CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

FACT SHEET

ANGLERS FOR CLEAN WATER: May, 2016
Underwater Grass Beds: Keystone Habitat for the Chesapeake's Fish & Crabs

Good news came last week with the release of the Chesapeake Bay Program's annual survey of underwater grasses. In 2015, the Baywide survey showed a 21% increase over the previous year, with 91,621 acres appearing in the aerial photographs carefully analyzed by Dr. Robert J. Orth and his team at the Virginia Institute of Marine Science. Last year's figure is, in fact, the largest in the thirty-two years that the VIMS team and its various federal, state, and local partners in Maryland and Virginia have been carrying out the survey. As usual, multiple field observations "ground-truthed" the aerial photography. Read the Bay Program's press release at: http://www.chesapeakebay.net/presscenter/release/annual_monitoring_finds_more_than_91000_acres_of_underwater_grasses_in_bay. Here's an article about the 2015 survey from *Bay Journal*: http://www.bayjournal.com/article/bay_grasses_expand_to_greatest_extent_in_more_than_30_years. Read them and you'll get a rough idea of which grasses grew where last year.

A Dose of Reality

While this news is good, it's important to recognize that 91,621 acres is still slightly less than half of the Bay Program's goal of 185,000 acres restored to the Chesapeake. That is about the extent of the Bay's grass beds in the 1950s, though it's still only about half the acreage that research from sediment cores indicate Capt. John Smith found in the Bay and its tidal tributaries in the 17th Century. Recent research indicates that the declines in Bay grasses, especially since the 1950s, have come from the usual suspects: excess nitrogen, phosphorus, and sediment that help algae cloud the water, reducing the light that the grasses need to grow and reproduce. The Bay was unusually clear last year, for reasons that are still unclear but much appreciated (http://www.bayjournal.com/article/bays_water_was_clearer_last_year_the_reason_why_is_murky). It's good to see that the grasses responded as expected, and that the seed stock in many places is strong enough that when conditions are right, the beds will develop.

Prime Fish and Crab Habitat

So why should we Chesapeake anglers celebrate these grasses? Because, just as oysters do, their beds form "keystone communities" of habitat for many Bay critters, from tiny grass shrimp, pipefishes, and sea horses to speckled trout, rockfish, and especially blue crabs. In fresher tidal water, look for big white perch, chain pickerel, yellow perch, and largemouth bass. In fall and winter, they provide vital calories to migratory waterfowl like canvasbacks and tundra swans. If you are unfamiliar with the concept of keystone communities, read this essay from *Bay Journal*: http://www.bayjournal.com/article/biodiversity_and_the_bay.

Yes, that story came out twenty-one years ago, but it holds just as much truth today as it did then. The bottom line for both oyster reefs and underwater grass beds: they provide essential fish and crab habitat, and both also actually improve water quality.

Stormy History

Pollution-fueled algae blooms and silt plumes began shading out underwater grasses early in the twentieth century, but few people paid attention until the late 1960s. Then in June of 1972, Hurricane Agnes poured massive amounts of sediment and other pollutants into the Chesapeake and its rivers, literally burying tens of thousands of acres of grasses. In succeeding years, the beds continued to decline, until they bottomed out in the early 1980s and began a slow comeback, when the Bay cleanup programs began in earnest. As you'll see from the Bay Program's graphs, progress has been halting, but the 2015 total is 2.4X as large as the survey's low point of 38,227 acres in 1984.

