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#### **AREAS OF EXPERTISE**

- Avian migration ecology
- Conservation of Charadriiformes
- Using remote sensing technology (e.g., radar, acoustic detection, digital VHF, geolocator) to understand migratory connectivity, large scale land bird migration patterns, habitat use and flight dynamics of migrating birds
- Habitat restoration and management for wetland birds

#### **EDUCATION**

Aug. 1999 Doctor of Philosophy.--Zoology, Clemson University. Major advisor: Dr. Sidney A. Gauthreaux, Jr. Dissertation title: Ecology, physiology and migratory behavior of Semipalmated and Least SandpiperS at a major migration stopover site, Delaware Bay
 Dec. 1992 Bachelor of Science.--Biological Sciences, State University of NY, Old Westbury

### **PROFESSIONAL EXPERIENCE**

Jan. 2000-presentVice-president for Research and Monitoring.-New Jersey Audubon/Cape May Bird<br/>ObservatoryAug.-Dec 1999Post-doctoral Research Associate.-Clemson University. Using National Weather Service<br/>radar and GIS to identify and map important stopover habitats for migrating songbirds.

#### VICE-PRESIDENT FOR RESEARCH AND MONITORING - NEW JERSEY AUDUBON

The primary purpose of NJAS's Research and Monitoring Department is to develop science-based information products and decision-support tools for conservation policy development, species conservation and land stewardship initiatives at NJAS, in the state of New Jersey and in the northeast region (i.e., as encompassed by U.S Fish and Wildlife Service, Region 5) and internationally. The department pursues this purpose primarily by designing and implementing research and monitoring programs that focus on priority natural resource conservation issues. The Department is responsible for using sound scientific approaches to achieve conservation goals. Doing so provides a defensible foundation for policy and conservation initiatives. Its purpose is also realized by senior staff participation in technical advisory committees and scientific working groups. The Department provides scientific expertise to end users, either directly through the information we develop from our own programs or indirectly through review of products developed by sources external to NJAS.

As Vice-president for Research and Monitoring at NJAS, I am responsible for developing priorities, programs, strategic plans and budgets for the department. I currently manage a budget of \$1,500,000, 95% of which comes from external grants and contracts. I supervise two PhDs and the department employs from 3-8 technical and administrative staff, depending on workload demands. My responsibilities also include evaluating program effectiveness, as it relates to project specific goals and objectives, but also with respect to NJAS's overall mission. These evaluations are typically done in collaboration with other senior staff in the organization. I work closely with Finance Dept. senior staff to insure best practices for grant administration, financial accountability and compliance. I also work closely with our Human Resources Dept. on staff performance evaluations and to improve employee retention and supervision.

Under my direction, the department has become a leader in the conservation of migratory birds. Many of our projects are regional in scope and in some cases, international. My department is currently working on projects to conserve young forest habitats used by conservation concern species like Golden-winged Warbler and Prairie Warbler, assess the status of Black Rail populations in New Jersey, restore habitats for beach nesting birds like Piping Plover and American Oystercatcher. My specific expertise is in the ecology and conservation of migratory shorebirds, the effects of wind power development on migratory birds, using remote sensing techniques to

characterize migratory connectivity, flight patterns and habitat use in migratory birds and habitat restoration and management for wetland bird species.

### CURRENT/RECENT NJ AUDUBON RESEARCH PROGRAMS

*Optimizing conservation outcomes and investments for Semipalmated Sandpiper using full life cycle migratory network models.* 2016 – present.

**Specific objectives:** Our goal is to develop a spatially explicit, full life-cycle model to assess the relative contribution of drivers that underlie SESA population declines. The model will provide insight into when during the annual cycle Atlantic Flyway SESA are subject to the most detrimental threats and will be a tool for developing conservation and management strategies that abate declines and for making decisions about allocating resources to implement these strategies. Demographic parameter estimates (e.g., reproductive success, survivorship) from both breeding and nonbreeding periods, and connectivity among populations throughout the annual cycle (i.e., spatial linkages between specific wintering, migrating and breeding populations), are essential components of the model. The latter is especially important for SESA because they have extensive breeding and wintering ranges, and use several major staging areas during migration. **Funding source:** National Fish and Wildlife Foundation, US Fish and Wildlife Service. **Funding:** Two- year budget ~\$207,000.

