

Workshop looks at keeping quagga mussel out of Clear Lake

Contributed by Victoria Brandon
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LAKEPORT – Several dozen extremely concerned Lake County citizens gathered in the Board of Supervisors Chambers in Lakeport on the evening of Nov. 8 for a workshop on the quagga mussel (*Dreissena rostriformis*): what it is, what it does, and what we can do to keep it out of Clear Lake.

The workshop, hosted by the county Fish and Wildlife Advisory Committee in conjunction with the University of California Cooperative Extension and the Lake County Department of Public Works, was led by F&W Chair Greg Giusti, who introduced UC Davis biologist Ted Grosholz, an expert on invasive pest species in both marine and fresh waters.

Dr. Grosholz began his presentation by discussing the immense costs of biological invasives, which all together cost the economy of the United States \$128 billion annually.

Just the cleanup and repair expenses related to zebra mussels (*Dreissena polymorpha*), which are closely related to the quagga and widely established in the eastern part of the nation, top \$100 million every year.

Monetary considerations aside, only habitat loss threatens global biodiversity more grievously than do invasive alien species.

Native to the Ukraine, quagga mussels entered the Great Lakes in ballast water in 1989 and were discovered in Lakes Mead, Mohave, and Havasu in January 2007; this fall they have also been found in parts of the San Diego county reservoir system entirely unconnected to the Colorado River system, presumably transported by an infested boat.

They breed prolifically, and cause horrific damage in several different ways. Most obviously, they will cover any hard object with shells, thus clogging intake pipes, ruining engines, and crusting pilings and mooring lines. Recreational enjoyment of infested areas is diminished when their sharp shells cover beaches, and also by their pervasive stench.

As filter feeders, they remove phytoplankton from the water, thus sapping the food chain from the bottom and starving out higher forms of marine life, and simultaneously causing an unnaturally high level of water clarity that encourages algae blooms and rampant weed growth.

It is clear that recreational boaters are the likeliest vector of infestation for Clear Lake and other bodies of water in California, and also clear that prevention is the most cost-effective strategy for dealing with these invasives.

The key, said Dr Grosholz, is "identifying high priority pathways and locations for introduction," which in the case of Clear Lake preeminently means bass tournaments.

But since preventive methods can never guarantee complete exclusion, continuing monitoring is also necessary, so that if mussels do enter the ecosystem they can be eradicated as quickly as possible, before the infestation spreads.

A successful eradication of invasive alien mollusks has been recorded on only one occasion, in Australia, and this required an application of such a heavy dose of toxic chemicals that everything in the estuary was wiped out along with the target species. No successful implementation of biological controls has yet occurred.

Pam Francis, deputy director of the Lake County Water Resources Division, then discussed the actions that the county has been taking to fend off these nasty invaders, which are considered "probably the worst ecological threat" that we face at the present time.

Monitoring of Clear Lake for mussels and their microscopic larvae (called veligers) has been under way since 2004, with happily negative results, Francis reported. But after discovery of quaggas in Southern California early this year the Clear Lake Advisory Subcommittee asked the Board of Supervisors for direction – and money – to establish a preventive program, and immediately received \$10,000 for implementation.

This budget is funding an expansion of the ongoing monitoring program, and also an extensive public education campaign involving both the production and distribution of brochures, posters and other literature. Every dock owner, every registered boat owner, and every purchaser of flood insurance is receiving materials describing the mussels, recommending inspection techniques, and providing sources of further information.

Anyone who thinks they may have found mussels is urged to call the county immediately at 263-2556; a trained inspector will be immediately dispatched to the scene.

The county also requires the organizers of any event subject to a Lakebed Management Permit to obtain a declaration from every participant on the recent whereabouts of their boat, and to inspect those considered to be at high risk. Sarah Ryan, Environmental Director of the Big Valley Band of Pomo Indians, confirmed that she personally conducted this survey at the BoardStock event recently hosted by the rancheria, and found all boats "very clean."

How should we move forward? The task is vast: according to Giusti, the state Department of Agriculture has invested \$2 million in six inspection stations in southern California, which inspected nearly 80,000 boats in barely nine months of operation this year. Bilges were drained and chlorinated on 8,600 of them, with adult mussels discovered on 84 of them, primarily clinging to aquatic weeds.

Department of Fish and Game Warden Lynette Shimek announced that the agency had recently received a \$100,000 grant to acquire and train mussel-sniffing dogs, two of which would be located in Lake County.

Setting up inspection stations on the roads leading into the county (as was suggested by several individuals attending the workshop) would cost at least \$1 million annually, said Francis, with no guarantee of ultimate success. In any case local jurisdictions cannot take effective action on this statewide problem: everyone present acknowledged the desirability of working with our state legislators to craft a powerful coordinated approach.

The idea of establishing a local inspection and decontamination station where boats that have recently been in infested waters could be diverted for examination and cleaning before entering Clear Lake also met general approval.

Fortunately, the state unleashed powerful anti-mussel weaponry a few weeks ago, with the passage of AB1683,

legislation providing the Department of Fish and Game with authority to inspect boats and other vehicles that might contain mussels and facilities that use or discharge water; to order watercraft to be drained, dried or decontaminated; to quarantine boats, marinas, launch facilities and infested waters themselves; and to delegate the exercise of these powers to other state departments.

Whether these sweeping powers will suffice to prevent catastrophe only time will tell.

Victoria Brandon is a member of the Fish and Wildlife Committee and chair of the Sierra Club Lake Group.

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