AUTUMN SEABIRD MIGRATION AT MANOMET POINT

by Vincent G. Yurkunas, Bondsville

Every year along the coast of Massachusetts thousands of seabirds migrate to their wintering grounds. Sites such as Halibut Point and Andrews Point on Cape Ann and Sandy Neck Beach and Race Point on Cape Cod provide observers with excellent views of this fascinating avian phenomenon. Manomet Point, an elevated promontory located on the South Shore in Plymouth, is another reliable lookout. Since 1967 an average of 41,000 migratory seabirds have been recorded annually during "Operation Seawatch," an ongoing research project conducted by personnel at Manomet Bird Observatory.

Over the years the primary purpose of "Operation Seawatch" has been to monitor the migratory populations of Black (Melanitta nigra), Surf (M. perspicillata), and White-winged (M. fusca) scoters, and various aspects of scoter migration have been described (Petersen 1971, Norton 1974, Riccitelli 1978, Sommers 1982, Bryan 1983, Yurkunas 1985). However, large numbers of other seabird species, particularly Common Eider (Somateria mollissima), Red-breasted Merganser (Mergus serrator), Northern Gannet (Sula bassanus), and Oldsquaw (Clangula hyemalis), are also seen (Yurkunas 1985).

The most important factor governing the observation of migrants at Manomet Point is the weather. Local weather systems influence the bird-to-shore distance when a flight is in progress. Generally, weather systems with strong northwest to southwest winds drive birds away from shore, decreasing the chance for close-up viewing, while systems with strong northeast to southeast winds blow birds toward shore, many times affording observers a "bird'seye view" of passing migrants. Particularly affected by strong offshore winds are the more pelagic species such as gannets, shearwaters, storm-petrels, and alcids.

The main purpose of this article is to describe the migratory populations of sixty-one species of seabirds observed at Manomet Point during the first eighteen years of "Operation Seawatch."



Flying White-winged Scoters Illustration by Denise Braunhardt

Because the entire population of any migratory species cannot be counted from a single location, a relative abundance rating was used to assign the descriptive terms depicted graphically in Table 1. This rating was based on the mean monthly number of birds per hour (BPH) over the entire observation period and was computed by dividing the total number of individuals of each species per month by the total number of hours of observation for that month. The number of hours of observation for the months of September, October, November, and December were 329.3, 1372.8, 319.4, and 36.0, respectively. As an example, 16 Red-throated Loons (Gavia stellata) were observed during the month of September. Therefore, a BPH of 16/329.3 or 0.049 places this species in the Rare category.

Another way of determining which species are most likely to be seen when was to calculate the probability of observation (Table 2). This method was based on the monthly frequency of occurrence of each species during the entire observation period and was computed by dividing the number of months a species was seen by the total number of months of observation. The number of months during which observations were made for September, October, November, and December were 16, 18, 16 and 5, respectively. As an example, the Red-throated Loon was observed during 4 of the 16 months of observation during September. Therefore, the chance of seeing that species that month is 4/16 or 0.25.

The relative abundance rating and probability of observation may seem underestimated for several species. Because the emphasis of "Operation Seawatch" has been on scoter migration, observers have concentrated on those species, perhaps resulting in a less thorough count of other birds.

Records of species observed ten or fewer times (Table 3) are presented to detail as much as possible the temporal pattern of their migration at Manomet Point.

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Table 1. Relative abundance of 61 seabird species observed migrating southward past Manomet during "Operation Seawatch," 1967-1984.

Legend: Abundant (100.000+ BPH)

Common (10.001 - 100.000 BPH)

Uncommon (1.001 - 10.000 BPH)

Occasional (0.101 - 1.000 BPH)

Rare (0.011 - 0.100 BPH)

Accidental (0.000 - 0.010 BPH)