Developing and implementing conservation strategies for Semipalmated Sandpiper (Calidris pusilla) in its primary wintering area – Suriname. 2010 – present.

Activities in this project will help achieve flyway-wide goals and objectives of the Atlantic Flyway Shorebird Initiative's plan to address illegal and poorly regulated shorebird hunting in the Caribbean and

northern South America. This project addresses the key actions in the plan to strengthen law enforcement and monitor compliance and improve outreach and communication. **Specific objectives**: (1) build law enforcement capacity that increases efforts to control illegal shorebird hunting in Suriname. Some examples are to provide fuel for vehicle patrols, funds to support vehicle maintenance and funds to support daily food and lodging expenses for multi-day activities (2) develop and implement a survey of hunters to better understanding their demographics, hunting methods and effort and overall take, (3) develop and implement a hunter education program that provides information about hunting regulations, species identification and the hemispheric importance of Suriname to migratory shorebird populations. **Funding: source:** US Fish and Wildlife Service, US Agency for International Development. **Funding:** ~\$65,000/year.

- Shorebird use of shrimp aquaculture sites in NE Brazil and the potential for contaminants exposure. 2015 2018. Specific objectives: (1) quantify how shorebirds use shrimp farms during migration and wintering periods (e.g., foraging, roosting) and possible differential use by age class or sex, (2) quantify contaminant profiles in in shrimp pond sediments during different phases of production (e.g., growing, harvesting), (3) quantify contaminant loads in shorebirds using shrimp ponds during various phases shrimp production and at different times of year and (4) use our results to help develop guidance documents that can be used to decrease potential adverse effects of shrimp aquaculture on migratory shorebirds. Project is a collaboration with Aquasis (Brazilian conservation NGO), Fundaçao Mammiferos Aquaticos (Brazilian conservation NGO) and CEMAVE (Bird management and conservation agency of Brazil federal government). Funding source: US Fish and Wildlife Service, Disney Conservation Fund. Funding: Two-year budget ~\$450,000.
- Beach Restoration at Southern Seven Mile Island, New Jersey. 2014 2017. Specific objectives: (1) improve habitat suitability for beach-nesting birds and roosting shorebirds through restoration, targeted management activities (e.g., predator control) and community engagement through a social marketing campaign, (2) increase coastal resiliency for the Borough of Stone Harbor through enhancement of existing ACOE dune system and (3) develop a plan using innovative methods for continued maintenance of the beach restoration as a long-term community resiliency strategy for the Borough (and

replication by other communities) by utilizing an adaptive management framework through beach and biological monitoring. Project is collaboration between NJAS, The Wetlands Institute, Conserve Wildlife Foundation, Richard Stockton College's Coastal Research Center, LJ Niles and Associates, the Borough of Stone Harbor, NJ Division ofFish and Wildlife and US Fish and Wildlife Service. **Funding source:** US Department of Interior and administered by National Fish and Wildlife Foundation. **Funding:** Two-year budget ~\$1,250,000.

- Coastal Impoundment Vulnerability and Resilience Assessment. 2014 2017. Specific objectives: (1) categorize all of the Northeastern impoundments in terms of their importance in reducing the risks of inundation to adjacent communities, (2) characterize the ecological value of Northeast region impoundments, (3) assess their vulnerabilities to future storm events and sea level rise and (4) identify restoration options that will enhance the resilience of vulnerable impoundments to sea level rise and future storm events. Project is collaboration between NJAS, National Wildlife Federation, Conservation Management Institute at VA Tech and the US Fish and Wildlife Service. Funding source: US Department of Interior and administered by National Fish and Wildlife Foundation. Funding: Two-year budget ~\$470,000.
- Assessing population status, structure and conservation needs for Semipalmated Sandpiper (SESA, Calidris pusilla) in South America. 2008 present. Specific objectives: (1) assess the abundance and distribution of the species along South America's northern coast during southbound migration and winter, (2) determine spatial relationships among important wintering, migration staging and breeding areas and characterize population structure and demographic properties of SESA wintering in northern South America, (3) identify, investigate and if possible address threats that adversely affect population viability and (4) collaborate with South American biologists and resource managers to develop and implement research, monitoring and conservation plans for the species. Funding source: US Fish and Wildlife Service, Disney Worldwide Conservation Fund, Western Hemisphere Shorebird Reserve Network, NJ Division of Fish and Wildlife, NJ Audubon Society (matching funds). Funding: ~\$200,000 annually.

