

## GLOSSARY OF TERMS AND ACRONYMS

### ACRONYMS AND ABBREVIATIONS

AMOY	American oystercatcher
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWB	colonial waterbird
dBA	a-weighted decibels
EA	Environmental Assessment
EVU	essential vehicle use
MOSH	moist substrate habitat
mph	miles per hour
NC-12	North Carolina Highway 12
NCDC	North Carolina Department of Commerce
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
ORV	off-road vehicle
PCI	per capita income
PIPL	piping plover
REKN	red knot
ROI	region of influence
SBA	seabeach amaranth
U.S. EPA	U.S. Environmental Protection Agency
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WIPL	Wilson's plover

### TERMS

**Adults** — An organism that is fully grown or developed and capable of sexual reproduction.

**Affected Environment** — The existing environment to be affected by a proposed action and alternatives.

**“Allee effect”** — Where populations continue to decline because the per capita birth rate declines at low densities because, for example, of the increased difficulty of finding a mate (Allee 1931).

**Alternate ORV route** — A route that uses another ramp or an existing interdunal route or North Carolina Highway 12 to provide ORV access to an area.

**Anthropogenic** — Influence of human beings on nature.

**Artificial lighting** — Light sources produced by humans.

**Backshore** — The part of a beach between the spring highwater level and the primary dune line.

**Barrier flat zones** — Also called backdune, overwash or mud flat; formed by sediments that get pushed through the dune system by storms, such as hurricanes. Grasses grow and stabilize these areas.

**Benthic** — The bottom, or relating to the bottom of the ocean or other body of water.

**Bird Nesting** — The act of building a structure by a bird for laying eggs and sheltering its young.

**Breeding areas** — Those areas that support the full suite of avian breeding activities including, courtship, territorial defense, copulation, scraping and nest building, egg laying and incubation, and chick rearing.

**Breeding habitat** — Habitat(s) that host the birds during territorial displaying, courtship and mating, scraping, nesting, incubation, brooding and chick foraging.

**Brood** — The offspring, as of an animal or a bird, that are the result of one breeding season.

**Buffer** — An area surrounding a sensitive resource limiting visitor access.

**Bypass** — A temporary route established by the park in accordance with the bypass criteria to provide ORV access during short periods of time.

**Closure** — An area delineated by posts with string between them, prohibiting vehicle and/or pedestrian access (except in alternative A, where sometimes string is not used between posts).

**Cobble Substrates** — A substrate where the majority of the material is between 2.5 and 10 inches in diameter.

**Cold stratified** — Chilling for weeks.

**Council on Environmental Quality (CEQ)** — Established by Congress within the Executive Office of the President with passage of the *National Environmental Policy Act of 1969*. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

**Crawl** — Tracks and other signs left on a beach by a sea turtle (FWC 2002).

**Cumulative Impacts** — Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions (40 CFR 1508.7).

**Decapods** — Invertebrate animals of the order Crustacea which have five pairs of legs and includes the shrimps, lobsters, crabs, etc.

**Dune** — A mound or ridge of sand or other loose sediment formed by the wind along a the sea coast.

**Enabling Legislation** — National Park Service legislation setting forth the legal parameters by which each park may operate.

**Endangered Species** — "...any species (including subspecies or qualifying distinct population segment) that is in danger of extinction throughout all or a significant portion of its range (ESA Section 3(6))." The lead federal agency, U.S. Fish and Wildlife Service, for the listing of a species as endangered is responsible for reviewing the status of the species on a five-year basis.

**Endangered Species Act (ESA) (16 USC 1531 et seq.)** — An Act to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program for the conservation of such endangered species and threatened species.

**Environmental Assessment (EA)** — An environmental analysis prepared pursuant to the *National Environmental Policy Act* to determine whether a Federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS).

**Executive Order** — Official proclamation issued by the President that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

**False crawl** — An aborted nesting attempt (emergence onto a beach by a sea turtle). A more correct term is "non-nesting emergence" (FWC 2002).

**Fledge** — The stage in a chick's life when the feathers and wing muscles are sufficiently developed for flight. It also describes the act of raising chicks to a fully grown state by the chick's parents.

**Hatchlings** — A young bird or turtle that has recently emerged from its egg.

**Historic Breeding Area** — Areas used within the last 10 breeding seasons.

**Incidental take** — Take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a federal agency or applicant [50 CFR §402.02].

**Interdune blowout** — Refers to the wind-swept, flat areas that lie between primary and secondary coastal dune systems.

**Misorientation** — Orientation in the wrong direction. For hatchling sea turtles on the beach, travel in any direction other than the general vicinity of the ocean (FWC 2002).

**Mobile (precocial)** — A young bird or turtle hatched or born in an advanced state of development and mobility and able to feed itself almost immediately.

**Nesting crawl** — A crawl resulting from a nesting attempt in which eggs were deposited (FWC 2002).

**Nesting habitat** — Habitat(s) that host the birds during nesting including incubation, brooding and chick foraging.

**Nestlings** — A bird that is too young to leave its nest.

**Niche** — A habitat supplying all of the necessary factors for a species existence.

**Off-road vehicle (ORV)** — Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that such term excludes (a) any registered motorboat, (b) any fire, military, emergency or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle when used for national defense purposes, and (c) any vehicle whose use contrary to restrictions proposed in this plan is expressly authorized by the Superintendent or the Refuge Manager under a permit, lease, license, or contract.

**Overwash** — Areas where water has run over or crested a berm or other structure that does not flow directly back to the ocean or lake.

**Overwash fan** — A fan-shaped deposit of sand, gravel or cobbles that is deposited from water that has run over or crested a berm or structure that does not flow directly back to the ocean or lake.

**Potential new habitat** — Habitat recently created, usually by storms, e.g., overwash passes, blowouts, etc.

**Recent breeding areas** — Areas used in the last 3 breeding seasons.

**Scarified** — To break a seed coat through nicking or abrasion.

**Scrapes** — A place where soil has been scraped away, esp. a shallow hollow formed in the ground by a bird during a courtship display or for nesting.

**Symbolic fencing** — Posts with string tied between them.

**Take** — An act that potentially harasses, injures, or kills a protected species (FWC 2002). Take is defined differently depending on the governing legislation (i.e. Endangered Species Act, Migratory Bird Treaty Act).

“Take” as it applies to the Migratory Bird Treaty Act and as stated in 50 CFR § 10.12, includes pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect. Executive Order 13186 which calls for an MOU that has not been completed by NPS or other land management agencies defines intentional and unintentional take.

“Take” as it applies to the Endangered Species Act and as stated in the Act § 3.19 means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harass is defined by Fish and Wildlife Service as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding feeding or sheltering. Harm is further defined by the Fish and Wildlife Service to include significant habitat modification or degradation that results in death to listed species by significantly impairing behavioral patterns such as breeding, feed or sheltering (50 CFR § 17.3).

**Wrack line** — Also known as a drift line, it is a line of stranded debris along a beach face marking the point of maximum run-up during a previous high tide.

## REFERENCES

Altman, J.

- 1974 Observational study of behavior sampling methods. *Behaviour*. 49: 227-267.

Altman, J. and M. Lyons

- 2003 2003 sea turtle summary, breeding and stranding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 16 pp.

American Bird Conservancy

- 2005 Both CAHA and CALO are listed as Globally Important Bird Areas by the American Bird Conservancy. The listing is at the website for citation. This cite is on page 8, 9, and 15, chapter 1. The cite on pages 9 and 15 needs to be revised to state Globally Important.  
<http://www.abcbirds.org/iba/northcarolina.htm>

Anders, F. and S. Leatherman

- 1987 Disturbance of beach sediment by off-road vehicles. *Environmental Geology and Water Sciences* 9:183-189.

