

**DRAFT FOR REVIEW**

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**Species Profiles of Western North Atlantic Seabirds**

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## INTRODUCTION

This series of profiles on seabird species occurring in the Western North Atlantic was prepared to inform U.S. fishery observers and managers on oceanic and coastal bird life. The National Marine Fisheries Service, through the authority of the Magnuson-Stevens Fishery Conservation and Management Act and the High Seas Fishing Compliance Act, may be required at times to serve a management role related to bird conservation. These profiles include, but are not limited to, species known to occur in the by-catch of the U.S. pelagic longline fishery or other U.S. fisheries in the Western North Atlantic. Other species are included because about half of the bird by-catch documented by observers is unidentified. The profiles are presented in three groups: (1) species documented in the long-line fisheries of the Western North Atlantic, (2) oceanic diving species in the Western North Atlantic, and (3) other seabirds of the Western North Atlantic. Oceanic diving species may be more likely to be caught on long line than non-diving species or species primarily of coastal waters. Only those species breeding or regularly occurring in the region are covered by these profiles. Vagrants and accidentals are not included. The "areas" referred to by number are the areas designated for record-keeping for the U.S. Western North Atlantic long-line fishery (Figure 1).

## DOCUMENTED WESTERN NORTH ATLANTIC LONGLINE BYCATCH

### Northern Gannet, *Sula bassana*

Boreal breeding species, nesting on rock cliffs. In Western Atlantic breeds in Newfoundland, Labrador and Iceland. In Eastern Atlantic breeds in British Isles, Ireland, Norway, Channel Islands and off Brittany. Winters at sea, but distance varies from site to site, off the Carolinas most individuals occur within sight of land, while off of Maryland they occur regularly far at sea. Occurs in NOAA areas 2 through 7. This relates to local variations in the distributions of forage fishes. However, they are not a primary pelagic species. These large birds often concentrate around fishing vessels and are likely common casualties of long line and other fisheries.

**Identification:** Could be confused with various species and age/plumage classes of boobies. All other North Atlantic *Sula* are smaller and are mostly confined to the tropics. Gannets are 34-39.5 inches in total length; the largest tropical boobies (Masked) are 32-36 inches (87-100 cm) in length and the other are all less than 30 inches.

Note: Different age groups have distinct plumages. Adults are primarily white, but have black primaries; birds in this plumage are at least 5 years of age. Sub-adult birds, 3<sup>rd</sup> to 4<sup>th</sup> year, have some black tail feathers and secondaries. Post-juvenile (immature) birds are extremely variable. These 1- to 2- year-old birds are basically white with dark markings (oldest) or dark with white markings (youngest). Juvenile birds (first year) from a distance look all dark. The adults winter from the Carolinas to Maryland and northward. The youngest birds winter further south (Florida, Cuba, and Upper Gulf of Mexico).

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**Conservation Status:** Endemic to North Atlantic, extremely common. Apparently little exchange between Eastern and Western North Atlantic stock. Thus, birds seen of North America are from New World Populations. The Northern Gannet is listed in the September 2005 review draft of the Southeastern United States Regional Waterbird Conservation Plan (W.C. Hunter, et al., compilers) as a “Regional Concern Species Requiring Management Attention.” Reasons given were that large numbers are found dead and dying off the Atlantic coast (e.g., thousands died during the winter of 2002-2003). “Emaciation syndrome” (suggested by autopsies) implicating stress or starvation, drowning in deep-set gill nets, or disease were possible factors in the large mortalities. Despite the die-offs, population numbers may be increasing.

**Current Population:** Old World population huge, exceeds 1 million pairs with 50, 000 pairs nesting on St. Kilda alone (Evans 1984). Western North Atlantic population 33,000 pairs (Brown, Brown and Nettleship 1984).

### References Cited:

Brown, R. G. B. Brown and D. N. Nettleship. 1989. The seabirds of Northeastern North America: their present status and conservation requirements. Pp 85-100. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World’s Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Evans, P. G. 1984. The seabirds of Greenland: their status and conservation. Pp 49-84 . In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World’s Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### Cory’s Shearwater, *Calonectris diomedea*

Cory’s shearwaters breed in the temperate eastern Atlantic. This species is highly pelagic, but small numbers are regularly seen in inshore waters. This species is common off North America during the warmer months (May through November), with the majority of individuals encountered during the summer off the Carolinas. Nearly all specimens collected off the North American coast are subadults because the adults are present at their eastern Atlantic breeding sites during this period. This species occurs in all 11 NOAA areas but is most abundant in areas 4, 5 and 6; it is less common in warmer waters of lower latitudes. It winters mostly off the coast of Africa and southern Indian Ocean. These shearwaters often forage over schools of small fishes driven to the surface by larger predatory species, and they are commonly encountered around commercial fishing operations.

**Identification:** Large shearwater, similar in size to Greater Shearwater [45-53 cm (18-21 inches) in length]. Grayish brown with little demarcation and featureless plumage. Strong flyer with long gliding arcs and, even with a modest wind, seldom flaps wings. Often associated with other shearwaters. Only shearwater in our area with a yellow bill.

**Conservation Status:** Endemic to Atlantic (though they disperse into Indian Ocean), common and of no current conservation concern. Based on estimates from known nesting

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sites current population probably exceeds 600,000 breeding adults. In that Cory's shearwaters occurring in the western Atlantic are mostly immatures and subadults, even a major mortality event in our area would have little if any impact on the overall population. However, the Southeast Regional Waterbird Plan (Sept. 2005 draft) lists Cory's shearwater as a "Continental Concern Species."

**Current Population:** Three subspecies are recognized. *C. d. diomedea* breeds on islands in the Mediterranean Sea. Young birds disperse into western Atlantic where they occur mostly from North Carolina southward during the warmer months. *C. d. borealis* breeds in the Azores, Madeira and Canary Islands. Young of this race also disperse into the western Atlantic but mostly occur from Virginia northward. The zone of overlap is not distinct but individuals in waters from New England northward are mostly of this race. From Hatteras southward they are mostly the Mediterranean race. *C. d. edwardsi* breeds only in the Cape Verde Islands and apparently does not venture into the western Atlantic.

### Mediterranean population:

Spain 10,000+ pairs (de Juana 1984, James 1984), increasing.

Moroccan coast ca 2,000 pairs (de Juana et al. 1984)

Zembra Island 3,000-5,000 pairs (de Juana et al. 1984)

France 760 pairs (James 1984)

Italy 7,000 pairs (James 1984)

Malia 700 pairs (James 1984)

Greece 5,000 pairs (James 1984)

Tunisia 3,000 pairs (James 1984)

Also breeds in former Yugoslavia, Algeria, and possibly Turkey but sizes of nesting populations are unknown. Many undiscovered colonies are believed to occur. Thus the total adult population of *C. d. domedea* exceeds 32,000 pairs.

### Eastern Atlantic Island population:

Azores 500,000 pairs (LeGrand, Emmerson and Martin 1984)

Madeira 16,500 (Zino and Biscoito 1994)

Salvages Islands 15,000 pairs (LeGrand, Emersson and Martin 1984)

Canary Islands ca 5,000 pairs, probably many more (LeGrand, Emerson and Martin 1984)

Thus total population well in excess of half a million breeding pairs.

### Cape Verde population:

Population unknown but said to breed in great numbers on several islands (Le Grand and Martin 1984), later estimated at 10,000 pairs (Hazevoet 1994).

### References Cited:

James, P. C. 1984. The status and conservation of seabirds in the Mediterranean Sea. Pp 371-375. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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- De Juana, E., J. Varela and H.-H. Witt. 1984. The conservation of seabirds at the Chafarinas Islands. Pp. 363-370. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.
- De Juana, E. 1984. The status and conservation of seabirds in the Spanish Mediterranean. Pp. 347-361. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.
- LeGrand, G. and K. Emmerson, and A. Martin 1984. The status and conservation of seabirds in the Macaronesian Islands. Pp 377-391 In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.
- Hazevoet C. J. 1994. Status and conservation of seabirds in the Cape Verde Islands. Pp 279-293. In D. N. Nettleship, J. Burger and M. Gochfeld (eds) Seabirds on Islands, threats, case studies and action plans. Birdlife Conservation Series No.1 318 p.
- Zino, F and M. Biscoito 1994. Breeding seabirds in the Madeira archipelago. Pp 172-185. In D. N. Nettleship, J. Burger and M. Gochfeld (eds) Seabirds on Islands, threats, case studies and action plans. Birdlife Conservation Series No.1 318 p.

### **Greater Shearwater, *Puffinus gravis***

The species is endemic to the Atlantic basin, breeding off extreme southern South America and dispersing northward to the North Atlantic during its non-breeding season, the Austral winter. When full grown the young are abandoned by their parents and migrate north several weeks prior to the adults. They spend the northern hemisphere summer mostly off the Grand Banks, but they also occur regularly at least as far south as the Carolinas. During spring and fall, migration occurs throughout all regions (NOAA areas 1 through 11), but the species is rare in the Gulf of Mexico. They occur typically in deep water over outer continental shelf, areas of upwelling associated with marine canyons and plateaus, and banks, which are in major pelagic recreational and commercial fishing grounds. This species is attracted to baits and other fishing activity. They are absent from the western North Atlantic in winter.

**Identification:** The Greater Shearwater is a large (18-21 inch [45-53 cm] total length), black billed, black-capped tubenose. The under parts are mostly white except for the undertail-coverts and a distinctive blackish-brown belly smudge. Strong flyer with powerful and quick wing beats.

**Conservation Status:** While abundant the species is highly gregarious, and an explosive migrant; thus significant portions of the adult global population can be concentrated in small areas, particularly during migration, and could be highly vulnerable to oil spills and other man induced events. This species is listed as a "Continental Concern Species" in the draft Southeast United States Regional Waterbird Conservation Plan (Hunter et al. 2005).

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**Current Population:** Despite its limited breeding distribution, the species is abundant, and estimates suggest over 5 million breeding pairs in Tristan de Cunha, Gough Island, and a single island in the Falklands (Williams 1984).

### References Cited:

Williams, A. J. 1984. The status and conservation of seabirds on some islands in the African sector of the Southern Ocean. Pp. 627-635. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### Storm Petrels

There are three genera and four species of storm petrels that occur regularly in the western North Atlantic. Several additional species have been reported but because of rarity in our area they are not considered here. While, because of their delicate surface feeding behavior, storm petrels do not appear to be candidates for long line fisheries mortality, they have been reported as by-catch. The species caught to date was not determined. All storm petrels are pelagic, and they mostly occur in the Western North Atlantic during the late spring and summer months. Some are obligate trans-equatorial migrants, others are trans-Atlantic, and one is a boreal breeding species. Distribution: All areas 1-11.

**Identification** is discussed below on a species by species basis. All are small (15-22 cm total length). However, each has a distinctive flight pattern. For birds in the hand look at length of legs, shape of tails, coloring on webbing on their feet, and tail lengths. Combinations of identifying characters may be necessary for species determination. When determining species identification, rule out the most common storm petrels first. The Wilson's Storm Petrel is the most common bird in the world and the only black species with a white rump, legs that protrude past the length of the tail, AND having yellow webbing in the feet. Band-rumped Storm Petrels have shorter legs. Leach's Storm Petrels also have shorter legs and a forked tail. Neither has yellow webbing. White-faced Storm Petrels are distinctive. They have a face stripe and white under parts. These species are listed and discussed separately in the section on Oceanic Divers.

### Laughing Gull, *Larus atricilla*

An abundant species of no conservation concern. Occurs in all 11 NOAA areas, breeding in Atlantic from Maine south to Florida, throughout the Bahamas and West Indies, Gulf of Mexico, Mexico and northern South American coast. Winters in coastal areas within its breeding range and at sea from Carolinas southward. During the summer restricted to coastal areas, during the winter often occurs in flocks in open ocean environments. Follows ships and forms feeding flocks around fishing operations. The species has been reported as long-line bycatch in the western North Atlantic.

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**Identification:** Smallish gull [38-43 cm (15-17 inches) in length.]. Plumage variable both seasonally and by age class. Breeding season adults with black heads dark wing tips and white tails. Most confusion regarding this species will be in separating them from Franklin's gulls (which occur mainly in the Gulf of Mexico). No confusion should occur in identification of adult birds in summer plumage as this is the only black headed gull likely to be found in marine environments in the Western North Atlantic.

**Conservation Status:** Two sub species are recognized. *L. a. atiricalla* breeds in West Indies and South America, *L. a. megalopterus* in North America. Common throughout most of its range, populations increasing primarily because of current methods of waste disposal. At least three times more common than any other seabird nesting in southeastern United States. In many areas this gull is detrimental to other sea birds, eating eggs and young and competing for food and nesting sites. The draft regional waterbird plan (Hunter et al. 2005) considers the Laughing Gull a problem species possibly requiring large scale control to protect other species vulnerable to its predation.

### **Current Population:**

Northeastern and mid Atlantic states 64,483 pairs (Buckley and Buckley 1984)

Southeastern US 197,873 pairs (Clapp and Buckley 1984)

Bahamas and West Indies 5,000-10,000 pairs (Chardine et al. 2000)

Mexico and Northern South America ca 1,000 pairs (Rudd and Norton 1984)

Total: 168,356 to 173,356 pairs. Kushlan et al., 2002 report 528,000 to 538,000 breeders for the Americas (thus 264,000 to 269,000 pairs in region. This latter number is probably more accurate as the species has greatly expanded in numbers in the last few decades, and more seabird inventories have been conducted since the early 80s when the last published information was made available.

### **References Cited:**

Buckley, P. A. and F. G. Buckley 1984. Seabirds of the North and Middle Atlantic Coast of the United States: their status and conservation. Pp. 101-133. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Chardine, J., R. P. Morris, J. F. Parnell and J. Pierce. 2000. Status and conservation priorities for laughing gulls, gull-billed terns, royal terns and bridled terns in the West Indies. in E. A. Schreiber and D. S. Lee (eds) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 p.

Clapp, R. B. and P. A. Buckley 1984. Status and conservation of seabirds in the Southeastern United States. Pp. 135-155. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

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van Halewyn, R. and R. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169-222. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **Herring Gull, *Larus argentatus***

Large gull [56-66 cm (22-26 inches) in length] breeding throughout the Northern Hemisphere. Ten recognized races by some authors but only *L. a. smithsonianus* breeding in Northern Hemisphere and few wintering records of other races in our region. Common and widespread. Known to hybridize on a regular basis with Glaucous-winged, Glaucous, Lesser Black-back and Greater Black-backed Gulls. Obviously the taxonomy of this complex is not definitive. Much of breeding range is inland. In North America nesting occurs from southeastern Alaska east to Greenland and south along coast to North Carolina. Wintering individuals can be expected in all 11 NOAA areas. In some areas immatures are more likely to be found far at sea than adults.

**Identification:** As with other gulls plumage varies with age and season. Leg color, size, and other characters vary between subspecies. Similar in many respects to another common species, the Ring-billed Gull [45-53 cm (18-21 inches) in length]. Often in mixed species flocks where sizes of the various gulls can be compared.

**Conservation Status:** This is not a species of conservation concern. The population is increasing partly because of this gull's use of landfills as winter feeding sites. In some areas these gulls need to be controlled because they are detrimental to breeding populations of Roseate Terns and other species of conservation concern. The draft regional waterbird plan concurs (Hunter et al. 2005).

