

# Horseshoe crab harvest, threatened red knot at odds

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Horseshoe crabs are bled at a Charleston-area lab to produce biomedical products, particularly an agent used to test injectable medicines. The crab eggs also provide vital food for migrating red knots. Provided by Charles River Laboratories

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The blue blood crab versus the bird that “flies to the moon.” That’s a fight state and federal regulators don’t want to referee.

But the latest conservationist move to force a critical habitat designation for the threatened red knot has them worried.

A red knot is equipped with a geolocator to track its migration stops. U.S. Fish and Wildlife

The blue blood of the centurion-shelled horseshoe crab makes it one valuable arthropod. An extract of the blood is critical to ensure medical equipment is kept bacteria-free. The crab's eggs are vital food for the rufa red knot in the bird's epic hemispheric migration each year, trips so long that over the course of the bird's life it's said to have flown as far as the distance from Earth to the moon.

Under pressure from conservation groups, the U.S. Fish and Wildlife Service in 2014 declared red knot a threatened species, a designation that requires establishing "critical habitat," areas where activities can be restricted if they impinge on the bird. That could curtail the number of crabs harvested for medicine and that would stir legal challenges.



Now, the service has been warned that it will be sued by Defenders of Wildlife for not yet designating that habitat.

Fish and Wildlife declined to comment on the potential suit, or the service's progress with defining the critical habitat, while its staff prepares a response. The S.C. Department of Natural Resources board recently received an update on the harvesting program, to make sure all its crabs are in a row in case the feathers start flying.

Thousands of horseshoe crabs at a time are caught each year off Lowcountry beaches and sandbars by licensed harvesters. They are turned over to a local medical research lab to be bled, and most are returned to the water later that day.

"There's a lot of misconceptions about what's happening with the horseshoe crabs here," said Alvin Taylor, department director. In South Carolina, the medical harvest "has minimal impact on shorebirds," he said.

That might well be, said an attorney for Defenders of Wildlife. But it's too soon to say.

"The service has not even done its first regulatory duty, to consider where the habitat should be," said senior attorney Jason Rylander. Because the designation allows a number of excluded uses, "it's highly unlikely" medical harvest in South Carolina would be restricted, he said. "But it's premature to discuss."

The conservation organization's primary focuses are the Delaware Bay and the Northeast, where the female crabs have been harvested for eel and whelk bait, and trawling for medical use has pulled in massive numbers of them. An estimated 10 to 30 percent die. Populations have plummeted.

In South Carolina, bait and trawl harvesting has been illegal since the 1980s, and the population appears to be stable.

"We think (the mortality percentage) has a lot to do with how the crabs are handled. We feel we have the best practices," said Brad Floyd, DNR fisheries biologist. "Basically, we have a 'no take' fishery."

The rufa red knot is a rust-breasted shorebird the size of a robin. It migrates each year from the Arctic as far as Cape Horn in South America. On the beach it would be a relatively nondescript bird, but it's a bellwether species. Protecting its habitat, in other words, also protects that quality of life for other species, including humans.

The red knot is in a decline indicated to be as steep as 75 percent on the Eastern Seaboard since the 1980s.

But critical habitat is becoming a regulating and enforcement nightmare for the Wildlife Service, having to provide for

a number of wide-ranging species along heavily populated and commercial regions like the East Coast. As an example, some 700 miles of the coast were declared critical habitat for the loggerhead turtle in 2014.

Meanwhile, service staff are in knots. Endangered species designations require periodic review. If they are not done in a timely fashion, both conservation groups and development-interest groups that want to see the designations downgraded sue to get them done. And new species continually are proposed for designation.

More than 700 “listing actions” of one sort or another currently are in front of the service staff, said Meagan Racey, public affairs specialist. One small team that worked on the red knot is reviewing habitat, she said. “These folks are balancing their time getting conservation on the ground and working on other listing actions with legal deadlines.”

Rylander has tremendous sympathy for the service staff, who are chronically underfunded and working hard, he said. “This is just a species we have been concerned about for a long time,” and the group has been given no indication that any progress is being made, he said.

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