Baicich, P. J. and C. J.O. Harrison

- 1997 A guide to the nests, eggs, and nestlings of North American birds. Second edition. Academic Press, San Diego, CA.

Baker, A. J., P. M. González, T. Piersma, L. J. Niles, I. L. S. do Nascimento, P. W. Atkinson, N. A. Clark, C. D. T. Minton, M. K. Peck, and G. Aarts

- 2004 Rapid population decline in red knot: fitness consequences of decreased refueling rates and late arrival in Delaware Bay. *Proc. Royal Soc. London* 271: 875-882.

Baker, A. J., P. M. González, I. L. Serrano, W. R. T. Júnior, M. A. Efe, S. Rice, V. L. D'Amico, M. C. Rocha, and M. E. Echave

- 2005 Assessment of the wintering area of Red Knots in Maranhão, northern Brazil in February 2005. *Wader Study Group Bull.* 107: in press.

Baskin, J.M. and C.C. Baskin

- 1998 Seed dormancy and germination in the rare plant species *Amaranthus pumilus*. *Castanea* 63: 493-494.

Bent, A. C.

- 1929 Life histories of North American shore birds. Part 2. United States National Museum Bulletin, Number 146, Washington, D. C., USA.

## REFERENCES

Bergstrom, P. W.

- 1982 Ecology of incubation in Wilson's Plover (*Charadrius wilsonius*). Ph.D. diss., University of Chicago, Chicago, IL.

Bergstrom, P. W.

- 1988 Breeding biology of Wilson's Plovers. *Wilson Bull.* 100: 25–35.

Bildstein, K. L., G. T. Bancroft, P. J. Dugan, D. H. Gordon, and R. M. Erwin

- 1991 Approaches to the conservation of coastal wetlands in the Western Hemisphere. *Wilson Bull.* 103: 218–254.

Blanco, D., H. R. Goi, and G. Pugnali

- 1992 [The importance of Punta Rasa, Buenos Aires Province, in the migration of the Red Knot (*Calidris canutus*).] *El Hornero* 13: 203-206.

Blazich, F.A., S.L. Warren, D.L. Nash and W.M. Reece

- 2005 Seed germination of seabeach amaranth (*Amaranthus pumilus*) as influenced by stratification, temperature, and light. *J. Environ. Hort.* 23: 33-36.

Blodget, B. G. and S. M. Melvin

- 1996 Massachusetts Tern and Piping Plover Handbook: A Manual for Stewards. Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program.

Blokpoel, H. and G. Tessier

- 1983 Monofilament lines exclude ring-billed gulls from traditional nesting areas. Proceedings of the 9<sup>th</sup> Bird Control Seminar, Toronto, Canada, Canadian Wildlife Service, Ottawa, Ontario, Canada.

Bluewater Network

- 1999 Off-the-Track: America's National Parks under Siege; viewed at [http://www.bluewaternetwork.org/reports/rep\\_pl\\_offroad\\_offtrack.pdf](http://www.bluewaternetwork.org/reports/rep_pl_offroad_offtrack.pdf) on 12-07/05.

Boarman, W. I.

- 2003 Managing a subsidized predator population: reducing common raven predation on desert tortoises. *Environmental Management* 32:205-217.

Bowen, B., J.C. Avise, J.I. Richardson, A.B. Meylan, D. Margaritoulis, and S.R. Hopkins- Murphy

- 1993 Population structure of loggerhead turtles (*Caretta caretta*) in the northwestern Atlantic Ocean and Mediterranean Sea. *Conservation Biology* 7(4):834-844.

Bowen, B.W., A.L. Bass, L. Soares, and R.J. Toonen

- 2005 Conservation implications of complex population structure: lessons from the loggerhead turtle (*Caretta caretta*). *Molecular Ecology* 14:2389-2402.

Brown, S., C. Hickey, and B. Harrington

- 2000 The U.S. Shorebird Conservation Plan. Manomet Center for Conservation Sciences, Manomet, MA.

Brown, S., S. Schulte, B. Harrington, B. Winn, J. Bart, and M. A. Howe

- 2005 Population size and winter distribution of eastern American oystercatchers. *Journal of Wildlife Management* 69: (*in press*).

Buckley, P. A. and F. G. Buckley

- 1976 Guidelines for the protection and management of colonially nesting waterbirds. North Atlantic Regional Office, National Park Service, Boston, Massachusetts.

Bureau of Economic Analysis

- 2005 Bureau of Economic Analysis. County Economic Profiles-Dare and Hyde Counties.

Bureau of Economic Analysis

- 2005 Bureau of Economic Analysis. Economic Profile-United States

Bureau of Economic Analysis

- 2005 Bureau of Economic Analysis. State Economic Profiles-North Carolina.

Burger, J.

- 1987 Physical and social determinants of nest site selection in piping plover in New Jersey. *Condor* 98: 811-818.

Burger, J. and M. G. Gochfeld

- 1990 Black skimmer: social dynamics of a colonial species. Columbia University Press, New York.

Burger, J.

- 1994 The effect of human disturbance on foraging behavior and habitat use in piping plover (*Charadrius melodus*). *Estuaries* 17: 695-701.

## REFERENCES

Cadman, M.

- 1979 Territorial behaviour in American Oystercatchers (*Haematopus palliatus*). Wader Study Group Bulletin 27:40–41.

Cairns, W.E.

- 1982 Biology and behavior of breeding Piping Plovers. Wilson Bull. 94: 531-545.

Carney, K. M., and W. J. Sydeman

- 1999 A review of human disturbance effects on nesting colonial waterbirds. Waterbirds 22:68–79.

Cameron, S. and D. Allen

- 2004 American Oystercatcher breeding distribution and population estimate in North Carolina. North Carolina Wildlife Resources, Raleigh, North Carolina, USA.

Carolinas Beach Vitex Task Force

- 2005 Website accessed December 5, 2005. Available at <http://www.northinlet.sc.edu/resource/vitex.htm>.

Carthy, R.R., A.M. Foley, and Y. Matsuzawa

- 2003 Incubation environment of loggerhead turtle nests: effects on hatching success and hatchling characteristics. Pp. 144-154 in Bolten, A.B. and B.E. Witherington (eds). Loggerhead Sea Turtles. Smithsonian Books, Washington, D.C. 319 pp.

CDE

2003

Chabreck, R.A.

- 1988 Coastal Marshes: Ecology and Wildlife Management. Univ. Minnesota Press, Minneapolis.

Christens, E.

- 1990 Nest emergence lag in loggerhead sea turtles. Journal of Herpetology 24(4):400-402.

Clark, R. Cape Hatteras National Seashore Resource Management Division

- 2005 Personal communication by email to Lori Gutman of the Louis Berger Group regarding Resource Management costs. December 1, 2005.



Cohen, J.B.

- 2005a Management and protection protocols for the threatened piping plover (*Charadrius melodus*) on Cape Hatteras National Seashore, North Carolina. USGS report to the National Park Service. 71 pp.

Cohen, J.B.

- 2005b Factors limiting piping plover nesting pair density and reproductive output on Long Island, New York. Ph.D. dissertation, Virginia Tech University, Blacksburg, VA. 256 pp.

Cohen, J.B.

- 2005c Management and protection protocols for nesting sea turtles on Cape Hatteras National Seashore, North Carolina.

Cohen, J.B. et al.

- 2005 J.B. Cohen, R.M. Erwin, J.B. French, J.L. Marion, J. M. Meyers. Synthesis of Management, Monitoring, and Protection Protocols for Threatened and Endangered Species and Species of Special Concern at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.

