

RESEARCH

Foraging Guilds of North American Birds

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ABSTRACT / We propose a foraging guild classification for North American inland, coastal, and pelagic birds. This classification uses a three-part identification for each guild—major food, feeding substrate, and foraging technique—to classify 672 species of birds in both the breeding and nonbreeding seasons. We have attempted to group species that use similar resources in similar ways. Researchers have identified foraging guilds generally by examining species distributions along one or more defined environmental axes. Such studies frequently result in species with several guild designations. While the continuance of these studies is important, to accurately describe species' functional roles, managers need methods to consider many species simultaneously when trying to determine the impacts of habitat alteration. Thus, we present an avian foraging classification as a starting point for further discussion to aid those faced with the task of describing community effects of habitat change.

Many approaches have been taken to describe bird feeding behavior. Comparisons between different studies, however, have been difficult because of differences in terminology. We propose to establish a classification scheme for North American birds by using common terminology based on major food type, substrate, and technique, using foraging guilds.

The guild concept was originally proposed by Root (1967) to indicate a group of species that exploit the same class of environmental resources in a similar way. For example, Root defined a foliage-gleaning guild in oak woodlands as a group of birds whose diet consisted of arthropods obtained from the foliage zone of oaks. Root pointed out that birds could be a member of several guilds. Thus, seasonal changes that occur in avian feeding habitats could be accommodated. The guild concept has become a useful tool in looking at competition, niche separation, and functional relationships within the community. As a result, biologists can use the guild concept to show how different taxa interrelate and how impacts of habitat change influence community dynamics and not just individual species.

The guild concept has been used by a number of authors to compare or classify components of a community. It is possible to establish guilds on the bases of different criteria. Landres (1983) reviews some efforts to assign species to guilds. Guilds were used by Severinghaus (1981) to develop the idea of indicator species; he believed that since all members use the same resource, all should respond similarly to changes in their environment. There are enough exceptions, in part because

Severinghaus's guilds were not all based on habitat requirements, to question whether the indicator concept would be effective.

Thomas and others (1979) developed lists of species by life form for each habitat and successional stage in the Blue Mountains of Oregon. This is a use of the guild concept in which assemblages of species are defined according to common nesting and feeding requirements. Another use of the guild concept was made by Short and Burnham (1982), who grouped species into layers of each habitat. For example, forest species are associated with subsurface, ground surface, and shrub layer.

Verner (1984) defines management guilds as groups of species that respond in a similar way to a variety of changes likely to affect their environment. He states that all bird species that depend on tree canopies for their food supply—whether fruit, buds, leaves, or insects—could be in one management guild. This would give the manager some idea of the group of species that are affected by habitat change. Verner's use of management guilds does not fully consider the functional role originally proposed by Root; rather, it considers responses to changes in identifiable zones of forest habitats.

Standardization of guilds provides a means by which resource managers can compare communities of birds. The number of community components are reduced, thereby facilitating the description. Likewise, biologists can discuss competition and energy flow using common terminology (Landres 1984).

Guilds can be combined in different ways for different purposes. Basically, however, we need to develop bases

for classifying each species into a guild. In this article, we have considered food, substrate from which the food was obtained, and technique used in obtaining the food as the common ground to classify 672 species of North American birds. These three criteria were selected because they can be observed or documented for each species. The components of major food, substrate on which food was found, and techniques used to obtain food provide realistic groupings of species. The user of this information can group the species in one of the guilds presently described or utilize different criteria to develop the grouping. With this classification, based on avian feeding behavior, users could compare the results of different studies for functional differences.

Our description of guilds brings the concept as proposed by Root (1967) into use by resource managers. Despite the different integrations and use of concept, it is now possible to have a "dictionary" of terms characteristic of each species. While debates can continue about the concept, our classification provides a reference point for application.

Birds' names are from the American Ornithologists' Union (1983); scientific names are listed in the *Appendix*. The major references used to develop this foraging guild classification included A. C. Bent's *Life History of North American Birds* series (Smithsonian Institute, US National Museum Bulletins, Washington, DC); *Handbook of North American Birds*, edited by Ralph S. Palmer (Yale University Press, New Haven, CT, 1962); *Waterfowl of North America*, by Paul A. Johnsgard (Indiana University Press, Bloomington, 1975); *Ducks, Geese & Swans of North America*, by Frank C. Bellrose (Stackpole Books, Harrisburg, PA, 1976); *American Wildlife & Plants*, by Alexander C. Martin and others (Dover Publications, New York, 1951); *Crows of the World*, by Derek Goodwin (Cornell University Press, Ithaca, NY, 1976); *Audubon Water Bird Guide* and *Audubon Land Bird Guide* by Richard H. Pough (Doubleday & Co., Garden City, NY, 1946); *Management of Migratory Shore and Upland Game Birds in North America*, edited by Glen C. Sanderson (International Association of Fish and Wildlife Agencies, Washington, DC, 1977).

Foraging Guild Designation

Often it was difficult to limit this classification to a single guild per species, so in several cases we have listed more than one guild. An additional guild was designated when a second food item represented at least 20% of the diet of a species or when the species spent at least 20% of its time feeding on a different substrate or using a different technique. Some species shift their food selec-

tion seasonally, which may require the use of different substrates or techniques. We indicate such changes in columns labeled as breeding period or nonbreeding period. We do not indicate gender- or age-specific differences in foraging guilds unless they appear vastly different and would affect the management of the species.

The species in this list include all those that can be found in North America during the breeding season or nonbreeding season. The geographic range covered by this list is from Greenland to Florida to California to Alaska. Birds of Mexico and the Caribbean are not included unless they are regularly found north of these areas at the specified season. Accidental species are not included. *The Check-list of North American Birds*, 6th edn. (American Ornithologists' Union, 1983) was used to determine the status of these birds.

Classification Procedures

For *food type*, we did not necessarily include all foods taken by each species—only the major food items (20% of diet during a given period).

- Carnivore: vertebrates
- Crustaceovore: crustaceans
- Frugivore: fruits
- Granivore: nuts
- Herbivore: plants (leaves, stems, roots)
- Insectivore: insects
- Molluscovore: mollusks
- Omnivore: a variety of foods including both animal and plant foods (the less common food group makes up 10% of diet)
- Piscivore: fish
- Vermivore: sandworms, earthworms, etc.

Substrate refers to the place where a food item is found or taken.