### **Current Population:**

Total population of just the North American subspecies is huge. In 1972 89,000 pairs in New England alone (Drury 1973-4) and 92,000 nested just along the north and middle Atlantic coast of the United States by 1977 (Buckley and Buckley 1984). Nearly 1,000 pairs nested along the coast of NC by 1988 (Lee 1995), they did not even nest this far south prior to the 1970. Most of the wintering Herring Gulls in the region, however, are from inland breeding colonies in the interior of Canada. Kushlan et al. (2002) estimate more than 264,000 breeding individuals in North America (132,000 pairs). Much of the Greenland population hybridizes with other species and while populations are large they are difficult to estimate.

### **References Cited:**

- Drury, W. H. 1973-74. Population changes in New England Seabirds. Bird-Banding 44: 276-313; 45: 1-15.
- Buckley, P. A. and F. G. Buckley 1984. Seabirds of the North and Middle Atlantic Coast of the United States: their status and conservation. Pp. 101-133. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

Lee, D. S. 1995. Marine birds off the coast of North Carolina. *Chat* 59(4): 113-171.

### **Greater Black-backed Gull, *Larus marinus***

This is a large gull [71-79 cm (28-31 inches) in length] that is confined to the North Atlantic. In North America it breeds along coastal areas from Labrador and Quebec south to New York, with individual nesting as far south as North Carolina. The species also nests in Greenland, Iceland, Spitsbergen and the Faeros. In western Europe Greater Black-backed Gulls nest along the coast of Russia southward to the British Isles and northern France. In the western North Atlantic, birds from North America and Greenland winter in marine environments from Labrador south to Florida. The species does not occur regularly in NOAA areas 1,2 10 or 11, and is absent from most of area 9. It is found mostly in coastal areas but can occur far at sea. It is often associated with commercial fishing activities and has been identified as bycatch of the U.S. longline fleet.

**Identification:** This is the largest species of gull in the world with a wing span of 152-167 cm (60-66 inches). The adults are white except for their jet-black back. The bill is large, and adults have yellow bills with an orange spot. This species differs from the smaller Lesser Black-backed gull [51-61 cm (20-24 inches) in length; 124-127 cm (49-50 inches) wing span] in having pink not yellow legs. Like in other gulls plumages of juvenile and immatures are variable, but large size should separate this species from all others. Birds not in adult plumage could be confused with immature Herring and Lesser-Black Backed Gulls.

**Conservation Status:** This is not a species of conservation concern. It is expanding both in distribution and numbers. It is viewed by the draft regional waterbird plan (Hunter et al. 2005) as a species that may need to be controlled because of its predation on other beach-nesting bird species.

### **Current Population:**

Canada 12,400 pairs in 1972 (Drury 1973-74)

Northern and mid Atlantic States: 17,405 (Buckley and Buckley 1984)

Southeastern United States: 12 pairs (Lee 1995)

Greenland: figures given in orders of magnitude from 1,000 to 100,000 pairs. Based on estimates by region, the population probably is about 10,000 pairs (Evans 1984).

Total: Based on continuing growth of North American populations there are at least 40,000 pairs in the western Atlantic, and Kushlan et al. (2002) give a figure of 121,430 adults (60,715 pairs). Neither of these estimates include breeding populations in the sub Arctic or western Europe where the species is also common.

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- Buckley, P. A. and F. G. Buckley 1984. Seabirds of the North and Middle Atlantic Coast of the United States: their status and conservation. Pp. 101-133. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). *Status and Conservation of the World's Seabirds*. ICBP Tech. Publ., No. 2. 778 p.
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### OCEANIC DIVERS

The species in this group are plunge divers, and, for this reason, might be vulnerable to long-line fisheries, although none profiled below occur in the poorly differentiated bird by-catch data from observers in the U.S. Western North Atlantic long-line fishery. Other shearwater species have been reported in the by-catch of this fishery (National Marine Fisheries Service Observer Program, unpublished data), and other petrel species have been reported as by-catch in the South African pelagic long-line fishery (Petersen 2005). Boobies are in the same genus as the Northern Gannet, which is reported in the by-catch of the U.S. Western North Atlantic long-line fishery. Tropic-birds have not been reported in any other fishery and are believed by J. Croxall (pers. comm.) to be unlikely to be caught on long-line.

#### **Northern Fulmar, *Fulmarus glacialis*** (received 12-22-06)

This sea bird has greatly increased in numbers during the historical period, perhaps a result from benefiting from fisheries operations as these birds commonly feed behind boats on discarded scraps. They follow working fishing ships, often in great numbers and because of their aggressive feeding behavior are likely to become by catch victims.

Primarily in NOAA areas 5-7. Major year round concentrations on Grand Banks. Regular but not common in Gulf Stream of area 4.

**Identification:** Stout gull-like seabird with a tube nose. Fulmars have color morphs that range from mostly white to uniformly dark and every gradation between. Bill stubby and yellow. Modest sized (45-51 cm (18-20 inches) total length) sea bird with a bull-necked-heavy build appearance that should prevent confusion with shearwaters and petrels.

**Conservation status:** Not a species of conservation concern. Atlantic population has expanded dramatically during the last 200 years.

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**Current population:** Global population estimated at 10-12 million individuals. Over 2,000,000 pairs nesting in Iceland, Greenland, Faeroes, Britain and n European mainland (Hatch and Nettleship 1998).

North America

Arctic and eastern Canada

North West Territories ca 302,000 pr. (Hatch and Nettelship 1998)

Labrador 16 pr. (Hatch and Nettleship 1998)

Newfoundland ca 100 pr. (Hatch and Nettleship 1998)

Total Atlantic population: Could exceed 2,151,000 pr. Including pre breeding birds the total Atlantic population estimated at 6.1 million individuals. Kushlan et al. (2002) estimate 2,100,000 breeding adults in North America (this includes Pacific populations).

### References Cited:

Hatch, S. A. and D. N. Nettleship 1998. Northern Fulmar, *Fulmarus glacialis*. in The Birds of North America, No. 361 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

Kushlan, J. A., et al. 2002. Waterbird Conservation for the Americas: the North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA, 78 pp.

### Bermuda Petrel, *Pterodroma cahow*

Bermuda petrels were first discovered in Bermuda in the 16<sup>th</sup> century when nesting birds numbered in the hundreds of thousands. They do not nest at any other locality and they were presumed extinct by 1620 as a result of human exploitation and introduced predators. After being considered extinct for over 300 years, 18 pairs were discovered in 1951 on five small islets off Bermuda. Their current total nesting range is less than one hectare.

The only published records of at sea occurrence are for waters around Bermuda and from the Gulf Stream over the Outer Continental Shelf of North Carolina. Area 4. Thus, the latter appears to be an important foraging area for this rare species. Found off North Carolina April to August, with one December report. At breeding sites from late October through May.

**Identification:** Small petrel (15 inches, 38 cm, in total length). Resembles the larger Black-capped petrel.

**Conservation Status:** Endangered (Federal Register 8495). Nesting population is carefully managed by Bermuda government.

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**Current Population:** 32 pairs in 1982 (van Halewyn and Norton 1984). Current 53 pairs (Lee 1999). This is one of the most endangered birds in the world. Hurricanes in the last decade have destroyed a number of nesting burrows and the population is currently thought to be lower than the 1999 count of 53 pairs. Bermuda reported 29 pairs actively nesting in 2005.

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Lee, D. S. 1999. Pelagic seabirds and the proposed exploration for fossil fuels off North Carolina: a test for conservation efforts of a vulnerable international resource. *Jour. Elisha Mitchell Scientific Soc.* 115(4): 294-315.

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### **Black-capped Petrel, *Pterodroma hasitata***

Endemic to western North Atlantic. Breeds in West Indies (now confined to a single island), forages off the southeastern coast of Cuba and in Gulf Stream off southeastern United States (mostly from Cape Canaveral north to Cape Hatteras). Island extinctions mostly result from European contact, but pre Columbian man also relied on them as a seasonal source of protein.

Tropical and sub-tropical distribution with numerous hurricane driven vagrants north of typical range. Highly pelagic. Primarily in areas 1, 3 and 4, and western most 10 and 11. Typically in deep Gulf Stream waters. Also probably in area 8 (Sargasso Sea).

**Identification:** Large petrel (14-18 inches, 35-46 cm, in total length) typically with white collar and white rump. Dark dorsally, and primarily white on underside, but some individuals are darker. At sea has a conspicuous soaring roller-coaster flight pattern.

**Conservation status:** Once believed to be extinct but nesting colonies were discovered in Haiti in 1961. Black-capped petrels are thought to be extirpated on four of the five Caribbean Islands where they were known to nest. This is one of the most threatened species in the Americas.

**Current Population:** Estimates of 2-20, 000 pairs were made at the time of their 1961 rediscovery. The higher figure was certainly an overestimate, and subsequent habitat destruction places their total population at less than 2,000 pairs. A complete review of known nesting sites, and documentation that these petrels do not nest in Cuba places the global population at 1,000-2,000 pairs. They nest in mountains of Hispaniola; both in Haiti and the Dominican Republic. (Lee 2000)

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### **Herald Petrel, *Pterodroma arminjoniana***

Rare tropical petrel confined to two breeding sites, South Trinidad Island and Martin Vas Rocks off Brazil. Fewer than several hundred records and sight reports are available from the Western North Atlantic. Most are from off Cape Hatteras, but the species has also been reported from Virginia, Puerto Rico, and the mid Atlantic. There are several inland records of hurricane driven birds found from Virginia to New York. This petrel disperses great distances from its breeding sites where it is found over deep tropical waters. Most records are from summer along the Outer Continental Shelf and well within the Gulf Stream. Area 4. Highly pelagic.

**Identification:** Occurs in both a light and dark color morph, although nearly all Western Atlantic records are of the dark morph. The dark morph is slaty-brown all over and has no distinctive markings. In flight could be confused with jaegers or sooty shearwaters. In hand the distinctive petrel shaped bill will easily distinguish it from these species. Length 14 to 15.5 inches, 35-39 cm.

**Conservation Status:** Highly endangered in Atlantic basin as a result of human disturbance and introduced house cats at its only breeding site. Population appears to continue to decline. Evidence suggests that the Atlantic population is specifically different from ones nesting in the Indian Ocean and tropical Pacific. Additionally the two color morphs nesting on South Trinidad Island may actually represent two different species.

**Current Population:** Formerly abundant but size of current population unknown and believed to be only several hundred pairs (Lee 1999, 2000).

### **References Cited:**

Lee, D. S. 1999. Pelagic seabirds and the proposed exploration for fossil fuels off North Carolina: a test for conservation efforts of a vulnerable international resource. Jour. Elisha Mitchell Scientific Soc. 115(4): 294-315.

Lee, D. S. 2000. Color morph bias and conservation concerns for a tropical *Pterodroma*. Chat 64(1): 15-20.

### **Soft-plumaged Petrel, *Pterodroma 'mollis'***

Four taxa, each considered a distinct species occur, two of these are endemic to the North Atlantic. The Fea's petrel, *Pterodroma feae*, the more common of the two, breeds in the

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Cape Verde Islands and Bugio, Desertas Islands off Maderia. The Maderian petrel, *P. maderia* breeds in remote high elevation sites on Maderia. Another form occurs in the sub-Antarctic of the Atlantic. The southern Atlantic form, *P. mollis*, has also been reported off eastern North America.

Limits of dispersal at sea from breeding unknown, but vagrant individuals reported from numerous sites in eastern North Atlantic. In our region eastern portions of areas 7, 9 and 10, and Gulf Stream waters of area 4, and extreme southern area 4

**Identification:** Identification between taxa of birds at sea away from their breeding sites is extremely difficult, and experts cannot agree to identifications of specimens obtained away from nesting sites. This is a modest sized petrel (12.25 – 14.25 inches, 32-37 cm in length). This bird has dark under-wings and a distinct or incomplete dark collar, and a darkish mask before and below the eye.

**Conservation Status:** The North Atlantic species are both extremely rare, declining, globally endangered species.

**Current Population:** Few hundred pairs represent the total population of Fea's petrel while the Madeira population is less than 50 pairs, and the most recent estimates indicate only about 20 pairs. It is considered the rarest bird of Europe (Collar and Andrew 1988, Lee 1999).

### References Cited:

Collier, N. J. and P. Andrew. 1988. Birds to watch: The ICBP World Checklist of Threatened Birds. ICBP Tech. Publ. No. 8. Smith. Inst. Press, Washington, DC. 303 p.

Lee, D. S. 1999. Pelagic seabirds and the proposed exploration for fossil fuels off North Carolina: a test for conservation efforts of a vulnerable international resource. Jour. Elisha Mitchell Scientific Soc. 115(4): 294-315.

### Bulwer's Petrel, *Bulweria bulweria*

Tropical, subtropical species with few reports away from nesting areas. In western Atlantic know from off northern South America, and from Georgia and the Carolinas. Vagrants associated with deep water and tropical seas or Gulf Stream. Areas 4, 10, 11 and the eastern portions of 7 and 9.

**Identification:** Long winged, long tailed all dark bird. Intermediate in size between petrels and storm petrels. Total Length 10-10.5 inches, 26-27 cm. Flies close to surface.

**Conservation Status:** Rare, in Atlantic, but also found in Indian and Pacific Oceans. Only six reliable reports from the Western Atlantic.

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**Current Population:** Azores (populations very small), Madeira (2,500 pairs), Salvages (> 5,000 pairs), Canary (75-125 pairs), and Cape Verde Islands (very few) (Zino and Bischoito 1994; LeGrand et al. 1984). Total population less than 8,000 pairs.

### References Cited:

LeGrand, G., K. Emmerson, and A. Martin. 1984. The status and conservation of seabirds in the Macaronesian Islands. Pp. 377-391. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Zino, E. and M. Bischoito. 1994. Breeding seabirds in the Maderian archipelago. Pp. 172-185. In D. N. Nettleship, J. Burger and M. Gochfield (eds.) Seabirds on Islands—threats, case studies and action plans. Birdlife Con. Ser. No. 1 318p.

### Sooty Shearwater, *Puffinus griseus*

Obligate trans-equatorial migrant. Breeds in extreme South Atlantic and “winters” in North Atlantic. Expected in all areas as a spring migrant, although rare or lacking from the Gulf of Mexico and Caribbean basin (areas 1 and 2). This species is common in northern hemisphere summers in area 6. The bulk of population migrates past the Carolinas in last week of May and first week of June, though some individuals summer as far south as North Carolina. Fall migration is mostly southward through eastern Atlantic.

**Identification:** Large all dark shearwater (16-18 inches, 40-46 cm in length) with long, pointed wings. Flies on stiff wing beats with long arching glides. Gregarious, often in mixed feeding flocks. Its foraging behavior and data from the Pacific both suggest that this is a species might be vulnerable to long-lines.

**Conservation Status:** While an abundant, although declining seabird in the Pacific, the total breeding population in the Atlantic is small. Some immature Pacific birds may forage in the Atlantic, but it is unknown what percentage, if any, of these individuals make up the total “wintering” population in the North Atlantic.

**Current Population:** 1-10,000 pairs nesting in Falkland Islands (Cramp and Simmons 1977, Croxall et al. 1984).

### References Cited:

Cramp, S. and K. E. L. Simmons, eds.. 1977. Birds of the Western Palearctic. Vol 1. Oxford University Press. 722 p.