Collazo, J. A., J. R. Walters, and J. F. Parnell

- Undated. Factors affecting reproduction and migration of waterbirds on the North Carolina barrier islands. Final report to the National Park Service – Cape Hatteras and Cape Lookout Seashores. NC State University, Raleigh, North Carolina.

Cooper, S.

- 1990 Notes on piping plovers nesting at Cape Hatteras National Seashore during 1987. Chat 54:1-6.

Corbat, C. A.

- 1990 Nesting ecology of selected beach-nesting birds in Georgia. Ph.D. diss., Univ. of Georgia, Athens.

Corbat, C. A., and P. W. Bergstrom

- 2000 Wilson's Plover (*Charadrius wilsonia*). In The Birds of North America, No. 516 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Coutu, S., J.D. Fraser, J. McOnnaughey, and J. Loegering

- 1990 Piping plover distribution and reproductive success on Cape Hatteras National Seashore. Dept. of Fisheries and Wildlife Sciences, Virginia Tech University, Blacksburg, VA. 67 pp.

## REFERENCES

Cowardin et al.

- 1979 *Classification of Wetlands and Deepwater Habitats of the United States*. Prepared for the U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington, DC 20240.

Dare County

- 2003 Dare County Land Use Plan Summary. Accessed at [www.co.dare.nc.us/Planning](http://www.co.dare.nc.us/Planning)
- 2004 Dare County Government. Planning Department. 2003 Dare County Land Use Plan.

Dare County Schools

- 2005 Dare County Schools. School News.

David, F.

- 2005 Cape Hatteras National Seashore Interpretive Division. Personal communication by email to Lori Gutman of the Louis Berger Group regarding Interpretive costs in relation to Resource Management. December 1, 2005.

Davis, M. B., T. R. Simons, M. J. Groom, J. L. Weaver, and J. R. Cordes

- 2001 The breeding status of the American Oystercatcher on the East Coast of North America and breeding success in North Carolina. *Waterbirds* 24:195–202.

Defenders of Wildlife

- 2005 Press Release: Conservation groups call for emergency endangered list for red knot, a rapidly declining shorebird. Defenders of Wildlife, August 1, 2005. Available online at: <http://www.defenders.org/releases/pr2005/pr080105.html>.

Dinsmore, S.J., Collazo, J.A., and Walters, J.R.

- 1998 Seasonal Numbers and Distribution of Shorebirds on North Carolina's Outer Banks. *Wilson Bull.*, 110(2), 1998, pp. 171-181.

Dolan, R., P.J. Godfrey, and W.E. Odum

- 1973 Man's impact on the barrier islands of North Carolina. *Amer. Sci.* 61:152-162.
- 2000 Piping plover brood foraging ecology on New York barrier island ecology. *J. Wildl. Manage.* 64: 346-354.

Drake, K.R., J.E. Thompson, and K.L. Drake

- 2001 Movement, habitat use, and survival of nonbreeding piping plovers. *Condor* 103:259-262. Elias, S.P., J.D. Fraser, and P.A. Buckley.

Ehrhart, L.M., D.A. Bagley, and W.E. Redfoot

- 2003 Loggerhead turtles in the Atlantic Ocean: geographic distribution, abundance, and population status. Pp. 157-174 in Bolten, A.B. and B.E. Witherington (eds). *Loggerhead Sea Turtles*. Smithsonian Books, Washington, D.C. 319 pp.

Elias et al.

- 2000 Elisa, S.P., J.D. Fraser, and P.A. Buckley. Piping plover brood foraging ecology on new York barrier island ecology. *J. Wildl. Manage.* 64: 346-354.

Environmental Laboratory

- 1987 *Corps of Engineers Wetland Delineation Manual*. Tech. Rpt. Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Erwin, R. M.

- 1977 Black skimmer breeding ecology and behavior. *Auk* 94: 709-717.

Erwin, R. M.

- 1978 Coloniality in terns: the role of social feeding. *Condor* 80: 211-215.

Erwin, R. M.

- 1979 Species interactions in a mixed colony of common terns (*Sterna hirundo*) and black skimmers (*Rynchops niger*), *Animal Behaviour* 27: 1054-1062.

Erwin, R. M.

- 1980 Breeding habitat use by colonially nesting waterbirds in two mid-Atlantic regions under different regimes of human disturbance. *Biological Conservation* 18: 39-51.

Erwin, R. M.

- 1989 Responses to human intruders by birds nesting colonies: experimental results and management guidelines. *Colonial Waterbirds* 12:104-108.

Erwin, R. M., J. D. Nichols, T. B. Eyler, D. B. Stotts, and B. R. Tuitt

- 1998 Modeling colony-site dynamics: A case study of gull-billed terns (*Sterna nilotica*) in coastal Virginia. *Auk* 115: 970-978.

## REFERENCES

Erwin, R. M., C. J. Conway, S.W. Hadden, J. S. Hatfield, and S.M. Melvin

- 2002 Waterbird monitoring protocol for Cape Cod National Seashore and other coastal parks, refuges and protected areas. USGS report to the National Park Service.

Erwin, R. M.

- 2005 Management, monitoring and protection protocols for colonially nesting waterbirds at Cape Hatteras National Seashore, North Carolina. USGS report to the National Park Service. 29 pp.

Erwin, R. M., T. B. Eyler, J. S. Hatfield, and S. McGary

- 1998a Diets of nestling gull-billed terns in coastal Virginia. Colonial Waterbirds 21: 323-327.

Erwin, R. M., J. D. Nichols, T. B. Eyler, D. B. Stotts, and B. R. Truitt

- 1998b Modeling colony-site dynamics: A case study of gull-billed terns (*Sterna nilotica*) in coastal Virginia. Auk 115: 970-978.

Erwin, R. M. and D. C. Smith

- 1985 Habitat comparisons and productivity in nesting common terns on the mid-Atlantic coast. Colonial Waterbirds 8: 155-165.

Erwin, R. M., B. R. Truitt, and J. E. Jimenez

- 2001 Ground-nesting waterbirds and mammalian carnivores in the Virginia barrier island region: running out of options. Journal of Coastal Research 17: 292-296.

Eyler, T. B., R. M. Erwin, D. B. Stotts, and J. S. Hatfield

- 1999 Aspects of hatching success and chick survival in gull-billed terns in coastal Virginia. Waterbirds 22: 54-59.

Federal Highway Administration

- 1980 Highway Traffic Noise , viewed at <http://www.nonoise.org/library/highway/traffic/traffic.htm> on December 07, 2005.

Federal Register

- 1985 Endangered and threatened wildlife and plants; final determinations of critical habitat for wintering Piping Plovers; final rule. Federal Register 50:50 FR 50726-50734.
- 2001 Endangered and threatened wildlife and plants; determination of endangered and threatened status for the Piping Plover; final rule. Federal Register 66:50 CFR 360378-36143.

Flemming, S.P., R.D. Chiasson, P.C. Smith, P.J. Austin-Smith, and R.P. Bancroft

- 1988 Piping plover status in Nova Scotia related to its reproductive and behavioral responses to human disturbance. *J. Field Ornithol.* 59: 321-330.

Franklin, Misty A. ed.

- 2004 North Carolina Natural Heritage Program. List of Rare Plant Species of North Carolina. Raleigh, NC.

Gilpin, M.E. and M.E. Soule

- 1986 Minimum viable populations: Processes of species extinction. In M.E. Soule, ed., *Conservation Biology: The Science of Scarcity and Diversity*, pp. 19-34, Sunderland, Mass: Sinauer.)

