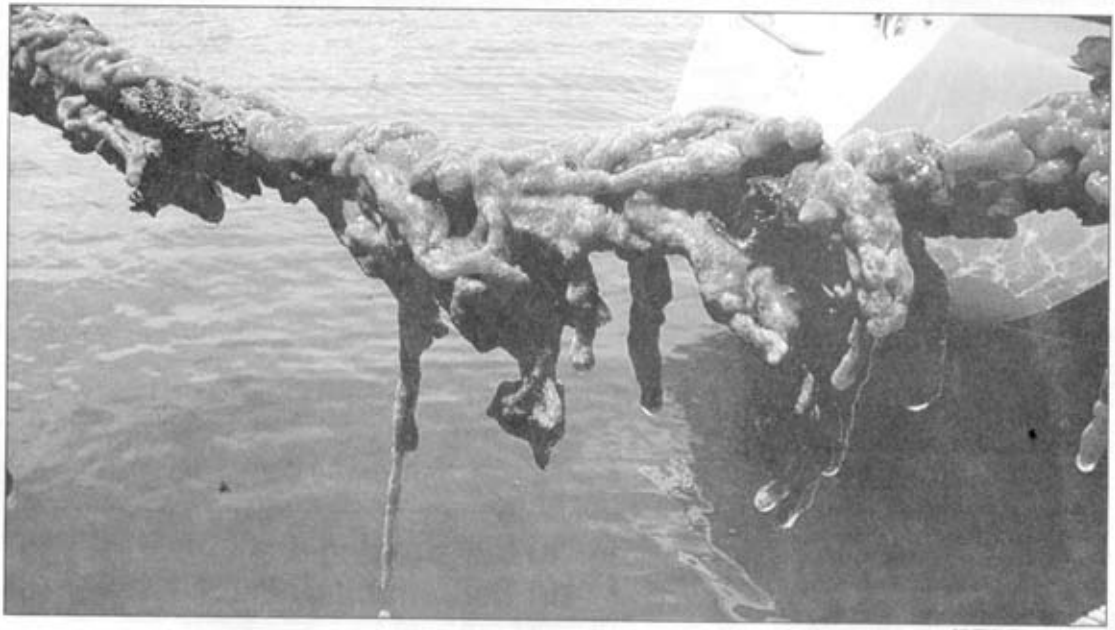

GRETCHEN LAMBERT

A MASSIVE colony of didemnum, or sea squirt, grows on a rope off Sausalito in San Francisco Bay.

Scientists track alien species infesting Bay, Delta

■ New Web site monitors spread of invasive breeds in an estuary that is, by reputation, most highly invaded in the world

By Mike Taugher
TIMES STAFF WRITER

In fall 1986, community college biology students in Suisun Bay dredged up three clams of a type never seen before in the San Francisco Bay or Delta.

By the following summer, the clam was the most abundant bottom-dwelling organism in the region.

Today, it grows so densely that as many as 48,000 of them can crowd in a 3-by-3 square.

Commonly called the overbite clam or Asian clam, the biologi-

See ALIEN, Page 4

ANDREW N. COHEN

A BOTRYLLUS SCHLOSSERI colony is one of many species in the San Francisco Bay. In some places in the Bay, 90 percent of plants and animals are alien species, not native to the area.

Alien

FROM PAGE 3

cal invader filters water extremely well and concentrates selenium in its tissue, two attributes that could have major effects on the estuary's food web.

It is not alone.

Like in a bad horror movie, the Bay and Delta are the scene of a massive invasion of an alien species. At least 250 plants and animals have moved in. In places, 90 percent of plants and animals are invaders.

Now, the alien species of the Bay have their own Web site, a new cyber-field guide to help volunteers, students and scientists identify some of the plants and animals that have wreaked havoc on the estuary's ecosystem. The idea is to improve monitoring of invasive species.

The site has 23 invaders so far, but Web site creator Andrew Cohen said he hopes to eventually include the rest of the invasive species in the Bay, the Delta and along the Pacific Coast.

"If we can develop the funding, we'll do them all," said Cohen, a marine biologist at the San Francisco Estuary Institute and a leading authority on invasive species in San Francisco Bay.

The site, which was launched Tuesday, can be used to monitor the spread of invasive species in an estuary that is, by reputation, the most highly invaded estuary in the world. Nationally, invasive species are a leading cause of biodiversity loss, second only to habitat loss.

Poking around the Web site (exoticsguide.org), which has extensive photographs, one can read a bit about didemnum, a genus of sea squirts that are tiny animals that grow in great, slimy colonies. The sea squirt, which also has invaded the Georges Bank off New England and covered large areas of the sea floor there, has the potential to smother oyster beds that some would like to restore in San Francisco Bay.

Many of the invasive species here are believed to have arrived in the ballast water of ships, though there are other sources, including bait worms imported from the East Coast.

Because funding for the Web site grew out of efforts to re-establish oyster beds in San Francisco Bay, the field guide focuses for now on invaders of the saltier Bay, where oysters can be grown, rather than the Delta.

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