Croxall, J. P. P. G. Evans and R. W. Schreiber, eds. Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### Manx Shearwater, *Puffinus puffinus*

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This is the most northern breeding species of shearwater. Breeds primarily at high latitudes in the Old World, but as of 1975 this species was discovered nesting in Martha's Vineyard and a small colony was discovered in Newfoundland. Banded specimens collected off North America indicate that most Western North Atlantic records are of birds from breeding colonies in the British Isles.

This shearwater is for the most part an obligate transequatorial migrant and is pelagic. After the breeding season, birds migrate south and winter off the west coast of South Africa. They migrate in a clockwise fashion in the Atlantic and may return to their breeding grounds (notably the British Isles, but other eastern Atlantic sites as well), flying northward over the western North Atlantic.

Manx shearwaters occur at sea commonly, though seasonally from Maryland northward (Primarily NOAA areas 5,6 and western portions of 7, in all other areas during migration, and possibly in winter). About 5,000 Manx Shearwaters forage over northern shelf waters (New England, Georges Bank, and the Gulf of Maine) in the summer (Powers 1983). Off the southeast Atlantic coast they are regular migrants and some individuals over-winter. This is a common migrant in waters around Bermuda. It is most common during the spring migration period (March through May) in the Western North Atlantic. The species is rare in upper Gulf of Mexico (off Alabama and Texas) and in the Greater Antilles (Lee 1995). Status off Northern South America unknown but probably never abundant there. Typically found over deep waters of Outer Continental Shelf.

**Identification:** Modest sized shearwater (12-15 inches, 30-38 cm, in length), black on dorsal surface, white on ventral surface. Similar, but larger than Little shearwater and Audubon's shearwater. Several additional taxa breed in Mediterranean Sea but they are seldom, if ever, encountered in Western North Atlantic.

**Conservation status:** Common, stable breeding populations in Eastern North Atlantic, small and newly established (mid 1970s) and expanding breeding populations in Western North Atlantic. Apparently nested in Bermuda in small numbers but that population has been extinct since 1905.

**Current Population:** Total population is estimated at 300,000 pairs (Tucker and Heath 1994).

### References Cited:

Lee, D. S. 1995. The pelagic ecology of Manx Shearwaters, *Puffinus puffinus*, off the Southeastern United States of America. *Marine Ornithology* 23: 107-119.

Powers, K. D. 1983. Pelagic distribution of marine birds off the Northeastern United States. NOAA Technical Memorandum NMFS-F/NEC-27.

Tucker, G. M. and M. F. Heath. 1994. Birds in Europe, their conservation status. *Birdlife Conservation Series No. 3*. Birdlife International, Cambridge.

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### **Audubon's Shearwater, *Puffinus lherminieri lherminieri* and *P. l. loyemilleri***

This is a pelagic tropical species often associated with Sargassum. Nominate subspecies endemic to western North Atlantic. *P. l. loyemilleri* confined to western Caribbean is close to extinction but no current population assessments are available.

Nesting occurs in the Bahamas, The West Indies and on various islands in the Western Caribbean. Disperses to adjacent tropical and subtropical seas in non-breeding period. Follows Gulf Stream northward and is commonly encountered off the Carolinas, and regularly north of New Jersey and New York. Typically in deep waters over Outer Continental Shelf. Mostly confined to NOAA areas 1, 3, and 4. Likely in area 8, and storm driven birds and vagrants may occur in areas 2, and 5.

**Identification:** Small, stocky black and white shearwater. Tail appears longer than other black and white species (Manx and Little). Length 12 inches, 30 cm.

**Conservation Status:** While in some situations this shearwater appears to be quite common, the Atlantic population is small and the species has disappeared from a number of former breeding sites (Bermuda, various islands in the Bahamas, Puerto Rico, Culebra, Mona, Monito, the British Virgin Islands, the Grenadines, and islands in the Western Caribbean). Introduced predators, mostly rats and feral house cats are a major problem, and populations on many islands continue to decline

**Current Population:** Nominate 3,000 to 5,000 pairs (Lee 2000). Western Caribbean subspecies believed to be close to extinction (van Halewyn and Norton 1984).

#### **References Cited:**

Lee, D. S. 2000. Status and Conservation priorities for Audubon's Shearwaters in the West Indies. P. 25-39. in E. A. Schreiber and D. S. Lee (eds) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 pp.

van Halewyn, R. and R. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169-222. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **Little Shearwater, *Puffinus assimilis baroli* and *boydi***

The Atlantic populations of Little shearwaters have been documented as straying north to England and into the western Atlantic. This shearwater is a temperate to sub-tropical equivalent of the more tropical Audubon's shearwater. Some believe they are different forms of the same species. Another subspecies of this shearwater occurs in the south Atlantic, and temperate south Pacific and Indian oceans. In the North Atlantic

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populations of *P. a. boydi* nests in the Cape Verde Islands, while *P. a. baroli*, the subspecies documented as straying into the western North Atlantic, breeds in the Azores, Dersertas, Salvages and Canary Islands. Could occur in any of the NOAA areas, but known from isolated records from 1, 4, and 6, Regularly occurs throughout eastern portions of 7, 9, and 10.

**Identification:** A small black and white shearwater (10-12 inches, 25-30 cm, in total length). Difficult to distinguish from Manx and Audubon's shearwaters, though flight behavior is different, and wing beat is faster and the birds exhibit minimal soaring. Hand held birds have blue legs, but accurate identification will require long apprenticeships.

**Conservation Status:** Rare in North Atlantic with the populations on Azores and Canaries in decline.

**Current Population:** Total population of *P. a. baroli* estimated to be 2,700-3,900 pairs (Tucker and Heath 1994). 840-1530 pairs of this population nest in the Azores (Monteiro et al. 1999). Size of Cape Verde population unknown; breeds on five, perhaps 6 islands.

### References Cited:

Monterio, L. R., J. A. Ramos, J. C. Pereira, P. R. Monteiro, R. S. Feio, D. R. Thompson, S. Bearhop, R. W. Furness, M. Laranjo, G. Hilton, V. C. Neves, M. P. Groz and K. R. Thompson. 1999. Status and distribution of Fea's Petrel, Bulwer's Petrel, Manx Shearwater, Little Shearwater and Band-rumped Storm-petrel in the Azores Archipelago. *Waterbirds* 22(3): 358-366.

Tucker, G. M. and M. H. Heath. 1994. *Birds in Europe: their conservation status*. Birdlife Conservation Series No. 3, Birdlife International, Cambridge.

### Wilson's Storm Petrel, *Oceanites oceanicus*

Excluding chickens this storm-petrel is suspected to be the most abundant bird in the world. Three subspecies are recognized but only one occurs in our area. Found in all 11 NOAA areas. They are a trans-equatorial migrant, breeding in the Antarctic and wintering at sea in the Northern Hemisphere during our summer. Generally present throughout the warmer months (April through early October) but there are scattered records from early March through late December. Attracted to oily slicks associated with fishing activity.

**Identification:** One of three small [15-19 cm (6-7 inches) in length] all black storm petrels with a white rump patch. In flight this is the only one of these three species where legs extend past the tail. In hand it is the only storm petrel with yellow webbing between its toes.

**Conservation Status:** Abundant species of no conservation concern.

**Current Population:**

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Several million pairs breed just in the area around the Antarctic Peninsula (Croxall et al. 1984a) and 100,000 to 1,000,000 pairs nest in the Falkland Islands (Croxall et al. 1984b) but no estimates of the species' abundance for its total breeding range are available. Kushlan et al. (2002) estimate 50,000 to 100,000 birds in North American waters during the summer.

### References Cited:

- Croxall, J. P., A. Prince, I. Hunter, S. J. McInnes and P. G. Copestake. 1984a. The seabirds of the Antarctic Peninsula, Islands of the Scotia Sea, and Antarctic Continent between 80 W and 20 W: their status and conservation. Pp. 637-666. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.
- Croxall, J. P., S. J. McInnes and P. A. Prince. 1984b. The status and conservation of seabirds at the Falkland Islands. Pp. 271-291. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.
- Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

### Leach's Storm Petrel, *Oceanodroma leucorhoa*

This is a common breeding bird in both the North Atlantic and North Pacific. It winters mainly in Gulf of Guinea, off Brazil, and South Africa. Breeds from Massachusetts north to Newfoundland, also breeds in Greenland and in eastern Atlantic on islands off of Scotland. Occurs in most of the NOAA areas, but absent, or at least extremely uncommon in the Gulf of Mexico and Caribbean Sea.

**Identification:** One of three all black, white rumped storm petrels in the region. Larger [13-15 cm (5-6 inches) in length] than Wilson's Storm Petrel, Wings long and pointed, and unlike other dark storm petrels tail is forked.

**Conservation Status:** This species is of no conservation concern.

### Current Population:

Extremely abundant; western North Atlantic breeding population estimated in the millions. (Harrison 1983). Kushlan (2002) noted 15,275 breeders in North America (including Pacific populations) but this appears to be a gross underestimate. A single 6.3 sq km island off eastern Canada has a population of 3,360,000 pairs of breeding adults (Sklepkovych and Montevecchi 1989).

### References Cited:

- Harrison, P. 1983. Seabirds: an identification guide. Houghton Mifflin Company, Boston. 448 p.

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Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

Sklepkovych, B. O. and W. A. Montecchi. 1989. The world's largest known nesting colony of Leach's Storm Petrels on Baccalieu Island, Newfoundland. *American Birds* 43(1): 38-42.

### **Band-rumped Storm Petrel, *Oceanodroma castro***

This species often is seen with other species of storm-petrels. but this is the most restricted in zone of occurrence (distance from continental shelf, water temperature) and seasonal distribution. There are no reports of them being captured on long-lines although there are records of unidentified storm-petrels that have been caught. They are not as attracted to fish oils as Wilson's storm petrels, so they do not flock around fishing boats in large numbers. Even in places at sea where they are common, it would be unusual to see 50 a day, while Wilson's storm petrels sometimes are present by the thousands.

Present in Western North Atlantic and Northern Gulf of Mexico from mid May through Mid September and most common in summer. Occurs over deep warm water at edge of outer continental shelf and beyond. Rarely encountered north of North Carolina. Reported from NOAA areas 2-4 and southern portions of area 5.

**Identification:** A small storm-petrel difficult to distinguish from other white rumped storm petrels. Best identified in flight. Legs do not protrude beyond end of tail (as in Wilson's storm petrel), wings broad and rounded, and it often glides on stiff out stretched wings like a small shearwater. In hand check leg length compared to tail, lack of yellow on webbing of feet, and square shaped tail. Total length 19-21 cm (7.5 to 8.5 inches).

**Conservation Status:** Small, apparently stable breeding populations on several Eastern Atlantic Islands.

### **Current Population:**

St. Helena: 23 pairs (Williams 1984)

Ascension: 1,500 pairs (Williams 1984)

Azores: number unknown (LeGrand et al 1984)

Madeira: rare but exact size of population unknown (LeGrand et al 1984)

Canary Islands: number unknown (LeGrand et al 1984)

Cape Verde Islands: number unknown (LeGrand et al 1984)

The total Atlantic population is estimated to be between 2,000 and 5,000 pairs; the latter figure being generous (Lee 1999). The species also occurs in scattered sites in the tropical Pacific where it is also uncommon.

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LeGrand, G., K. Emmerson, and A. Martin. 1984. The status and conservation of seabirds in the Macaronesian Islands. Pp. 377-391. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Williams, A. J. 1984. Breeding distribution, numbers and conservation of tropical seabirds on oceanic islands in the South Atlantic Ocean. Pp 393-401. . In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **White-faced Storm Petrel, *Pelagodroma marina***

A distinctive long-legged storm-petrel. One of the larger species of storm-petrels [20 cm (8 inches) in total length]. Hops about on the surface like a kangaroo and has a contrasting plumage. While there are 3-4 named races of this storm-petrel, and two occur in the Atlantic, the only one known from the Western North Atlantic is the race which breeds in the Cape Verde Islands, *P. m. eadesi* (Watson, et. al. 1986). They occur only rarely in the western Atlantic from summer through early fall. Records are from deepwater zones. Known only from NOAA areas 4, 5, and 6 in western North Atlantic.

**Identification:** Extremely long legs and distinctive face pattern. Body dark above and light below, the only North Atlantic storm-petrel with white under parts. Resembles no other storm-petrel occurring in the region. Species not expected to be seen in flocks.

**Conservation Status:** Not rare but species of some conservation concern in the Atlantic because breeding colonies while large are very localized and conservation issues in these islands are paramount.

### **Current Population:**

Cape Verde Islands: 10-0000 to 50,000 pairs (Bourne 1955) on one island, small populations known from several other Cape Verde Islands.

Bourne, W. R. P. 1955. The birds of the Cape Verde Islands. Ibis 97: 508-556.

Watson, G. E., D. S. Lee and E. S. Backus. 1986. The status and subspecific identity of White-faced Storm-petrels in the western North Atlantic. American Birds 40:401-408.

### **Red-billed Tropicbird, *Phaethon aethereus mesonauta***

The Red-billed Tropicbird is the larger of the two species of tropicbirds in the Atlantic. It is also the rarest. The species nests primarily in the Lesser Antilles, but they also nest in Puerto Rico and on islands off Venezuela and Panama. Populations are estimated at 1,800 to 2,500 breeding pairs (Walsh-McGehee 2000). Lee and Walsh-McGehee (2000)

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believed that the region supported approximately 2,200 pairs, but reliable surveys of many of the Lesser Antillean breeding sites are sketchy. In general this larger species replaces the White-tailed Tropicbird from Puerto Rico southward. This is a plunge diving species.

At sea this species ranges regularly throughout the western Caribbean and adjacent Atlantic northward to Cape Hatteras and Bermuda. After storms displaced individuals may occur over a wider range. The species occurs primarily in NOAA areas 1, 3, and 4. Expected in area 8. Scattered, mostly storm driven reports from other areas.

**Identification:** For identification see White-tailed Tropicbird.

**Conservation Status:** Rare and declining, but not specifically protected.

### Current Population:

Puerto Rico: <10 to 30 pairs ( 9%). Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

US Virgin Islands: 225-300 pairs ( 12%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

British Virgin Islands: <50-<100 pairs (3.5%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Antigua: <50 pairs (2.3%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Barbuda: 50-100 pairs (3.5%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Redondo: 100 pairs (4.7%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

St. Martin: 15 pairs (0.7%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Saba: 750-1,000 pairs (41%) Source: Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

St. Eustatius: 30 pairs ( 1.4%) Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Guadeloupe: 69 pairs (3.3%) Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Dominica: 0-10 pairs (0.2%) Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Martinique: 50 pairs (2.3%) Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Tobago: 400 pairs (19%) Lee and Walsh-McGehee 2000, Walsh-McGehee 2000)

Caribbean Basin: <100 pairs (4.7%). Source: van Halewyn and Norton 1984

### References Cited:

Lee, D. D. and M. Walsh-McGehee. 2000. Population estimates, conservation concerns, and management of tropicbirds in the Western Atlantic. *Caribbean Jour. Sci.* 36(3-4): 267-279.

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van Halewyn, R. and R. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169-222. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.) Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **White-tailed Tropicbird, *Phaethon lepturus catesbyi***

This species is represented by an endemic subspecies in the western north Atlantic. It has declined rapidly in the last century and in 2000 there was an estimated 2,500-5,000 pairs (Lee and Walsh-McGehee 2000, Walsh McGehee 2000). Subsequently, an additional loss of 1,175 pairs may have resulted in a present total population of 1,325 to 3,825 pairs. This is a plunge diving seabird that feeds primarily on squid and flying fishes caught near the surface.

