PROFILE

JIM FINCH

California abalone diver faces trying times

USING HOOKAH gear, mandatory equipment for commercial divers, consisting of air compressor, length of hose, and regulator, Jim Finch gets set for a trip to the bottom.

D.B. PLESCHNER

"We usually go out in good weather and run home in bad," Jim Finch yells over the blare of the weather scanner. Easing his 26-foot Radon boat out of Santa Barbara harbor, he begins the run across the channel, destination San Nicolas Island, a barren lump of land nearly 80 miles off the Southern California coast. He has waited over a week for the wind to die and the sea to lay down, waited impatiently to return to work.

For Finch, work means diving abalone. Jim is one of 175 permit-regulated commercial divers in California's limited-entry abalone fishery. With over 20 years' experience at age 39, he belongs to a unique brotherhood of fishermen. Aside from small production in Alaska, California seas provide the only native commercial abalone harvest in the United States.

Seven species of the giant sea snails live in the ocean bordering California. Four comprise the major commercial catch: pinks, greens, blacks, and reds. Red abalone, found only between southern Oregon and Baja California, are the largest of some 65 species encountered in rocky nearshore habitat throughout much of the world. (The east coast of North and South America is the only major land mass without a native supply.) Reds are the traditional mainstay of California's abalone industry, serving the restaurant steak market. As the top dollar abalone, now bringing in $12 a processed pound to the fisherman (averaging $100 a dozen) and $18 to $20 a pound wholesale, reds are also the most expensive shellfish in the Golden State.

The succulent mollusks have been a prized market item since the turn of the century, the beginning of this diving fishery. But today California's abalone industry is beset with problems. Modernized gear and increased demand are taking their toll of slow-growing abalone stocks that normally require 7 to 10 years to reach legal size. Perhaps the most telling problem, however, is the impact from sea otter predation.

D.B. PLESCHNER

A LIVE WELL FULL of red abalone is a bonanza at today's prices, averaging $100 a dozen ex-vessel. A commercial legal red, at 7¾ inches, may be 8-10 years old.

JIM FINCH

From the early 1900s until the 1960s, statewide abalone production averaged 4 million pounds a year. At least half of that poundage was reds, most of it harvested along the central coast outside Morro Bay, once the hub of the fishery. But a small herd of sea otters, survivors of the 19th century fur trade, made a remarkable comeback from near extinction along the central coast. With voracious appetites for 40 different shellfish species, otters expanded into the state's most prolific red abalone beds, decimating resources that had sustained the abalone industry for 50 years. California Department of Fish & Game biologists documented the loss, estimating that a single adult otter consumed about 2½ tons of shellfish per year. By the early 1970s, close to 300 otters were observed foraging the reefs outside Morro Bay, and the entire herd numbered approximately 1,500 animals. Soon afterward, the Morro Bay fishery was forced to shut down.

As a result, the commercial diving center shifted south to Santa Barbara. Finch beat the rush, arriving in 1967. Today he works a fishery that is worlds away from its beginnings, where a good day's catch numbers five dozen instead of 50 or 100 dozen. Divers no longer pick abalone by feel, as they could during the industry's heyday. Nor do they wear the weighty, cumbersome hard-hat gear used by their forebearers. Today's fishery is streamlined. Fast boats, compact air compressors, and lightweight wetsuits afford divers a freedom they never had before. They need it. Abalone are hard to come by these days.

The lion's share of the commercial catch now comes from Southern California, most of it from the Channel Islands and San Nicolas. Total fishery production in 1982 approximated 1,100,000 pounds, of which only 363,000 pounds were reds.

Natural forces and overfishing, rather than sea otters, have caused the islands' decline. Few spots in Southern California have been able to withstand continued picking pressure and regenerate legal abalone to the degree characteristic of the central coast. Few rapid-growth red abalone spots remain for commercial harvest. But one of them is San Nicolas, gateway to the Channel Islands. That's why Finch is going. He is an old-time, red abalone fisherman. Like many other divers, he makes his living from San Nic.

Across the channel in a quick hour-and-a-half, Finch breaks for San Nicolas, still over two hours away by 18-knot boat. In the past, working from the lumbering craft of the day, divers could harvest San Nicolas only in stretches of good weather. Then they lost a full day traveling to the island. Finch's *Port Flush* cuts that time in half. His Radon is a prototype of today's sleek abalone boats, built especially for diving. These boats revolutionized the fishery.

With gunwales a bare 3 feet from the waterline, a cramped 9x8 foot cabin, about 12 feet of deck snaked with air hose, and an engine compartment, the *Port Flush* is spartan in comforts, expecially considering that an average trip lasts three to five days. Wood-hulled, it still bucks the waves like a renegade bronc. Finch takes the pounding, standing slack-kneed at the wheel, as a matter of course. Newer boats are molded of fiberglass to increase speed and save fuel. They bounce so hard in heavy seas that many divers wear kidney belts to protect themselves from abuse. The men rarely leave port in foul weather, averaging 14 workdays a month with off-seasons in February and August. But every diver has met the unexpected storm.