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Ten or fewer records

Red-throated Loon (Gavia stellata) Common Loon (Gavia immer) *Pied-hilled Grebe (Podilymbus podiceps) Red-ehilled Grebe (Podilymbus podiceps) Red-necked Grebe (Podiceps gurisus) Red-necked Grebe (Podiceps grisegena) Northern Fulmar (Fulmarus glacialis) *Scoty Shearwater (Calonectris diomedea) Greater Shearwater (Puffinus griseus) *Manx Shearwater (Fuffinus griseus) *Manx Shearwater (Fuffinus griseus) *Manx Shearwater (Fuffinus puffinus) *Leach's Storm-Petrel (Oceandries oceanicus) *Leach's Storm-Petrel (Oceandries oceanicus) *Leach's Storm-Petrel (Oceandries oceanicus) *Northern Gannet (Sula bassanus) Great Cormorant (Phalacrocorax carbo) Double-crested Cormorant (Phalacrocorax auritus) *Show Goose (Ehen caexulescens) *Brant (Branta bernicla) *Canada Goose (Ehen caexulescens) *Wood Duck (Aix sponsa) *Green-winged Teal (Anas crecca) *American Black Duck (Anas rubripes) *Mallard (Anas platythymchos) *Northern Pintail (Anas acuta) *Blue-winged Teal (Anas acuta) *Blue-winged Teal (Anas acuta) *Blue-winged Teal (Anas spectabilis) *Acc. *Greater Scaup (Aythya marila) *Lesser Scaup (Aythya marila) *Lesser Scaup (Aythya affinis) *Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Barlequin Duck (Histrionicus histrionicus) *Oldsquaw (Clangula hyemalis) *Black Scoter (Melanitta nigra) *Surf Scoter (Melanitta perspicillata) *Mhite-winged Scoter (Melanitta fusca) *Common Goldeneye (Bucephala clangula) *Buffichead (Bucephala albeola) *Birchoded Merganser (Mergus merganser) *Red-breasted Merganser (Mergus merganser) *Red-breasted Merganser (Mergus merganser) *Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Heplaropus lobatus) *Acc. *Rod-necked Merganser (Mergus serrator) *Ruddy Duck (Terma caspia) *Acc. *Rod-necked Merganser (Mergus serrator) *Ruddy Duck (Terma forsteri) *Acc. *Rod-necked Fren (Sterna forsteri) *Acc. *Rod-necked Fren (Sterna forsteri) *Acc. *Rocaled Fren (Sterna forsteri) *Acc. *Rocaled Fren (Sterna forsteri) *Proster's Green forsteri) *P	Ten or fewer records		*		
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Canada Goose (Branta canadensis) *Wood Duck (Aix sponsa) Acc. Acc. Green-winged Teal (Anas crecca) American Black Duck (Anas rubripes) Mallard (Anas platyhynchos) Northern Pintail (Anas acuta) Blue-winged Teal (Anas acuta) Blue-winged Teal (Anas acuta) Blue-winged Teal (Anas acuta) Blue-winged Teal (Anas acuta) *Canvasback (Aythya valisineria) Careater Scaup (Aythya marritan) Lesser Scaup (Aythya marritan) *Lesser Scaup (Aythya affinis) Common Eider (Somateria mollissima) *King Eider (Somateria mollissima) *King Eider (Somateria mollissima) *King Eider (Somateria pectabilis) *Back Scoter (Melanitta nigra) Surf Scoter (Melanitta nigra) Surf Scoter (Melanitta prespicillata) *Mhite-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) *Buffelhead (Bucephala albeola) *Hooded Merganser (Mergus merganser) *Rad-breasted Merganser (Mergus serrator) *Raddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius pomarinus) Acc. Acc. *Pomarine Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Little Gull (Larus minutus) *Common Black-headed Gull (Icarus ridibundus) Bonaparte's Gull (Larus philadelphia) *Caspian Tern (Sterna caspia) *Royal Tern (Sterna maxima) *Acc. *Royal Tern (Sterna maxima) *Acc. *Royal Tern (Sterna maxima) *Acc. *Roseate Tern (Sterna maxima) *Roseate Tern (Sterna maxima) *Acc. *Common Tern (Sterna maxima) *Acc. *Common Tern (Sterna maxima) *Acc. *Common Murre (Sterna antillarum) *Dovekie (Alle alle) *Common Murre (Uria alage) *Thick-billed Murre (Uria lomvia) *Racorhill (Alca torda) *Acc.	[12] [15] [15] [15] [15] [15] [15] [15] [15	12000011111111			
Green-winged Teal (Anas crecca) Green-winged Teal (Anas crecca) American Black Duck (Anas rubripes) Mallard (Anas platyrhynchos) Northern Pintail (Anas acuta) Blue-winged Teal (Anas discors) *American Wigeon (Anas americana) *Canvasback (Aythya valisineria) *Canvasback (Aythya valisineria) *Camson Eider (Somateria spectabilis) *Lesser Scaup (Aythya affinis) *Common Eider (Somateria spectabilis) *Acc. *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta nigra) Surf Scoter (Melanitta prespicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus ghaucoides) Black-legged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna caspia) *Royal Tern (Sterna maxima) *Caspian Tern (Sterna maxima) *Roseate Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda)					
