

Shifting baselines

About 20 years ago dire stock assessments mandated draconian conservation measures for our rocky reefs. The call was made to drastically reduce catches by all sectors and included the use of geographic closures of historically important fishing areas. Many said no, "Once you loose it you'll never get it back."

Folks like myself made the case these closures were not the same as Marine Protected Areas, areas designated to be fisheries free forever. Temporary closures were "utilitarian conservation measures" with the sole purpose of ultimately supporting fisheries' productivity. All would re-open as our fisheries recovered.

Today the evidence is in. Instead of treating these temporarily closed areas as traditionally fished – their status quo, that baseline has shifted.

Apparently those at the highest levels determined fishing these areas closed for 2 decades had a new baseline – The new status quo was unfished.

This in turn creates the need to consider fishing as a new impact, one that needs to be considered in that context. Repealing these temporary closures has proven difficult, slow and requiring a lot of analyses and work.

In addition, it's become clear, once closed, the fisheries never get their traditional access back whole.

Bottom line, as a good scientist I've change my mind on the basis of evidence. Unfortunately others were right. Once we loose public access for any reason under any guise, you don't get it back easily, if at all.

Temporary spatial closures are not a good fisheries conservation tool – if only for the reason they become political targets for permanence over time.

Turning to habitat – What are the impacts of hook and line gears on habitat?

Since 2003 I have been a member of the Dr. Milton Love research team. Among our many projects, we used the Delta

Submersible to conduct fish surveys of deep water reefs throughout the SoCal Bight. Surveys occurred over a 1 to 2-week period each fall in the 2000s.

Our scientific observer team included Milton, Dr. Ann Bull, Dianne Waters, Dr. Mary Nishimoto, Linda Snook, Donna Schoeder, Scott Clark and myself. We surveyed sites in depths of 100 to 1,200 feet.

I surveyed many deep water reefs, oil platform jackets, even sub-sea pipelines, and reviewed video of many other dives. My impression of the fishing impacts on these habitats is hook and line gears is minor, trapping is minor, yet snagged and lost netting can be a problem where it covers the reef.

We would find a few lost sinkers, the rare complete fishing rod and reel, the occasional smashed up trap, a can or bottle, and some loose strands of fishing line on the more heavily fished sites like the Footprint Reef in the Channel Islands.

These debris were typically overgrown and incorporated into the structure of the reef itself.

I think the concept of major negative impact by hook and line gears is primarily hypothetical, with very little science to support a high level of damage.

In 2010, Di Waters, Milton, Mary Yocklovich and Donna published an accounting and analyses of marine debris impacts in the January 2010 issue of Marine Pollution Bulletin. They used three years of dive data – two from the Monterey Bay area with Dr. Mary Yok's team and one with us in 2007

Among other things, authors concluded, "Disturbance to habitat and organisms was low, and debris was used as habitat by some fishes and macroinvertebrates."

They said, "The majority of debris items had colony-forming invertebrates on them. Off central California in 2007, 99% of 815 items had moderate or heavy colonization, and in southern California, 88% of 162 items had moderate or heavy colonization."

And: "Little ghost fishing was observed in either central or southern California."

While there was an observed pattern of more debris closer to port in the Monterey Bay area, with respect to SoCal they said, "Commercial fishing and maritime or coastal activities contributed more to the debris in the area than recreational fishing activities. A pattern of decreasing debris density with distance from port was not obvious at our southern California sites. Forty-three Fathom Bank, a hot spot with the highest densities of debris, is approximately 60 km from the port of San Diego, while Hidden Reef had very little debris and is 55 km from the port of Ventura."

Please use the use the utmost caution in considering temporary closures as a fisheries management tool.

Impacts of hook and line gears largely hypothetical and observed impacts not significant.

Love lab dives: Depths of 20 to 365 meters (65-1,200 ft)

January 2010 Marine Pollution Bulletin: Assessing marine debris in deep seafloor habitats off California

Diana L. Watters a,*, Mary M. Yoklavich a , Milton S. Love b , Donna M. Schroeder c

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Central California distance to port correlation of debris density.

So Cal:

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