Finch begins to suspect the weather report when he is an hour from landfall and the swell picks up. Oily, 7-foot sets roll across the ocean as he anchors in a vast kelp bed in the foul area at San Nicolas. The fathometer marks the bottom at 70 feet as he dresses in, donning a custom-made, quarter-inch neoprene wetsuit and thinner rubber vest for extra warmth.

He starts his air compressor, a vital component in the hookah gear required for commercial diving. It is connected to a beer keg reserve tank that he uses as an emergency air supply. He snaps his regulator, a second-stage Scubapro he picked up at the flea market, onto its hose connector, which is linked to 600 feet of air hose. Then he straps on fins, mask, and about 15 pounds of lead.

Slipping on the decompression meter most commercial divers wear to measure their days and record bottom time, grabbing abalone bar and net bag, he rolls over the side. Ten feet down, he disappears. He is gone for almost 45 minutes, swimming the reefs, exploring the ledges where he pries off his catch.

He returns with three reds; they barely hit the miking bar at 7¾ inches, commercial legal size. He scans the horizon, studies the lay of the kelp, then points. "There used to be a nice reef over there," he says. He pulls anchor and moves to a spot he somehow recognizes in the acres of identical-looking kelp fronds. He disappears for another half-hour into the 50-degree murk, returning with eight reds, which he measures and stows in a live well, one of the four set into the deck.

> *"IF OTTERS HIT San Nic, they'll wind up at all the Channel Islands. Within five years, the abalone industry will be gone..." —Mike Wagner*

After this trip Finch rests topside for almost an hour, waiting for his meter needle to drop well below the red line, the danger zone beyond which he must decompress underwater or suffer the bends at that depth. Most divers avoid the need to decompress after a deep dive, expelling the accumulated nitrogen in their bloodstreams by swimming back to the boat just under the surface and working progressively shallower bottom. Finch moves to a shallower reef, and moves again, as the wind begins to howl and mountains of water slop over themselves and splash the compressor.

The sky has darkened, hiding the island in soupy fog, when Finch swings aboard at last. He has made six jumps and has swum the bottom for three hours. He has 15 abalone to show for the effort. He figures he needs three dozen to pay fuel expenses for the trip. So he runs for the scant protection the island affords, there being no safe anchorage at San Nicolas. He is prepared to wait out the blow; he brought provisions for a five-day trip. He spends four of them hanging on the hook, catching up on his reading and contemplating the future.

The fishery was at its zenith when Finch entered it in 1961. Growing up around Morro Bay, he thought abalone diving was a swashbuckling way of life. Now he chuckles at his reasoning, saying, "I thought I could retire in five years and live off the interest." The chance to earn big money has always been there. But even when the ocean was full of abalone, divers quickly learned it was no easy feat spotting them underwater. The elusive mollusks are usually clamped to the undersides of rocks, so covered with growth that the only clue to their presence is their gill holes.

Opened to commercial harvest after World War II, the Channel Islands were still producing gunwale-sagging loads of abalone when Finch migrated south. But in the last 10 years, with the proliferation of fast boats affording easy access, the area has suffered nearly continuous picking pressure.

Size limits were set to perpetuate a sustained yield harvest, but as Finch points out, "You need a lot of abalone to have a successful spawn." Commercial divers believe that sport size limits, 7 inches for reds, are too low. The dramatic surge in sport abalone harvesting, they feel, is removing too many animals at the height of their spawning cycle, limiting the chance for the resource to renew itself.

Natural forces also play a key role in the abalone supply. Ripping currents around the islands carry spawn to unseen places. In addition, kelp grazers like abalone face the whims of unseasonal changes in water temperature, affecting kelp production. The disastrous storms last winter, caused by an abnormal warm-water phenomenon called "El Nino," ripped out kelp beds and scoured the bottom, tearing abalone off their rocks. If the warm-water cycle persists, kelp will not grow and abalone may starve. Divers are now seeing emaciated abalone, although normally abalone put on meat during the cold-water winter months.

Finch thinks there is a changing oceanic cycle at work around the islands. He has seen the bottom thrive, then die, and return to life again. This instability makes abalone diving catch-as-catch-can work. Usually it's an all-day anchor drill in depths from the shallows to 120 feet or more, in conditions sometimes so murky a diver can barely see his outstretched hand. But spots that divers once called dead are now producing a lot of abalone. Every diver lives with the secret hope that he'll find a hot spot under the next reef. One diver did two years ago, hauling in 130 dozen reds in three trips, making about $11,000 in two weeks.