Green-winged Teal (Anas crecca) American Black Duck (Anas rubripes) Mallard (Anas platyrhynchos) Northern Pintail (Anas acuta) Blue-winged Teal (Anas discors) *American Wigeon (Anas americana) *Canvasback (Aythya valisineria) Greater Scaup (Aythya marila) *Lesser Scaup (Aythya affinis) Common Eider (Somateria mollissima) *King Eider (Somateria mollissima) *King Eider (Somateria mollissima) *King Eider (Somateria spectabilis) Acc. Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta perspicillata) White-winged Scoter (Melanita perspicillata) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Lophodytes cucullatus) Common Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) Acc. *Pomarine Jaeger (Stercorarius pomarinus) Acc. *Pomarine Jaeger (Stercorarius pomarinus) Acc. *Pomarine Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus ghiladelphia) *Cemmon Black-leaged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna caspia) *Acc. *Royal Tern (Sterna maxima) Acc. *Acc. *Acc. *Acc. *Caspian Tern (Sterna maxima) Acc. *Roseate Tern (Sterna maxima) Acc. *Acc. *Caspian Tern (Sterna maxima) Acc. *Common Tern (Sterna maxima) Acc. *Acc. *Common Tern (Sterna hirundo) *Forster's Tern (Sterna forsteri) *Acc. *Caspian Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda)					
American Black Duck (Anas rubripes) Mallard (Anas platythynchos) Northern Pintail (Anas acuta) Blue-winged Teal (Anas discors) *American Wigeon (Anas americana) *Canvasback (Aythya valisineria) Greater Scaup (Aythya marila) *Lesser Scaup (Aythya marila) *Lesser Scaup (Aythya affinis) Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius pomarinus) Acc. Acc. *Acc. Acc. Acc. *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus ghaucides) *Recalegged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna acaspia) *Royal Tern (Sterna maxima) *Caspian Tern (Sterna maxima) *Caspian Tern (Sterna maxima) *Common Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda)					
Mallard (Anas platyrhynchos) Northern Pintail (Anas acuta) Blue-winged Teal (Anas discors) *American Wigeon (Anas americana) *Canvasback (Aythya valisineria) Greater Scaup (Aythya marila) *Lesser Scaup (Aythya ffinis) *Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Lophodytes cucullatus) Common Merganser (Mergus merganser) *Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna caspia) *Roc. Acc. *Royal Tern (Sterna maxima) *Roc. *Royal Tern (Sterna forsteri) *Leates Tern (Sterna antillarum) *Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda) *Acc. **Common Murre (Uria lomvia) *Razorbill (Alca torda)					•
Northern Pintail (Anas acuta) Blue-winged Teal (Anas discors) *American Wigeon (Anas americana) *Canvasback (Aythya valisineria) *Lesser Scaup (Aythya marila) *Lesser Scaup (Aythya marila) *Lesser Scaup (Aythya finis) Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanita fusca) Common Goldeneye (Bucephala clangula) Buffelhead (Bucephala clangula) *Hooded Merganser (Lophodytes cucullatus) *Common Merganser (Mergus merganser) *Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Ree-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus atricilla) *Little Gull (Larus minutus) *Little Gull (Larus minutus) *Liceland Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) *Iceland Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) *Common Ten (Sterna caspia) *Royal Tern (Sterna amxima) *Roseate Tern (Sterna forsteri) *Least Tern (Sterna antillarum) *Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda) *Acc. **Common Murre (Uria lomvia) *Razorbill (Alca torda)					
**Mamerican Wigeon (Anas americana) **Canvasback (Aythya valisineria) **Canvasback (Aythya marila) **Lesser Scaup (Aythya marila) **Lesser Scaup (Aythya ffinis) **Common Eider (Somateria mollissima) **King Eider (Somateria spectabilis) **Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) **Black Scoter (Melanitta nigra) **Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) **Bufflehead (Bucephala elbeola) **Hooded Merganser (Lophodytes cucullatus) **Common Merganser (Mergus merganser) **Red-necked Phalarope (Phalaropus lobatus) **Red-necked Phalarope (Phalaropus lobatus) **Pomarine Jaeger (Stercorarius pomarinus) **Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) **Common Black-headed Gull (Larus ridibundus) **Bonaparte's Gull (Larus philadelphia) **Iceland Gull (Larus glaucoides) **Black-legged Kittiwake (Rissa tridactyla) **Caspian Tern (Sterna acspia) **Royal Tern (Sterna maxima) **Rocate Tern (Sterna forsteri) **Forster's Tern (Sterna forsteri) **Least Tern (Sterna antillarum) Dovekie (Alle alle) **Common Murre (Uria aalge) **Thick-billed Murre (Uria lomvia) **Razorbill (Alca torda) **Common Murre (Uria aalge) **Thick-billed Murre (Uria lomvia) **Razorbill (Alca torda)		Acc.			
*American Wigeon (Anas americana) *Canvasback (Aythya valisineria) *Canvasback (Aythya valisineria) *Lesser Scaup (Aythya affinis) *Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus philadelphia) *Iceland Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) *Roseate Tern (Sterna maxima) *Roseate Tern (Sterna forsteri) *Least Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda)					
