The Chesapeake Bay
watershed
(Courtesy NASA / MODIS)

An article in the Washington Post yesterday ran with the headline, "Crabs, supersized by carbon pollution, may upset Chesapeake's balance." Not to nitpick, but Chesapeake Bay **is** unbalanced and has been that way for well over a century.

The article references some interesting research from the University of North Carolina that looks at the effects of ocean acidification on blue crab and oyster populations. Ocean acidification is the result of increased carbon levels in the ocean due primarily to excessive anthropogenic carbon emissions. It turns out that blue crabs grow much larger in high-carbon waters. Oysters, however, struggle to grow in high-carbon waters. One possible outcome: the larger crabs could eat all the weaker oysters in the Bay.

Oyster populations in Chesapeake Bay are somewhere around 1% to 2% of what they were before 1850. The Bay has never recovered from that devastating loss of its primary filter mechanism.

Credit: South Carolina Oyster
Restoration and Enhancement

The article goes on to claim that the oyster "showed signs of a modest recovery" in 2011. The evidence: both Virginia and Maryland watermen harvested 3x to 5x more oysters in 2012 than in 2005.

I would like to see reporters take a bit more nuanced approach when reporting on "recoveries" of aquatic populations. Sure, an increased catch may be correlated with increasing population size. And there are definitely signs that the Bay's oyster population has risen slightly in the past few years. But that increased catch could very easily overwhelm any increased population size, leading to a population crash instead of a population boom. There are population studies that attempt to account for these various factors for oysters and other aquatic species. It cannot be that difficult to cite a population study, at least for the highly-studied Chesapeake Bay. So please stop taking the easy way out by conflating catch size with population size.

Oh, and the report ends by noting that juvenile blue crab populations doubled after Virginia

stopped allowing dredging in rivers during the winter, just when female crabs start to reproduce. I know it seems obvious that if you don't kill crab and crab habitat during reproduction you might end up with more crabs, but it has taken a surprisingly long time for Virginia to acknowledge this simple causal relationship. So congratulations Virginia!

And I reject the article's implication that we may have to catch more crabs to avoid harming the oyster population. To achieve a sustainable **balance** in Chesapeake Bay requires a much higher blue crab **and** oyster population, along with about a dozen other hard-to-achieve ecosystem improvements.