 Ecology, physiology and conservation needs for Semipalmated Sandpiper and other soft-sediment associated shorebirds at a major migration stopover site, Delaware Bay. Dates: 2000 – present.
 Specific objectives: (1) Characterize physiological condition and weight gain potential during stopover periods,

(2) determine stopover duration and relationship to physiological condition, (3) investigate diet and habitat use of SESA during stopover periods, (4) characterize the species' demographic properties and population structure (5) assess contaminant loads and (5) develop conservation strategies that insure long- term population viability of the species. Funders: NJ Division of Fish and Wildlife, National Fish and Wildlife Foundation, NJ Audubon Society. **Funding source:** NJ Division of Fish and Wildlife Service, National Fish and Wildlife Foundation, DuPont – Clear into the Future, NJ Audubon Society (matching funds). **Funding:** ~\$100,000 annually

*Effects of large-scale wind power generation on migratory birds and bats in the mid-Atlantic and New England regions.* Multiple projects conducted from 2007 – 2013 in NJ, VA, WV, NY, RI and ME. **Specific objectives:** (1) quantify passage density/rates of birds and bats flying through the study sites and investigate diurnal, nocturnal and seasonal temporal patterns of movement (2) quantify altitudes of birds/bats relative to project area height and (3) determine flight direction (4) investigate meteorological conditions that may affect passage density/rates, altitudinal distribution and flight direction. **Funding source:** USDOE, USGS, USFWS, Virginia Department of Game and Inland Fish, Maryland Division of Fish and Wildlife, West Virginia Division of Natural Resources, NY State Energy Research Development Authority, State of Rhode Island/University of Rhode Island, NJ Board of Public Utilities/Atlantic County Utilities Authority. **Funding:** ~\$150,000 annually during project years.

- Vegetation management on power line right-of-ways and its effects on early successional and shrubland bird population. 2011 Current. The overall goal of this project is to develop habitat management strategies for PSEG transmission line corridors that provide the greatest benefit to shrub-scrub breeding bird populations (e.g., Golden-winged Warbler, Prairie Warbler) in the NJ Highlands, while satisfying the company's regulatory requirements for vegetation management. Specific objectives: (1) identify management strategies that maximize diversity of target shrub/scrub birds and other wildlife, (2) identify management strategies that maximize abundance of shrub/scrub birds and other wildlife, (3) identify management strategies that maximize suitability of breeding habitat for shrub/scrub birds and other wildlife and (4) develop best management practices and maintenance strategies from results of Objective 1 3. Funding source: NJ Public Service Electric and Gas. Funding: \$110,000 annually.
- Effects of commercial and military airfield management on breeding grassland birds in the mid-Atlantic region. 2008 – 2013. **Specific objectives:** (1) characterize use and movement patterns of grassland birds on military and commercial airfields during migration and breeding, (2) assess nesting success of select grassland bird species, (3) evaluate effects of runway/taxiway and overall airfield habitat management on survival and nest success of select grassland bird species and (4) develop best management practices for maintenance of grass height that benefits grassland birds and minimizes use by problematic bird species (e.g., Canada Goose, gull sp.). **Funded by:** South Jersey Transit Authority, Department of Defense-Legacy Program, NJ Division of Fish and Wildlife. **Funding:** ~\$150,000 annually.
- Evaluating bird/building interactions in Newark, New Jersey: 2017- Current

**Specific objectives:** (1) document temporal and spatial patterns of bird collisions with building in Newark, NJ, (2) determine factors that explain daily variability in collision occurrences (e.g., weather, migration intensity), (3) investigate building construction variables that explain variability in collision occurrences (e.g., building height, percent glass, aspect) and (4) engage building owner/operators in discussions that lead to actions that reduce bird/building collisions. **Funding source:** Public Service Electric and Gas.