- air: caught in the air
- bark: on, in, or under bark of trees
- coastal: waters along coast (can include brackish as well as salt water)
- coastal beach: beaches and/or tidal flats along coast
- coastal bottom: floor of continental shelf along coast
- coastal rock: rocks along coast
- coastal surface: surface of coastal waters
- floral: on or in flowers
- fresh marsh: freshwater marshes (on mud, in shallow water, or on marsh plants)
- freshwater: freshwater habitats (ponds, lakes, rivers, streams)
- freshwater bottom: bottoms of freshwater ponds and lakes

freshwater shoreline: shores of freshwater ponds, lakes, rivers, or streams

freshwater surface: surface of freshwater habitats

ground: on the ground or on very low, weedy vegetation

lower canopy/shrub: on leaves, twigs, and branches of shrubs, saplings, and lower crowns of trees

marsh: fresh, brackish, or saltwater marshes (on mud, in shallow water, or on marsh plants)

mud: inland on mud flats (wet fields, meadows, tundra, or associated with freshwater habitats)

pelagic: ocean waters away from coastlines

pelagic surface: surface of ocean waters

riparian bottom: bottoms of rivers and streams

salt marsh: brackish or salt marshes (on mud, in shallow water, or on marsh plants)

shoreline: along shoreline of both freshwater and saltwater (coastal) habitats

upper canopy: on leaves, twigs, and branches of trees in main canopy

water: brackish, fresh- and saltwater habitats

water bottom: on bottoms of fresh-, brackish, or saltwater habitats

water surface: on surface of fresh-, brackish, or saltwater habitats

Technique refers to the manner in which food is obtained. Note: some techniques are associated with particular food types and/or substrates.

ambusher: slowly stalks or waits for prey to come within reach

chaser: pursues prey on ground

dabbler: submerges head and neck or tips up (various water substrates)

diver: dives from surface for underwater food

excavator: locates food in bark by drilling holes

food pirate: steals food from other species, usually other birds

foot plunger: catches prey by plunging from air to water surface (or ground) and seizing prey in talons

forager: takes almost any food items encountered upon the substrate (includes all herbivores and omnivores feeding on terrestrial habitats or vegetation, except grazers and grubbers)

gleaner: selects particular food items from the substrate

grazer: feeds on grasses, sedges, or grains in fields or meadows

grubber: digs up roots and tubers of either terrestrial or aquatic plants

hawker: flies after prey and captures it either in air or on ground

hover-gleaner: hovers in air while selecting prey (from vegetation or ground)

plunger: dives from air into water to capture prey in bill or gular pouch

prober: inserts bill into substrate (beach, mud, ground) and locates prey by touch

sallier: perches on exposed branch or twig, waits for insect to fly by, and then pursues and catches insect in air

scaler: exposes prey under bark by scaling off loose bark

scavenger: takes a variety of items, including refuse or carrion

scraper: flies with bill open and screens prey from air

skimmer: flies low over water and skims food from water surface with lower mandible in water

strainer: strains food items from water or mud through lamellae along edge of bill

Foraging Guild Classification

Breeding period	Nonbreeding period	Year round
CARNIVORE: <i>air hawker</i>		
Pomarine Jaeger		White-tailed Eagle
Long-tailed Jaeger		Sharp-shinned
Glaucous Gull		Hawk
		Cooper's Hawk
		Northern Goshawk
		Merlin
		Peregrine Falcon
		Gyr Falcon
		Prairie Falcon
CARNIVORE: <i>coastal beach scavenger</i>		
Laughing Gull	Common Black-headed Gull	Western Gull
Thayer's Gull	Bonaparte's Gull	Great Black-backed Gull
	Heermann's Gull	
	Mew Gull	
	Ring-billed Gull	
	California Gull	
	Iceland Gull	
	Yellow-footed Gull	
	Glaucous-winged Gull	
CARNIVORE: <i>coastal food pirate</i>		
Parasitic Jaeger		
Great Skua		
CARNIVORE: <i>coastal scavenger</i>		
Pomarine Jaeger	Western Gull	Iceland Gull
Great Skua		Glaucous Gull
Glaucous-winged Gull		
CARNIVORE: <i>coastal surface gleaner</i>		
	Bonaparte's Gull	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
CARNIVORE: <i>ground chaser</i>		
		Greater Roadrunner
CARNIVORE: <i>ground hawk</i>		
American Swallow-tailed Kite		Black-shouldered Kite
Gray Hawk		Northern Harrier
Aplomado Falcon		Sharp-shinned Hawk
Pomarine Jaeger		Cooper's Hawk
Long-tailed Jaeger		Northern Goshawk
Great Skua		Common Black-hawk
Ring-billed Gull		Harris's Hawk
California Gull		Red-shouldered Hawk
Ivory Gull		Broad-winged Hawk
		Short-tailed Hawk
		Swainson's Hawk
		White-tailed Hawk
		Zone-tailed Hawk
		Red-tailed Hawk
		Ferruginous Hawk
		Rough-legged Hawk
		Golden Eagle
		American Kestrel
		Prairie Falcon
		Common Barn-Owl
		Eastern Screech-Owl
		Western Screech-Owl
		Great Horned Owl
		Snowy Owl
		Northern Hawk-Owl
		Northern Pygmy-Owl
		Ferruginous Pygmy-Owl
		Burrowing Owl
		Spotted Owl
		Barred Owl
		Great Gray Owl
		Long-eared Owl
		Short-eared Owl
		Boreal Owl
		Northern Saw-whet Owl
		Northern Shrike
		Loggerhead Shrike
CARNIVORE: <i>ground scavenger</i>		
Parasitic Jaeger	Golden Eagle	Black Vulture
		Turkey Vulture
		California Condor