*Canvasback (Aythya valisineria) Acc. Greater Scaup (Aythya marila) *Lesser Scaup (Aythya marila) *King Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanita fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Lophodytes cucullatus) *Common Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Pomarine Jaeger (Stercorarius pomarinus) *Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus philadelphia) *Little Gull (Larus glaucoides) Black-leged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna maxima) *Caspian Tern (Sterna dougallii) Common Tern (Sterna hirundo) *Forster's Tern (Sterna forsteri) *Least Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda) *Acc. *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda)					
*Lesser Scaup (Aythya affinis) *Common Eider (Somateria spectabilis) *Acc. *Common Goldenum (Maythya affinis) *Common Merganser (Mergus merganser) *Red-necked Phalarope (Phalaropus lobatus) *Laughing Gull (Larus atricilla) *Laughing Gull (Larus philadelphia) *Little Gull (Larus philadelphia) *Lesst Tern (Sterna anstillarum) *Common Merganser (Mergus sersion) *Red-necked Fren (Sterona anstillarum) *Common Merganser (Mergus sersion) *Red-necked Phalarope (Phalaropus lobatus) *Acc. *Ac					
*Lesser Scaup (Aythya maffinis) Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Lophodytes cucullatus) Common Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) Acc. *Red-necked Phalarope (Phalaropus lobatus) Parasitic Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) Laughing Gull (Larus minutus) Bonaparte's Gull (Larus philadelphia) *Iceland Gull (Larus philadelphia) *Iceland Gull (Larus glaucoides) Black-leged Kittiwake (Rissa tridactyla) *Common Tern (Sterna maxima) *Roseate Tern (Sterna dougallii) Common Tern (Sterna hirundo) *Forster's Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria alge) *Common Murre (Uria alge) *Common Murre (Uria alge) *Acc. *Thick-billed Murre (Uria lomvia) Razorbill (Alca torda) *Acc. *A			600000		
Common Eider (Somateria mollissima) *King Eider (Somateria spectabilis) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) *Parasitic Jaeger (Stercorarius pomarinus) Parasitic Jaeger (Stercorarius parasiticus) Laughing Gull (Larus minutus) **Little Gull (Larus minutus) **Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus philadelphia) **Loeland Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) **Caspian Tern (Sterna caspia) **Caspian Tern (Sterna maxima) **Caspian Tern (Sterna dougallii) Common Tern (Sterna hirundo) **Forster's Tern (Sterna forsteri) **Least Tern (Sterna antillarum) Dovekie (Alle alle) **Common Murre (Uria alage) **Thick-billed Murre (Uria lomvia) Razorbill (Alca torda) Acc					
*King Eider (Somateria spectabilis) *Harlequin Duck (Histrionicus histrionicus) Oldsquaw (Clangula hyemalis) Black Scoter (Melanitta nigra) Surf Scoter (Melanitta perspicillata) White-winged Scoter (Melanitta fusca) Common Goldeneye (Bucephala clangula) Bufflehead (Bucephala albeola) *Hooded Merganser (Lophodytes cucullatus) Common Merganser (Mergus merganser) Red-breasted Merganser (Mergus serrator) *Ruddy Duck (Oxyura jamaicensis) *Red-necked Phalarope (Phalaropus lobatus) Acc. *Pomarine Jaeger (Stercorarius pomarinus) Laughing Gull (Larus atricilla) *Little Gull (Larus minutus) *Common Black-headed Gull (Larus ridibundus) Bonaparte's Gull (Larus philadelphia) *Loeland Gull (Larus glaucoides) Black-legged Kittiwake (Rissa tridactyla) *Caspian Tern (Sterna caspia) *Caspian Tern (Sterna maxima) *Roseate Tern (Sterna hirundo) *Forster's Tern (Sterna forsteri) *Least Tern (Sterna antillarum) Dovekie (Alle alle) *Common Murre (Uria aalge) *Thick-billed Murre (Uria lomvia) *Razorbill (Alca torda) *Acc. *Common Lacc. *Common Murre (Uria lomvia) *Razorbill (Alca torda) *Acc. *Common Murre (Uria lomvia) *Razorbill (Alca torda)			Acc.		
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	(copping gryrre)				