**Identification:** Because of their long streamer like tails adult tropicbirds are easy to identify. The only other streamer-tailed seabirds in the region are Long-tailed Jaegers, which are dark, not white. This species can be distinguished from the Red-billed Tropicbird by measuring the bill (bill color does not always work). Its total length is about 36-40 cm (18 inches) not including streamers, compared to the total length of the Red-billed, 46-50 cm without streamers. Occurs in proximity to breeding sites, as well as in the Gulf Stream regularly as far north as Cape Hatteras and the Sargasso Sea. Storm displaced individuals can occur anywhere along the North American coast. Most reports are from areas 1, 3, 4, and 8.

**Conservation Status:** Rare and declining, but not specifically protected.

### **Current Population:**

Bermuda: 2,500 pairs (50% of total population). This is the largest breeding population of this seabird in the Atlantic. Recent hurricanes may have reduced available nesting sites by as much as 40% (personal communication Bermuda Wildlife and Conservation Department). Source: Lee and Walsh-McGehee, 1998

Bahamas: <500 pairs (10%). Additional loss of at least 50 pairs by 2004. Source: Walsh-McGehee, et al, 1999, Walsh-McGehee 2000, Lee and Mackin 2004.

Turks and Caicos: 82 pairs (1.6%) Walsh-McGehee 2000

United States (Dry Tortugas): 0-2 pairs (0.04%). Source: Stevenson and Anderson 1998

Cuba: 60 pairs (2%). Source: Vina et al., 1998

Jamaica: 80-162 pairs (2%). Source: Walsh-McGehee 2000

Cayman Islands: 60 pairs (2%). Source: Walsh-McGehee 2000

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Hispaniola: 1000 pairs (20%). Source: Walsh-McGehee 2000  
Mona and Monito: 100-200 pairs (3%). Source: Lee and Walsh-McGehee 2000  
Puerto Rico: 200-300 pairs (5%). Source: Walsh-McGehee 2000  
US Virgin Islands: 40-80 pairs (1.2%). Source: Walsh-McGehee 2000  
British Virgin Islands: 40-100 pairs (1.2%). Source: Walsh-McGehee 2000  
Lesser Antilles: 143-438 pairs (4%). Source: Walsh-McGehee 2000

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### **Masked Booby, *Sula dactylatra dactylatra***

Rare pan-tropical species; various subspecies occur throughout the world. Nest on remote islands lacking mammalian predators, often in association with other species of boobies. The diet of this species is flying fish, jacks, and squid. Like other boobies they often lay more than one egg but only one chick is raised.

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While this is the least common species of booby, it is the one most likely to be encountered away from nesting sites as individuals disperse great distances from their breeding grounds. The species occurs northward in the Gulf Stream to the Carolinas, where it is a deepwater, pelagic species usually associated with *Sargassum*. It occurs in NOAA areas 1 through 4, and the southern portions of 5. Expected in area 8, and occurs over continental shelf of northern South America, western portions of areas 9 through 11.

**Identification:** Large (32-36 inches, 81-92 cm, total length) white booby with black in tail, primaries and scapulars. Adults superficially resemble Northern Gannets, but adult Gannets have yellow-hue on back of head and neck. Juveniles are brown and resemble Brown boobies. Immature Masked boobies have white under-parts, and a white collar.

**Conservation status:** This is the least common booby, and one of the rarest birds in the Atlantic. The Atlantic population is considered endangered in West Indies where over half the breeding stock occurs on a single island off Jamaica. The southern Caribbean population is vulnerable.

**Current population:** 550-650 pairs in eight known colonies in the West Indies, another 4,000 to 5,200 pairs nest on Islands of Venezuela and Mexico (Schreiber 2000). A few pair nest in the Dry Tortugas.

### References Cited:

Schreiber, E. A. 2000. Status of Red-footed, Brown and Masked Boobies in the West Indies Pp 46-57 in E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 pp.

### Brown Booby, *Sula sula sula*

This species is pan-tropical in distribution; the nominate subspecies is endemic to tropical Atlantic. They feed by plunge diving and eat mostly flying fish and squid. The nest on the ground; normally on rocky cliffs and isolated cays. Adults feed closer to shore than other boobies. Like other boobies their nesting season varies from site to site. This is a result of seasonal food availability and choosing nesting periods outside the hurricane season.

The marine distribution primarily restricted to Caribbean and Gulf of Mexico (NOAA areas 1, 2, and 3). Storm-blown individuals and vagrants occasionally expected in areas 4 and 5. Also occurs in extreme western portions of areas 9 and 10. This booby stays in the proximity of its breeding sites throughout the year.

**Identification:** See Masked booby. Brown boobies are chocolate brown above and white bellied as adults. The brown extends down to upper breast and has a clear-cut division. Smaller than Masked booby, Brown boobies are 64-74 cm (25-29 inches) in total length.

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**Conservation status:** Atlantic population considered vulnerable, few nesting sites are protected, and loss of one or two of the larger breeding sites would represent a large segment of the population. Extirpated from numerous former nesting colonies.

**Current population:** 5,500 – 7,800 pairs in West Indies and 4,500 – 7,000 pairs on various islands off Atlantic coast of northern South America and Central America. (Schreiber 2000).

### References Cited:

Schreiber, E. A. 2000. Status of Red-footed, Brown and Masked Boobies in the West Indies Pp 46-57 in E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 pp.

### Red-footed Booby, *Sula leucogaster leucogaster*

This pan-tropical species is the smallest of the boobies. They feed by plunge diving, feeding mostly on flying fish and squid. This booby builds nests in trees and shrubs. But when this type of vegetation is not available (destruction of island plant communities by goats for example) they will nest on the ground.

This booby has the most restricted distribution with both adults and immatures remaining in the proximity of nesting sites throughout the year. This species is the least likely to occur as a vagrant and does not seem to often be displaced by hurricanes. Expected primarily in area 1. Generally absent from Gulf of Mexico. Found in extreme western portions of areas 9 through 11.

**Identification:** Though smaller it is the same general size as Brown booby (26-30 inches, 66-77 cm). Comes in several color morphs, white, brown, white-tailed brown, and a white tailed and white headed. Typically several morphs nest in the same colony. The brown morph is the most common in our region. Because of adult plumage variation this bird is easily confused with Brown or Masked boobies. Juvenile wholly brown with yellowish- grey legs and feet. Immatures also present confusing plumage patterns when in transition to various adult color morphs. Red feet and legs of adults distinctive.

**Conservation status:** Atlantic population considered vulnerable, few nesting sites are protected, and loss of one or two of the larger breeding sites would represent a large segment of the region's population.

**Current population:** Atlantic population 8,200 – 10,000 pairs in West Indies and 6,500 pairs off Venezuela and Mexico. (Schreiber 2000)

### References Cited:

Schreiber, E. A. 2000. Status of Red-footed, Brown and Masked Boobies in the West Indies Pp 46-57 in E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West

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The Alcids that follow are boreal birds. Their behavior suggests that they might be vulnerable to some fishing gear. The population information on these species is hard to detail because these sub-Arctic birds are so wide spread.

### **Atlantic Puffin, *Fratercula arctica***

Boreal, surface diving seabird. Nest on rocky islands and sea cliffs. Feeds at sea where diving behavior suggest it could be a by-catch species of the long line fishing industry.

Endemic to North Atlantic. Boreal breeding distribution, at sea normally far from land and in deep-water areas. South to North Africa and Mediterranean Sea in eastern Atlantic and regularly to North Carolina in western Atlantic. Mostly in NOAA areas 5, 6, and 7.

**Identification:** Small 11-12 inches, 28-30 cm, total length. Adults easily distinguished by grooved and parrot-like bill and colorful appearance, legs red, on non-breeding adults the bill sheath is shed and on juveniles it is not formed. In flight short rounded wings and tail, poor flyer.

**Conservation status:** This is a very common species and not of global conservation concern. The figures below (Current Population) represent only those for the western North Atlantic. They also breed in the eastern North Atlantic. The bulk of the population nest in Iceland, 1 to 10 million pairs. They also occur in Scotland 645,000 pairs, the Faeroes 500,000 to 750,000 pairs and Norway 1,300,000 pairs. Puffins were extirpated from Maine and through a long-term management reestablished there. This is the only segment of the population of strong conservation concern. Several distinct subspecies are recognized, only one occurs in western Atlantic.

**Current Population:** Western Atlantic--Greenland: 2,500-5,500 pairs (Evans 1984). Northern Eastern North America 333,000 pairs (Brown, Brown and Nettleship 1984). Latter figure does not include Maine's 125 pairs (Buckley and Buckley 1984).

### **References Cited:**

Brown, R. G. B. Brown and D. N. Nettleship. 1989. The seabirds of Northeastern North America: their present status and conservation requirements. Pp 85-100. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Buckley, P. A. and F. G. Buckley. 1984. Seabirds of the North and Middle Atlantic coast of the United States: their status and conservation. Pp 101-133. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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Evans, P. G. 1984. The seabirds of Greenland: their status and conservation. Pp 49-84 . In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds.). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

**Dovekie, *Alle alle*** (received 12-22-06)

Also known as the Little Auk, this is the smallest and most abundant alcid in the North Atlantic. It is endemic to North Atlantic and Arctic Sea. Because of its abundance and accessibility at breeding sites in north western Greenland this bird has played an important role in the food and culture of the Inuit.

In the western Atlantic, most birds winter in low-arctic waters of the Labrador Sea, Grand Banks, and coastal Newfoundland. They are associated with planktonic prey and sea ice and concentrate near shelf edges. They occur occasionally south to North Carolina and rarely to Bermuda, Florida, Cuba, and the Bahamas. They could be captured in nets, but not are expected to be a species of concern for long-line fisheries.

In NOAA areas 5-7, rarely in 3 and 4.

**Identification:** Small size (20-25 cm (8-10 inches) total length) separates this species from all auks, razorbills, and guillemots. Black back and throat, white breast and belly. Float high on water and have fast, blurred, wing beat. Bill small and sparrow like. Chin, throat, and "ears" white in non-breeding birds, and in this plumage could be confused at a distance with other immature alcids.

**Conservation status:** Not a species of conservation concern.

**Current population:** While only about 1,000 pr. are believed to breed in North America; Home Bay, Baffin Island including a few on other islands in the immediate area (Montevecchi and Stenhouse 2002). The North Atlantic population is estimated at 9.5-25.1 million pairs (various sources summarized in Montevecchi and Stenhouse 2002). Kushlan, et al. (2002) estimated about 1000 individuals breeding in North America. In the winter it is estimated that tens of millions occur in North American waters.

### References Cited:

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

Montevecchi, W. A. and I. J. Stenhouse. 2002. Dovekie, *Alle alle*. in The Birds of North America, No. 701 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

**Razorbill, *Alca torda*** (received 12-22-06)

Boreal and low arctic seabird confined to North Atlantic. Breeds in North America,

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Greenland, Iceland and Europe. In western Atlantic winters primarily in the outer Bay of Fundy and Gulf of Maine south to Natucket Shoals and Georges Bank, individuals and small flocks found south to New York and New Jersey. Occasionally south to North Carolina, rarely to Florida. Fishes by swimming and diving so possibly a candidate for by catch in pelagic fishery operations.

In NOAA areas 5-7, rarely in 3-4.

**Identification:** Modest, crow sized (40-45 cm (15 \_ -17 \_ inch) total length) alcid. Smaller than murre. Black bill, head, throat, back and legs. Breast and belly white. Head large neck stout. Large, deep, laterally compressed, rectangular, parrot-like bill with thin white lines. At close range not likely to be confused with any other seabird.

**Conservation status:** Not a species of conservation concern.

**Current population:** World population believed to be on the order of 500,000 to 700,000 pr. (Lloyd et al. 1991). In North America: 300 pr in Maine, 38,000 pr in Canada (Chapdelaine et al. 2001). Bulk of the global population (65%) nesting in Iceland. Kushlan et al. (2002) estimate 75,000 adults breeding in North America.

### References Cited:

- Chapdelaine, G., A. W. Diamond, R. D. Elliot, and G. J. Robertson. 2001. Status and population trends of the Razorbill in eastern North America. Can. Wildl. Serv. Occas. Pap. No 105, Ottawa, ON.
- Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.
- Lloyd, C. S., M. L. Tasker, and K. Partridge. 1991. The status of seabirds in Britain and Ireland. T. & A. D. Poyser, London, U. K.

### Common Murre, *Uria aaige* (received 1-05-07)

This murre is an abundant seabird of the sub and low Arctic regions of the North Atlantic. Also occurs in Pacific and several sub-species are recognized. They often forage in flocks, sometimes these are mixed species flocks. They feed on mainly fishes and can dive to depths of 100 meters. Thereby they are likely to be a by-catch of pelagic fishery operations. Alternate name of Guillemont in British texts.

In the winter these birds occur at sea over continental shelf waters from Newfoundland southward to Cape Cod. Occasionally found as far south as Virginia. In NOAA areas 5-7

**Identification:** This bird is among the largest of the living alcids (40-43 cm (16-17 inches) total length). They are intermediate in size between the larger Thick-billed Murre and the smaller Black Guillemont. A black seabird with a white belly and breast. Winter birds have white throat, ventral portions of neck, and terminal portions of head. Bill long,

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pointed and almost loon like (all loons are much larger). Loons lack white wing bars and Black Guillemonts have large white wing patches.

**Conservation status:** One of the most numerous seabirds breeding in the Northern Hemisphere and not a species of conservation concern.

**Current population:** World population estimated at 13-20.7 million birds (Ainley et al 2002).

Western North Atlantic

Labrador 73,467 pr. (Ainley et al 2002).

Newfoundland 490,598 pr. (Ainley et al 2002).

Gulf of St Lawrence 17,735 pr. (Ainley et al 2002).

Total for western North Atlantic 581,800 pr.

Greenland and Europe 4.8-7.8 million individuals (Ainley et al 2002).

Total for North Atlantic 3-4.4 million pr., with additional par in adjacent Arctic regions.

### References Cited:

Kushlan et al. (2001) estimate 4,250,000 adults for North America but this would include Pacific populations.

Ainley, D. G., D. N. Nettleship, H. R. Carter, and A. E. Storey. 2002. Common Murre, *Uria aalge*. in *The Birds of North America*, No. 666 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

### Thick-billed Murre, *Uria lomvia* (received 1-05-07)

An abundant seabird of the North Atlantic, nesting in dense colonies on precipitous sea cliffs. Also breeds in Arctic Ocean and North Pacific and several sub species are recognized. A likely candidate for by catch. These are one of the deepest diving birds, commonly descending to depths of over 100 meters and sometimes to below 200 meters. They feed on a variety of prey including fish up to 50 grams.

Deserts northern portion of range in winter where ice cover is complete. Winters mainly off eastern Newfoundland and Labrador, but also off western Greenland, in Gulf of St. Lawrence, Bay of Fundy and off Nova Scotia south to Mass and NY. Occasionally south to Carolinas and Florida. Over continental shelf waters, and in large deep-water bays. For the most part found within 5 km of the coast. In NOAA areas 6 and 7, rarely in 5.

