Horseshoe crabs on uptick in MD - for now

Today brings a bit of short-term good news for horseshoe crabs - and a worrisome long-term prognosis.

Volunteers canvassing Maryland's coastal bays this summer counted a record 23,438 of the helmet-shaped crustaceans crawling ashore to spawn on five different beaches. That's the highest tally in nine years of checking by the state **Department of Natural Resources** and the **Maryland Coastal Bays Program**.

Horseshoe crabs creep ashore in late spring and early summer to lay eggs and fertlize them in a slow-moving orgy, with one or more males clinging to each larger female. The most action was seen on**Skimmer Island**, an eroding patch of sand just north of the U.S. 50 bridge in Sinepuxent Bay.

Surveyors report that the ratio of males to each female has gradually been climbing in the past eight years - a good trend for maintaining a diverse gene pool for the longlasting creatures. With more crabs laying more eggs, shorebirds and herons also had more to eat. The surveyors also saw an uptick in **royal terns** and **black skimmers** on aptly named Skimmer Island.

Now for the not-so-promising news: new research relayed by the **U.S. Geological Survey** suggests that the crabs have been in a long decline because the earth's climate has been changing - and that future rises in sea level and water temperatures could dim their prospects even more.

While the recent drop in horseshoe crabs has been blamed on overharvesting them for eel bait, a study published in **Molecular Ecology** suggests that changes in climate since the last Ice Age have had a hand in altering the number of successfully reproducing crabs seen along the Atlantic and Gulf coasts.

What's more, the impacts of climate change to come - rising sea level and water temperature fluctuations - could limit crab distribution and interbreeding. With fewer crabs to mingle, there are fewer genes to mix and blend. And without a rich variety of genes at work, a species may have a harder time adapting to changing surroundings, the scientists said.

And that could be bad news for struggling shorebirds like the **red knot**, which feast on the crabs' eggs to refuel for their epic 9,000-mile migrations. Likewise bad for the endangered **Atlantic loggerhead sea turtle**, which feeds on the crabs themselves.

"For this reason, the low effective population sizes indicated in the new study give one pause," said Tim King, a US. Geological Survey scientist and lead author of the study.

(Crabs spawning on Skimmer Island: Photo by Dick Arnold for the Maryland Coastal Bays Program)