Seasoned divers like Finch know the

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ocean floor better than the street maps of their hometowns. In a nearshore blooming with kelp-covered reefs, they know where to find the "short beds," abalone nurseries. They know which reefs should be ripe for picking, since abalone rarely move out of an area. Indeed, some animals have been seen on the same rock for years at a stretch.

Each abalone species has habitat preferences. Pinks seem to prefer sheltered coves. Greens grow around the southern islands and south coast. Reds like active wave action and are found mainly along the coast north of Santa Barbara, the northern Channel Islands, and San Nicolas, although part of the catch comes from Half Moon Bay and the Farallon Islands. Blacks are basically intertidal abalone, extending out to depths approaching 20 feet.

Unlike Finch, who is a red specialist, many divers specialize in blacks. In fact, in 1982 blacks accounted for just over half of the statewide commerical catch. Divers in the black fishery harvest a smaller species (5¾ inches commercial size) sold live in the shell to the Oriental market. Blacks are more abundant than reds, and divers are limited to daily quotas of 20 dozen. But even at the reduced price of $25 to $30 a dozen, they consistently turn a profit.

Divers don't have to worry about decompressing when they work in shallow water. Instead they labor in roiling surf, blinded by rolling clouds of sand. CDF&G regulations prohibit commercial harvest in less than 20 feet of water in some areas, a political law that divers are fighting to overturn. But even at 20 feet, divers can be bulldozed by ground swells, so even the black fishery exacts its pound of flesh.

Still, the job and the life have rewards, not all of them financial. Divers relish the chance to face the elements on a one-to-one basis, not only on the sea but beneath it. They know more about the ocean than most scientists, and that knowledge gives them satisfaction. To be sure, there are risks and dangers. Every diver can recount tales of horror—shark attacks, sudden loss of air supply demanding free ascent from depths averaging 70 feet, a long way up on one lungful. All abalone divers suffer the bends at one time or another. But these risks are all in a day's work, outweighed by the chance to live at sea and pay the way.

J I M F I N C H

> *"THERE'S GOT TO be proper management. Forget the politics and get to management. The resource needs protection."*
> *—Jim Finch*

Divers can minimize the risks by diving in tandem. A common arrangement called split diving finds two divers working from a boat. One tends line at the surface while the other swims the bottom, and the two switch roles when the first diver "red-lines" his meter, running it into the decompression zone. In these cases, the guest diver normally pays the boat owner a percentage of his catch.

Some divers hire a non-diving line tender to pull hose, anchor, reanchor, even cook—saving the diver's energy for productive work. Whatever the agreement, there is no set pattern to a commercial diver's routine. Faces change; the only constant is the diver's knowledge, built on experience. And there's always the hope that he'll find the next hot spot before anyone else.

Finch usually dives alone, scratching it out. He is one of the most widely respected divers in the industry, and one of its spokesmen as treasurer of the California Abalone Association, representing most of the fishery's divers. He and Rudy Mangue, longstanding president of CAA and another 20-year veteran diver, have lobbied eloquently for reforms to save the fishery.

CAA spearheaded legislation for a limited-entry lottery, requiring divers to register 20 landings of two dozen each or 6,000 pounds a year to keep their permits. Mangue and Finch also won a battle requiring sport divers to use a commercial-type abalone bar, a more efficient prying tool and measuring device. Accidental short picking and bar cutting are common pitfalls of the inexperienced abalone diver. Bar cutting is a serious problem because abalone are hemophiliacs. Once cut, they often bleed to death.

Further, fishery spokesmen are co-

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D.B. PLESCHNER

WORKING IN A 15-foot swell, commercial divers prepare to restock a reef with baby abalone in the bottom-lease mariculture program.

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operating with the CDF&G to stop poaching, a lucrative proposition with the price of abalone so high. More than a few divers have seen the effects of piracy, waiting months for abalone beds to mature, then returning only to find them stripped clean. In 1981 a Santa Barbara processor was caught marketing over $200,000 worth of illegal abalone from the north coast, an area off limits to commercial harvest. Legitimate processors and commercial divers took a financial beating as restaurants stocked up on the cheaper product and stopped buying from fish dealers. Says Mike Wagner, the largest abalone processor in Santa Barbara, "We'll never get that business back."

The recession has also forced many restaurants to drop abalone from the menu entirely. Wagner adds that the market is better now, since foul weather curtailed abalone harvesting and fish dealers have been able to move their backlogged stock. But bootlegging is still a problem with no resolution in sight.

Despite the gloomy outlook, the resource and fishery raise hopes. The most exciting prospect involves open-ocean mariculture. Under bottom lease agreements authorized by the state, commercial divers have begun reseeding worked-out reefs with hatchery-spawned abalone. In fact, Mangue came mask to jaws with a thousand-pound white shark looking for CAA's bottom lease site. But the association has planted over 2,500 juveniles in its initial efforts. Several divers now operate their own leases. One of the first lies near the foul area at San Nicolas.