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
CARNIVORE: <i>ground scavenger</i> (continued)		
		Bald Eagle
		Crested Caracara
CARNIVORE: <i>pelagic food pirate</i>		
		Pomarine Jaeger
		Parasitic Jaeger
CARNIVORE: <i>pelagic scavenger</i>		
	Short-tailed Albatross	Northern Fulmar
	Cory's Shearwater	Fork-tailed Storm-Petrel
	Sooty Shearwater	Petrel
	Black Storm-Petrel	Leach's Storm-Petrel
	Pomarine Jaeger	
	Great Skua	
	South Polar Skua	
	Ivory Gull	
CARNIVORE: <i>shoreline gleaner</i>		
Mew Gull		
CARNIVORE: <i>shoreline scavenger</i>		
	Herring Gull	
	Thayer's Gull	
	Lesser Black-backed Gull	
CARNIVORE: <i>water ambusher</i>		
		American Bittern
		Great Egret
		Snowy Egret
		Wood Stork
CRUSTACEOVORE: <i>coastal ambusher</i>		
Tricolored Heron		
CRUSTACEOVORE: <i>coastal beach gleaner</i>		
	Black-bellied Plover	Wilson's Plover
	Snowy Plover	Black Turnstone
	Semipalmated Plover	
	Piping Plover	
	Red Knot	
CRUSTACEOVORE: <i>coastal beach prober</i>		
	Willet	
	Whimbrel	
	Marbled Godwit	
	Sanderling	
	Dunlin	
CRUSTACEOVORE: <i>coastal bottom gleaner</i>		
	King Eider	Common Eider
	Steller's Eider	
	Harlequin Duck	
	Oldsquaw	
	Black Scoter	
	Surf Scoter	
	White-winged Scoter	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
CRUSTACEOVORE: <i>coastal diver</i>		
Dovekie	Horned Grebe	Red-faced Cormorant
Common Murre	Eared Grebe	
Black Guillemot		
Pigeon Guillemot		
Kittlitz's Murrelet		
Xantus' Murrelet		
Ancient Murrelet		
Cassin's Auklet		
Parakeet Auklet		
Least Auklet		
Whiskered Auklet		
Crested Auklet		
Rhinoceros Auklet		
CRUSTACEOVORE: <i>coastal rock gleaner</i>		
	Ruddy Turnstone	Black Turnstone
	Surfbird	
	Purple Sandpiper	
	Rock Sandpiper	
CRUSTACEOVORE: <i>coastal surface gleaner</i>		
Thick-billed Murre		
Razorbill		
CRUSTACEOVORE: <i>freshwater bottom gleaner</i>		
Lesser Scaup		
White-winged Scoter		
Hooded Merganser		
CRUSTACEOVORE: <i>freshwater diver</i>		
Pied-billed Grebe		
Red-necked Grebe		
CRUSTACEOVORE: <i>freshwater gleaner</i>		
		Solitary Sandpiper
CRUSTACEOVORE: <i>freshwater shoreline gleaner</i>		
Red Knot		
Sanderling		
Least Sandpiper		
CRUSTACEOVORE: <i>marsh gleaner</i>		
Black Rail		
CRUSTACEOVORE: <i>marsh prober</i>		
King Rail		
CRUSTACEOVORE: <i>mud gleaner</i>		
Baird's Sandpiper		
CRUSTACEOVORE: <i>mud prober</i>		
White-rumped Sandpiper	Scarlet Ibis	White Ibis
Dunlin		Glossy Ibis
		White-faced Ibis
CRUSTACEOVORE: <i>mud strainer</i>		
		Roseate Spoonbill
CRUSTACEOVORE: <i>pelagic diver</i>		
	Dovekie	
	Common Murre	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
CRUSTACEOVORE: <i>pelagic diver</i> (continued)		
	Black Guillemot	
	Pigeon Guillemot	
	Xantus' Murrelet	
	Ancient Murrelet	
	Cassin's Auklet	
	Parakeet Auklet	
	Least Auklet	
	Whiskered Auklet	
	Crested Auklet	
	Rhinoceros Auklet	
CRUSTACEOVORE: <i>pelagic scavenger</i>		
	Short-tailed Shearwater	
	Wilson's Storm-Petrel	
CRUSTACEOVORE: <i>pelagic surface gleaner</i>		
	Buller's Shearwater	Ashy Storm-Petrel
	Least Storm-Petrel	
	Thick-billed Murre	
	Razorbill	
CRUSTACEOVORE: <i>salt-marsh gleaner</i>		
Clapper Rail	Black Rail	Seaside Sparrow
CRUSTACEOVORE: <i>shoreline gleaner</i>		
Black-bellied Plover	Least Sandpiper	
Snowy Plover		
Semipalmated Plover		
Piping Plover		
Semipalmated Sandpiper		
Western Sandpiper		
Rufous-necked Stint		
Rock Sandpiper		
CRUSTACEOVORE: <i>shoreline prober</i>		
Willet	Long-billed Curlew	
Bar-tailed Godwit		
Stilt Sandpiper		
CRUSTACEOVORE: <i>water ambusher</i>		
	Tricolored Heron	American Bittern
		Great Egret
		Snowy Egret
		Little Blue Heron
		Green-backed Heron
		Black-crowned Night-Heron
		Yellow-crowned night-heron
		Wood Stork

Foraging Guilds of North American Birds

Breeding period	Nonbreeding period	Year round
CRUSTACEOVORE: <i>water bottom gleaner</i>		
King Eider	Tufted Duck	
	Hooded Merganser	
CRUSTACEOVORE: <i>water diver</i>		
	Pied-billed Grebe	
CRUSTACEOVORE: <i>water skimmer</i>		
	Black Skimmer	
CRUSTACEOVORE: <i>water surface gleaner</i>		
Red Phalarope		Lesser Yellowlegs
FRUGIVORE: <i>ground gleaner</i>		
House Finch		Plain Chachalaca
FRUGIVORE: <i>lower-canopy/shrub gleaner</i>		
Band-tailed Pigeon	Red-headed Wood-	Ladder-backed
Gray Kingbird	pecker	Woodpecker
Rose-throated Becard	Eastern Phoebe	Nuttall's Wood-
Eastern Bluebird	Great Crested Fly-	pecker
	catcher	Downy Wood-
	Cassin's Kingbird	pecker
	Tree Swallow	Hairy Woodpecker
	Wrentit	Phainopepla
	Northern Mock-	
	ingbird	
	Curve-billed	
	Thrasher	
	Bohemian Wax-	
	wing	
FRUGIVORE: <i>upper-canopy gleaner</i>		
Purple Finch	Band-tailed Pigeon	White-crowned
		Pigeon
		Red-billed Pigeon
		Acorn Woodpecker
		Gila Woodpecker
		Strickland's Wood-
		pecker
		Ivory-billed Wood-
		pecker
		Bohemian Wax-
		wing
		Cedar Waxwing
GRANIVORE: <i>freshwater dabbler</i>		
Green-winged Teal		Fulvous Whistling-
Northern Pintail		Duck
		Mallard
GRANIVORE: <i>freshwater surface gleaner</i>		
		Wood Duck
GRANIVORE: <i>ground gleaner</i>		
Mallard	Gray Partridge	Fulvous Whistling-
California Quail	Mountain Quail	Duck
	Eurasian Skylark	Black-bellied
	Horned Lark	Whistling-Duck
	Dickcissel	Wood Duck
	Cassin's Sparrow	White-winged
		Dove

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
GRANIVORE: <i>ground gleaner</i> (continued)		
	Rufous-winged	Mourning Dove
	Sparrow	Inca Dove
	Rufous-crowned	Common Ground-
	Sparrow	Dove
	American Tree	White-tipped Dove
	Sparrow	White-collared
	Chipping Sparrow	Seedeater
	Field Sparrow	House Finch
	Black-chinned	Lesser Goldfinch
	Sparrow	Lawrence's Gold-
	Vesper Sparrow	finch
	Lark Sparrow	House Sparrow
	Black-throated	Eurasian Tree
	Sparrow	Sparrow
	Sage Sparrow	
	Five-striped	
	Sparrow	
	Savannah Sparrow	
	Baird's Sparrow	
	Fox Sparrow	
	Song Sparrow	
	Lincoln's Sparrow	
	Swamp Sparrow	
	White-throated	
	Sparrow	
	Golden-crowned	
	Sparrow	
	White-crowned	
	Sparrow	
	Harris' Sparrow	
	Dark-eyed Junco	
	McCown's Long-	
	spur	
	Lapland Longspur	
	Chestnut-collared	
	Longspur	
	Snow Bunting	
	McKay's Bunting	
	Red-winged Black-	
	bird	
	Bronzed Cowbird	
	Brown-headed	
	Cowbird	
	Rosy Finch	
	Pine Grosbeak	
	Purple Finch	
	Cassin's Finch	
	Common Redpoll	
	Hoary Redpoll	
	Pine Siskin	
	American Gold-	
	finch	
	Evening Grosbeak	
GRANIVORE: <i>lower-canopy/shrub gleaner</i>		
	American Gold-	Lesser Goldfinch
	finch	Lawrence's Gold-
		finch

