

Would a horseshoe crab harvest ban save the red knot?

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This much seems indisputable: The over-harvest of horseshoe crabs has contributed to the red knots' plight. But exactly how much so — and even whether a moratorium on the crabs is justified — is not quite so clear.

Indeed, there is ample evidence that horseshoe crabs are crawling back. Restrictions already in place have had a positive impact, although the recovery has been slow. According to the Atlantic States Marine Fisheries Commission, the horseshoe crab population in Delaware Bay and the Southeast has grown over the past decade. Atlantic Coast crab landings are held to about 500,000 crabs annually, compared to more than 2 million in 1998.

Maryland fishermen harvest no more than 170,000 horseshoe crabs each year, with most used as bait for eel and whelk. Two-thirds of the crabs harvested are required to be male, a restriction that reduces the impact on spawning. Delaware allows 100,000 crabs to be harvested, and all must be male.

But the states also allow tens of thousands more crabs to be collected for bleeding by the biomedical industry. Horseshoe crab blood is used to produce limulus amoebocyte lysate, which is used to detect human pathogens. The crabs are released back into the wild, although studies suggest about 15 percent will not survive the procedure.

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Certainly, Maryland, Delaware and Virginia could seek a regional ban on the harvest of horseshoe crabs, but the impact on the fishermen and the biomedical companies involved in LAL production would be serious. Would the impact on red knots justify the economic (and potential human health) costs involved?

That would appear uncertain at best. While we generally side with those who espouse a conservative approach to fisheries management, it's difficult to support further cutbacks to the crab harvest when the species already appears to be bouncing back, at least in Delaware Bay and the Mid-Atlantic.

We would, however, urge further research to better understand the impact of the horseshoe crab harvest on the red knot and other shorebirds. One positive sign in recent years is a study that shows red knots caught in Delaware Bay in 2009 and 2010 are bigger and better fed than those studied in 2008. Researchers credited a higher density of crab eggs in the sand, likely a direct result of existing harvest restrictions.

East Coast surveys also show some modest positive trends. Last year, volunteers from Delaware Bay to Florida counted 25,328 red knots during a four-day survey in late May, compared to just 15,494 recorded in 2006.

Bird lovers probably won't be satisfied with anything less than a complete ban on the harvest of horseshoe crabs, but staying the course now doesn't mean such an action might not be taken in the future, particularly if the situation worsens. For the moment, however, whatever marginal help to the red knot a crab moratorium might provide is not yet justified.

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