosystem 965km from the Pacific Coast.

"It's a vision from the future of diving," said Douglas, the shark expert, alluding to environmental changes. "You used to be able to zip to the Florida Keys and see pristine reefs and stunning sea life, but it's no longer that easy."

Local residents make up most of Seabase's 1,500 to 2,000 annual visitors, including regulars from area dive clubs and people seeking scuba certification before trips to Cozumel or the Caribbean. Masks, air tanks, fins and wet suits are for rent in the main building. Divers top off

their tanks at a refilling station on a sidewalk next to the communal shower room.

Chris Westover, 37, a manager at a ski area near Ogden, Utah, snorkeled for an hour on the morning of my visit. He came with a friend to try something new. "It's the last Sunday in October and I'm snorkeling in the desert," he said. "This is a better idea than the breakfast buffet."

Westover took a head of romaine lettuce with him underwater. He held it out and fed tropical fish. The water was murky and cold, but he said, "we saw an angelfish."

Before suiting up for my dive, I walked out a few hundred meters into the desert for a wider perspective. Mountains rose up in the west. A pickup truck roared by 1.5km away on a country road.

THE END OF THE EARTH

Seabase — a mishmash of sheds, trailer homes, Quonset huts, construction equipment, camper trailers, ponds with polycarbonate covers, two telescope observatories and an airplane hangar — looked like a settlement on Mars. Wind kicked dust off the flat land. There was an end-of-the-earth feeling, with no noise and little life.

When I returned to Seabase, Sanders pointed to a hilltop and told me it was the home of a hermit who once loaded a truck with barrels of fuel in anticipation of the apocalypse. The hermit used dynamite to clear a road and now keeps large-caliber guns on the hill. "He's an enterprising young fellow," Sanders said.

Lew Ershler, who runs a powered-parachute flight program out of the airplane hangar on the site, mentioned a polygamist settlement in the hills across State Highway 138.

Underwater, things were even stranger. At 10am I climbed down a ladder, weighted with 23kg of scuba gear, following my guide into the murk. Bits of squid still floated on the surface, unateen ringlets from the morning feed. "Swim with me out to the white pole," Fox said, turning to glide away.

We paddled 15m, heads out of the water with dive masks on. The pool, called White Rocks Bay, was capped under a polycarbonate roof to retain warmth in the wintertime (the outside gets down to freezing temperatures), creating a claustrophobic cave.

"Keep close," Fox said. "I'll have a hand on you." She pressed a button on her buoyancy compensator, air wheezing out of the flotation lung. I did the same, and we sank down along the pole, my bare hand clutching white metal coated in slime.

At the bottom, 4m down, a rocky seabed stirred with dust. I kicked to swim and sediment mushroomed up,

clouding the water to almost black. Small fish swam by, amorphous little blips. I saw dark shapes and shadows, but bubbles and dust confounded my view.

In two minutes, Fox tugged on my arm. She pointed skyward, and I followed her back to the surface by the white pole.

"You were right on top of the shark!" she said, spitting out her regulator to talk. "I had to almost pull you off of him."

Unknowingly, I'd hovered a few centimeters over a shark's back while scanning the bottom and following an angelfish. The shark was resting in the rocks, its blood sluggish in the 32°C water.

Back in the depths, swimming gingerly to keep the dust storm down, I followed my guide to find our cartilaginous friend. Fox again tugged at my arm, signaling toward an underwater ledge.

FEEDING TIME

I reached out to the black shape and touched a surface squishy and rough, like sandpaper waterlogged and coated in goo. I evened my breathing, the bubbles slowing down, and a spike appeared in focus, a triangle fin contrasting with the brown water. It was the dorsal fin of a nurse shark. The creature was dead still, seemingly asleep — a 2.7m-long fish fading away in algae and sediment, its head unseen.

Visibility is the Achilles' heel at Seabase. Desert storms, wind, blooming algae and thousands of stirring fish make a mix that some days resembles pea soup. On my dive, visibility was about 1.4m; the best days, according to Nelson, let sunlight cut 6m through the water.

I gave the shark a final touch and stroked away, kicking carefully.

I was carrying a stalk of romaine that Fox had given me to feed the fish. For the few minutes that I tried, nothing bit. The leafy head was deteriorating as I swam, and before we left the water, I dropped the lettuce into the depths.

"What do you think of this place?" Fox asked, smiling, as I stood dripping on concrete. The water stirred below me, a school of minnows pecking bits. I looked up and told Fox it was unlike any place I'd ever been before.

Outside, a group of Seabase regulars were grilling hot dogs. There was music and laughter as old friends talked scuba diving. Charcoal smoke seeped up to where I was standing, a smell of ash mixing with musty aquarium air.

A bit farther away, bubbles swirled in a pool, water upstirred with lines and ripples. The fish were stirring in their desert home. The sharks were quiet, still sleeping in the deep.

On the Net: www.seabase.net