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
GRANIVORE: <i>upper-canopy gleaner</i>		
Purple Finch	Red-cockaded Woodpecker	Lewis' Woodpecker
	White-headed Woodpecker	
	Red-breasted Nuthatch	
	White-breasted Nuthatch	
	Brown-headed Nuthatch	
	Pine Grosbeak	
	Cassin's Finch	
	Red Crossbill	
	White-winged Crossbill	
	Pine Siskin	
	Evening Grosbeak	
GRANIVORE: <i>water dabbler</i>		
	Green-winged Teal	
HERBIVORE: <i>coastal dabbler</i>		
	Whooper Swan	
	Emperor Goose	
	Brant	
	Eurasian Wigeon	
HERBIVORE: <i>freshwater dabbler</i>		
Tundra Swan	Cinnamon Teal	Black-bellied
Trumpeter Swan		Whistling-Duck
Mute Swan		
Canada Goose		
Gadwall		
HERBIVORE: <i>freshwater diver</i>		
Masked Duck		
HERBIVORE: <i>ground forager</i>		
Willow Ptarmigan	Ring-necked Pheasant	Chukar
Rock Ptarmigan	Greater Prairie-Chicken	Sage Grouse
White-tailed Ptarmigan	Lesser Prairie-Chicken	Gambel's Quail
Mountain Quail	Wild Turkey	
	California Quail	
HERBIVORE: <i>ground grazer</i>		
Mute Swan	Mallard	Greater White-fronted Goose
Pink-footed Goose		Snow Goose
Emperor Goose		Ross' Goose
Brant		Canada Goose
Barnacle Goose		
American Wigeon		
HERBIVORE: <i>ground grubber</i>		
	Montezuma Quail	
HERBIVORE: <i>lower-canopy/shrub forager</i>		
	Willow Ptarmigan	
	Rock Ptarmigan	
	White-tailed Ptarmigan	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
HERBIVORE: <i>upper-canopy forager</i>		
	Spruce Grouse	Plain Chachalaca
	Blue Grouse	
	Ruffed Grouse	
	Sharp-tailed Grouse	
HERBIVORE: <i>water dabbler</i>		
	Tundra Swan	American Wigeon
	Trumpeter Swan	
	Mute Swan	
	Canada Goose	
	Gadwall	
	American Coot	
HERBIVORE: <i>water diver</i>		
	Masked Duck	Redhead
	American Coot	
HERBIVORE: <i>water grubber</i>		
	Snow Goose	
INSECTIVORE: <i>air hawk</i>		
American Swallow-tailed Kite	Common Black-headed Gull	Mississippi Kite
Gray Hawk		Swainson's Hawk
American Kestrel		Burrowing Owl
Aplomado Falcon		
Franklin's Gull		
Bonaparte's Gull		
Black Tern		
Elf Owl		
INSECTIVORE: <i>air sallier</i>		
Elegant Trogon		Anna's Hummingbird
Red-headed Woodpecker		Green Kingfisher
Olive-sided Flycatcher		Lewis' Woodpecker
Greater Pewee		Hammond's Flycatcher
Western Woodpeewee		Gray Flycatcher
Eastern Woodpeewee		Black Phoebe
Yellow-bellied Flycatcher		Eastern Phoebe
Acadian Flycatcher		Say's Phoebe
Alder Flycatcher		Vermillion Flycatcher
Willow Flycatcher		Ash-throated Flycatcher
Least Flycatcher		Great Crested Flycatcher
Dusky Flycatcher		Great Kiskadee
Western Flycatcher		Couch's Kingbird
Buff-breasted Flycatcher		Cassin's Kingbird
Dusky-capped Flycatcher		Western Kingbird
Brown-crested Flycatcher		Scissor-tailed Flycatcher
Sulphur-bellied Flycatcher		Townsend's Solitaire
Tropical Kingbird		Cedar Waxwing
Thick-billed Kingbird		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>air sallier</i> (continued)		
Eastern Kingbird		
Gray Kingbird		
Rose-throated		
Becard		
Bohemian Wax-wing		
American Redstart		
Hooded Warbler		
Wilson's Warbler		
Painted Redstart		
Western Tanager		
Rufous-winged Sparrow		
Black-throated Sparrow		
Rosy Finch		
INSECTIVORE: <i>air screener</i>		
Lesser Nighthawk		Common Pauraque
Common Nighthawk		Common Poorwill
Antillean Nighthawk		Chuck-will's-widow
Buff-collared Nightjar		Whip-poor-will
Black Swift		Vaux's Swift
Chimney Swift		White-throated Swift
Purple Martin		Tree Swallow
Bank Swallow		Violet-green Swallow
Cliff Swallow		Northern Rough-winged Swallow
Cave Swallow		
Barn Swallow		
INSECTIVORE: <i>bark excavator</i>		
		Pileated Woodpecker
INSECTIVORE: <i>bark gleaner</i>		
Pine Warbler	Yellow-bellied	Red-headed Woodpecker
Prothonotary Warbler	Sapsucker	Acorn Woodpecker
Painted Redstart	Red-breasted Sapsucker	Gila Woodpecker
	Williamson's Sapsucker	Golden-fronted Woodpecker
		Red-bellied Woodpecker
		Ladder-backed Woodpecker
		Nuttall's Woodpecker
		Downy Woodpecker
		Hairy Woodpecker
		Strickland's Woodpecker
		Red-cockaded Woodpecker
		Red-breasted Nuthatch