Gochfeld, M. G. and J. Burger

- 1994 Black skimmer (*Rynchops niger*). In A. Poole and F. Gill, editors. *The birds of North America*. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and American Ornithologists' Union, Washington, D.C.

Golder, W.W.

- 1985 Piping plovers nesting at Cape Hatteras, N.C. *Chat* 49:69-70.

Golder, W.W.

- 1986 Piping plovers nesting at Cape Hatteras, N.C., in 1985. *Chat* 50:51-53.

Goldin, M.R.

- 1993 Effects of human disturbance and off-road vehicles on piping plover reproductive success and behavior at Breezy Point, Gateway National Recreation Area, New York. M.S. Thesis. University of Massachusetts, Amherst, Massachusetts. 128 pp.

Goldin, M.R. and J.V. Regosin

- 1998 Chick behavior, habitat use, and reproductive success of piping plovers at Goosewing Beach, Rhode Island. *J. Field Ornithol.* 69(2):228-234.

Gosh, L. and M. Lyons

- 2002 2002 sea turtle summary, breeding and stranding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 13 pp.

Godfrey, M.

- Date Unpublished data.

## REFERENCES

Haig, S.M.

- 1992 No. 2: Piping Plover. In Poole, A., P. Stettenheim, and F. Gill (eds). *Birds of North America*. American Ornithologists Union. Philadelphia, PA. 18 pp.

Haig, S. M. and L. W. Oring

- 1988 Distribution and dispersal in the piping plover. *Auk* 105:630-638.

Haig, Susan M. and E. Elliott-Smith

- 2004 Piping Plover. *The Birds of North America Online*. (A. Poole, Ed.) Ithaca: Cornell Laboratory of Ornithology; Retrieved from The Birds of North American Online database:  
[http://bna.birds.cornell.edu/BNA/account/Piping\\_Plover/](http://bna.birds.cornell.edu/BNA/account/Piping_Plover/).

Hanson, J., Wibbels, T., and Martin, E. M.

- 1998 Predicted female bias in sex ratios of hatchling loggerhead sea turtles from a Florida nesting beach. *Canadian Journal of Zoology* 76: 1850-1861.

Harrington, B. A., P. de T. Z. Antas, and F. Silva.

- 1986 Northward shorebird migration on the Atlantic coast of southern Brazil. *Vida Silvestre Neotropical* 1: 45-54.

Harrington, B. A.

- 1996 The flight of the Red Knot. W. W. Norton and Co., New York.
- 2001 Red knot (*Calidris canutus*). In *The birds of North America*, No. 563 (ed. A. Poole & F. Gill). 1-32. Philadelphia: The Birds of North America.

Hayman, P, Marchant, and T. Prater

- 1986 Shorebirds: an identification guide. Houghton Mifflin Co., Boston, MA.

Hill, D., D. Hockin, D. Price, G. Tucker, R. Morris, and J. Treweek

- 1997 Bird disturbance: improving the quality and utility of disturbance research. *Journal of Applied Ecology* 34:275-288.

Hilty, S. L. and W. L. Brown

- 1986 A guide to the birds of Columbia. Princeton Univ. Press, Princeton, NJ.

Hoopes, E.M.

- 1993 Relationships between human recreation and piping plover foraging ecology and chick survival. M.S. Thesis. University of Massachusetts, Amherst, Massachusetts. 106 pp.

Houghton L.M., J.D. Fraser, and J.B. Cohen.

- In prep. Piping plover population dynamics on a storm-destroyed and rebuilt barrier island. Final Report to The U.S. Army Corps of Engineers New York District.

Hosier et al.

- 1981 Off-road Vehicle and Pedestrian Track Effects on the Sea-Approaching of Hatchling Loggerhead Turtles. Imprimerie du Journal de Geneve, Geneva.

Howell, S. N. G. and S. Webb

- 1995 A guide to the birds of Mexico and northern Central America. Oxford Univ. Press, New York.

Hyde County

- 2004 Planning and Economic Development Department, Services Provided..

IPCC.

- 2001 Summary for policymakers: climate change 2001. Impacts, adaptation, and vulnerability. Intergovernmental Panel on Climate Change, Geneva, Switzerland.

Johnsgard, P. A.

- 1981 The plovers, sandpipers and snipes of the world. University of Nebraska Press, Lincoln, Nebraska, USA.

Johnson, C.M. and G.A. Baldassarre

- 1988 Aspects of the wintering ecology of piping plovers in coastal Alabama. Wilson Bull. 100: 214-233.

Johnson, M. and L. W. Oring

- 2002 Are nest exclosures an effective tool in plover conservation? Waterbirds 24:184-190.

Jolls, C.L., A. Cooley, and J.D. Sellars

- 2001 Germination ecology of seabeach amaranth, *Amaranthus pumilus*, in controlled environments. Southeaster Biology 48: 169.

## REFERENCES

Jolls, C.L., J.D. Sellars, and C.A. Wigent

- 2004 Restore seabeach amaranth: a federally threatened species; habitat assessment and restoration of *Amaranthus pumilus*, (Amaranthaceae) using remote sensing data. 2001. Natural Resource Presentation Program, RMP Project Statement CAHA-N-018.000, National Park Service, Final Report. 144p.

Kain, T.

- 1987 Virginia's birdlife: an annotated checklist. Virginia Avifauna No. 3, Virginia Society of Ornithology.

Keane, S.E., J.D. Fraser, and P.A. Buckley

- In press Pre-nesting use of intertidal habitats by piping plovers on South Monomoy Island, Massachusetts. J Wildl. Manage.

Komanoff, Charles and Howard Shaw, Ph. D.

- 2000 Drowning in Noise: Noise Costs of Jet Skis in America. A Report for the Noise Pollution Clearinghouse; viewed at <http://www.nonoise.org/library/drowning/drowning.htm> on 12-07-05.

Kuklinski, M.L., L.M. Houghton, and J.D. Fraser

- 1996 Piping plover breeding ecology on Cape Hatteras National Seashore with special reference to the effect of temperature on productivity. Dept. of Fisheries and Wildlife Sciences, Virginia Tech University, Blacksburg, VA. 71 pp.

Lande, R.

- 1988 Genetics and demography in biological conservation. Science 241:1455-1460.

Larson, M.A., M.R. Ryan, and B.G. Root

- 2000 Piping plover survival in the Great Plains, an updated analysis. J. Field Ornithol. 71: 721-729

Larson, M.A., M.R. Ryan, B.G. Root, M.R., and R.K. Murphy

- 2002 Population viability of Piping Plovers: effects of predator exclusion. J. of Wildl. Manage. 66:361-371.

Lauro, B. and J. Burger

- 1989 Nest-site selection of American Oystercatcher (*Haematopus palliatus*) in salt marshes. Auk 106:185-192.



Leatherman, S. and P. Godfrey

- 1979 The impact of off-road vehicles on coastal ecosystems in Cape Cod national seashore: an overview. Report for the National Park Service Cooperation Research Unit No. 34. 34 pp.

Leatherman, S. P., and J. R. Allen, eds.

- 1995 Geomorphic analysis, Fire Island Inlet to Montauk Point, Long Island, New York. Reformulation study submitted to the U.S. Army Corps of Engineers, New York District.

Loefering, J.P.

- 1992 Piping plover breeding biology, foraging ecology and behavior on Assateague Island National Seashore, Maryland. M.S. Thesis. Virginia Polytechnic Institute and State University, Blacksburg, Virginia. 247 pp.

Loefering, J.P., and J.D. Fraser

- 1995 Factors affecting piping plover chick survival in different brood-rearing habitats. *J. Wildl. Manage.* 59(4): 646-655.