**Identification:** As name implies bill is thick. The largest of the living alcids (43-48 cm (17-19 inches) total length) and thus can be distinguished from Common Murre and Black Guillemont. All black back neck and head. White extends up underside of neck in

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a v shape on breeding adults. Winter plumage as in breeding adults but white extends to throat (but not on to head as in Common Murre). White wing bar and smaller size separates these seabirds from all loons.

**Conservation status:** This is one of the most numerous seabirds in the Northern Hemisphere and is not a species of conservation concern.

**Current population:** World population estimated at 15-22 million birds (Gaston and Hipfner 2000).

Western North Atlantic has millions of pairs.

Labrador 1,200 pr. (Gaston and Hipfner 2000)

Newfoundland a few pr. (Gaston and Hipfner 2000)

Gulf of St Lawrence 500+ pr. (Gaston and Hipfner 2000)

Hudson Bay and Strait 900,000 pr. (Gaston and Hipfner 2000)

E. Canada High Arctic 546,000 pr. (Gaston and Hipfner 2000)

Beaufort Sea 500 pr. (Gaston and Hipfner 2000)

Total eastern North America 1,448,200 pr. (Gaston and Hipfner 2000)

Additionally Iceland has millions of nesting individuals

Kushlan et al. (2001) estimate 4,000,000 pr. for North America but this includes Pacific populations.

### References Cited:

Gaston, A. J. and J. M. Hipfner. 2000. Thick-billed *Murre*, *Uria lomvia*. in The Birds of North America, No. 497 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

### **Black Guillemot, *Cepphus grylle* (received 1-05-07)**

These seabirds remain close to their breeding sites and often concentrate on edges of ice including mobile pack ice. Feed on and near bottom in <35 m inshore waters, in winter shifts feeding to organism living under sea ice. Not expected to be a by catch species. Northern limit of winter distribution limited to ice free, open seas. Winters mostly to the north of NOAA survey areas but a few occur south to NY, rarely south to the Carolinas.

In NOAA areas 5-7.

**Identification:** Modest sized all black seabird (30-36 cm (12-14 inches) total length) with extensive white wing patch. Black pointed bill, legs orange-red. Except for Dovekies this is the smallest of the Atlantic alcids. Dovekies have white breast and lower neck, lack white wing patch and have sparrow like bills. Birds in non-breeding plumage

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variable but white to gray dorsally.

**Conservation status:** Compared to some other boreal species this seabird is not particularly abundant but it is not a species of conservation concern.

**Current population:** World population not well documented but estimated at 250,000-500,000 pr.

Western North Atlantic and Arctic Oceans 266,000 pr. but accurate census difficult due to burrow nesting behavior and presence of non-breeding individuals at known nesting sites (Butler and Buckley 2002). Most individuals occur in the high Arctic.

Kushlan et al. (2001) estimate 100,000-200,000 adults for North America but this includes populations in Western Canada and Alaska.

### References Cited:

Butler, R. G. and D. E. Buckley. 2002. Black Guillemot, *Cephus grylle*. in The Birds of North America, No. 701 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

## OTHER WESTERN NORTH ATLANTIC SEA BIRDS

The following bird species, because of their feeding behavior, are unlikely to be captured on long-line.

### **Brown Pelican, *Pelecanus occidentalis* (received 11-26-06)**

While Brown Pelicans are extremely susceptible to entanglement in fishing gear, they rarely forage more than a few miles from the coast and thereby are not likely to be encountered by pelagic fishery operations. While in the mid part of the last century Brown Pelican populations were severely depleted, today they not only have the Atlantic ones returned, but breeding colonies have expanded in size, numbers, and northward from se North Carolina to Maryland. While this increase is generally and correctly attributed to the removal of DDT from the environment, the population surge also occurred at a time when there were major changes in coastal herring fisheries.

A temperate to tropical species that is migratory in the northern portion of its breeding range. Two subspecies occur in the Atlantic; the nominate form breeds in the West Indies and *P. o. carolinensis* breeds along the coast of North, Central and northern South America. Another subspecies breeds on the Pacific coast of the Americas. (In coastal regions of NOAA survey areas 1-5)

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**Identification:** Almost anyone can recognize a pelican. A second species, the White Pelican, occasionally winters along the Atlantic coast, but this species does not venture out to sea.

**Conservation status:** Once listed as Endangered by the US Fish and Wildlife Service Atlantic populations of Brown Pelicans have increased considerably since the 1970s. Because of small populations and coastal development pelicans are still considered Endangered in the Bahamas and West Indies where an endemic, non-migratory subspecies occurs (Schreiber and Lee 2000).

**Current population:** Southeastern United States, 13,422 pairs (Clapp and Buckley 1984), Bahamas and Turks and Caicos, 60-110 pairs, West Indies ca 1,500 pairs (Collazo, et al. 2000), islands off Central America 500+ pairs (Van Halewyn and Norton 1984), islands off northern South America ca 3,000+ pairs (Van Halewyn and Norton 1984). Total of 18,000 pairs in Atlantic.

Kushlan, et al. (2002) estimate 191,600-193,700 adults (95,800-96,850 pairs), the higher figure can be accounted for by breeding populations in the Pacific and the fact that the number of birds in the SE United States has increased considerably since the early 1980s when most surveys were conducted.

### References:

Clapp, R. B. and P. A. Buckley. 1984. Status and conservation of seabirds in the southeastern United States, Pp. 135-155. *in* J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Collazo, J., J. E. Saliva, and Judy Pierce. (2000). Conservation of the Brown Pelican in the West Indies. Pp. 39-45. *in* E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 pp.

Kushlan, J. A. 2002. Waterbird Conservation for the Americas: the North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA., 78 pp.

E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1.225 pp.

Van Halewyn, R. and R. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169-222. *in* J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

**Olivaceous Cormorant, *Phalacrocorax olivaceus* and Neotropical Cormorant, *P. brasilanus***

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For the most part a South American species with estuarine populations adjacent to coastal areas along northern South American coast, Central America, and the upper Gulf of Mexico north and east to Texas and Louisiana. Also in Cuba and the Bahamas. (NOAA areas 1, 2, 3, 10 and 11). Non-migratory to short-range migrant in upper Gulf of Mexico. This is not primarily a marine species and it is highly unlikely to be encountered by any pelagic fishing operations. The Neotropical Cormorant, *P. brasilanus* is the currently accepted name, but this bird appears as the Olivaceous Cormorant in most recent publications.

**Identification:** Small size [58-73 cm (23-29 inches) in length], long tail, and yellow throat patch should distinguish it from other cormorants in the region. In adults this throat patch is thinly bordered with white. Often seen in flocks. Plumage varies between juveniles, immatures and adults.

**Conservation status:** This is a common species in freshwater and estuarine habitats and excluding local peripheral populations it is not a species of conservation concern

**Current Population:** Total global population unknown, US population has fluctuated in recent decades; 3,000 pairs in Louisiana and 500 pairs in Texas (Clapp and Buckley 1984) but estimated later at 16,000 individuals [less than 8,000 pr?] (Kushlan et al 2002).

### References Cited:

Clapp, R. B. and P. A. Buckley 1984. Status and conservation of seabirds in the Southeastern United States. Pp. 135-155. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Kushlan, J.A. et al. 2002. Waterbird Conservation for the Americas: The North American Waterbird Conservation Plan, Version I. Waterbird Conservation for the Americas, Washington, DC. 78 p.

### Double-crested Cormorant, *Phalacrocorax auritus*

This is the most common and widespread cormorant in our region. Like the other cormorants it resides in marine habitats only in coastal areas, feeding in bays and sounds and near inlets. Only rarely is it seen at sea out of sight of land. Occurs throughout much of North America, with northern freshwater populations migrating to ice-free coastal marine and estuarine habitats outside the breeding season. Also occurs in the Bahamas and Cuba (NOAA areas 2 through 7). Three subspecies in occur our region.

**Identification:** Intermediate in size between the larger Great Cormorant and the smaller Neotropical Cormorant [74-91 cm (29-36 inches) total length]. Orange-yellow facial skin and throat pouch. The crest is rarely seen. Adults are all black, younger birds are

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brownish with pale upper breast and neck. Often seen in small groups, and occasionally in flocks of thousands around inlets and other areas where fish concentrate.

**Conservation status:** This is an abundant species and is of no current conservation concern. In the Bahamas there is an endemic dwarf race (*P. a. heuretus*) that is very rare, however, it is almost exclusively freshwater. The more widespread Florida race (*P. a. floridanus*) breeds from the Carolinas south into the Northern Bahamas and Cuba but is not considered to be of conservation concern (White and Lee 2001)

### **Current Population:**

Coastal Canada, 27,000 pr. (Brown and Nettleship, 1984)

Maine to Virginia, 15,333 to 17,000 pr (Buckley and Buckley 1984)

Southeastern United States, 11,840 (Clapp and Buckley 1984)

Bahamas, San Salvador, Eluthera and Rum Cay, <1,000 pr (White and Lee 2001)

Cuban population unknown but probably <1,000 pr. (DSL, pers. obser)

**Total** western Atlantic population ca 55,000 pr. Kushlan et al. (2002) estimate 740,000 breeders (370,000 pr) in all of North America. Population is currently increasing.

### **References Cited:**

Brown, R. G. B and D. N. Nettleship 1984. The seabirds of northeastern North America: their present status and conservation requirements. Pp. 85-100. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

Buckley, P. A. and F. G. Buckley 1984. Seabirds of the North an Middle Atlantic coast of the United States: their status and concervation. Pp. 103-133. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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White, A and D. S. Lee. 2001. Bahamian Seabirds: an international resource. Pp59-65, In E. Carey, S. D. Buckner, A. C. Alberts, R.D. Hudson, and D. S. Lee. Protected Areas Management Strategy for Bahamian Terrestrial Vertebrates: Iguanas and Seabirds. IUCN/SSC Conservation Breeding Specialists Group, Apple Valley, MN 55124. 74p.

### **Great Cormorant, *Phalacrocorax carbo***

Like the other cormorants this is a coastal species that is unlikely to be encountered during pelagic fisheries operations. This is primarily an old world species with breeding populations (*P. c. carbo*) in western Greenland, Iceland, Labrador, Nova Scotia, Newfoundland and the Gulf of St. Lawrence. This is a sedentary to short-range migrant,

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regularly wintering south to the coastal Carolinas occasionally to n Florida (NOAA areas 4 through 7).

**Identification:** Our largest cormorant [80-110 cm (31.5-40 inches) in length]. Short tail, yellow throat patch broadly bordered with white. Plumage varies with age. Adults have distinct white flank patches. Compared to other cormorants these birds appear to have larger heads and thicker necks.

**Conservation status:** This species is not considered to be of conservation concern and western Atlantic populations have been expanding in the last 3 decades.

**Current Population:** Global population unknown, several subspecies exist and the species occurs though out much of the Old World. New World population is much smaller restricted to coastal North Atlantic.

Maine 30 pairs (Buckley and Buckley 1984)

Eastern Canada 27,000 pairs (Brown and Nettleship 1984)

(North America total 11,600 adults (ca. 6,500 pairs) (Kushlan et al 2002)

Greenland 750-1,500 pairs (Evans 1984b)

Iceland 3,500 pairs (Evans 1984a)

**Total** in western Atlantic ca 32,000 pr.

### References Cited:

Brown, R. G. B and D. N. Nettleship 1984. The seabirds of northeastern North America: their present status and conservation requirements. Pp. 85-100. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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Evans, P. G. H. 1984b. The seabirds of Greenland: their status and conservation. Pp 49-84. In J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

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### **Magnificent Frigatebird, *Fregata magnificens***

Large graceful highly aerial seabird with long forked tail streamers. They can neither walk nor swim. This primarily is a tropical Atlantic species, with a few populations in Pacific off Central America and in the Galapagos. In the Atlantic mostly in West Indies region, but also breeds off Brazil and Cape Verde Islands. Found in NOAA regions 1-3, occasionally wandering north along Atlantic coast to the Carolinas. Aerial surface and inshore feeding behavior makes this an unlikely candidate for by-catch in long line pelagic fisheries operations.

**Identification:** Large [102 cm (40 inches) in length] dark seabird with long wings and long forked tail. Plumages of males, females and immatures differ, but size and shape of frigates easily distinguished them from all other marine birds. Frigates soar high and feed by snatching food from the surface. They cannot land on water and resume flight. Two other slightly smaller species of frigates occur in the tropical south Atlantic but records of vagrants into the North Atlantic are very rare.

**Conservation status:** Considered a threatened species in the Caribbean with the majority of the total population nesting in four colonies.

#### **Current Population:**

Florida: Marquesas Key <200 pr. (vanHalewyn and Norton 1984), but common, though not nesting in Keys and on Florida's Gulf Coast.

Bahamas: ca 350 pr. (Lindsey et al 2000)

Cayman Islands: 120-150 pr. (Lindsey et al 2000)

Cuba: ? (Lindsey et al 2000)

Jamaica: 910-1,210 pr. (Lindsey et al 2000)

Haiti: ? (Lindsey et al 2000)

Dominican Republic: 150+ pr. (Lindsey et al 2000)

Puerto Rico: 200-300 pr. (Lindsey et al 2000)

U.S. Virgin Islands: extirpated (Lindsey et al 2000)

British Virgin Islands: 500-600 pr. (Lindsey et al 2000)

Anguilla: 40 pr. (Lindsey et al 2000)

Barbuda: 2,000 pr. (Lindsey et al 2000)

St. Kitts: breeds, number unknown (Lindsey et al 2000)

Redonda: ? (Lindsey et al 2000)

Martinique: 400-700 pr. (Lindsey et al 2000)

Guadeloupe 1,190 pr. (Lindsey et al 2000)

Grenadines: ? (Lindsey et al 2000)

Grenada: ? (Lindsey et al 2000)

Tobago: 500-900 pr. (Lindsey et al 2000)

Trinidad: breeds, number unknown (Lindsey et al 2000)

Barbados: 100 pr. (Lindsey et al 2000)

Bonaire: ? (Lindsey et al 2000)

Curacao: breeds, number unknown (Lindsey et al 2000)

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Various Islands off N. South America: ca 2,000+ pr. (van Halewyn and Norton 1984)  
Various Islands off Atlantic coast of Central America: ca 3,200 pr. (vanHalewyn and Norton)

**Total for North Atlantic region:** 9,900-10,700 pr.

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### **Common Loon, *Gavia immer* (5-14-06 or before)**

This North American species nests in freshwater lakes primarily in Canada and Alaska. Small numbers occur in some of the northern US states and the species also nests in western Greenland. They winter primarily at sea with some migrating as far south as Florida and the Gulf states. In NOAA region 2-7 in winter. Once on wintering grounds they completely molt their flight feathers and go through an extended period where they cannot fly. Typically seen floating on the surface, they are more likely to dive to avoid approaching ships than to fly. They feed on fish that they capture on extended deep dives.

**Identification:** Large [61-91 cm (24-36 inches) in length] diving bird. Seen singly or in small groups sometimes far at sea where it is associated with the continental shelf (feed in waters with depths to at least 700 fathoms), and sometimes, current edges. At a distance could be confused with cormorants or other species of loons. Cormorant beaks are hooked. Red-throated Loons are smaller and have more slender, and upturned, bills. There are occasionally reports of Pacific Loons along the Atlantic coast, but this is the only loon likely to be encountered far offshore.