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>bark gleaner</i> (continued)		
		White-breasted Nuthatch
		Pygmy Nuthatch
		Brown-headed Nuthatch
		Brown Creeper
		Wrentit
		Yellow-throated Warbler
		Pine Warbler
		Black-and-white Warbler
INSECTIVORE: <i>bark scaler</i>		
		White-headed Woodpecker
		Three-toed Woodpecker
		Black-backed Woodpecker
		Ivory-billed Woodpecker
INSECTIVORE: <i>coastal beach gleaner</i>		
Eurasian Dotterel	Black-bellied Plover	Wilson's Plover
	Semipalmated Plover	
	Piping Plover	
	Wandering Tattler	
	Western Sandpiper	
	Dunlin	
	Short-billed Dowitcher	
	Long-billed Dowitcher	
INSECTIVORE: <i>coastal beach prober</i>		
		Willet
INSECTIVORE: <i>coastal rock gleaner</i>		
		Purple Sandpiper
		Rock Sandpiper
INSECTIVORE: <i>fresh-marsh gleaner</i>		
Northern Jacana		
INSECTIVORE: <i>freshwater bottom gleaner</i>		
Bufflehead		
Hooded Merganser		
INSECTIVORE: <i>freshwater diver</i>		
Pied-billed Grebe		Least Grebe
Horned Grebe		Eared Grebe
Red-necked Grebe		
INSECTIVORE: <i>freshwater gleaner</i>		
Wood Sandpiper		Black-necked Stilt
Solitary Sandpiper		
INSECTIVORE: <i>Freshwater shoreline gleaner</i>		
Wandering Tattler		Northern Waterthrush
Red Knot		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>Freshwater shoreline gleaner</i> (continued)		
Sanderling		
Least Sandpiper		
Wilson's Phalarope		
Louisiana Water-thrush		
INSECTIVORE: <i>freshwater surface gleaner</i>		
Little Gull		
Sabine's Gull		
Black Tern		
INSECTIVORE: <i>ground gleaner</i>		
Lesser Golden-Plover		Cattle Egret
Killdeer		Mountain Plover
Upland Sandpiper		Greater Roadrunner
Eskimo Curlew		Smooth-billed Ani
Surfbird		Groove-billed Ani
Pectoral Sandpiper		Rock Wren
Rock Sandpiper		Canyon Wren
Curlew Sandpiper		Bewick's Wren
Buff-breasted Sandpiper		Winter Wren
Long-billed Dowitcher		Sedge Wren
Bonaparte's Gull		Mountain Bluebird
Mew Gull		Le Conte's Thrasher
Ring-billed Gull		Gray-crowned Yellow-throat
California Gull		
Northern Flicker		
Black-billed Magpie		
Yellow-billed Magpie		
Bluethroat		
Northern Wheat-ear		
Eastern Bluebird		
Western Bluebird		
Hermit Thrush		
Fieldfare		
Varied Thrush		
Sage Thrasher		
Yellow Wagtail		
White Wagtail		
Red-throated Pipit		
Water Pipit		
Sprague's Pipit		
Palm Warbler		
Worm-eating Warbler		
Ovenbird		
Kentucky Warbler		
Connecticut Warbler		
Mourning Warbler		
Painted Redstart		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>ground gleaner</i> (continued)		
Cassin's Sparrow		
Brewer's Sparrow		
Baird's Sparrow		
Eastern Meadow-lark		
Western Meadow-lark		
Rusty Blackbird		
INSECTIVORE: <i>ground hawk</i>		
Eastern Screech-Owl		Flammulated Owl
Western Screech-Owl		Whiskered Screech-Owl
Northern Pygmy-Owl		
Elf Owl		
INSECTIVORE: <i>lower-canopy/shrub gleaner</i>		
Black-billed Cuckoo		Ash-throated Flycatcher
Yellow-billed Cuckoo		Carolina Wren
Mangrove Cuckoo		House Wren
Black-capped Chickadee		Golden-crowned Kinglet
Carolina Chickadee		Ruby-crowned Kinglet
Mexican Chickadee		Black-tailed Gnatcatcher
Mountain Chickadee		Black-capped Gnatcatcher
Siberian Tit		Hutton's Vireo
Boreal Chickadee		Nashville Warbler
Chestnut-backed Chickadee		Black-throated Gray Warbler
Bridled Titmouse		Prairie Warbler
Tufted Titmouse		Common Yellowthroat
Verdin		
Bushtit		
White-eyed Vireo		
Bell's Vireo		
Black-capped Vireo		
Gray Vireo		
Solitary Vireo		
Blue-winged Warbler		
Orange-crowned Warbler		
Virginia's Warbler		
Colima Warbler		
Lucy's Warbler		
Yellow Warbler		
Chestnut-sided Warbler		
Magnolia Warbler		
Black-throated Blue Warbler		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>lower-canopy/shrub gleaner</i> (continued)		
Yellow-rumped Warbler		
Golden-cheeked Warbler		
Kirtland's Warbler		
American Redstart		
Prothonotary Warbler		
Swainson's Warbler		
MacGillivray's Warbler		
Hooded Warbler		
Wilson's Warbler		
Canada Warbler		
Olive Warbler		
Black-throated Sparrow		
INSECTIVORE: <i>marsh gleaner</i>		
Black Rail		Marsh Wren
INSECTIVORE: <i>marsh prober</i>		
King Rail		
Virginia Rail		
INSECTIVORE: <i>mud gleaner</i>		
White-rumped Sandpiper		Glossy Ibis
Baird's Sandpiper		White-faced Ibis
Dunlin		
INSECTIVORE: <i>riparian bottom gleaner</i>		
Harlequin Duck		American Dipper
INSECTIVORE: <i>salt-marsh gleaner</i>		
		Seaside Sparrow
INSECTIVORE: <i>shoreline gleaner</i>		
Black-bellied Plover	Killdeer	Spotted Sandpiper
Semipalmated Plover	Long-billed Curlew	
Piping Plover	Least Sandpiper	
Semipalmated Sandpiper		
Western Sandpiper		
Rufous-necked Stint		
Stilt Sandpiper		
INSECTIVORE: <i>shoreline prober</i>		
Willet		
Bar-tailed Godwit		
Marbled Godwit		
INSECTIVORE: <i>upper-canopy gleaner</i>		
Arctic Warbler		Northern Beardless-Tyrannulet
Yellow-throated Vireo		Blue-gray Gnatcatcher
Warbling Vireo		Tropical Parula
Philadelphia Vireo		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
INSECTIVORE: <i>upper-canopy gleaner</i> (continued)		
Red-eyed Vireo		Townsend's Warbler
Bachman's Warbler		Black-throated Green Warbler
Golden-winged Warbler		Yellow-throated Warbler
Tennessee Warbler		
Northern Parula		
Cape May Warbler		
Blackburnian Warbler		
Grace's Warbler		
Bay-breasted Warbler		
Blackpoll Warbler		
Cerulean Warbler		
Red-faced Warbler		
Hepatic Tanager		
Summer Tanager		
Scarlet Tanager		
Orchard Oriole		
INSECTIVORE: <i>water ambusher</i>		
		American Bittern
		Least Bittern
INSECTIVORE: <i>water bottom gleaner</i>		
		Hooded Merganser
INSECTIVORE: <i>water diver</i>		
		Pied-billed Grebe
INSECTIVORE: <i>water surface gleaner</i>		
Red-necked Phalarope	Solitary Sandpiper	Greater Yellowlegs
Red Phalarope		Lesser Yellowlegs
		Gull-billed Tern
		Forster's Tern
MOLLUSCOVORE: <i>coastal beach gleaner</i>		
		Black-bellied Plover
		Semipalmated Plover
		Red Knot
		Western Sandpiper
MOLLUSCOVORE: <i>coastal beach prober</i>		
	Whimbrel	American Oystercatcher
	Marbled Godwit	
	Sanderling	
	Dunlin	
MOLLUSCOVORE: <i>coastal bottom gleaner</i>		
	Greater Scaup	Common Eider
	King Eider	
	Spectacled Eider	
	Steller's Eider	
	Harlequin Duck	
	Oldsquaw	
	Black Scoter	
	Surf Scoter	
	White-winged Scoter	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
Razorbill	MOLLUSCOVORE: <i>coastal diver</i>	
	MOLLUSCOVORE: <i>coastal plunger</i>	
	Red-footed Booby	
	MOLLUSCOVORE: <i>coastal rock gleaner</i>	
	Ruddy Turnstone	American Black
	Surfbird	Oystercatcher
	Rock Sandpiper	Black Turnstone
	MOLLUSCOVORE: <i>fresh-marsh gleaner</i>	
	Limpkin	
	MOLLUSCOVORE: <i>fresh-marsh hover-gleaner</i>	
	Snail Kite	
	MOLLUSCOVORE: <i>freshwater bottom gleaner</i>	
White-winged Scoter		
Ovenbird	MOLLUSCOVORE: <i>ground gleaner</i>	
Virginia Rail	MOLLUSCOVORE: <i>marsh prober</i>	
Dunlin	MOLLUSCOVORE: <i>mud prober</i>	
	Scarlet Ibis	
	MOLLUSCOVORE: <i>pelagic diver</i>	
	Razorbill	
	Pigeon Guillemot	
	MOLLUSCOVORE: <i>pelagic plunger</i>	
	White-tailed	
	Tropicbird	
	Red-billed Tropic- bird	
	MOLLUSCOVORE: <i>pelagic scavenger</i>	
	Short-tailed Alba- tross	
	MOLLUSCOVORE: <i>pelagic surface gleaner</i>	
	Short-tailed Alba- tross	
	Laysan Albatross	
	Greater Shear- water	
	Buller's Shear- water	
	Audubon's Shear- water	
	MOLLUSCOVORE: <i>salt-marsh gleaner</i>	
Clapper Rail	Seaside Sparrow	
	MOLLUSCOVORE: <i>shoreline gleaner</i>	
Semipalmated Plover		
	MOLLUSCOVORE: <i>shoreline prober</i>	
Bar-tailed Godwit		
Marbled Godwit		
Stilt Sandpiper		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
	MOLLUSCOVORE: <i>water ambusher</i>	
	Wood Stork	
	MOLLUSCOVORE: <i>water bottom gleaner</i>	
King Eider	Tufted Duck	
	OMNIVORE: <i>bark excavator</i>	
Williamson's Sap- sucker	Yellow-bellied Sapsucker	
	Red-breasted Sap- sucker	
	OMNIVORE: <i>coastal beach forager</i>	
Common Ringed Plover	Northern Pintail	
Ruddy Turnstone		
	OMNIVORE: <i>coastal beach scavenger</i>	
	Northwestern Crow	
	OMNIVORE: <i>coastal bottom forager</i>	
Steller's Eider		
	OMNIVORE: <i>coastal dabbler</i>	
	Northern Pintail	
	OMNIVORE: <i>floral hover-gleaner</i>	
Broad-billed Hum- mingbird	Ruby-throated Hummingbird	
White-eared Hum- mingbird	Black-chinned Hummingbird	
Buff-bellied Hum- mingbird	Anna's Humming- bird	
Violet-crowned Hummingbird	Costa's Humming- bird	
Blue-throated Hummingbird		
Magnificent Hum- mingbird		
Lucifer Humming- bird		
Calliope Hum- mingbird		
Broad-tailed Hum- mingbird		
Rufous Humming- bird		
Allen's Humming- bird		
	OMNIVORE: <i>fresh-marsh forager</i>	
Yellow Rail	Purple Gallinule	
Sora	Common Moorhen	
Whooping Crane	Sandhill Crane	
	OMNIVORE: <i>freshwater bottom forager</i>	
Canvasback		
Ring-necked Duck		
Greater Scaup		
Surf Scoter		
Common Golden- eye		