Loefering, J.P., J.D. Fraser, and L.L. Loefering

- 1995 Ghost crabs prey on a piping plover chick. *Wilson Bull.* 107: 768-769.

Lyons, M.

- 2001 2000 Piping plover breeding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 10 pp.

Lyons, M.

- 2002a 2001 Piping plover breeding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 13 pp.
- 2004 2003 Piping plover breeding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 18pp. Lyons, M.
- 2005 2004 sea turtle summary, breeding and stranding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 9 pp.

Lyons, M. and J. Altman

- 2000 2000 sea turtle summary, breeding and stranding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 15 pp.

Lyons, M.

- 2002 2001 Seabeach amaranth survey Cape Hatteras National Seashore.

## REFERENCES

Mabee, T. J., V. B. Estelle

- 2000 Assessing the effectiveness of predator exclosures for plovers. *Wilson Bull.* 112: 14-20.

Mallin, M.

- 2000 Impacts of industrial animal production on rivers and estuaries. *American Scientist* 88: 26-37.

Marion, J. L.

- 2005 Management, monitoring, and protection protocols for seabeach amaranth at Cape Hatteras national Seashore, North Carolina.

Martinez, N.

- 2005 Cape Hatteras National Seashore Law Enforcement Division. Personal communications by email and telephone to Lori Gutman of the Louis Berger Group regarding Law Enforcement costs in relation to Resource Management. November 22, 2005.

Mayer, P.M., and M.R. Ryan

- 1991 Electric fences reduce mammalian predation on piping plover nests and chicks. *Wildl. Society Bull.* 19: 59-63.

McCrimmon, D.A.

- 1978 The collection, management, and exchange of information on colonially nesting birds. Pages 187-196 *In* (A. Sprunt, IV, J.C. Ogden, and S. Winckler, eds. *Wading birds*. National Audubon Society Research Rep. No. 7, New York.

McGowan, C. P.

- 2004 Factors affecting nesting success of American Oystercatchers (*Haematopus palliatus*) in North Carolina. Thesis. North Carolina State University, Raleigh, North Carolina, USA.

McGowan, C. P., T. R. Simon, W. Golder, and J. Cordes

- 2005 A comparison of American Oystercatcher reproductive success on barrier beach and river island habitats in coastal North Carolina. *Waterbirds* 28:150-155.

Melvin, S.M., C.R. Griffin, and L.H. McIvor

- 1991 Recovery strategies for piping plovers in managed coastal landscapes. *Coastal Manage.* 19:21-34.

Melvin, S.M., L.H. McIvor, and C.R. Griffin

- 1992 Predator exclosures: A technique to reduce predation of piping plover nests. Wildlife Society Bulletin 20: 143-148.

Melvin, S.M., L.H. McIvor, A. Hecht, and C.R. Griffin

- 1994 Piping plover mortalities caused by off-road vehicles on Atlantic coast beaches. Wildl. Society Bull. 22: 409-414.

Meyer de Schauensee, R. and W. H. Phelps, Jr.

- 1978 A guide to the birds of Venezuela. Princeton University. Press, Princeton, NJ.

Meyers, J. M.

- 2005 Management, monitoring and protection protocols for the American Oystercatcher (*Haematopus palliatus*) at Cape Hatteras National Seashore, North Carolina. USGS report to the National Park Service. 26 pp.

Miller, J.D.

- 1997 Reproduction in sea turtles. Pages 51-81 in The Biology of the Sea Turtle. P.L. Lutz and J.A. Musick (eds). CRC Press Boca Raton, Florida.

Miller, J.D., C.J. Limpus, and M.H. Godfrey

- 2003 Nest site selection, oviposition, eggs, development, hatching, and emergence of loggerhead turtles. Pp. 125-143 in Bolten, A.B. and B.E. Witherington (eds). Loggerhead Sea Turtles. Smithsonian Books, Washington, D.C. 319 pp.

Morrison, R. I. G. and R. K. Ross

- 1989 Atlas of Nearctic shorebirds on the coast of South America. Can. Wildl. Serv. Spec. Publ. vol. 1-2.

Morrison, R. I. G., R. K. Ross and L. J. Niles

- 2004 Declines in wintering populations of red knots in southern South America. Condor 106: 60-70.

Morrier, A., R. McNeil

- 1991 Time-activity budget of Wilson's and Semipalmated plovers in a tropical environment. Wilson Bull. 103: 598-620.

## REFERENCES

Mrosovsky, N.

- 1968 Nocturnal emergence of hatchling sea turtles: control by thermal inhibition of activity. *Nature* 220(5174):1338–1339.

Mrosovsky, N., S.R. Hopkins-Murphy, and J.I. Richardson

- 1984 Sex ratio of sea turtles: seasonal changes. *Science* 225: 739-741.

Murphy, R.K., I.M.G. Michaud, D.R.C. Prescott, J.S. Ivan, B.J. Anderson, and M.L. French-Pombier.

- 2003a Predation on adult piping plovers at predator exclosure cages. *Waterbirds* 26:150-155.

Murphy, R.K., R.J. Greenwood, J.S. Ivan, and K.A. Smith.

- 2003b Predator exclusion methods for managing endangered shorebirds: are two barriers better than one? *Waterbirds* 26:156-159.

Myers, J. P., R. I. G. Morrison, P. Z. Antas, B. A. Harrington, T. E. Lovejoy, et al.

- 1987 Conservation strategy for migratory species. *Am. Sci.* 75: 19-26.

Myers

- 2005 Management, Monitoring, and Protection Protocols for American Oystercatchers at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.

National Marine Fisheries Service and U.S. Fish and Wildlife Service (NMFS and USFWS)

- 1991a Recovery plan for U.S. population of loggerhead turtle. National Marine Fisheries Service, Washington, D.C. 64 pp.
- 1991b Recovery plan for U.S. Population of Atlantic green turtle. National Marine Fisheries Service, Washington, D.C. 52 pp.
- 1992 Recovery plan for leatherback turtles in the U.S. Caribbean, Atlantic and Gulf of Mexico. National Marine Fisheries Service, Washington, D.C. 65 pp.

National Park Service (NPS)

- nd <http://parkplanning/nps.gov> NPS Planning, Environment and Public Comment (PEPC) website
- 1997 Cape Hatteras National Seashore Resource Management Plan. December.
1980. ORV Plan North District Cape Hatteras National Seashore. Prepared by Patrick Reed, North District Ranger. October.

- 1984 General Management Plan/Development Concept Plan for Cape Hatteras National Seashore (1984)
- 1998 Fire Island National Seashore Environmental Assessment for Endangered Species Habitat Management, Fire Island NS, New York.
- 1999 1999 sea turtle breeding and stranding summary, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 7 pp.
- 2000a Strategic Plan
- 2000b 2000 Seabeach amaranth survey Cape Hatteras National Seashore.
- 2001 DO12 and Handbook
- 2002 NPS *Management Policies 2001*
- 2003a 2003 Colonial Waterbird Breeding Summary. Cape Hatteras National Seashore.
- 2003b 2003 American Oystercatcher Breeding Activity. Cape Hatteras National Seashore. {NPS 2003 is the same}
- 2003c Annual Dredging to Close section of Bodie Island. News Release. Access at [www.nps.gov/caha/pphtml/newsdetail7897.html](http://www.nps.gov/caha/pphtml/newsdetail7897.html).
- 2004a (U.S. Council on Environmental Quality. NEPA's Forty Most Asked Questions. <http://ceq.eh.doe.gov/nepa/regs/40/40p.3.htm>)
- 2004b Synopsis: Off-Road Vehicle Planning Cape Hatteras National Seashore. Prepared by Steve Harrison, Chief, Resource Management. April.
- 2004c (U.S. Department of the Interior. Departmental Manual 516 DM 64.10(A)(5). 2004).
- 2004d Off-road Vehicle Beach Access Ramp History 1978 to 2004 Draft. Cape Hatteras National Seashore.
- 2004e Interim ORV Use Areas to Be Identified at Seashore. March. Accessed November 11, 2005. <http://www.nps.gov/caha/pphtml/newsdetail11827.html>
- 2004f Cape Hatteras National Seashore News. <http://www.nps.gov/caha/pphtml/news.html>. Accessed on November 11, 2005
- 2005a National Park Service Public Use Statistics, Cape Hatteras National Seashore. Accessed November 10, 2005. <http://www2.nature.nps.gov/mpur/index.cfm>.
- 2005b Cape Hatteras National Seashore Hatteras Inlet Off-Road Vehicle (ORV) Escort Program/Piping Plover Protection Trial Plan, May 20, 2005.

