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## Counting Blue Crabs in Winter

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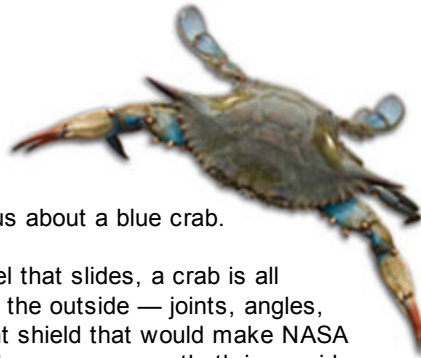
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## How Are Crabs Doing, Really?



There is something pugnacious about a blue crab.

Unlike a fish that flops or an eel that slides, a crab is all armor. It wears its skeleton on the outside — joints, angles, and spikes, a strong lightweight shield that would make NASA proud. Blue crabs are tough. They can apparently thrive amid decaying fish, rotting pilings, and the refuse of a careless human populace.

And yet the blue crab has its delicate side. A female crab's sex life seems almost prim. After about 21 molts — the blue crab equivalent of becoming a consenting adult — a female crab will mate only once. She will lie in the shelter of a male crab's claws, counting on him to fend off threats as she sheds her shell, her final molt. After a few days of courting and mating, she will watch her male escort leave to seek out other partners.

Male crabs continue to molt and grow throughout their lives, but once a female crab mates, she keeps the same shell. And unlike male crabs, who spend their lives rambling through the whole Bay, the female crab heads south, toward the saltier waters of the lower Chesapeake. Picture an expectant mother walking many miles to give birth. In summer, in Virginia's tidal waters, she will release her brood into the oceanic unknown.

Most of that expansive litter will wash offshore into the Atlantic, but many of her mite-sized offspring will make their way back into the Bay, where they will begin to look and act like blue crabs.

What's riding on that return is a way of life for working watermen and the seafood industry they support — and for the rest of us a sense of place, a sense of the Chesapeake.

So many of us have memories tied to the blue crab. We've caught them by dangling chicken necks from a dock. Or bought them at a roadside stand. We've eaten hard crabs steamed and seasoned with Old Bay. Or pan-fried soft crabs. We've eaten backfin and claw meat in crab cakes and soups and deviled crabs. We remember summer picnics, tables spread with newspaper, and whacking crab claws with wooden mallets.

When I was a kid we didn't even use bait. We just walked barefoot

through the eelgrass and scooped up crabs, hard or soft, with a dipnet.

If I could return to my grandmother's house on the river, years after she has passed away, and walk those shallow grassbeds again, would the crabs still be there?

Hard to say, since the eelgrass is no longer there. It's gone. The river bottom in Gloucester, Virginia, is now one vast unbroken plain — like the surface of the moon. Searching for crabs without the grass should be easier, and yet it isn't somehow. The crabs seem harder to find.

Has the river really changed that much, or has memory created a crab-filled river that never was?

Crab stocks have in fact dwindled over time, according to biologist Victor S. Kennedy, editor of a new 800-page reference text on the blue crab. He points to reports in the late 1800s of crabbers in sailing skiffs catching as many as 2400 crabs in a morning's work. Less than a century later, similar estimates fell to half that, even though by that time crabbers had engine-powered boats. In his foreword to *The Blue Crab*, Kennedy notes that when it comes to our natural resources most Americans don't have any idea of just how much we have lost.

If crab populations have fallen from their former heights, what's the prognosis now for blue crabs in the Bay?

The arithmetic of blue crab abundance is abstruse, a complex formula of egg production, larval survival, and finally each year's crop of young crabs — what fisheries scientists call recruitment. And then, deducted from that, the percentage that predators and crabbers will catch.

Some say that blue crabs are doing fine in the Chesapeake. Others say that the fishery could be in danger of collapse. Where is the truth? And how can we be sure?

To answer with some confidence how blue crabs are doing, researchers, resource managers, and commercial crabbers are working to document just how many crabs there really are in the Bay. Scientists, working with watermen, are searching for crabs in winter, surprising them while they sleep. Other researchers are constructing population models to help set new targets for sustainable crabbing. And bi-state efforts have led to new limits on commercial and recreational crabbing.

But other mysteries remain — especially the apparent decline of females in the lower Bay, where blue crabs spawn. How worried should we be that the spawning stock remains so far below average? How are blue crabs doing, really?

— Jack Greer

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