**Conservation status:** Common Loons are decreasing in numbers but this has to do mostly with conservation issues on the inland lakes where they breed and not with ones wintering in marine environments. Oil spills however are a major problem when the birds are at sea. There are reports of massive die offs and loons washing up on coastal beaches, these probably result from mercury contaminations picked up on their breeding lakes. Population levels are currently still high.

**Current Population:** Total population estimated to be between 500,000 and 700,000 (Rose and Scott 1996). The majority of the population nests in Canada. Haney (1990) estimated up to 200,000 (a significant portion of the total population) wintering off the Atlantic coast of North America between Latitudes 29 and 35 N.

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Rose, P. M., and D. A. Scott. 1996. Waterfowl population estimates. 2nd edition. Wetlands International.

### **Red-throated Loon, *Gavia stellata* (5-14-06 or before)**

This loon is limited to the high Arctic as a breeding species in North America. Unlike the Common Loon, Red-throateds winter mostly in sounds, estuaries, around inlets, and along beach fronts; they are very unlikely to be found far out at sea. Because of this they are not a likely candidate for by-catch by the long line fishery. Only expected in coastal areas of NOAA regions 3-7.

**Identification:** Smaller [53-69 cm (21-27 inches) in length] than Common Loons. Slender upturned bill is diagnostic. Distinctive plumage of breeding adults is absent in wintering individuals.

**Conservation status:** This is not a species of conservation concern. They are commonly caught and drown in coastal fishnets and traps, and face numerous conservation issues. Sharp declines in populations have been noted for some portions of their range.

**Current Population:** No inventories which would suggest even approximate numbers wintering in the western North Atlantic are available. 75,000 winter in Europe and western Asia (Barr et al. 2000) and about 10,000 nests in Alaska (Groves et al. 1996). 50,000 to 100,000 nests in Russia (Pakarinen 1997), and Canada is believed to be second to Russia in population of this loon. The numbers breeding in Greenland and Iceland are unknown, but ones from there and eastern Canada would migrate to the Atlantic coast for the winter. Thus it seems that 50,000+ would be a conservative estimate for the number wintering along the North American coast.

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Groves, D. J., B. Conant, R. J. King, J. I. Hodges, and J. G. King. 1996. Status and trends of loon populations summering in Alaska, 1971-1993. *Condor* 98: 189-195.

Pakarinen, R. 1997. Red-throated Diver. In *THE EBCC atlas of European breeding birds* (W. M. Hagemeyer and M. Blair, eds.). Academic Press, New York.

### **Caspian Tern, *Sterna caspia* (received 12-16-06)**

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One of two large white, black-capped terns in our area. This species is not likely to be encountered out of sight of land. Unlike most sea birds, Caspian Terns, for the most part, breed inland and migrate to coastal areas in the winter. Breeds in both the Old and New World (named after breeding populations on Caspian Sea). In North America breeding in widely scattered regions, most sites are in central and western Canada and the western United States. But also one group breeds in Alaska, and others occur in around the Great Lakes, the Gulf Coast, and various sites along the Atlantic coast.

At sea expect in NOAA areas 1-7

**Identification:** A large (48-59 cm (19-23 inches) total length) white tern with a dark cap. Larger than Royal Tern, the only other big white black capped species. Compared to Royal Tern bill is heavier, blood red, with dark tip. On immatures and non-breeding adults the cap is darker and more complete than on any other large tern.

**Conservation status:** Not a species of conservation concern.

### **Current population:**

Pacific Coast 14,030 pr. Cuthbert and Wires 1999

Great Lakes 7,378 pr. Cuthbert and Wires 1999

Central Canada 8,780-9,980 pr. Cuthbert and Wires 1999

Coastal Canada small numbers Brown, et al. 1984

Central Atlantic States 1 pr. Buckley and Buckley 1884

South Atlantic States 1.105 pr. Clapp and Buckley 1984

Gulf Coast of United States 2,327 pr. Cuthbert and Wires 1999

Total likely to be wintering in NOAA area ca 10,000+ pr.

North American population was estimated at 9,500 pr. in the late 1970s and early 1980s (Spendelov and Patton 1986), but this number has now doubled (Cuthbert and Wires 1999). Kushlan et al. (2002) estimate is larger yet with 66,000-70,000 adults (33,000-35,000 pr) in North America.

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Kushlan, J. A., et al. 2002. Waterbird Conservation for the Americas: the North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA., 78 pp.

Spendelov, J. A. and S. R. Patton 1988. National atlas of colonial waterbird colonies in the contiguous United States: 1976-1982. U. S. Fish and Wildlife Serv. Biol. Rep. 88. Washington, D.C.

### **Royal Tern, *Sterna maximab* (received 12-16-06)**

One of two large white terns in our area. This one, unlike most of the other white terns commonly feeds far at sea. Off North Carolina they regularly fly 35 miles or more out to sea to hunt and then return to barrier islands to feed their chicks. Feeds along oceanic fronts and over feeding schools of coastal and pelagic fishes. Often seen at sea perched on drifting boards and logs. Several subspecies but only one in the Americas is the nominate. This species, but a different race, also breeds along the west central coast of Africa.

In NOAA areas 1-5, 8 and coastal regions of 10-11.

**Identification:** Large (46-53 cm (18-21 inches) total length) white tern with orange unmarked bill. Smaller than Caspian Tern, the other large whir species. Has less black in under wing than Caspian Tern and much more likely to be see far at sea. Breeding adults have black caps, immatures and non-breeding adults have band of dark plumage extending from eyes over the backs of their heads.

**Conservation status:** Not a species of conservation concern.

### **Current population:**

Central Atlantic States 4,734 pr. Buckley and Buckley 1984

SE United States 62,532 pr. Clapp and Buckley 1984

Bahamas ca. 200 pr. Chardine et al. 2000

West Indies 250-600 pr. Chardine et al. 2000

Islands of Yucatan 1,000 pr. Howell and Webb 1995

Islands off N. coast of South America 600+ pr. Van Halewyn and Norton 1984

Total for Western North Atlantic: ca 70,000 pr. Kushlan et al. (2002) estimate 100,000-

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150,000 individuals (50,000-75,000 pr.) in the Americas.

This subspecies also breeds in the Gulf of California 8,000 to 10,000+ pr. (Everett and Anderson 1991) and they were recently discovered nesting in the South Atlantic along the South American coast but size of population is presently unknown.

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Howell, S. N. G. and S. Webb. 1995. A guide to the birds of Mexico and northern Central America. Oxford Univ. Press, New York.

### **Roseate Tern, *Sterna dougalli dougallii***

Coastal, but often pelagic in migration. Occurs or is expected in all NOAA areas. Occurs from northern South America and Gulf of Mexico to Canada. May be in mixed flocks with other terns during migration. Nesting disjunct, in western North Atlantic breeds in New England and southern Canada and another population occurs in Florida, the Bahamas Antilles and northern South American coast and islands (Netherlands Antilles). Small numbers nest in the Eastern North Atlantic, while additional subspecies occur in South Africa, the Indian Ocean and the western tropical Pacific

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**Identification:** There are a number of species of intermediate sized all white terns and they will prove difficult to identify to the inexperienced. Roseate terns are named for the pinkish cast to their breast, and this can be seen at close range on birds in flight. The all-black bill is shared with several other species of white terns. Those of the Caribbean population have reddish orange bills with only the tips being black. When at rest the tails of breeding plumaged adults project past the wing tip. Tails of adults have streamers. Juvenile and winter plumaged adults would be more difficult to identify. Most likely to be confused with Common and Arctic terns. Roseate tern Length 35-43 cm (14 to 17 inches), compared to the Common tern 12.25 to 15 inches and Arctic tern 13-15 inches.

**Conservation Status:** The US Fish and Wildlife Service recognizes the population of this tern in northeast North America, including North Carolina, as Endangered and the disjunct Florida and Caribbean stock as Threatened (Federal Register: 42064). The nominate subspecies, endemic to the North Atlantic, is in sharp decline.

**Current Population:** Northern population 2,500 and 3,300 pairs (Nesbit 1980); Caribbean population 4,000-6000 pairs (van Halewyn and Norton 1984, Saliva 2000); North Carolina 1-2 sporadic breeding attempts (Lee and Parnell 1990); British Isles ca 800 pairs, and France (ca 120 pairs (Lee 1999). Formerly nested in Bermuda but the nesting colony there has been abandoned for decades. Within the historical period, as many as 10,000 pairs may have nested in just the West Indies. The total Atlantic population presently is probably less than 8,000 pairs.

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### White Terns

Following is a set of FIVE species (Common Tern, Arctic Tern, Sandwich Tern, Forester's Tern, Gull-billed Tern) sometimes referred to collectively as the "mid-sized white terns." These terns will be impossible for inexperienced people to identify. Most field mark identification criteria are judgments of degree of black in wing tips, etc. . Fortunately they are unlikely to be caught on long lines. Some are more oceanic than others, but even the most coastal of the group have been seen out at sea once or twice by the author in 30 years of surveys off North Carolina.

#### **Common Tern, *Sterna hirundo*** (received 12-11-06)

This is a common wide spread all-white tern. At sea often in small to modest sized flocks often associated with other tern species during migration and when wintering.

**Identification:** Breeding adults have red bill, this separates them from a number of white, black capped terns that are also found in our area. Like many other medium sized white terns, juveniles and non-breeding adults have dark bills and white foreheads. Size (32-36 cm (12 \_ - 15 inches) total length. Can be confused with Forester's, Roseate and Arctic terns. For identifications record leg and bill colors and photograph extended wings from both dorsal and ventral perspectives.

Breeds in both North America and Eurasia, winters at sea and coastal areas in the tropics. Breeding colonies primarily on Atlantic coast and along inland rivers and lakes in Canada. Occurs in all western North Atlantic NOAA areas. Often migrates far at sea. Not expected to be a by-catch species.

**Conservation status:** Not a species of conservation concern.

#### **Current population:**

Inland lakes and rivers 45,176 (Nisbet 2002)  
Coastal Canada 37,500 (Nisbet 2002)  
New England 15,000 pr. (Brown and Nettleship 1984)  
North and Middle Atlantic coast 29,000 pr (Buckley and Buckley 1984)  
South Eastern US 2,247 (Clapp and Buckley 1984)  
Bermuda 25 pr. (Amos 1991)  
Bahamas a few (Buckley and Buckley 2000)  
West Indies 50-100 pr. (Buckley and Buckley 2000)  
Netherlands Antilles 200-300 pr. Voous (1983)  
Islands of Venezuela ca 100 pr (LeCroy 1976)  
Total 129,473 pr. Kushlan et al. 2002 estimate 300,000 adults (150,000 pr.)

Amos, A. 1991. A guide to the birds of Bermuda. Warwick, Bermuda, privately published. 206 pp.

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Voous, K. 1983. Birds of the Netherlands Antilles, 2nd ed. Curaco, De Walburg Pers. 327 pp.

### **Arctic Tern, *Sterna paradisaea*** (received 12-11-06)

This tern breeds through out much of the Arctic and sub Arctic and along the northern Atlantic coast of North America and Europe. They are long distance pelagic migrants wintering in Antarctic seas. While the species migrates through the North Atlantic they are rarely encountered south of Maryland as most individuals migrate through the central and eastern Atlantic. There are a few records from the SE and Upper Gulf of Mexico. In NOAA areas 5-9, rare in 2-4.

**Identification:** Medium size (33-38 cm (13-15 inches) total length) white tern with dark cap. Breeding plumaged adult red bill, short red legs. Tail streamers extend past folded wings. As in other white terns difficult to identify in non-breeding plumages and as

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juveniles. Record color of legs, feet, and bill and photograph bird with wings extended. Can easily be confused with Common, Forester's and Roseate terns.

**Conservation status:** Even though only small numbers breed in the United States this is not a species of conservation concern.

**Current population:** Difficult to assess as many portions of the breeding range of this wide spread tern have not been surveyed. They also tend to change colony sites so adding up totals in known colonies does not provide a realistic inventory. World wide the population is assumed to be between one to two million pairs (Hatch 2002).

Atlantic coast (Massachusetts to Newfoundland) ca 12,800 pr. (Hatch 2002)

US 1,713 pr. (Buckley and Buckley 1984)

Canada Arctic and sub Arctic Unknown but vast population

Greenland 80,000 pr. (Hatch 2002)

Iceland 200,000-500,000 pr. (Hatch 2002)

Atlantic coast of Europe 142,000 pr. (Hatch 2002)

Eurasian Arctic and sub Arctic Unknown but vast

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Hatch, J. J. 2002. Arctic Tern (*Sterna paradisaea*). *in* The Birds of North America, No. 707 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

**Sandwich Tern, *Sterna sandvicensis*** (received 12-11-06-second, later submission of same date)

This species breeds in North America, Eurasia, and northern South America. It is named after one of its breeding sites, the Isle of Sandwich. Two subspecies are recognized, one known as the Cayenne Tern, is not common and is restricted to the coast of South America and the lower Caribbean.

Breeds in our area from Virginia southward and along the Gulf coast. Also in West Indies, islands off Central America and on the coast of northern and northeastern South America. Found throughout coastal NOAA areas 1-5 with the Cayenne tern occurring along South American coast and also in Caribbean. This is a coastal foraging species and excluding migration periods it is almost never seen more than 12 miles from land. It is not a tern that is likely to be encountered in pelagic fishing operations.

**Identification:** A medium sized (40-45 cm (16-18 inches) total length) very white tern with a dark cap. Can be distinguished from similar Atlantic terns by its all black, yellow-

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tipped bill. Only other adult plumaged white tern with a black bill is the Gull-billed Tern. White terns with white foreheads are immatures and non-breeding adults, and many of them also have black bills. Juveniles have gray backs. The Gull-billed tern's bill is not slender and lacks the yellow tip. In flight the yellow tip may not show, making the bill appear as if it has a square end. For this and other terns in difficult to identify plumages, record the colors of the legs, feet and bills, and photograph entire bird dorsally with extended wings.

**Conservation status:** This is not a species of conservation concern but in the West Indies the “Cayenne” subspecies is considered to be critically endangered (Schreiber and Lee 2000).

### **Current population:**

Sandwich Tern, *Sterna s. sandvicensis*

Central Atlantic States 140 pr (Va) (Buckley and Buckley 1984)

South Eastern US 44,805 pr (Clapp and Buckley 1984)

Central America (islands of coast) 100s (Van Halewyn and Norton 1984)

West Indies 2100-3000 pr (Norton 2000)

Total: ca. 48,000 pr

Kushlan et al. (2002) estimate 75,000-100,000 adults in North America (37,500-50,000 pr).

Cayenne Tern, *Sterna s. eurygnata*

West Indies 10-100 pr (Norton 2000)

Netherlands Antilles

Curacao 1600 pr (Norton 2000)

Bonaire <4000 pr (Norton 2000)

Aruba 3500 pr (Norton 2000)

Venezuela (islands off coast) 1100+ (Norton 2000)

Guyana (islands off coast) 1400-2000 pr (Norton 2000)

Total: ca. 12,000 pr

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### **Forster's Tern, *Sterna forsteri*** (Received 12-13-06)

This is another medium sized white, black capped tern. It breeds only in North America and mostly at inland sites in the middle and western portion of the continent. They also nest in marshes along south eastern Atlantic states (n to NJ) and upper Gulf coasts. These terns migrate and winter primarily inland and along the coast of the south-eastern states, Mexico, the California coast, and in the upper Gulf of Mexico. Found in the West Indies in winter indicating some at sea migration. Only rarely found at sea in the western North Atlantic. This is not a species expected to be encountered in pelagic fisheries operations.