Reseeding is expensive, and the results won't be visible for several years. But if the young abalone survive, divers will be able to harvest a percentage at 5 inches, establishing a new market while enchancing the resource. CDF&G experiments, begun during 1979 in cooperation with commercial divers, confirm that the program can work. Mangue and Finch believe reseeding is the hope of the future. Mangue declares, "With our knowledge of the resource, we can make abalone one of the basic foods of California— not a luxury but a staple."

The biggest drawback to success is continued sea otter expansion. Mangue, who often works the coast north of Santa Barbara in a 16-foot skiff and operates a bottom lease there, has seen a vanguard of otters foraging the area. Another victim of the Morro Bay fishery shutdown, he exclaims, "First you see one broken shell, then five. Then it's gone. Inch by inch, the whole resource is gone."

Sea otters have been fully protected by law since the early 1900s. In a decision contested by the CDF&G, California's otters were also listed as threatened under the Endangered Species Act in 1977. The act transferred authority to the U.S. Fish and Wildlife Service and denied the state the opportunity to implement a management program.

FWS officials believe that the otter herd, now numbering an estimated 1,800 animals, is jeopardized by a catastrophic oil spill. The agency is planning to translocate about 200 otters to alleviate the threat and enhance population growth. The translocation site receiving the most attention is San Nicolas Island.

San Nicolas yields almost a quarter of the commercial abalone catch, most of which is reds. Further, ironically, the oil spill threat near the island is the greatest of any site under study, including the central coast. Nevertheless, FWS has nearly completed San Nicolas baseline research, at a cost approaching $500,000. Commercial divers feel the emphasis on San Nicolas is politically inspired, an attempt to halt expanding oil development. They are fighting the proposed translocation, but they face a highly emotional battle.

Public support for unlimited otter expansion (and a San Nicolas translocation) is widespread. Environmentalists are now pushing to increase protection for California's otters by listing them as endangered. Meanwhile, a diver-inspired group called Save Our Shellfish is amassing support for sea otter management. The controversy remains stalemated, and time is a critical factor. Left alone, otters may reach the islands in a few years. Under the FWS plan, they may arrive sooner.

Throughout the 25-year conflict, divers have complained that sea otters don't observe size limits. CDF&G advocates a multiple-use concept setting aside parts of the coast for otters and other areas for shellfising. The zonal management plan is recognized in federal circles, but under present law, the state cannot recover management authority while the herd remains on the threatened list.

Concerned for the shellfish market, Mike Wagner forecasts, "If otters hit San Nic, they'll wind up at all the Channel Islands. Within five years, the abalone industry will be gone—and not only abalone but lobster, rock crab, and sea urchin." In 1980, the combined value of the four shellfisheries in Southern California totaled an estimated $45,000,000.

Hanging on the hook at San Nicolas, polishing off the last of his provisions, Finch exclaims, "The poundage is down but the economics are still here. It's just stupid to throw that away. What we're talking about is preserving not only abalone but all shellfish—preserving a food source." Pounding the bunk with his fist, he adds, "There's got to be proper management. Forget the politics and get to management. The resource needs protection."

He returns to work the next day. The wind is still but a fair swell continues to roll as he jumps over another reef he hasn't worked for awhile. He hauls in over four dozen reds before noon. He works three more days, living off the ocean. The wind picks up again his tenth day at sea, but he hits another little area. Pushing for one more meter before sundown, he takes an uncharacteristic risk. He can feel the ache beginning on his swim to the surface, a dull throbbing pain in his joints. Still, he fails to hang off and by dark he is pacing the deck, unable to sleep.

His shoulder, crippled from the bends, nags him on the long bumpy ride home. The pain is intense for a week afterward, but he laughs it off. "I knew better than to pull a stunt like that," he says. "It was just basic greed." Altogether, he scored almost 20 dozen abalone, a good trip despite the frustration. Recalling the spots he hit, his eyes light up. "That was fun," he says softly. Hardship, frustration, politics notwithstanding, that reward, and the challenge, bring him back.

by D.B. Pleschner

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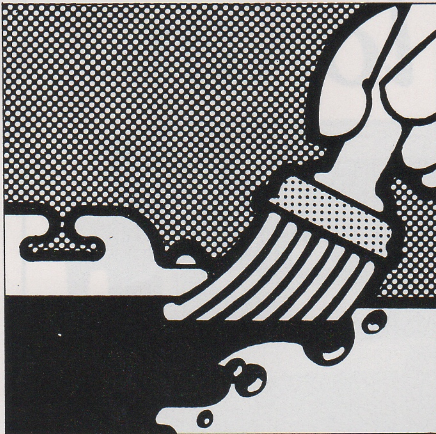
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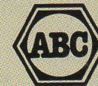

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