

*American Bird Conservancy • American Littoral Society
Citizens Campaign for the Environment • Defenders of Wildlife • Delaware Audubon Society • Delaware
Riverkeeper Network • National Audubon Society • NJ Audubon Society
New Jersey Environmental Federation • NJ Public Interest Research Group • Sierra Club*

June 7, 2005

*The Honorable Ruth Ann Minner
Governor of Delaware
Tatnall Building
Dover, Delaware 19901*

Dear Governor Minner:

*We are writing on behalf of the above listed groups comprised of millions of members (including more than 100,000 in Delaware) to urgently and respectfully request that you move quickly to help prevent the extinction of the Red Knot bird, whose numbers have dropped so precipitously that experts are predicting the bird will disappear from Jersey's shore by 2010. The Red Knot migrates annually to your shores on its way to its breeding grounds in the Arctic. It relies on the abundant horseshoe crab eggs available at this time of year to fuel its journey northward. But recent spikes in the horseshoe crab harvest have dramatically and dangerously cut the bird's food supply, causing a disastrous decline in population numbers. **We therefore ask you to declare an emergency order stopping the harvest of horseshoe crabs in Delaware.** Immediate action is required to ensure that the Red Knots, which once numbered over 150,000, do not disappear under in the next five years.*

Below are the most salient points outlining the urgency of this need:

- 1) Baker et al. (2004) reported that the Red Knot migrating through Delaware Bay will be at or near extinction by 2010.*
- 2) The decline of Red Knots is the most drastic among shorebirds globally (Sitters and Minton 2005).*
- 3) Recent reports (Baker et al. 2004, Morrison et al. 2004 and Stiles et al. 2005) report that the primary reason for the declining Red Knot numbers is the overharvest of horseshoe crabs in the Delaware Bay.*
- 4) Egg density studies show that 2005 had the lowest number of horseshoe crab eggs on the Delaware Bay (Sitters and Minton 2005). Thus, the current fisheries management plan for this species is failing.*
- 5) Among all potential conservation options, a harvest moratorium would be the most effective means to increase eggs available to foraging shorebirds and possibly save the Red Knot from extinction.*
- 6) Nature-based tourism on the Delaware Bay, of which shorebirds is a keystone, is valued up to \$34 million (Eubanks et al. 2000). NJ annual horseshoe crab landings are valued at under \$500,000 since 1998. Far more jobs are provided through conservation than commercial overharvest of horseshoe crabs and the economic boost to the tourism industry in your state provided by these shorebirds far outweighs any associated loss were the crab harvest to be stopped.*

In the past, national and regional conservation efforts for shorebirds and horseshoe crabs have always been precipitated through state leadership by Delaware and New Jersey. Most recently, conservation-minded horseshoe crab harvest reforms adopted by the Atlantic States Marine Fisheries Commission (March 2004) resulted from the states of DE and NJ enacting more stringent harvest restrictions in 2003. Delaware Secretary John Hughes and New Jersey Commissioner Bradley Campbell deserve credit and thanks for this milestone. Unfortunately, recent data from the Delaware Bay and Tierra del Fuego show the inadequacy of these measures. Thus, we are asking you to continue the tradition of state leadership in helping to protect this internationally important natural treasure.

Prior to the overharvest of horseshoe crabs in the Delaware Bay during the mid and late 1990's, the Delaware Bay was one of the top 4 most important shorebird migration sites in the worlds (Sitters and Minton 2005). Delaware Bay's location on the U.S. eastern seaboard inarguably made this stopover for more than one million migratory shorebirds the most well known of the 4 major stopovers. The Bay also contains the world's largest remaining horseshoe crab population. The co-occurrence of these two globally important (and rare) natural gems is no coincidence.