**Identification:** Medium sized (35-41 cm (14-16 inches) total length) white, black capped terns seen at sea are not likely to be this species. Look like Roseate, Common, Gull-billed, and Arctic terns that are similarly marked and also exhibit distinctive seasonal shifts in plumage. They all have juvenile plumages that are different yet. Winter plumaged birds could also be confused with Sandwich Terns. Bills thicker and legs longer than those of the other white terns. Because of variations in plumages these medium sized white terns are difficult to identify away from breeding sites. Of all the medium sized white terns this is the one least likely to be seen far at sea. Record leg, feet and bill colors, photograph with wings spread.

Expect in NOAA areas 2-5, occasionally in area 1.

**Conservation status:** This is not a species of conservation concern.

### **Current population:**

Inland Canada 2,000-4,000 pr (Micnicholl et al. 2001)

Atlantic coastal states 5,766 pr. (Micnicholl et al. 2001)

Gulf Coast of US 23,096 pr. (Micnicholl et al. 2001)

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Total of surveyed populations not including Pacific coast nesting sites at least 32,000 pr.; 47,000-51,500 adults (23,500-25,750 pr.) for all of North America. (Kushlan et al. 2002). US coastal breeding populations have increased since the surveys of the 1980s (Buckley and Buckley 1984, Clapp and Buckley 1984).

### References Cited:

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McNicholl, M. K., P. E. Lowther, and J. H. Hall. 2001. Forester's Tern, *Sterna forsteri*. *in* The Birds of North America, No. 595 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

### **Gull-billed Tern, *Sterna nilotica*** (received 12-15-06)

This is not a species that is normally found in pelagic habitats and it is unlikely to be recovered as by-catch from pelagic fishery operations. Unlike other terns Gull-billed Terns feed over marshes and open sand flats.

Found in both hemispheres of the New and Old World. (Expect at sea in NOAA regions 1-5, and along coast of 10-11.)

**Identification:** Another medium sized (35-43 cm (14-17 inches) total length) white tern with a black cap. Bill is all black and shorter and thicker while its body more robust than other similar appearing terns. Legs black. Non-breeding birds lack cap but have black extending from eye toward back of head.

**Conservation status:** Not an abundant species in North America. Considered as Critically Endangered in the West Indies region (Schreiber and Lee 2000)

### **Current population:**

Western North Atlantic population *G. n. aranea*  
SE United States 3,019 pr. (Clapp and Buckley 1984)

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Bahamas and West Indies 100-500 pr. (Chardine, et al. 2000)  
Central America, Gulf Coast a few (Van H and Norton 1984)

Total for Western North Atlantic: 3,100-3,500 pr.

Others estimate total North American population at 5,400 individuals (Spendelow and Patton 1988) to 6,000-8,000 adults (Kushlan, et al. 2002), but these figures include another sub species represented by western and Pacific coast populations. Old world population (yet another sub species) estimated at 24,000 individuals (Moller 1973).

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### Least Tern, *Sterna antillarum* (received 11-26-06)

(note also listed as Little Tern and/or *Sterna albinfrons* in some books)

This is the smallest of the white terns. Least terns are a coastal species and are rarely seen out of sight of land even during migration. This tern is cosmopolitan in distribution but does not breed in the South Atlantic. A number of inland populations occur along rivers in North America and in Europe.

In the western North Atlantic it occurs along the Atlantic coast, through the Gulf of

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Mexico and West Indies and wintering birds are found along the South American coast south to Northern Brazil. (NOAA areas 1-5; coastal 10 and 11, and barely into southwest portion of area 6).

**Identification:** Small tern (8-11 inches; 20-28 cm, total length) Breeding season adults have a black cap and a narrow yellow bill. Legs and feet yellow. In the non-breeding season the bill is black and the cap is less distinct. The young have dark bills and are light grey dorsally. In hand, or when seen with other terns size alone will distinguish this species from other North Atlantic terns.

**Conservation status:** In our area this is not a species of conservation concern, and both the behavior of the bird and its coastal affiliations would make it highly unlikely that this species would be encountered by pelagic fisheries operations. Several of the inland populations are endangered but this is not relevant to offshore fisheries issues.

**Current population:** Globally this tern's population is of considerable magnitude, however these birds do not wander between hemispheres so the information presented here is just for the North Atlantic. This is the nominate subspecies *Sterna antillarum antillarum*.

North and middle United States: 7,623 pairs (Buckley and Buckley 1984); SE United States: 13,500 pairs (Clapp and Buckley 1984); Bahamas and West Indies: 1500-3000 pairs (Jackson 2000); Central America: ca 100 pairs (van Halewyn and Norton 1984); islands off Venezuela: ca 1,000 pairs (van Halewyn and Norton 1984). Total population probably exceeds the figures presented here (32,000+ pairs) in that protection of nesting colonies in the United States has greatly increased the number of viable breeding colonies in the last several decades. However, Kushlan, et al. (2002) report a total of 47,000-51,500 breeding adults for the Americas. This figure is for individuals, not pairs (thus 23-25.75 thousand pairs) and includes inland and west coast populations so assessments from the 1980s may still yet reflect the actual overall western Atlantic population.

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### **Black Tern, *Chilidonias niger*** (Received 12-22-06)

This small tern breeds in inland freshwater marshes and feeds on insects. They migrate over land, along coast and out at sea. The terns nesting in North America winter primarily along the Pacific coast of Central America and South America and in the Atlantic along the north coast of South America. European Black Terns (a different subspecies) winter primarily along the coast of West Africa. This is not a species that is likely to be tallied as by catch of pelagic fisheries.

Migrates through NOAA areas 1 and 2, and along the coast of areas 3-6. Winters along coast in areas 1, 10 and 11.

**Identification:** Small (22-24 cm (8 -9 inches) total length) dark tern with short delicate bill. Differ from all other North Atlantic terns as breeding plumaged adults have black heads, bills, feet, bellies and backs with white underwings. Immatures and non breeding adults have black heads and "ear flaps" extending further down on head but otherwise a gray to pale plumage. Molting adults have "salt and pepper" colored breast in spring and fall as plumages are replaced. Small size eliminates all North Atlantic species other than Least Tern.

**Conservation status:** Not considered a species of immediate conservation concern at this time. It probably should be; since the 1960s their populations have been in sharp decline. North American breeding Bird Survey data shows a sharp and significant decline, perhaps as much as 60% between the 1970s and late 1990s.

**Current population:** Previous and current census numbers for both North America and Europe are lacking. Kushlan et al. (2002) estimate the North American population to be approximately 1,000-5,000 adults, the basis for this estimate is unclear. In the early part of the previous century there were 100s of thousands wintering in Panama alone (Murphy 1938).

### **References Cited:**

Kushlan, J. A., et al. 2002. Waterbird Conservation for the Americas: the North American Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA. 78 pp.

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### **Brown Noddy, *Anous stolidus*** (Received 1-22-07)

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This is a common tropical pelagic tern occurring in the Pacific, Atlantic, and Indian Ocean; it is the second most abundant tropical seabird in the Atlantic. Except following hurricanes and other major storms, the Brown Noddy is seldom encountered away from tropical and sub-tropical seas. In the WNA NOAA area, this species is essentially confined to areas 1-3 and 10 and 11 and is occasionally in the Gulf Stream in area 4.

**Identification:** There are only three species of all black terns in our region. The Black Tern is smaller than the two Atlantic species of noddy terns, and they have white underwings. Non-breeding Black Terns are not entirely black. Of the two noddy terns the Brown Noddy is larger (16-18 inches; 40-45 cm, total length) than the Black Noddy (14-15 inches; 35-39 cm total length). Both noddy terns have white caps. As its name implies this species is brownish and less dark. It also has a larger broader bill. That said these terns would be very difficult to identify in flight at sea or when both species are not available for direct comparison.

**Conservation status:** Because of its abundance in the western north Atlantic and other oceans this tern is not a species of conservation concern.

**Current population:** Florida (Dry Tortugas) 2,000 pairs (Clapp and Buckley 1984); Bahamas 600-800 pairs (Chardine, et al. 2000) while Sprunt (1984) estimates 50,000-60,000 pairs, West Indies 11,400-17,200 pairs (Chardine, et al. 2000), islands off Central America ca. 1,000 (not well surveyed, (Van Halewyn and Norton 1984) and islands of northern South American coast ca. 7,000-9,000 pairs (Van Halewyn and Norton 1984). Total for western north Atlantic 20,000-30,000 to 71,400-89,000 pairs depending on the actual population size in the Bahamas. Kushlan, et al. (2002) estimate the total population in the Americas as 286,000-298,000 adults (143,000-149,000 pairs). This discrepancy is only in part explained by additional pairs nesting off the tropical Pacific coast of Mexico and Central America.

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- Van Halewyn, R. and R. Norton. 1984. The status and conservation of seabirds in the Caribbean. Pp. 169-222. *in* J. P. Coxall, P. G. Evans and R. W. Schreiber (eds). Status

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and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **Black Noddy, *Anous minutus* (received 11-22-06)**

This is a tropical pelagic species that is extremely rare in the North Atlantic. Because of its behavior at sea and its rarity it is unlikely that this will be a species that will be encountered by commercial fisheries operations.

**Identification:** There are only three species of all black terns in our region. The Black Tern is smaller than the two species of noddy terns, and they have white underwings. Non-breeding Black Terns are not entirely black. Of the two noddy terns the Black Noddy is smaller (14-15 inches; 35-39 cm, total length) than the Brown Noddy (16-18 inches; 40-45 cm total length). As its name implies this species is darker. It also has a smaller bill. That said these terns would be very difficult to identify in flight at sea or even when the two species are not available for direct comparison.

For the most part restricted to the Caribbean Sea, and rarely in the Gulf of Mexico. (In NOAA areas 1-3, possibly in Gulf Stream in area 4)

**Conservation status:** While this species also occurs in the Pacific and south Atlantic it is extremely rare in the North Atlantic. The only major known colony was off Belize. It was first discovered in 1862 and supported over 1000 nesting pairs. This colony disappeared prior to 1970. This tern is considered as critically endangered in the West Indies (Schreiber and Lee 2000).

**Current population:** Florida, one or two pairs occur regularly and may nest on Dry Tortugas (Clapp and Buckley 1984, pers obser.); Anguilla (Sombero) 1-6 pairs (Chardine, et al. 2000); Puerto Rico, Culebra, Noroeste Cay, "a few" (Chardine, et al. 2000); Aruba "a few" (Chardine, et al. 2000). Islands off Venezuela, probably hundreds or pairs (Van Halewyn and Norton 1984). Total North Atlantic population probably between 100 and 300 pairs.

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### **Bridled Tern, *Sterna anaethetus melanoptera***

This is a pelagic tropical and subtropical species. Occurs singly or in small flocks. Often seen resting on boards, the backs of sea turtles and other floating material far at sea. Much of its foraging is in *Sargassum*, so it is frequently associated with large *Sargassum* mats.

Distributed throughout the Caribbean, non-breeding birds occur in Gulf of Mexico and regularly in Gulf Stream north to the Carolinas (areas 1,2,3, 4, and probably 8 and 10). Occasionally further north into area 5.

**Identification:** Medium sized dark tern (14-15 inches, 35-38 cm, total length). Combination of dark mantel and white under parts distinguished adult Bridled terns from all other terns in the region except the Sooty tern. Sooty tern is larger (17-18 inches) and has more white on forehead. Immatures of both species differ from adults. Sooty entirely black, Bridled similar to adult but markings less defined.

**Conservation status:** This is not a common species. It nests in widely scattered, mostly unprotected sites. Several subspecies collectively form a composite circum-equatorial distribution. Not of current conservation concern on a global or regional scale, but individual breeding populations for some countries are quite small.

**Current population:** Total West Indies population 4,000-6,000 pairs (Chardine et al. 2000), perhaps as many as 1,000 pairs nest on islands off northern South American Coast, and a few pairs nest in the Florida Keys (Haney et al. 1999). Maximum total western Atlantic population is estimated at 7,000 pr.

### **References cited:**

Chardine, J. W., R. D. Morris, J. Parnell and J. Pierce. 2000. Status and conservation priorities for Laughing gulls, Gull-billed Terns, Royal Terns and Bridled terns in the West Indies Pp 65-79 in E. A. Schreiber and D. S. Lee (eds.) Status and Conservation of West Indian Seabirds. Society of Caribbean Ornithology, Special Publication Number 1, 225 pp.  
Haney, J. C., D. S. Lee and R. D. Morris. 1999. Bridled Tern, *Sterna anaethetus*, No. 468. The Birds of North America, Inc. Philadelphia, Pennsylvania 24 pp.

### **Sooty Tern, *Sterna fuscata* (received 11-29-06)**

This is a common tropical pelagic tern with dark back and white under parts. High flying

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and frequently in large flocks, sometimes thousands of birds are in a single flock. Feeding flocks often form over foraging surface feeding fishes. Occurs in tropical seas worldwide. Will not land on water.

**Identification:** Except for Bridled Terns all other black terns have dark ventral surfaces (although adult male Black Terns have white under-wings). Sooty Terns are larger (43-45 cm (17-18 inches) total length) than Bridled Terns, their white forehead extends only back to the eye, and they lack the white collar. Immature Sooty Terns tend to be brownish, have more white on heads, and in their second year have variably dark upper breast. Once they leave their nesting islands most young Sooty Terns live in the eastern south Atlantic and away from the NOAA survey areas until they achieve adult plumage.

This tern occurs throughout the world's tropical seas. Young sooty terns from the Western North Atlantic live primarily off the west coast of Africa. Adults are largely confined to the tropical seas of our region and in summer wander north through the Gulf Stream. (In NOAA areas 1-3 and 10 and 11, in warm months in Gulf Stream in areas 4-5).

**Conservation status:** This is the most abundant seabird breeding in the tropical Atlantic. Many of its nesting colonies are protected and it is not a species of conservation concern.

**Current population:** Southeastern United States: Single large nesting colony at Dry Tortugas, but small groups and individual pairs occasionally nest along Gulf Coast and north to the Outer Banks. 40,000 pairs (Clapp and Buckley 1984); Bahamas: 4,000-8,000 pairs (Salvia 2000); West Indies: 200,000-300,000 pairs (Salvia 2000); Islands off Central America: ca 1,000s (Van H and Norton 1984); Islands off South America 30,000+ (Van Halewyn and Norton 1984). Greater Caribbean: Total 230,000-500,000+ pairs. (Sylva 2000, Van Halewyn and Norton 1984)

Kushlan et al. (2003) estimate 3,360,000-4,380,000 (1,680,000-2,190,000 pairs) Sooty Terns in the Americas. This figure includes breeding colonies in the tropical Pacific.

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Caribbean. Pp. 169-222. *in* J. P. Croxall, P. G. Evans and R. W. Schreiber (eds). Status and Conservation of the World's Seabirds. ICBP Tech. Publ., No. 2. 778 p.

### **Black Skimmer, *Rynchops niger* (received 11-22-06)**

This is a strictly a coastal species in North America and a “seabird” that lives along rivers in South America. Other species live in Africa and India. Skimmers because of their appearance are unmistakable. These birds do not range out to sea, feed by skimming the water's surface with their knife like bills, and are not anymore likely to be entrapped in pelagic fishing gear than a turkey.

