



Fish ranchers Thomas Tisch and T. Roger Hass use fencing to move scores of fish in pond to spawning shed

FISH RETURN FROM SEA

First Steelhead, Salmon 'Ranch'

By BOB LIGON
Staff Writer

SANTA CRUZ — Two pioneer fish ranchers have staked a claim here that could well push the western frontier right out into the Pacific Ocean.

They've started the world's only commercial salmon and steelhead ranch — a unique method of harvesting, yet preserving, these creatures of the deep.

The fish are even "branded" on dry land before being let loose to roam the ocean.

The ranchers are Thomas A. Tisch and T. Roger Haas, partners in Silver King Oceanic Farms, Inc.

Tisch, a biologist, and Haas, an agriculture-business major, started the venture three years ago and this year got their first crop, 5,000 silver salmon and 250 steelhead.

They intend to level off their herd at 50,000 fish annually.

Works like this:

Fish spawn in the firm's hatchery in Scotts Valley. When they get to be finger length, they're transported to the firm's fish corral near the mouth of Waddell Creek,

on the coast 17 miles north of here.

Finally, they are set out to pasture in the whole Pacific. After three to four years, for reasons not fully understood, they come high-tailing it back to the home stream to spawn.

Once corralled again, they are relieved of their eggs to insure a new generation and the adults are then sold commercially.

The end result is that they are many more salmon and steelhead in the ocean than there would be if the fish had spawned naturally.

The California Fish and Game Department is overseeing the operation. Special state legislation was adopted to try out the technique as a possible conservation tool.

Haas estimates that for every two fingerlings they release, one comes back as an adult fish. The others are either strays or are caught by local fishermen.

This season's harvest of 5,250 fish, indicates that more than 10,000 fish that did not return were taken by fishermen, said Haas.

"At today's prices, the amounts to about \$40,000, said Haas.

When the herd gets up to 50,000 fish, about 100,000 of them will be available to the public at large, said Haas.

Tisch said a 10-year study of Waddell Creek years ago revealed that between 200 and 300 salmon and steelhead returned annually to spawn there. These fish would lay between 400,000 and 600,000 eggs, of which only 1 to 2 percent would survive as fish.

The State Fish and Game Department has declared that the fish that normally spawned at Waddell Creek are "wild" and cannot be harvested.

The firm has established holding centers and fish ladders near the mouth of Waddell Creek. The owners mark their fish by clipping a fin.

Those fish not marked are allowed to go up steam to spawn naturally.



Thomas Tisch holds salmon—one of 5,250 harvested this season

Salinas To Vote On Bonds, Tax

SALINAS — Voters of the Salinas Union High School District will ballot on a \$8-million bond issue and a \$700,000 tax override issue today.

If approved money from sale of bonds will be used to build a high school in the Castroville Area. Income from the tax override would go into operating costs.

A two-thirds favorable vote is required for passage of the bonds. A simple majority is

Seaside Recount Changes Nothing

SEASIDE — A recount of ballots cast for candidates for mayor of Seaside in the April 11 municipal election did not change overall results, with Bernard J. Dolan still emerging the winner.

Mrs. Pearl Carey, former councilwoman and one of the three unsuccessful candidates for mayor, demanded the recount.

She gained one vote, for a final total of 1,258. Dolan lost six votes, for a final total of 1,323.

Write-in candidate Guiller-

mo Bautista gained one vote, for a final total of 380. Hugh Bagley's total remained 166.

Mrs. Carey's demand for a recount resulted virtually the same result as a similar demand she made following her recall from the council on June 29, 1971.

That recall movement, led by Dolan, resulted in Mrs. Carey's recall from the council by the vote of 1,532 to 1,501. A recount resulted in the addition of a single vote to Mrs. Carey's total.

D.A. Chang Asks Raise Of \$6,000

SANTA CRUZ — Santa Cruz County Supervisors today will consider a pay raise for District Attorney Peter Chang.

Chang has asked that his \$25,000-a-year salary be increased to \$31,000, the same as that paid to municipal court judges.

Chang, in a letter to supervisors, says his salary is "well below the average for the nine comparison counties in four salary surveys."

Chang, who has received

Department has declared that the fish that normally spawned at Waddell Creek are "wild" and cannot be harvested.

The firm has established holding centers and fish ladders near the mouth of Waddell Creek. The owners mark their fish by clipping a fin.

Those fish not marked are allowed to go up stream to spawn naturally.

While nature's egg-fish ratio is 1 to 2 per cent, Silver King's ratio is between 70 and 80 per cent. That's because the fish are raised in a hatchery under controlled conditions.

The firm is permitted to release 10 to 20 times as many fish as it captures in any given year.

Tisch said that if they should halt the operation, the fish population at Waddell Creek would be what it was in the past.

H a a s said that King Salmon will average about 30 pounds, while silver salmon and steelhead average about 15 pounds. So far, only a few king salmon have returned to spawn. These salmon normally return in four years, while the company has only been in operation three years.

Haas, a graduate of Cal Poly College in San Luis Obispo, did a thesis on the fish ranch idea.

Haas and Tisch, have been friends since attending Santa Cruz High School here years ago.

"The idea of 'fish farming' has been around for some time I guess, said Haas, "but we just put it into practice."

Mrs.
counc
thre
dates
the re
She
final
six v
1,323
Wr

913
S
I

SAN
ta Cr
glewo
rested
accus
pound
United
author
Pap
said t
Satur
guel
Sells,
Borde
smelle
lieved
of the
A c
U.S. M
Terliz
Ivan
Tina
Santa
er's b
Hornb
T e