*American Bird Conservancy • American Littoral Society
Citizens Campaign for the Environment • Defenders of Wildlife • Delaware Audubon Society • Delaware
Riverkeeper Network • National Audubon Society • NJ Audubon Society
New Jersey Environmental Federation • NJ Public Interest Research Group • Sierra Club*

As you know, Red Knots and eight other shorebird species rely on horseshoe crab eggs as food to fuel their flight from Delaware Bay to their arctic breeding grounds each spring. Two publications in the top European (Baker et al. 2004, co-authored by NJDEP biologists) and North American (Morrison et al. 2004, co-authored by NJDEP biologists) peer-review journals concluded that the primary cause of the rapid decline of Red Knots was the lack of available horseshoe crab eggs for foraging shorebirds. Work conducted by several scientists (Tispoura 1999, Stiles et al. 2005) has shown that several species of shorebirds utilizing the Delaware Bay almost exclusively consume horseshoe crab eggs during migration and no reliable alternate food source exists. Finally, a study examining scientific reports of Delaware Bay horseshoe crabs and shorebirds conclusively found that there are insufficient adult horseshoe crabs remaining in the Delaware Bay population to sustain shorebird migration and recommended closure of the horseshoe crab harvest (Stiles et al. 2005).

The international research team, including NJDEP biologists, reported a catastrophic low count of 17,653 Red Knots in Tierra del Fuego in February 2005. This information corroborates an international publication (Baker et al. 2004, co-authored by NJDEP biologists) predicting that the Red Knot rufa subspecies will be at or near extinction by 2010.

*Delaware Bay research conducted by NJ Department of Environmental Protection (NJDEP), Delaware Department of Natural Resources and Environmental Control (DNREC), NJ Audubon Society and international ornithologists has shown a sharp decline in daily weight gain for Red Knots, Semipalmated Sandpipers and other shorebird species; many birds leave Delaware Bay unable to reach their Arctic breeding grounds. Delaware trawl data has shown a >75% decline in the number of horseshoe crabs in 14 years, which again supports the conclusion that overharvest of crabs is the chief culprit for the shorebird declines. While recent work reported by David Smith (Smith et al 2005) concludes that the spawning population has undergone no discernible change since 2000, this **does not** signify that there are sufficient adult spawning horseshoe crabs to support foraging shorebirds. As mentioned above, the work done by the leading world shorebird experts (Baker et al. 2004, Morrison et al. 2004 and Stiles et al. 2005) demonstrated clearly that the amount of eggs, and therefore the number of adult horseshoe crabs, was not sufficient to support shorebird migration on the Delaware Bay. It is also clear that even the more conservation minded horseshoe crab quotas instituted in 2004 by the Atlantic States Marine Fisheries Commission is insufficient to safeguard these rapidly declining shorebird species. Thus, only an immediate moratorium on the harvest of crabs may prevent this extinction.*

A NJDEP report (Eubanks et al. 2000) on Delaware Bay nature based tourism valued the industry at up to \$34 million per year. The study found that shorebirds were the keystone for this vital economic engine. This figure alone surpasses the US Fish & Wildlife Services' (Manion and Unsworth 2000) estimate that the eel and conch harvest industry, which use Horseshoe Crabs as bait, from Florida to Maine is worth \$15 million annually. In addition, the USFWS (Manion and Unsworth 2000) valued the biomedical industry's non-lethal collection of horseshoe crab blood at \$150 million. Thus, horseshoe crabs are worth more alive than dead.

Quite simply, it is ecologically and economically reckless to allow the continued harvest of Delaware Bay population horseshoe crabs while the Red Knot population heads for extinction.

In summary, we ask you to take a leadership role to conserve our shorebird and horseshoe crabs natural heritages for future generations by:

- 1. Immediately instituting a moratorium on the 2005 NJ horseshoe crab harvest. The moratorium should persist until a management plan, which guarantees a more than adequate food supply for shorebirds and population viability for shorebirds and horseshoe crabs, is developed and approved by a peer-review panel including shorebird ornithologists and horseshoe crab ecologists. The science must indicate that shorebirds species have fully recovered before a limited harvest season should even be explored.**
- 2. Support regional efforts with surrounding states (especially Delaware) to enact a harvest moratorium and other measures to conserve this shared resource.*
- 3. Support efforts to federally list the Red Knot rufa subspecies under the Endangered Species Act.*
- 4. Continue bay-wide efforts to reduce human harassment of foraging shorebirds and restore horseshoe crab habitat.*