## REFERENCES

- 2005c Cape Hatteras National Seashore Information.  
<http://capehatteras.areaparks.com/parkinfo.html?pid=1305>. Site visited November 15, 2005.
- 2005d Turtle Nests – Calendar Year 2005, Cape Hatteras National Seashore.
- 2005e Bird Closures – Calendar Year 2005, Cape Hatteras National Seashore.
- 2005f Park Visitation Report. National Park Service. Public Use Statistics Office. Denver, CO.  
World Wide Web site <http://www2.nature.nps.gov/stats/>
- 2005g Vital Signs Monitoring in the Southeast coast Inventory and Monitoring Network, Phase II (Draft) Report. Southeast Coast Network, Atlanta, Georgia. Available at:  
[http://www1.nature.nps.gov/im/units/secn/Downloads/Phase\\_IIb\\_Main\\_Report.pdf](http://www1.nature.nps.gov/im/units/secn/Downloads/Phase_IIb_Main_Report.pdf).
- 2006 Biological Assessment of the Interim Protected Species Management Strategy, Cape Hatteras national Seashore. January 2006.

### New Jersey Department of Environmental Protection (NJDEP)

- 2005 Endangered plants of New Jersey fact sheet: Sea-beach amaranth (*Amaranthus pumilus*). New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of Natural Lands Management. Available:  
[http://www.fws.gov/northeast/nyfo/es/amaranthweb/fact\\_sheets/NJ.pdf](http://www.fws.gov/northeast/nyfo/es/amaranthweb/fact_sheets/NJ.pdf). Accessed on October 7, 2005.

### Nicholls, J.L. and G.A. Baldassarre

- 1990 Habitat selection and interspecific associations of piping plovers along the Atlantic and Gulf Coasts of the United States. *Wilson Bull.* 102: 581-590.

### Niles, L., A. Dey, H. Sitters, and C. Minton

- 2005 Report on the Status of Red Knots on the Delaware Bay with Recommendations for the 2005 Field Season: New Jersey Division of Fish and Wildlife Endangered and Nongame Species Program.

### Nisbet, I. C. T.

- 2002 Common tern (*Sterna hirundo*). In A. Poole and F. Gill, editors. *The birds of North America*. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and American Ornithologists' Union, Washington, D.C.

### Nisbet, I. C. T. and W. H. Drury

- 1972 Measuring breeding success in common and roseate terns. *Bird-Banding* 43: 97-106.

### Nol, E.

- 1989 Food supply and reproduction performance of the American Oystercatcher in Virginia. *Condor* 91:429-435.

Nol, E. and R. C. Humphrey

- 1994 American Oystercatcher (*Haematopus palliatus*). In A. Pool and F. Gill, editors. The birds of North America, Number 82, Philadelphia, Pennsylvania, USA.

North Carolina Department of Commerce

- 2004 Fast Facts: 2004 Economic Impact of Tourism.

North Carolina Department of Environment and Natural Resources (NCDENR)

- 2004 *Division of Coastal Management Interactive Wetlands Maps*. North Carolina Department of Environment and Natural Resources, Division of Coastal Management. Accessed via the Internet at: <http://dcm2.enr.state.nc.us/Wetlands/wetlands.htm>

North Carolina Rural Economic Development Center, Inc.

- 2004 North Carolina Rural Economic Development Center, Inc. Rural Data Bank. County Profiles for Dare and Hyde Counties.

North Carolina State Demographic Section

- 2004 North Carolina State Demographic Section. Projected Annual County Population Totals 2005-2010.

North Carolina State Demographic Section

- 2004 North Carolina State Demographic Section. Projected Annual County Population Totals. 2010-2019.

North Carolina State Demographic Section

- 2004 North Carolina State Demographic Section. Projected Annual County Population Totals 2020-2029.

North Carolina Wildlife Resources Commission (NCWRC)

- 2002 Handbook for sea turtle volunteers in North Carolina. North Carolina Wildlife Resources Commission, Raleigh, NC. 44 pp.
- 2004 North Carolina's state and federally listed wildlife species.
- nd. North Carolina's Wildlife Action Plan. Accessed at [www.ncwildlife.org](http://www.ncwildlife.org).

Outer Banks Chamber of Commerce

- 2001 Outer Banks Chamber of Commerce. Medical Services, Outer Banks Hospital.
- 2005 Outer Banks Chamber of Commerce. The Outer Banks Economy.

## REFERENCES

### Outer Banks Preservation Association, Inc. (OBPA)

- 2004 Outer Banks Preservation Associations website; Discussion of specific issues. <  
[http://www.obpa.net/index.php?option=com\\_content&task=view&id=14&Itemid=29](http://www.obpa.net/index.php?option=com_content&task=view&id=14&Itemid=29)>.  
Accessed on November 11, 2005.

### Palmer, R. S.

- 1967 Family Haematopodidae. Pages 147–150 in G. Stout, editor. Shorebirds of North America. Viking Press, New York, New York, USA.

### Parnell, J. F., and Committee

- 1977 Birds. Pages 330-384 In J. Cooper, S. Robinson, and J. Funderburg, editors. Endangered and threatened plants and animals of North Carolina. North Carolina State Museum of Natural History, Raleigh, North Carolina.

### Parnell, J. F., R. M. Erwin, and K. C. Molina

- 1995 Gull-billed tern (*Sterna nilotica*). In A. Poole and F. Gill, editors. The birds of North America. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and American Ornithologists' Union, Washington, D.C.

### Parnell, J. F., and R. F. Soots, Jr.

- 1979 Atlas of colonial waterbirds of North Carolina estuaries. UNC Sea Grant Publication, UNC-SG-78-10, Raleigh, North Carolina.

### Patterson, M.E., J.D. Fraser, and J.W. Roggenbuck

- 1991 Factors affecting piping plover productivity on Assateague Island. J. of Wildl. Manage. 55: 525-531.

### Paulson, D.

- 1993 Shorebirds of the Pacific Northwest. Univ. of Washington Press, Seattle.

### Pilkey, O. H.

- 2003 A celebration of the world's barrier islands. Columbia University Press, New York, New York, USA.

### Post, W. and S. A. Gauthreaux

- 1989 Status and distribution of South Carolina birds. Charleston Museum, Charleston, South Carolina, USA.



Quinn, J. S., R. D. Morris, H. Blokpoel, D. V. Weseloh, and P. J. Ewins

- 1996 Design and management of bird nesting habitat: tactics for conserving colonial waterbird biodiversity on artificial islands in Hamilton Harbour, Ontario. *Canadian Journal of Fish and Aquatic Sciences* 53 (supplement 1): 45-57.