Fishing the Grass Beds

Back in the 1950s and '60s, anglers routinely sought out grass beds to fish, especially for speckled trout, rockfish, and white perch, and to catch soft crabs in nets. The decline, however, has caused a whole generation of anglers to grow up with few beds available to fish, and the specialized techniques developed for them have died out. Now it's time to bring some of them back. Here's a short summary:

- **Finding Grasses—**First off, where are they? Well, we aren't predicting 2016, but here's how to find where they were last year: http://web.vims.edu/bio/sav/sav15/quadindex.html. You'll note places where there are still no grasses today, but from the Susquehanna Flats all the way south to the Lynnhaven River, there are beds on both sides of the Bay that are readily accessible to us.
- **What Kind of Grass is This?—**Here's a printable online field guide from the Maryland Department of Natural Resources: **http://www.dnr.state.md.us/bay/sav/key/complete_sav_key.pdf.** Note that you won't have to learn all of these species at once. The part of the Bay where you'll be fishing probably has only two to six species. But it'll be useful to get a sense of those as fish/crab habitat and think about how you'll fish them.
- **Approaching the Beds—**There are two good reasons for care and stealth. First, it's important to make sure you don't damage the beds. Second, since grasses in the Chesapeake grow in water less than 6' deep (most in less than 4'), making racket will spook fish. Wade-fishing is my personal favorite, even if I have to use my skiff or canoe as a taxi to get to a particular bed. If you have to approach in a boat, try to drift or pole in. In summer, fish early and late, in low light. (One problem you'll find if you try to run a motor is that the grasses can be as hard on it as it is on them. Mid-salinity grasses like sago pondweed grow thick enough that you'll feel you're trying to run through a marshmallow. Your prop will look like a hay bale, and you may clog your cooling water intake.)
- **What Lures and Flies?**—If the tide is high, you may be able to retrieve a semi-weedless fly like a Clouser minnow or a surface lure over the tops of the grass. Look for edges, little channels, and bare spots in the beds. Predator fish will move along these, or use them as ambush points. If you can, look over the bed and try to "think like a fish" about where and how you'd try to find food there. One of my favorite grassbed lures is an old standby, the Johnson Silver Minnow weedless spoon (**www.johnsonfishing.com/johnson-hard-bait/johnson-silver-minnow/1285602.html**). In sizes from 1/8- to ½-oz., it can attract fish from white perch to rock, redfish, and specks. A short plastic tail on the hook can add to its attraction, and it will come through all but the thickest grass. Another, especially for rockfish and specks, is a weedless, Texas-rigged, soft plastic swimbait. One good one is DOA's 5.5" C.A.L. Jerkbait on a 5/0 C.A.L. Long Neck hook (http://www.doalures.com/category-s/1929.htm). Make it walk the dog like a Spook.
- **What about Bait?—**Certainly. One old trick around Mobjack Bay was "floating soft crabs," attaching a weightless whole small crab to a single hook with a rubber band or impaling a quarter of a large crab, tossing it out where a tidal current would carry it to the edge of or over a grass bed. Practiced at dawn and dusk, it was quiet but deadly, and it will certainly work today. So will chumming with grass shrimp and allowing the current to carry a baited hook back into the zone where the chum has accumulated. A third trick is to toss a bait under a slip bobber into open patches in a bed.
- **Let Us Know How You Do, and Please Share Your Own Good Techniques with the Rest of the Anglers for Clean Water Team.**

What You Can Do to Help the Chesapeake's Grass Beds

The tricky part of this issue is that, unlike planting oysters on restored reefs, planting Bay grasses is only part of the solution. One way you can participate in that is by joining CBF's Grasses for the Masses program in Virginia (**www.cbf.org/how-we-save-the-bay/programs-initiatives/virginia/grasses-for-the-masses**), on the James River at Westover Plantation in Charles City County and on the Potomac at Mason Neck State Park in Fairfax County. The most valuable ways, however, come through finding active ways to support the Chesapeake Clean Water Blueprint (**http://www.cbf.org/how-we-save-the-bay/chesapeake-clean-water-blueprint**), which over the next nine years will reduce pollution by nitrogen, phosphorus, and sediment, improving water clarity in the Chesapeake's waters so the Bay Program's grasses surveys can continue to bring good news to us.

This season, learn your local grass beds, fish 'em, crab 'em, love 'em, and help us keep 'em growing, expanding, and providing even more habitat for a healthy Bay. Tight Lines!

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