**Funding:** ~\$75,000/year

- Assessing population status of Black Rail in coastal and estuarine wetlands of New Jersey: 2016-2019 **Specific objectives:** (1) document temporal and spatial patterns of Black Rail occurrences in NJ, (2) evaluate possible restoration and enhancement projects that improve habitats used by Black Rails and increase occupancy. **Funding source:** NJ Division of Fish and Wildlife. **Funding:** ~\$20,000/year
- Assessing population status of Black Rail in coastal and estuarine wetlands of Great Bay: 2021-2022 **Specific objectives:** (1) document temporal and spatial patterns of Black Rail occurrences on US Fish and Wildlife Service refuges in Great Bay, Atlantic County, NJ, (2) evaluate possible restoration and enhancement projects that improve habitats used by Black Rails and increase occupancy. **Funding source:** US Fish and Wildlife Service. **Funding:** ~\$25,000/year
- High Marsh Habitat Management to Benefit Nesting Black Rails and Saltmarsh Sparrows in the Delaware Bay
  Specific objectives: (1) Advance comprehensive conservation and habitat management on an 8000-acre site that is one of the largest contiguous areas of high marsh habitat in the mid-Atlantic area in the most important Black Rail and Saltmarsh Sparrow breeding areas in Delaware Bay by implementing management strategies to protect the high marsh areas on the site, which is mowed annually for salt hay, (2) Work with landowners and NRCS-NJ to modify existing Practice Standards and Scenarios to stop mowing in high value, high marsh sites, while allowing mowing in less suitable areas to minimize economic impact to the landowner/farmer and breeding habitat loss for Black Rail and Saltmarsh Sparrow, and (3) Work with landowners and NRCS-NJ to identify conservation programs to develop relevant Practice Standards and Scenarios targeting salt hay farms that offset the economic loss of only mowing portions of the land. Funding source: National Fish and Wildlife Foundatio. Funding: ~\$95,000/year for two years.