They breed along the Atlantic coast from Massachusetts south through the Gulf of Mexico to northern Brazil. In winter northern populations migrate southward to Florida and the Gulf of Mexico. Absent from the Bahamas and West Indies as a breeding species. (NOAA areas 1-5; coastal 10 and 11, and barely into southwest portion of area 6).

**Identification:** A modest sized (16-19 inches; 40-50 cm, in length) dark long winged bird. Bill thin and knife like, lower mandible is noticeably longer than the upper.

**Conservation status:** This is not a conservation priority species nor is it one that that occurs far at sea.

**Current population:** Kushlan, et al. (2002) indicate 65,000 to 75,000 breeding adults (32,500-37,500 pairs) in the Americas. While this is not a species of conservation concern, a number of states with small numbers of colonies and declining populations have them listed as conservation priority bird. Overall their populations are stable and in some areas increasing back to former levels. In the north and middle-Atlantic states there are approximately 4,200 pairs (Buckley and Buckley 1984), in the southeastern United States there are 23,281 pairs (Clapp and Buckley 1984). Information on Central America (very few nesting birds) and South America, where they are primarily a freshwater river and estuarine species, is lacking. Total Atlantic population is in excess of 27,500 pairs. This figure is probably similar to that of Kushlan, et al. (2002) in that it does not include Pacific coast populations.

### **References Cited:**

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Waterbird Conservation Plan, Version 1. Waterbird Conservation for the Americas, Washington, DC, USA. 78 pp.

### **Great Skua, *Catharacta skua* (5-14-06 or before)**

There are a number of species of skuas, but the Great Skua is the only one that breeds in the Northern Hemisphere and the only one endemic to the Atlantic. They exist in modest numbers breeding in the high sub Arctic and winter at sea. From Georges Banks southward they are not common in the Western Atlantic but individuals do wander in offshore waters south to the Carolinas. Both skuas are highly pelagic during their non breeding season and often feed by stealing food from other seabirds. They are large powerful gull like birds. In NOAA regions 4-9, and eastern portions of 10 and 11.

**Identification:** This is the larger of the two species of skuas in our area [51-66 cm (20-26 inches) in length]. See description of South Polar Skua. Great Skuas are similar in overall appearance, but typically lack the contrasting plumage of the other species. Great Skuas usually have a dark cap that is lacking in the other species. This is the skua most expected in our area during the colder months, but there is seasonal overlap of their period of occurrence.

**Conservation status:** This is a species while not of immediate conservation concern needs to be watched. They fiercely defend their nesting territories and are killed by farmers and others who do not like having their domestic animals harassed. They are also commonly hunted by indigenous people. Their overall population is small and some individual colonies support only a few pairs. Both Atlantic skuas are attracted to areas where other seabirds are feeding and because of this they are likely to be associated with offshore fishery operations and suffer accidental mortality.

### **Current Population:**

Iceland: 4,909-5,846 pr. (Furness 1987)

Faeroes: 250 pr. (Evans 1984)

Shetland: 5,000 pr. (Furness 1986)

Orkeny: 2,000 pr. (Furness 1987)

Scotland: 150 pr. (Furness 1986)

Spitsbergen: 30 pr. (Furness 1987)

Bear Island: 30 pr. (Furness 1987)

N. Norway: 4 pr. (Furness 1987)

Hopen: 2 pr. (Furness 1987)

**Total Atlantic population:** ca 12,500 pr. (Furness 1987)

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Furness, R. W. 1986. The conservation of Arctic and Great Skuas and their impact on agriculture. Unpubl. Report to NCC.

Furness, R. W. 1987. The Skuas. T. and D. Poyser. Calton, England. 363 p.

### **South Polar Skua, *Catharacta maccormicki* (received 11-26-06)**

This is the smaller of two species of skuas that regularly occur in the North Atlantic. South Polar Skuas breed in the Antarctic and adjacent islands with some individuals migrating to the Northern Hemisphere during their winter. Individuals have been reported as far north as waters off Greenland. This species is not common and is attracted to commercial fisheries operations. Any skua seen during the summer in temperate or tropical seas is likely to be this species. In NOAA regions 3-11.

**Identification:** Large [53 cm (21 inches) in length], heavily built, brown colored seabird. Characterized by large head, short neck, hooked bill, with conspicuous white area at the base of the primaries. Smaller than the other species of skua occurring in the North Atlantic. Considerable plumage variation between different aged birds and different plumage morphs. Typically there is a strong contrast between the dark dorsal surface and the head, neck, and underparts. Other species of skuas, or their hybrids, while rare, may occur in our area. Measure and photograph any birds in hand.

**Conservation status:** While not common in the North Atlantic, current population information for breeding populations is insufficient. Additionally this species is known to hybridize with other species of skuas and the taxonomic status of some populations is not clear. Much information comes from military and other stations in the Antarctic, sites where populations declined because of human activity in and around the breeding colonies. The areas where these birds nest is owned by multiple countries and inventories of seabirds have not received adequate attention in a number of the various political units. While it is not considered a bird of primary conservation concern it probably should be as it is rare by all standards.

### **Current Population:**

Antarctica adjacent to Peninsula: 10 pr. (Croxall et al. 1984)

Antarctic Peninsula: 650 pr. (Croxall et al. 1984)

S. Shetlands: 10 pr. (Croxall et al. 1984)

S. Orkney: 10 pr. (Croxall et al. 1984)

Adelie Land: 70-80 pr. (Jouventin et al. 1984.)

Haswell Is., Davis Sea: 23 pr/ (Pryor 1968)

Ross Sea sector of Antarctica: 1,000-2,500 pr. (Harper et al. 1984)

Wilkes Land: 830 pr. (Eklund 1961)

Other coastal areas of Antarctic: < 1,000 pr. (Furness 1987)

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Thus, the total global population may be only a few thousand pairs, but this needs to be confirmed. Furness (1987) estimated the total world population to be between 5,000 and 8,000 pairs. What percentage of the total population migrates into the North Atlantic is unknown but it probably does not represent a great number of individuals.

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### Jaegers, *Stercorarius* (received 11-26-06)

Jaegers are gull like predators that nest on the Arctic and sub arctic tundra where they live on insects, mice and lemmings. They migrate and winter at sea where their lifestyle shifts to one of a pelagic marine species. During the winter they can occur in tropical seas where they are usually seen as single birds, occasionally they travel in groups of two or three, but conjugate around food sources. They feed on fish and scavenge but one of their primary sources of food is robbing fish from other sea birds. Immature jaegers for the most part remain at sea until they are adults, and thereby can be found, even in the sub tropics, at all seasons. There are three species, each slightly different in size but because of differences in seasonal, and age related plumages along with the presence of several color morphs they can be extremely difficult to identify. Adults in full breeding plumage sport species-specific central tail feathers of different lengths and shapes. These are essentially lacking in the skuas. The amount of white in their flight feathers is diagnostic so if you photograph jaegers for later identification it would be good if the shot included a spread wing from the ventral side. Based on their behavior I would not expect jaegers to be a by-catch of pelagic fisheries operations, although they would be attracted to hooked baits fished near the surface.

### Parasitic Jaeger, *Stercorarius parasiticus* (received 11-26-06)

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Parasitic Jaegers are primarily coastal migrants occurring around inlets and other places where terns and small gulls concentrate. Here they spend their time pirating food from seabirds that have recently fed. Parasitic Jaegers occur in all of the North Atlantic NOAA survey areas, but they are rare in the Gulf of Mexico and the Caribbean Sea ((areas 1-2).

**Identification:** Difficult; even experienced bird watchers have trouble separating species of jaegers. The three species of jaegers each exhibit considerable age and season related variation in plumage. Adult birds in breeding plumage have distinctively shaped central tail feathers. Parasitic Jaegers have pointed central tail feathers that extend for a short distance (3-5.5 inches) beyond the other tail feathers. For jaegers in hand species in any plumages can be separated by overall sizes. Parasitic jaegers are intermediate in size (46-67 cm (18-26 inches) in length including their 8-14 cm (3-5.5 inch) tail streamers) between the slightly smaller Long-tailed Jaegers (50-58 cm (19.25-23 inch) total length including their 15-25 cm (6-10 inch) tail streamers) and the larger Pomarine Jaeger (65-78 cm (25-31 inch) total length including 17-20 (6.5-8 inch) tail streamers).

**Conservation status:** Not a species of conservation concern.

**Current Population:** Several hundred thousand pairs world wide (Furness 1987). Wiley and Lee (1999) review the literature concerning breeding population densities and for what is known of the world's populations but could not provide an estimate. The number wintering in the Atlantic or breeding in North America is unknown.

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### Long-tailed Jaeger, *Stercorarius longicaudus* (received 11-26-06)

This species occurs far at sea when not on its tundra breeding grounds. Occasionally they will follow ships. The small size and long streamer tails make adult plumaged birds unmistakable. Unfortunately less than 10% will have the long central tail feathers when at sea.

**Identification:** Difficult. The three species of jaegers each exhibit considerable age and season related variation in plumage. They also have different color morphs. Adult jaegers in breeding plumage have distinctively shaped central tail feathers. Long-tailed Jaegers have long pointed central tail feathers that extend for a some distance (6.5-10 inches) beyond the other tail feathers. For jaegers in hand species in any plumages can be separated by overall sizes. Long-tailed jaegers are the smallest in size (50-58 cm (19.25-23 inch) total length including their 15-25 cm (6-10 inch) tail streamers). The three species of jaegers are stair-stepped in size with the Parasitic Jaegers (46-67 cm (18-26

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inches in length including their 8-14 cm (3-5.5 inch) tail streamers) being slightly larger and the Pomarine Jaeger (65-78 cm (25-31 inch) total length including 17-20 (6.5-8 inch) tail streamers) being the largest.

Found in all the NOAA survey areas in the North Atlantic, but uncommon in areas 1 and 2. Migrates to southern hemisphere but small numbers remain in the North Atlantic in winter.

**Conservation status:** Not a species of conservation concern. It is the most abundant and widespread of the jaegers.

**Current Population:** Tens to low hundreds of thousands of pairs world-wide (Furness 1987). North American population estimated at < 75,000 pairs (Kushlan 2002). Wiley and Lee (1998) provide information on densities in breeding grounds. Number wintering in the Atlantic is unknown.

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- Furness, R. W. 1987. The Skuas. T. and D. Poyser. Calton, England. 363 p.
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### **Pomarine Jaeger, *Stercorarius pomarinus* (received 11-26-06)**

Because of its large size and strong powerful flight this Jaeger is perhaps the easiest to identify. They tend to fly higher than the other two species.

Like other jaegers they migrate in winter to the southern hemisphere, but a number of them winter in temperate and tropical seas in the North Atlantic. Can be expected in all North Atlantic NOAA survey areas during migration, in the southern ones in winter, and a few immature birds will summer at sea in areas 4-7.

**Identification:** Difficult. The three species of jaegers each exhibit considerable age and season related variation in plumage. They also have different color morphs. Adult birds in breeding plumage have distinctively shaped central tail feathers. Pomarine Jaegers have pointed central tail feathers that extend for a short distance (6.5-8 inches) beyond the other tail feathers. For jaegers in hand species in any plumages can be separated by overall sizes. Pomarine jaegers are the largest in size (65-78 cm (25-31 inch) total length including 17-20 (6.5-8 inch) tail streamers). The Parasitic Jaeger is smaller (50-58 cm (19.25-23 inch) total length including their 15-25 cm (6-10 inch) tail streamers) and the Long-tailed Jaeger is the smallest (46-67 cm (18-26 inches in length including their 8-14 cm (3-5.5 inch) tail streamers).

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**Conservation status:** Not a species of conservation concern.

**Current Population:** An estimated 10,000-20,000 pairs in North America (Kushlan 2002); global population unknown but assumed to be considerably larger than the global population of Parasitic Jaegers (Furness 1987). Wiley, R. H. and D. S. Lee (2000) provide information on densities on breeding grounds. Numbers wintering in the Atlantic are unknown.

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- Furness, R. W. 1987. The Skuas. T. and D. Poyser. Calton, England. 363 p.
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### Northern Phalarope (Red-necked Phalarope), *Phalaropus lobatus* (5-14-06 or before)

There are three species of phalaropes all of which are highly migratory, but only two of them occur regularly in marine environments during their non-breeding season. While many species of shorebirds migrate far at sea only the phalaropes winter at sea and actually float and feed on the surface. They are sometimes encountered in huge flocks, and often both species are present in the same flock. Migrant in NOAA regions 3-11.

**Identification:** Small [15-20 cm (6-8 inches) in length] bird with lobed semi-palmated toes. While their breeding plumage is distinctive in the winter the plumage of the adults and immatures is less distinctive. They can be distinguished from Red Phalaropes by their smaller size, thinner build, and thinner bill. Underparts mostly white. April to May spring migrant, fall migration August through October off eastern North America. Absent in winter.

**Conservation status:** This is an abundant species and is not one of conservation concern.

**Current Population:** This is a circumpolar species breeding through much of the Arctic and sub Arctic tundra. Because of the remote and expansive nature of their breeding grounds few attempts have been made to assess their population. Minimally it is in the millions. Morrison (1994) estimated the total Canada population to be 2,000,000+; others have estimated 3,000,000, and 1,000,000 at single migratory sites in eastern Canada (Rubega, et al 2000). In Iceland the population is estimated to be >200,000 pairs (Cramp and Simmons 1983). Thus, just the total wintering in the eastern North Atlantic is likely to be over 4 million individuals.

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Cramp, S., and K. E. L. Simmons. 1983. The birds of the Western Palearctic. Vol. 3: waders to gulls. Oxford Univ. Press, Oxford.

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Rubega, M. A., D. Schamel, and D. M. Tracy. 2000. Red-necked Phalarope (*Phalaropus lobatus*). In The Birds of North America, No. 538 (A. Poole and F. Gill, eds.). The Birds of North America, Inc. Philadelphia, Pa.

### Red Phalarope, *Phalaropus fulicarius* (5-14-06 or before)

Like the Northern Phalarope, the Red Phalarope has a circumpolar breeding distribution, Its' nesting area is more restricted to the higher latitudes of the Arctic tundra, but it also migrates and winters at sea. While many wintering individuals migrate to the southern hemisphere, modest numbers winter of the North American coast. They migrate through or winter in NOAA regions 2-11. Both species of these species are highly pelagic, tend to congregate along current boundaries where they often feed around mats of Sargassum. Because of their size and feeding behavior neither would appear to be susceptible to long-line fisheries.

**Identification:** Larger of the two species which occur at sea [18-23 cm (7-9 inches) in length]. Distinctive plumage is not present in wintering adults. Body is heavier and bill thicker than that of Northern Phalarope. Underparts pale grey, not white as in Northern Phalarope. On adults some red coloration may be retained on breast and belly feathers. Present at sea off North American coast from December through April. Similar to Northern Phalaropes in pelagic marine distribution, flocking and feeding behavior.

**Conservation status:** This is an abundant species and is not one of conservation concern.

**Current Population:** The problems with population assessment of Northern Phalaropes also apply to this species. The global population is believed to be about 5 million individuals, 3.4 million of which are breeding adults ((Tracy et al. 2002). The North American population is believed to be between 1 million and 2.5 million individuals (Morrison et al. 2000), probably more than half of these migrate and winter in the western Atlantic.

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