Rabon, D.R., S. Johnson, R. Boettcher, M. Dodd, M. Lyons, S. Murphy, S. Ramsey, S. Roff, K. Stewart

- 2004 Confirmed leatherback turtle (*Dermochelys coriacea*) nests from North Carolina, with a summary of leatherback nesting activities north of Florida. *Marine Turtle Newsletter*, Number 101, July, 2004.

Raffaele, H., J. Wiley, O. Garrido, A. Keith, J. Raffaele

- 1998 A guide to the birds of the West Indies. Princeton University. Press, Princeton, NJ

Reid, W. V., and M. C. Trexler

- 1992 Responding to potential impacts of climate change on U. S. coastal diversity. *Coastal Management* 20: 117-142.

Richards, T. W.

- 1888 Notes on the nesting habits of the American Oystercatcher. *Oologist* 7:103–104.

Rogers, J. A., Jr., and H. T. Smith

- 1995 Set-back distances to protect nesting bird colonies from human disturbance in Florida. *Conservation Biology* 9:89-99.

Rupert, E. and R. Fox

- 1988 Seashore animals of the southeast. University of South Carolina Press. Columbia, South Carolina. 429 pp.

Sabine, J. B., III

- 2005 Effects of human activity and predation on breeding American Oystercatchers. Thesis, The University of Georgia, Athens, Georgia, USA.

Sabine, J. B., III, J. M. Meyers, and S. H. Schweitzer

- 2005 A simple, inexpensive video camera setup for the study of avian nest activity. *Journal of Field Ornithology* 76:293-297.

Sauer, J. R., B. Peterjohn, and W. Link

- 1994 Observer differences in the North American Breeding Bird Survey. *Auk* 111: 50-62.

## REFERENCES

Sayles, K.

- 2002 2001 sea turtle summary, breeding and stranding activities, Cape Hatteras National Seashore. Unpublished annual report. National Park Service. Buxton, NC. 12 pp.

Schroeder, B.A., A.M. Foley, and D.A. Bagley

- 2003 Nesting patterns, reproductive migrations, and adult foraging areas of loggerhead turtles. Pp. 114-124 in Bolten, A.B. and B.E. Witherington (eds). Loggerhead Sea Turtles. Smithsonian Books, Washington, D.C. 319 pp.

Shields, M.A. and Parnell, J.F.

- 1990 March nesting by American Oystercatchers in North Carolina. J. Field Ornithol. 61:431-433.

Simon, T. R., S. Schulte, J. Cordes, Marcia Lyons, and W. Golder

- 2004 American Oystercatcher (*Haematopus palliatus*) research and monitoring in North Carolina. Annual report, North Carolina Cooperative Fish and Wildlife Research Unit, Department of Zoology, North Carolina State University, Raleigh, North Carolina, USA.

Smith, R. L.

- 1966 Ecology and field biology, Harper and Row, New York.

Spaans, A. L.

- 1978 Status and numerical fluctuations of some North American waders along the Surinam coast. Wilson Bull. 90: 60-83.

Staine, K.J. and J. Burger

- 1994 Nocturnal foraging behavior of breeding piping plovers (*Charadrius melodus*) in New Jersey. Auk 111(3): 579-587.

STATS Indiana

- 2004 USA Counties in Profile, Overview and Population for North Carolina.

Steinback, J.

In prep. Off-road vehicles on Cape Cod National Shoreline.

Steinitz, M.J., M. Salmon, and J. Wyneken

- 1998 Beach renourishment and loggerhead turtle reproduction: a seven year study at Jupiter Island, Florida. Journal of Coastal Research 14: 1000-1013.

Stephenson, G.

- 1999 Vehicle impacts on the biota of sandy beaches and coastal dunes: a review from a New Zealand perspective. *Science for Conservation* 121. 48 pp.

Stevenson, H.M. and Anderson, B.H.

- 1994 The birdlife of Florida. University. Press of Florida, Gainesville.

Strauch, J.G., Jr. and Abele, L.G.

- 1979 Feeding ecology of three species of plovers wintering on the bay of Panama, Central America. *Studies. Avian Biol.* 2: 217–230.

Studds, C.E. and Marra, P.P.

- 2005 Non-breeding Habitat Occupancy and Population Processes: An Upgrade Experiment with a Migratory Bird. *Ecology*, 86(9), 2005, pp. 2380–2385

Thibault, M., R. McNeil

- 1994 Daylight variation in habitat use by Wilson's Plovers in northeastern Venezuela. *Wilson Bull.* 106: 299–310.

Thompson, B. C., J. A. Jackson, J. Burger, L. A. Hill, E. M. Kirsch, and J. L. Atwood.

- 1997 Least tern (*Sterna antillarum*). In A. Poole and F. Gill, editors. *The birds of North America*. The Academy of Natural Sciences, Philadelphia, Pennsylvania, and American Ornithologists' Union, Washington, D.C.

Thurber, W. A., J. F. Serrano, A. Sermeño, M. Benitez

- 1987 Status of uncommon and previously unreported birds of El Salvador. *Proc. West. Found. Vert. Zool.* 3: 109–293.

Titchenell, Sue. Outer Banks Group Fee Business Manager

- 2005 Personal communication by email to Sarah Branson of the NPS Environmental Quality Division regarding the Fee Demonstration Program. October 3, 2005.

Tomkins, I. R.

- 1944 Wilson's Plover in its summer home. *Auk* 61: 259–269.

Titus, J. G.

- 1990 Greenhouse effect, sea level rise, and barrier islands: case study of Long Beach Island, New Jersey. *Coastal Management* 18:65–90.

## REFERENCES

Tomkins, I. R.

- 1954 Life history notes on the American oyster-catcher. *Oriole* 19:37–45.

Tsipoura, N., and J. Burger

- 1999 Shorebird diet during spring migration stopover on Delaware Bay. *Condor*. 101: 635-644.

University of Idaho

- 2002 Outer Banks Group parks Visitor Study, Cape Hatteras National Seashore Visitors, Report 136a, University of Idaho, Park Studies Unit. National Park Service, U.S. Department of the Interior, Visitor Services Project.

University of Massachusetts (UMASS) National Park Service Cooperative Research Unit

- 1979 The Impact of Off-Road Vehicles on Coastal Ecosystems in Cape Cod National Seashore: An Overview. Stephen P. Leatherman, Leader. The Environmental Institute, Blaisdell House, University of Massachusetts, Amherst. UM/NPSCRU Report No. 34.

U.S. Army Corps of Engineers

- 2002 Manteo (Shallowbag Bay) Project Maintenance of Oregon Inlet Bar Channel, Channel Widener Dare County, North Carolina. Environmental Assessment. February 2002

U.S. Census Bureau, U.S. Census

- 2000 U.S. Census Bureau. Available at: <http://www.census.gov/main/www/cen2000.html>.
- 2003 County Business Patterns, Buxton County.
- 2003 County Business Patterns, Hyde County.