Table 2. Probability of observing 61 seabird species from Manomet Point during "Operation Seawatch," 1967-1984.

Legend: 81% - 100%
61% - 80%
41% - 60%
21% - 40%
0% - 20%
Ten or fewer records *

SPECIES	SEPTEMBER OCTOBER NOVEMBER DECEMBER
Red-throated Loon (Gavia stellata)	
Common Loon (Gavia immer)	
*Pied-billed Grebe (Podilymbus podiceps)	
Horned Grebe (Podiceps auritus)	
Red-necked Grebe (Podiceps grisegena)	
*Northern Fulmar (Fulmarus glacialis)	
Cory's Shearwater (Calonectris diomedea)	
Greater Shearwater (Puffinus gravis)	
*Sooty Shearwater (Puffinus griseus)	
*Manx Shearwater (Puffinus puffinus)	
*Wilson's Storm-Petrel (Oceanites oceanicus)	
*Leach's Storm-Petrel (Oceanodroma leucorhoa)	*******
Northern Gannet (Sula bassanus)	
Great Cormorant (Phalacrocorax carbo)	
Double-crested Cormorant (Phalacrocorax auritu	
*Snow Goose (Chen caerulescens)	
*Snow Goose (Chen Caetulescens)	
Brant (Branta bernicla)	
Canada Goose (Branta canadensis)	
*Wood Duck (Aix sponsa)	
Green-winged Teal (Anas crecca)	
American Black Duck (Anas rubripes)	
Mallard (Anas platyrhynchos)	
Northern Pintail (Anas acuta)	
Blue-winged Teal (Anas discors)	
*American Wigeon (Anas americana)	
*Canvasback (Aythya valisineria)	
Greater Scaup (Aythya marila)	
*Lesser Scaup (Aythya affinis)	AND THE OWNER OF THE OWNER OF THE OWNER.
Common Eider (Somateria mollissima)	
*King Eider (Somateria spectabilis)	
*Harlequin Duck (Histrionicus histrionicus)	
Oldsquaw (Clangula hyemalis)	THE POWOMER AND IN COMPANY OF THE PARTY OF T
Black Scoter (Melanitta nigra)	NAME OF TAXABLE PARTY OF TAXABLE PARTY.
Surf Scoter (Melanitta perspicillata)	
White-winged Scoter (Melanitta fusca)	
Common Goldeneye (Bucephala clangula)	
Bufflehead (Bucephala albeola)	
*Hooded Merganser (Lophodytes cucullatus)	
Common Merganser (Mergus merganser)	
Red-breasted Merganser (Mergus serrator)	
*Ruddy Duck (Oxyura jamaicensis)	
*Red-necked Phalarope (Phalaropus lobatus)	
*Pomarine Jaeger (Stercorarius pomarinus)	
Parasitic Jaeger (Stercorarius parasiticus)	
Laughing Gull (Larus atricilla)	
*Little Gull (Larus minutus)	
*Common Black-headed Gull (Larus ridibundus)	
Bonaparte's Gull (Larus philadelphia)	
*Iceland Gull (Larus glaucoides)	
Black-legged Kittiwake (Rissa tridactyla)	
*Caspian Tern (Sterna caspia)	
*Royal Tern (Sterna maxima)	
*Roseate Tern (Sterna dougallii)	
Common Tern (Sterna hirundo)	
*Forster's Tern (Sterna forsteri)	
*Least Tern (Sterna antillarum)	
Dovekie (Alle alle)	
*Common Murre (Uria aalge)	•••••
*Thick-billed Murre (Uria lomvia)	
Razorbill (Alca torda)	
*Black Guillemot (Cepphus grylle)	

Table 3. Records of seabird species observed ten or fewer times at Manomet Point during "Operation Seawatch," 1967-1984

Pied-billed Grebe: November 30, 1984 - one.