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
OMNIVORE: <i>freshwater bottom forager</i> (continued)		
Barrow's Golden-eye		
Ruddy Duck		
OMNIVORE: <i>freshwater dabbler</i>		
Mallard		Blue-winged Teal
Cinnamon Teal		
American Coot		
OMNIVORE: <i>freshwater diver</i>		
American Coot		
OMNIVORE: <i>freshwater strainer</i>		
Northern Shoveler		
OMNIVORE: <i>ground forager</i>		
Gray Partridge	Northern Flicker	Northern Bobwhite
Ring-necked Pheasant	Black-billed Magpie	Scaled Quail
Spruce Grouse	Yellow-billed Magpie	Sandhill Crane
Blue Grouse		Whooping Crane
Ruffed Grouse	Eastern Bluebird	Rock Dove
Greater Prairie-Chicken	Western Bluebird	Golden-fronted Woodpecker
Lesser Prairie-Chicken	Hermit Thrush	Red-bellied Woodpecker
Sharp-tailed Grouse	American Robin	Steller's Jay
Wild Turkey	Varied Thrush	Blue Jay
Montezuma Quail	Sage Thrasher	Green Jay
Long-billed Curlew	Water Pipit	Brown Jay
Eurasian Skylark	Sprague's Pipit	Scrub Jay
Horned Lark	Pine Warbler	Gray-breasted Jay
Veery	Palm Warbler	Pinyon Jay
Gray-cheeked Thrush	Ovenbird	Clark's Nutcracker
Swainson's Thrush	Brewer's Sparrow	American Crow
Wood Thrush	Eastern Meadowlark	Chihuahuan Raven
Northern Mockingbird	Western Meadowlark	Cactus Wren
Curve-billed Thrasher	Rusty Blackbird	Townsend's Solitaire
Blue Grosbeak		Gray Catbird
Dickcissel		Brown Thrasher
Botteri's Sparrow		Long-billed Thrasher
Rufous-crowned Sparrow		Bendire's Thrasher
American Tree Sparrow		California Thrasher
Chipping Sparrow		Crissal Thrasher
Clay-colored Sparrow		European Starling
Field Sparrow		Crested Myna
Black-chinned Sparrow		Northern Cardinal
Vesper Sparrow		Pyrrhuloxia
Lark Sparrow		Olive Sparrow
Sage Sparrow		Green-tailed Towhee
		Rufous-sided Towhee
		Brown Towhee
		Abert's Towhee
		Bachman's Sparrow

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
OMNIVORE: <i>ground forager</i> (continued)		
Five-striped Sparrow		Lark Bunting
Savannah Sparrow		Grasshopper Sparrow
Fox Sparrow		Henslow's Sparrow
Song Sparrow		Le Conte's Sparrow
Lincoln's Sparrow		Sharp-tailed Sparrow
Swamp Sparrow		Yellow-eyed Junco
White-throated Sparrow		Smith's Longspur
Golden-crowned Sparrow		
White-crowned Sparrow		
Harris' Sparrow		
Dark-eyed Junco		
McCown's Longspur		
Lapland Longspur		
Chestnut-collared Longspur		
Snow Bunting		
McKay's Bunting		
Bobolink		
Red-winged Blackbird		
Bronzed Cowbird		
Brown-headed Cowbird		
Rosy Finch		
Cassin's Finch		
Common Redpoll		
Hoary Redpoll		
Pine Siskin		
American Goldfinch		
OMNIVORE: <i>ground scavenger</i>		
		Common Raven
OMNIVORE: <i>lower-canopy/shrub forager</i>		
Veery	Northern Flicker	Steller's Jay
Gray-cheeked Thrush	Pileated Woodpecker	Plain Titmouse
Swainson's Thrush	Black-capped Chickadee	Cactus Wren
Yellow-breasted Chat	Carolina Chickadee	American Robin
Varied Bunting	Mexican Chickadee	Gray Catbird
Rufous-winged Sparrow		Brown Thrasher
Clay-colored Sparrow	Mountain Chickadee	Long-billed Thrasher
Sage Sparrow	Siberian Tit	Bendire's Thrasher
Song Sparrow	Boreal Chickadee	Crissal Thrasher
Hooded Oriole	Chestnut-backed Chickadee	Lazuli Bunting
Scott's Oriole		Indigo Bunting
Common Redpoll	Bridled Titmouse	Painted Bunting
Hoary Redpoll	Tufted Titmouse	Audubon's Oriole