U.S. Department of the Interior (USDOI)

- 2004a (U.S. Council on Environmental Quality. NEPA's Forty Most Asked Questions. <http://ceq.eh.doe.gov/nepa/regs/40/40p.3.htm>) (U.S. Department of the Interior. Departmental Manual 516 DM 64.10(A)(5). 2004).
- 2004b Tip of Hatteras Spit to be temporarily closed. U.S. Dept. of the Interior Press Release, National Parks Service, Outer Banks Group, Manteo, NC. World Wide Web site [http://www.nps.gov/caha/052604%20PR%20Cape Hatteras.htm](http://www.nps.gov/caha/052604%20PR%20Cape%20Hatteras.htm)

U.S. Fish and Wildlife Service (USFWS)

- 1988 Great Lakes and northern Great Plains piping plover recovery plan. 160 pp.
- 1991a Recovery Plan for U.S. Population of Loggerhead Turtle (*Caretta caretta*). U.S. Fish and Wildlife Service

- 1991 Recovery Plan for U.S. Population of Atlantic Green Turtle (*Chelonia mydas*). U.S. Fish and Wildlife Service.
- 1992 Recovery Plan for the Leatherback Turtles in the U.S. Caribbean, Atlantic, and Gulf of Mexico (*Dermochelys coriacea*). U.S. Fish and Wildlife Service.
- 1993 Recovery Plan for the Hawksbill turtles in the U.S. Caribbean, Atlantic Ocean, and Gulf of Mexico (*Eretmochelys imbricata*). U.S. Fish and Wildlife Service.
- 1992 Recovery Plan for the Kemp's Ridley Sea Turtle (*Lepidochelys kempii*). U.S. Fish and Wildlife Service.
- 1993 Endangered and threatened wildlife and plants; determination of seabeach amaranth (*Amaranthus pumilus*) to a threatened species. Federal Register 58(65)18035-18042).
- 1994 Technical/Agency Review Draft, Revised Recover Plan for Piping Plovers, *Charadrius melodus*, Breeding on the Great Lakes and Northern Great Plains. U.S. Fish and Wildlife Service.
- 1996b Recovery plan for seabeach amaranth (*Amaranthus pumilus*). U.S. Fish and Wildlife Service, Southeast Region, Atlanta, GA.
- 1996a Piping Plover (*Charadrius melodus*) Atlantic Coast population, Revised Recovery Plan. USFWS Regional Office, Hadley, Massachusetts.
- 2000 Recovery Plan: Reasons for Listing and Continuing Threats; viewed at <http://www.fws.gov/northeast/pipingplover/recplan/threats.html> on 12/07/05.
- 2002 North Carolina Wildlife Resources Commission (NCWRC) in Handbook for Sea Turtle Volunteers in North Carolina (2002). An annual permit is issued by NCWRC under the authority of the U.S. Fish and Wildlife Service and USFWS Recovery Plans referenced.
- 2003 Recovery plan for the Great Lakes piping plover (*Charadrius melodus*), Ft. Snelling, MN 149 pp.
- 2004a U.S. Shorebird Conservation Plan. High Priority Shorebirds. Unpublished Report, U. S. Fish and Wildlife Service, 4401 N. Fairfax Dr., MBSP 4107, Arlington, VA, 22203 U.S.A. 5 pp.
- 2004b 2002-2003 Status Update: U.S. Atlantic Coast piping plover population. Sudbury, MA. 8 pp.
- 2005 Seabeach amaranth. Available: <http://www.fws.gov/northeast/nyfo/es/amaranthweb/overview.html>. (Accessed: October 7, 2005).
- 2005 Synthesis of Management, Monitoring, and Protection Protocols for the Threatened and Endangered Species and Species of Special Concern at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.
- 2005 Management and Protection Protocols for the Threatened Piping Plover (*Charadrius melodus*) on Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.

## REFERENCES

- 2005 Management, Monitoring, and Protection Protocols for Colonially Nesting Waterbirds at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.
- 2005 Management, Monitoring, and Protection Protocols for American Oystercatchers at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.
- 2005 Management and Protection Protocols for Nesting Sea Turtles on Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.
- 2005 Management, Monitoring, and Protection Protocols for Seabeach Amaranth at Cape Hatteras National Seashore, North Carolina. U.S. Geological Survey, Patuxent Wildlife Research Center.
- 2005 North American *Colonial Waterbird Conservation Management Plan*.

### United States Geological Survey

- 2005 Bird Checklists of the United States, Cape Hatteras National Seashore. USGS Northern Prairie Research Division. Available on the internet at: <http://www.npwrc.usgs.gov/resource/othrdata/chekbird/r4/hatteras.htm>. Site visited December 14, 2005.

### U.S. Shorebird Conservation Plan

- 2004 High Priority Shorebirds – 2004. Unpublished Report, U. S. Fish and Wildlife Service, Arlington. 1-5.

### van der Merwe, D. and D. van der Merwe

- 1991 Effects of off-road vehicles on the macrofauna of a sandy beach. *South African Journal of Science* 87: 210-213.

### Verboven, N., B. J. Ens, and S. Dechesne

- 2001 Effect of investigator disturbance on nest attendance and egg predation in Eurasian Oystercatchers. *Auk* 118:503-508.

### Verhulst, S., K. Oosterbeek, and B. J. Ens

- 2001 Experimental evidence for effects of human disturbance on foraging and parental care in oystercatchers. *Biological Conservation* 101:375-380.

### Vogelsang, Hans

- 2003 Cape Hatteras National Seashore Visitor Use Study, August 2003. East Carolina University, Department of Recreation and Leisure Studies.

Vooren, C. M., and A. Chiaradia

- 1990 Seasonal abundance and behaviour of coastal birds on Cassino Beach, Brazil. *Ornitologia Neotropical* 1: 9-24.

Walters, C. J.

- 1986 Adaptive resource management. Macmillan, New York, USA.

Watts, B.D., and D.S. Bradshaw

- 1995 Ghost crabs prey on Piping Plover eggs. *Wilson Bull.* 107:767-768.

Watson, J.K. of U.S. Fish and Wildlife Service

- 2003 DRAFT Avian Conservation Implementation Plan, Cape Hatteras National Seashore. National Park Service, Southeast Region.

Wilkinson, P.M. and M. Spinks

- 1994 Winter distribution and habitat utilization of piping plovers in South Carolina. *Chat* 58:33-37.

Wilson, D. E., F. R. Cole, J. D. Nichols, R. Rudran, and M. Foster, editors

- 1996 Measuring and monitoring biological diversity. Standard methods for mammals. Smithsonian Institution Press, Washington, D.C.

Witherington, B.E.

- 2003 Biological conservation of loggerheads, challenges and opportunities. Pp. 295-312 in Bolten, A.B. and B.E. Witherington (eds). *Loggerhead Sea Turtles*. Smithsonian Books, Washington, D.C. 319 pp.

Witherington, B.E. and R.E. Martin

- 1996 Understanding, assessing, and resolving light-pollution problems on sea turtle nesting beaches. Florida Marine Research Institute Technical Report TR-2. 73pp.

Witherington, B.E., K.A. Bjorndal, and C.M. McCabe

- 1990 Temporal pattern of nocturnal emergence of loggerhead turtle hatchlings from natural nests. *Copeia* 4:1165-1168.

Wolcott, T. and D. Wolcott

- 1984 Impact of off-road vehicles on macroinvertebrates of a mid-Atlantic beach. *Biological Conservation* 29: 217-240.

## REFERENCES

Wolcott, D.L. and T.G. Wolcott

- 1999 High mortality of piping plovers on beaches with abundant ghost crabs: correlation not causation. *Wilson Bulletin* 111:321-329.

Wood, D.W. and K.A. Bjorndal

- 2000 Relation of temperature, moisture, salinity, and slope to nest site selection in loggerhead sea turtles. *Copeia* 2000(1):119-128.

Zonick, C.A.

- 2000 The winter ecology of piping plovers (*Charadrius melodus*) along the Texas Gulf Coast. Ph.D. Dissertation, University of Missouri – Columbia. 169 pp. document.

Zadusky, J.D.

- 1985 Breeding status of the American Oystercatcher in the town of Hempstead. *Kingbird* 35:105-113.