### **RECENT PUBLICATIONS**

- 2022 Herbert, JA, **D** Mizrahi, CM Taylor. Migration tactics and connectivity of a Nearctic–Neotropical migratory shorebird. Journal of Animal Ecology. DOI: 10.1111/1365-2656.13670
- 2020 Loring PH, Lenske AK, McLaren JD, Aikens M, Anderson AM, Aubrey Y, Dalton E, Dey A, Friis C, Hamilton D, Holberton B, Kriensky D, Mizrahi D, Niles L, Parkins K.L. Paquet J, Sanders F, Smith A, Turcotte Y, Vitz A, Smith PA. 2020. Tracking Movements of Migratory Shorebirds in the US Atlantic Outer Continental Shelf Region. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2021-008. 104 p.
- 2019 Duijns, S., A.M. Anderson, Y. Aubry, A. Dey, S.A. Flemming, C.M. Francis, C. Friis, C. Gratto-Trevor, D. Hamilton, R. Holberton, S. Koch, A.E. McKellar, D. Mizrahi, C.A. Morrissey, S. Neima, D. Newstead, L. Niles, E. Nol, J. Paquet, J. Rausch, L. Tudor, Y. Turcotte and P.A. Smith. Long-distance migratory shorebirds travel faster towards their breeding grounds, but fly faster post-breeding. Nature Scientific Reports, <u>https://doi.org/10.1038/s41598-019-45862-0</u>.
- 2019 Burger, J., D. Mizrahi, C. Jeitner, N. Tsipoura, J. Mobley and M. Gochfeld. Metal and metalloid levels in blood of semipalmated sandpipers (*Calidris pusilla*) from Brazil, Suriname, and Delaware Bay: Sentinels of exposure to themselves, their prey, and predators that eat them. .Environmental Research 173:77-86.
- 2018 Burger, J., **D. Mizrahi**, N. Tsipoura, C. Jeitner and M. Gochfeld. Mercury, lead, cadmium, cobalt, arsenic and selenium in the blood of Semipalmated Sandpipers (*Calidris pusilla*) from Suriname, South America: Age-related differences in wintering site and comparisons with a stopover site in New Jersey, USA. Toxics
- 2017 Novcic, I, R.R. Viet, **D.S. Mizrahi** and W.O.C. Symondson. Molecular analysis of amphipods in the diets of migrating shorebirds. Wader Study 123:195-201.
- 2017 Novcic, I, **D.S. Mizrahi**, R.R. Viet, and W.O.C. Symondson. Molecular analysis of the value of Horseshoe Crab eggs to migrating shorebirds. Avian Biology Research 8:210-220.
- 2017 Jourde, J., C. Dupuy, H.T. Nguyen, **D. Mizrahi**, N. de Pracontal and P. Bocher. low benthic macrofauna diversity in dynamic, tropical tidal mudflats: migrating banks on Guiana's Coast, South America. Estuaries and Coasts. doi:10.1007/s12237-016-0205-y
- 2017 Brown, S, Gratto-Trevor, C, Porter, R., Weiser, E.L., Mizrahi, D., Bentzen, R., Boldenow, M., Clay, R., Freeman, S., Giroux, M-A., Kwon, E., Lank, D.B., Lecomte, N., Liebezeit, J., Loverti, V., Rausch, J., Sandercock, B.K., Schulte, S., Smith, P., Taylor, A., Winn, B., Yezerinac, S., and Lanctot, R.B. Migratory connectivity of Semipalmated Sandpipers and implications for conservation. Condor 119:207-224.
- 2017 Tsipoura, N., J. Burger, L. Niles, A. Dey, M. Gochfeld, M. Peck and **D. Mizrahi**. Metal levels in shorebird feathers and blood during migration through Delaware Bay. Archives of Environmental Contamination and Toxicology 72:562-574.
- Weiser, E. L., Lanctot, R. B., Brown, S. C., Alves, J. A., Battley, P. F., Bentzen, R., J. Béty, M. A. Bishop, M. Boldenow, L. Bollachem B. Casler, M. Christie, J. T. Coleman, J. R. Conklin, W. B. English, H. R. Gates, O. Gilg, M-A. Giroux, K. Gosbell, C. Hassell, J. Helmericks, A. Johnson, B. Katrínardóttir, K. Koivula, E. Kwon, J-F. Lamarre, J. Lang, D. B. Lank, N. Lecomte, J. Liebezeit, V. Loverti, L. McKinnon, C. Minton, D. Mizrahi, E. Nol, V-M. Pakanen, J. Perz, R. Porter, J. Rausch, J. Reneerkens, N. Rönkä, S. Saalfeld, N. Senner, B. Sittler, P. A. Smith, K. Sowl, A. Taylor, D. H. Ward, S. Yezerinac and B. Sandercock, Effects of geolocators on hatching success, return rates, breeding movements, and change in body mass in 16 species of Arctic-breeding shorebirds. Movement Ecology, 4:1-19. doi:10.1186/s40462-016-0077-6
- 2016 Van Doren, B.M., K.G. Horton, P.M. Stepanian, **D.S. Mizrahi** and A. Farnsworth. Wind drift explains the reoriented morning flights of songbirds. Behavioral Ecology 27:1122–1131.
- 2015 Dupuy C., H.T. Nguyen, **D. Mizrahi**, J. Jourde, M. Breret, H. Agogue, B. Laureen and P. Bocher. Structure and functional characteristics of the meiofauna community in highly unstable intertidal mudbanks in Suriname and French Guiana (North Atlantic coast of South America). Continental Shelf Research 110:39-47.
- 2015 Burger, J., N. Tsipoura, L.J. Niles, M. Gochfeld, A. Dey and **D. Mizrahi**. Mercury, lead, cadmium, arsenic, chromium and selenium in feathers of shorebirds during migrating through Delaware Bay, New Jersey: comparing the 1990s and 2011/2012. Toxics 3:63-74.

- 2013 Miller, M. P., C. Gratto-Trevor, S. M. Haig, **D. S. Mizrahi**, M. M. Mitchell, and T. D. Mullins. Population genetics and evaluation of genetic evidence for subspecies in the Semipalmated Sandpiper (Calidris pusilla). Waterbirds 36:166–178.
- 2012 **Mizrahi, D.S.** Peters, K.A. and Hodgetts, P.A. Energetic condition of Semipalmated and Least Sandpipers during northbound migration stopover periods in Delaware Bay. Waterbirds 34:135-145.
- 2012 Morrison, R.I.G., **Mizrahi, D.S**, Ross, R.K., Ottema, O.H., De Pracontal, N., and Narine, A. Dramatic Declines of Semipalmated Sandpipers on their Major Wintering Areas in the Guianas, Northern South America. Waterbirds 34:120-134
- 2012 Gratto-Trevor, C. L., R. I. G. Morrison, D. Mizrahi, D. B. Lank, P. Hicklin and A. L. Spaans. Migratory connectivity of Semipalmated Sandpipers: winter distribution and migration routes of breeding populations. Waterbirds 34:83-95.
- 2011 Tsipoura, N., J. Burger, M. Newhouse, C. Jeitner, M. Gochfeld, and **D. Mizrahi**. Lead, mercury, cadmium, chromium and arsenic levels in eggs, feathers and tissues of Canada geese of the New Jersey Meadowlands. Environmental Research 111:775-784.
- 2009 **Mizrahi, D.S.** and Peters, K.A. Relationships between sandpipers and horseshoe crabs in DelawareBay: a synthesis. Pages 65-88 *in*, Biology and Conservation of Horseshoe crabs (J. Tanacredi, M. Botton, D. Smith, eds.). Springer, New York.