*American Bird Conservancy • American Littoral Society
Citizens Campaign for the Environment • Defenders of Wildlife • Delaware Audubon Society • Delaware
Riverkeeper Network • National Audubon Society • NJ Audubon Society
New Jersey Environmental Federation • NJ Public Interest Research Group • Sierra Club*

We would also be supportive of state and federal appropriations to ease economic transition of affected watermen, fund habitat restoration projects, complete the outstanding scientific research agenda identified by the ASFMC Addendum III to the Horseshoe Crab Management Plan, promote the research and development of alternate bait for eel and conch and fund the international shorebird and horseshoe crab research.

We appreciate your consideration of this important matter. Please continue the leadership efforts initiated by Commissioner Campbell and Secretary Hughes by acting in accordance with the urgency of the situation.

Sincerely,

*Perry Plumart, Director of Conservation Advocacy, American Bird Conservancy
Tim Dillingham, Executive Director, American Littoral Society
Bill Cooke, Director of Government Relations, Citizens Campaign for the Environment
Jamie Rappaport Clark, Executive Vice President, Defenders of Wildlife
Mark Martell, President, Delaware Audubon Society
Maya van Rossum, The Delaware Riverkeeper
Greg Butcher, Director of Bird Conservation, National Audubon Society
Thomas Gilmore, President, NJ Audubon Society
David Pringle, Campaign Director, New Jersey Environmental Federation
Dena Mottola, Executive Director, NJ Public Interest Research Group
Jeff Tittel, NJ Chapter Executive Director, Sierra Club*

cc: John Hughes, Secretary, DNREC

Citations

- Baker, Allan J., Patricia M. Gonzalez, Theunis Piersma, Lawrence J. Niles, Ines de Lima Serrano do Nascimento, Phillip W. Atkinson, Nigel A. Clark, Clive D.T. Minton, Mark K. Peck, and Geert Aarts. 2004. Rapid population declines in red knots: fitness consequences of decreased refueling rates and late arrival in Delaware Bay.*
- Eubanks, T.L., J.R. Stoll and P. Kerlinger. 2000. Wildlife-Associated Recreation on the New Jersey Delaware Baysshore. Report from Fermata, Inc. submitted to New Jersey Division of Fish & Wildlife.*
- Manion, M., R.A. West and R.E. Unsworth. 2000. Economic Assessment of the Atlantic Coast Horseshoe Crab Fishery. Report from Industrial Economics, Inc. submitted to U.S. Fish & Wildlife Service, Division of Economics.*
- Morrison, R.I. Guy, P. Kenyon Ross and Lawrence J. Niles. 2005. Declines in wintering populations of Red Knots in Southern America. The Condor. 106:60-70.*
- Sitters, Humphrey and Clive Minton. 2005. Congressional Briefing, June 2, 2005. Washington, D.C..*
- Smith, David, Benji Swan, Bill Hall, Stewart Michels, Sherry Bennett, and Katy O'Connell. 2005. Spatial and temporal distribution of horseshoe crab (*Limulus polyphemus*) spawning in Delaware*

*American Bird Conservancy • American Littoral Society
Citizens Campaign for the Environment • Defenders of Wildlife • Delaware Audubon Society • Delaware
Riverkeeper Network • National Audubon Society • NJ Audubon Society
New Jersey Environmental Federation • NJ Public Interest Research Group • Sierra Club*

Bay: insights from six years of standardized monitoring. Pub. proceedings from the Delaware Estuary Conference – January 2005.

Stiles, Eric, David Mizrahi and Lawrence Niles. 2005. Meta-analysis of Horseshoe Crab and Shorebird Research on the Delaware Bay - Are there enough Horseshoe Crab eggs to sustain spring shorebird migration?. Pub. proceedings from the Delaware Estuary Conference – January 2005.

Tsipoura, Nellie. 1999. Shorebird diet during spring migration stopover on Delaware Bay. The Condor. 101: 635-642.