

Forage for thought



By David E. Frulla and Shaun M. Gehan

Environmentalists are using forage fish issues both as a wedge to divide fishermen and a club to force managers to reduce fishing. Starting with the indisputable premise fish must eat, activists then declare prey stocks require heightened protection. They argue a fishery for forage fish cannot be managed on a single-species basis, but should instead be subject to “ecosystem-based” management. In this contest, commercial fishermen are actually the prey.

Advocacy groups are spending substantial money to advance this premise. This includes campaigns of the Marine Fish Conservation Network, National Coalition for Marine Conservation, and the Pew Charitable Trusts, which recently paid \$4 million to help establish a new Institute for Ocean Conservation Science in Stony Brook, N.Y.

According to a Seafood.com report, one of the institute’s first initiatives “will be to assemble and lead the Lenfest Forage Fish Task Force of preeminent scientists and policy experts from around the world to address an escalating environmental dilemma: the depletion of forage fish from our oceans.”

Despite the foreboding predictions, major forage stocks, such as Atlantic menhaden and herring, are not

overfished. Furthermore, forage stocks are being fished at sustainable levels, just as the law requires.

Nonetheless, advocacy groups often promote that prey must either not be harvested at all, or must be maintained at levels of super-abundance. This view is intuitively appealing but ignores essential factors, which may ultimately suggest the “single species” management model is likely the best way to manage even forage fisheries for the foreseeable future.

To start, what is a forage fish? A typical list includes menhaden, herring, mackerel, squid, anchovy and krill. Ultimately, though, forage is any schooling pelagic species smaller than the critter trying to eat it. That covers a lot of ground, including juveniles of most species of commercial and recreational interest, including salmon, walleye pollock, haddock and cod.

One also needs to understand that prey is also predator.

Consider menhaden, a forage species that feeds by filtering water. Menhaden indiscriminately feed on everything small enough to enter their mouths and get trapped in their gillrakers. This includes fish and shellfish eggs, larvae and even juveniles. Recent studies show that Atlantic herring target their feeding on, among

others, juvenile cod. The fact is, billions of hungry “forage fish” can have a large “ecosystem” impact. And, their trophic impacts can be magnified when their predators, such as striped bass, weakfish, and bluefin tuna, are subject to significant fishing pressure.

When fisheries management gets out of balance, ecosystems suffer. An over-abundant stock of fish tends to out-eat its own prey, and individual fish end up smaller because they can’t find enough to eat. While ecosystem management models under development account for predators’ trophic needs, do they address the prey’s trophic needs? It’s not biologically robust to assume the prey species will just vacuum up algae, and all will be

well. Maintaining sustainable fisheries for all stocks is more compatible with healthy marine ecosystems.

Nor does the prospect of rebounding stocks of fish, like Pacific groundfish, New England cod or highly migratory species, suggest sustainable herring, mackerel or menhaden fisheries must be curtailed. As predators’ populations improve, their eggs, larvae and young provide forage for both predators and prey and support a healthy ecosystem.

Nonetheless, these “forage first” campaigns appear to be finding favor in NMFS. The proposed new National Standard 1 Guidelines contend that “consideration should be given to managing forage stocks for higher biomass,” supposedly to “enhance and protect the marine ecosystem.”

This conclusion fails to acknowledge that there must also be forage for the forage. On the advocacy group front, the Marine Fish Conservation Network is attempting to persuade the South Atlantic Fishery Management Council to create federal “forage fish plans” for state-managed fisheries not prosecuted in any of the council’s member states. Undeterred, these advocates vie to have forage fish declared “essential fish habitat” for other managed species.

The NMFS or MFCN propositions lack statutory basis, and instead make vague references to the law’s general encouragement of ecosystem considerations in management. But EFH is a blunt instrument to use with respect to target fisheries, particularly given that many stocks are cannibalistic — should cod should be considered EFH for itself?

Until there is a much better understanding of complex marine ecosystems, the forage fish angle on ecosystem management remains yet another angle of attack on commercial fishermen and their communities.

David E. Frulla is a partner and Shaun M. Gehan is an associate in the Washington, D.C. office of Kelley Drye & Warren LLP.