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
OMNIVORE: <i>lower-canopy/shrub forager</i> (continued)		
American Gold-finch	Verdin	
	Bushtit	
	Eastern Bluebird	
	Western Bluebird	
	Mountain Bluebird	
	Hermit Thrush	
	Sage Thrasher	
	White-eyed Vireo	
	Solitary Vireo	
	Orange-crowned Warbler	
	Magnolia Warbler	
	Black-throated Blue Warbler	
	Yellow-rumped Warbler	
	Pine Warbler	
	Brewer's Sparrow	
	OMNIVORE: <i>marsh dabbler</i>	
		Mottled Duck
	OMNIVORE: <i>marsh forager</i>	
	Yellow Rail	
	Virginia Rail	
	Sora	
	Whooping Crane	
	OMNIVORE: <i>mud forager</i>	
		Common Snipe
	OMNIVORE: <i>mud prober</i>	
Short-billed Dowitcher	OMNIVORE: <i>mud strainer</i>	
	Greater Flamingo	
	OMNIVORE: <i>pelagic forager</i>	
	British Storm-Petrel	
	OMNIVORE: <i>pelagic scavenger</i>	
	Black-footed Albatross	
	OMNIVORE: <i>salt-marsh forager</i>	
	Clapper Rail	
	OMNIVORE: <i>salt-marsh prober</i>	
	King Rail	
	OMNIVORE: <i>shoreline forager</i>	
Whimbrel		Fish Crow
Bristle-thighed Curlew		
Purple Sandpiper		
Herring Gull		
OMNIVORE: <i>shoreline prober</i>		
Hudsonian Godwit		
OMNIVORE: <i>shoreline scavenger</i>		
Herring Gull		Fish Crow

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
OMNIVORE: <i>upper-canopy forager</i>		
Elegant Trogon	Cape May Warbler	Gray Jay
Black-whiskered Vireo		Blue Jay
Hermit Warbler		Pinyon Jay
Western Tanager		Clark's Nutcracker
Rose-breasted Grosbeak		Pygmy Nuthatch
Black-headed Grosbeak		Altamira Oriole
Northern Oriole		
Pine Grosbeak		
Red Crossbill		
White-winged Crossbill		
Pine Siskin		
Evening Grosbeak		
OMNIVORE: <i>water bottom forager</i>		
Oldsquaw	Canvasback	
Black Scoter	Ring-necked Duck	
	Lesser Scaup	
	Common Golden-eye	
	Barrow's Golden-eye	
	Bufflehead	
	Ruddy Duck	
OMNIVORE: <i>water dabbler</i>		
Spectacled Eider		American Black Duck
OMNIVORE: <i>water strainer</i>		
	Northern Shoveler	
PISCIVORE: <i>coastal ambusher</i>		
Tricolored Heron		
PISCIVORE: <i>coastal diver</i>		
Common Murre	Red-throated Loon	Brandt's Cormorant
Thick-billed Murre	Arctic Loon	
Black Guillemot	Common Loon	Pelagic Cormorant
Pigeon Guillemot	Yellow-billed Loon	Red-faced Cormorant
Marbled Murrelet	Horned Grebe	
Rhinoceros Auklet	Red-necked Grebe	
Tufted Puffin	Red-breasted Merganser	
Atlantic Puffin		
Horned Puffin		
PISCIVORE: <i>coastal food pirate</i>		
	Magnificent Frigatebird	
	Laughing Gull	
PISCIVORE: <i>coastal plunger</i>		
Elegant Tern	Masked Booby	Northern Gannet
Roseate Tern	Blue-footed Booby	Brown Pelican
Aleutian Tern	Brown Booby	Royal Tern
Sooty Tern	Red-footed Booby	Sandwich Tern
	Caspian Tern	
	Common Tern	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
<i>PISCIVORE: coastal surface gleaner</i>		
Razorbill	American White Pelican	
	Magnificent Frigatebird	
	Laughing Gull	
	Heermann's Gull	
<i>PISCIVORE: freshwater diver</i>		
Common Loon		Anhinga
Yellow-billed Loon		Common Merganser
Horned Grebe		
Red-necked Grebe		
Western Grebe		
Hooded Merganser		
Red-breasted Merganser		
<i>PISCIVORE: freshwater plunger</i>		
		Green Kingfisher
		Great Kiskadee
<i>PISCIVORE: freshwater surface gleaner</i>		
American White Pelican		
<i>PISCIVORE: pelagic diver</i>		
	Arctic Loon	Black-legged Kittiwake
	Red-necked Grebe	
	Audubon's Shearwater	Red-legged Kittiwake
	Common Murre	
	Thick-billed Murre	
	Black Guillemot	
	Pigeon Guillemot	
	Marbled Murrelet	
	Rhinoceros Auklet	
	Tufted Puffin	
	Atlantic Puffin	
	Horned Puffin	
<i>PISCIVORE: pelagic plunger</i>		
	White-tailed Tropicbird	
	Red-billed Tropicbird	
<i>PISCIVORE: pelagic scavenger</i>		
	Pink-footed Shearwater	
	Greater Shearwater	
	Manx Shearwater	
	Black-vented Shearwater	
<i>PISCIVORE: pelagic surface gleaner</i>		
Brown Noddy	Heerman's Gull	
	Razorbill	

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
<i>PISCIVORE: water ambusher</i>		
	Tricolored Heron	Least Bittern
		Great Blue Heron
		Little Blue Heron
		Reddish Egret
		Green-backed Heron
		Black-crowned Night Heron
		Greater Yellow-legs
<i>PISCIVORE: water diver</i>		
Red-throated Loon	Western Grebe	Great Cormorant
Arctic Loon	Hooded Merganser	Double-crested Cormorant
		Olivaceous Cormorant
<i>PISCIVORE: water foot-plunger</i>		
		Osprey
		Bald Eagle
		White-tailed Eagle
<i>PISCIVORE: water plunger</i>		
Caspian Tern		Forster's Tern
Common Tern		Belted Kingfisher
Arctic Tern		
Least Tern		
<i>PISCIVORE: water skimmer</i>		
		Black Skimmer
<i>PISCIVORE: water strainer</i>		
		Roseate Spoonbill
<i>VERMIVORE: coastal beach gleaner</i>		
	Black-bellied Plover	
	Snowy Plover	
	Western Sandpiper	
	Dunlin	
<i>VERMIVORE: coastal beach prober</i>		
Bar-tailed Godwit	Marbled Godwit	
	Short-billed Dowitcher	
<i>VERMIVORE: freshwater shoreline gleaner</i>		
Least Sandpiper		
<i>VERMIVORE: ground gleaner</i>		
American Robin		
<i>VERMIVORE: ground prober</i>		
White-rumped Sandpiper		American Woodcock
Dunlin		
Common Snipe		
<i>VERMIVORE: mud gleaner</i>		
	Common Black-headed Gull	Semipalmated Plover