### **RECENT TECHNICAL REPORTS**

- 2020 Aerial Surveys for Shorebirds Wintering Brazil's Northern South America's Atlantic Coast with an emphasis
- on Semipalmated Sandpipers and Red Knots. Final report to National Fish and Wildlife Foundation
   Reducing potential adverse environmental, natural resource and wildlife effects of shrimp aquaculture in
- Brazil. Final report to the US Fish and Wildlife Service 2015 Assessing population status, structure and conservation needs for Semipalmated Sandpiper. Final report
- to the US Fish and Wildlife Service

#### **RECENT PROFESSIONAL PRESENTATIONS**

- 2022 Mizrahi, D. S and J. A. Mobley. Best Management Practices for Shrimp Aquaculture in NE Brazil: Application and Lessons Learned
- 2019 Mizrahi, D. S. Using aerial surveys to assess population change in shorebirds wintering in NE South America. Western Hemisphere Shorebird Group, Panama City, Panama.
- 2017 Mizrahi, D. S. Bandedbirds.org: A web-based relational database for reporting and retrieving observations of individually-marked birds. Western Hemisphere Shorebird Group, Paracas, Peru.
- 2015 Mizrahi, D. S. Effects of food availability and diet on weight gain in Semipalmated Sandpipers in Delaware Bay during spring migration staging periods. Western Hemisphere Shorebird Group conference, September 2015, Chesapeake, VA.
- 2015 Migratory connectivity in Semipalmated Sandpipers: Implications for Conservation. The Waterbird Society, August 2015, Bar Harbor, ME.

Dr. Lawrence J. Niles, Wildlife Restoration Partnership	Dr. Jason Mobley, AQUASIS, Brazil
Dr. Scott McWilliams, University of Rhode Island	Dr. Arie Spaans, Friends of Conservation, Suriname
Dr. Carlos David Santos, University of Maranhão,	Dr. Roberta Rodrigues, University of Pernambuco,
Brazil	Brazil
Dr. Brad Andres, US Fish and Wildlife Serviced	Dr. Scott Johnston, US Fish and Wildlife Service
Dr. Andrew Farnsworth, Cornell Lab of Ornithology	Dr. Hector Galbraith, National Wildlife Federation
Dr. Guy Morrison, Environment Canada (retired)	NJ Endangered and Non Game Advisory Council
Ms. Danielle Paludo, Shorebird Action Plan	Dr. Robert Clay, W Hemisphere Shorebird Reserve
Coordinator, CEMAVE, Brazil	Network
Dr. James Lyons, US Geological Service	Dr. Stephen Brown, Manomet Center for Conservation
	Sciences
Western Hemisphere Shorebird Reserve Network,	Atlantic Flyway Shorebird Initiative, Executive
Council member	Committee

## **COLLABORATORS and AFFILIATIONS**

# SYNERGISTIC ACTIVITIES

Results from NJ Audubon's Research and Monitoring Department projects results are used in NJ Audubon's web site content and in education and outreach programs. As a conservation organization, results are also used to support regional and national conservation initiatives and for invited lectures and symposiums at universities. Research and Monitoring Department activities also provide opportunities for international students and biologists to work on shorebird ecology and conservation projects in the US. The latter has resulted in the engagement of 35 students and young professionals from eight Latin American countries since 2005.

# PROFESSIONAL SOCIETY AND COUNCIL AFFILIATIONS

Co-founded and co-leads the Horseshoe Crab Recovery Coalition Atlantic Flyway Shorebird Initiative Executive Committee Co-lead – Hunting Working Group Co-lead – Incompatible Resource Management Working Group NJ Endangered and Nongame Species Advisory Committee American Ornithology Society Wilson Ornithological Society Waterbird Society Society for Conservation Biology Association of Field Ornithologists Ecological Society of America Wildlife Society