Northern Fulmar: October 4, 1971 - five; October 17, 1971 - one; October 18, 1971 - one; October 30, 1972 - one; October 2, 1984 - one.

Sooty Shearwater: September 9, 1969 - one.

Manx Shearwater: October 7, 1972 - two.

Wilson's Storm-Petrel: October 26, 1970 - one; October 30, 1981 - one.

Leach's Storm-Petrel: October 17, 1971 - two; October 24, 1971 - one; October 29, 1973 - two.

Snow Goose: November 29, 1969 - one; October 23, 1980 - twelve; November 10, 1980 - fifteen.

Wood Duck: September 28, 1972 - one; October 3, 1979 - one.

American Wigeon: October 8, 1967 - thirty; September 27, 1968 - two; September 29, 1968 - three; November 8, 1969 - twenty-eight; October 9, 1970 - one; October 1, 1971 - one; October 9, 1971 - one; November 6, 1971 - three; October 9, 1973 - eight.

Canvasback: October 30, 1971 - two.

Lesser Scaup: October 10, 1968 - five.

King Eider: October 25, 1970 - one; October 27, 1970 - one; October 17, 1971 - three; October 31, 1971 - two; October 28, 1976 - one; November 19, 1984 - four; December 2, 1984 - one; December 14, 1984 - one.

Harlequin Duck: October 2, 1984 - one; November 1, 1984 - one; November 8, 1984 - three.

Hooded Merganser: October 25, 1970 - one; November 1, 1972 - three; October 30, 1977 - ten; December 6, 1984 - two.

Ruddy Duck: October 19, 1968 - one; October 21, 1971 - five; October 4, 1976 - three; October 20, 1976 - two; October 23, 1976 - two.

Red-necked Phalarope: October 24, 1971 - three.

Pomarine Jaeger: November 2, 1969 - one; September 21, 1977 - two; October 23, 1984 - one.

Little Gull: October 11, 1970 - two; October 12, 1970 - two.

Common Black-headed Gull: October 9, 1971 - one; October 24, 1974 - one; October 25, 1974 - one; November 10, 1984 - one; December 9, 1984 - one.

Iceland Gull: September 27, 1968 - one; October 26, 1976 - one; November 8, 1976 one.

Caspian Tern: October 14, 1972 - two; October 13, 1979 - two.

Royal Tern: October 6, 1980 - three.

Roseate Tern: September 9, 1969 - five; September 10, 1969 - two; September 12, 1969 - six; October 6, 1972 - one.

Forster's Tern: September 14, 1969 - one; September 28, 1972 - two; November 11, 1976 - one; November 2, 1983 - one; November 5, 1983 - one.

Least Tern: September 12, 1969 - seven; September 18, 1969 - three; September 23, 1969 - one; September 24, 1970 - fourteen; October 23, 1976 - thirteen.

Common Murre: November 25, 1975 - two.

Thick-billed Murre: November 6, 1969 - one; November 8, 1969 - one; November 10, 1969 - eight; November 19, 1979 - five.

Black Guillemot: October 31, 1979 - one; November 25, 1984 - one; December 1, 1984 - two; December 6, 1984 - three.

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VINCENT G. YURKUNAS, who has his M.S. in Wildlife from Louisiana State, first became interested in birds in college when he took an ornithology course at the University of Massachusetts and has been an active birder ever since. He developed "an intense passion for raptors" and worked at the Raptor Information Center of the National Wildlife Federation in 1979 and at Whitefish Point Bird Observatory in Michigan in 1985. He also banded waterfowl in Alberta, Canada, for the USFWS, served as research intern at MBO, and worked as a field biologist at the Kalamazoo Nature Center, collecting data for the Michigan Breeding Bird Atlas. Most of his ten years of experience have been in the east, but since 1982, he has expanded his birding in travels through a number of western states and northern Mexico.

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