Foraging Guild Classification (Continued)

Breeding period	Nonbreeding period	Year round
Black-bellied Plover	VERMIVORE: <i>shoreline gleaner</i> Least Sandpiper	
Stilt Sandpiper	VERMIVORE: <i>shoreline prober</i>	

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Appendix I. Taxonomic list of North American birds and their foraging guilds.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Red-throated Loon <i>Gavia stellata</i>	Piscivore: water diver	Piscivore: coastal diver	
Arctic Loon <i>Gavia arctica</i>	Piscivore: water diver	Piscivore: coastal diver pelagic diver	
Common Loon <i>Gavia immer</i>	Piscivore: freshwater diver	Piscivore: coastal diver	
Yellow-billed Loon <i>Gavia adamsii</i>	Piscivore: freshwater diver	Piscivore: coastal diver	
Least Grebe <i>Tachybaptus dominicus</i>			Insectivore: freshwater diver
Pied-billed Grebe <i>Podilymbus podiceps</i>	Insectivore: freshwater diver Crustaceovore: freshwater diver	Insectivore: water diver Crustaceovore: water diver	
Horned Grebe <i>Podiceps auritus</i>	Insectivore: freshwater diver Piscivore: freshwater diver	Crustaceovore: coastal diver Piscivore: coastal diver	
Red-necked Grebe <i>Podiceps grisegena</i>	Piscivore: freshwater diver Crustaceovore: freshwater diver Insectivore: freshwater diver	Piscivore: coastal diver pelagic diver	
Eared Grebe <i>Podiceps nigricollis</i>		Crustaceovore: coastal diver	Insectivore: freshwater diver
Western Grebe <i>Aechmophorus occidentalis</i>	Piscivore: freshwater diver	Piscivore: water diver	
Short-tailed Albatross <i>Diomedea albatrus</i>		Molluscovore: pelagic surface gleaner pelagic scavenger Carnivore: pelagic scavenger	
Black-footed Albatross <i>Diomedea nigripes</i>		Omnivore: pelagic scavenger	
Laysan Albatross <i>Diomedea immutabilis</i>		Molluscovore: pelagic surface gleaner	
Northern Fulmar <i>Fulmarus glacialis</i>			Carnivore: pelagic scavenger
Cory's Shearwater <i>Calonectris diomedea</i>		Carnivore: pelagic scavenger	
Pink-footed Shearwater <i>Puffinus creatopus</i>		Piscivore: pelagic scavenger	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Greater Shearwater <i>Puffinus gravis</i>		Piscivore: pelagic scavenger	
Buller's Shearwater <i>Puffinus bulleri</i>		Molluscovore: pelagic surface gleaner	
		Crustaceovore: pelagic surface gleaner	
		Molluscovore: pelagic surface gleaner	
Sooty Shearwater <i>Puffinus griseus</i>		Carnivore: pelagic scavenger	
Short-tailed Shearwater <i>Puffinus tenuirostris</i>		Crustaceovore: pelagic scavenger	
Manx Shearwater <i>Puffinus puffinus</i>		Piscivore: pelagic scavenger	
Black-vented Shearwater <i>Puffinus opisthomelas</i>		Piscivore: pelagic scavenger	
Audubon's Shearwater <i>Puffinus lherminieri</i>		Piscivore: pelagic diver	
		Molluscovore: pelagic surface gleaner	
		Crustaceovore: pelagic scavenger	
Wilson's Storm-Petrel <i>Oceanites oceanicus</i>		Omnivore: pelagic forager	
British Storm-Petrel <i>Hydrobates pelagicus</i>			Carnivore: pelagic scavenger
Fork-tailed Storm-Petrel <i>Oceanodroma furcata</i>			Carnivore: pelagic scavenger
Leach's Storm-Petrel <i>Oceanodroma leucorhoa</i>			Crustaceovore: pelagic surface gleaner
Ashy Storm-Petrel <i>Oceanodroma homochroa</i>			
Black Storm-Petrel <i>Oceanodroma melania</i>		Carnivore: pelagic scavenger	
Least Storm-Petrel <i>Oceanodroma microsoma</i>		Crustaceovore: pelagic surface gleaner	
White-tailed Tropicbird <i>Phaethon lepturus</i>		Piscivore: pelagic plunger	
		Molluscovore: pelagic plunger	
Red-billed Tropicbird <i>Phaethon aethereus</i>		Piscivore: pelagic plunger	
		Molluscovore: pelagic plunger	
Masked Booby <i>Sula dactylatra</i>		Piscivore: coastal plunger	
Blue-footed Booby <i>Sula nebouxii</i>		Piscivore: coastal plunger	
Brown Booby <i>Sula leucogaster</i>		Piscivore: coastal plunger	
Red-footed Booby <i>Sula sula</i>		Piscivore: coastal plunger	
		Molluscovore: coastal plunger	
Northern Gannet <i>Sula bassanus</i>			Piscivore: coastal plunger
American White Pelican <i>Pelecanus erythrorhynchos</i>	Piscivore: freshwater surface gleaner	Piscivore: coastal surface gleaner	
Brown Pelican <i>Pelecanus occidentalis</i>			Piscivore: coastal plunger

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Great Cormorant <i>Phalacrocorax carbo</i>			Piscivore: water diver
Double-crested Cormorant <i>Phalacrocorax auritus</i>			Piscivore: water diver
Olivaceous Cormorant <i>Phalacrocorax olivaceus</i>			Piscivore: water diver
Brandt's Cormorant <i>Phalacrocorax penicillatus</i>			Piscivore: coastal diver
Pelagic Cormorant <i>Phalacrocorax pelagicus</i>			Piscivore: coastal diver
Red-faced Cormorant <i>Phalacrocorax urile</i>			Piscivore: coastal diver Crustaceovore: coastal diver
Anhinga <i>Anhinga anhinga</i>			Piscivore: freshwater diver
Magnificent Frigatebird <i>Fregata magnificens</i>		Piscivore: coastal surface gleaner coastal food pirate	
American Bittern <i>Botaurus lentiginosus</i>			Carnivore: water ambusher Insectivore: water ambusher Crustaceovore: water ambusher
Least Bittern <i>Isobrychus exilis</i>			Piscivore: water ambusher Insectivore: water ambusher
Great Blue Heron <i>Ardea herodias</i>			Piscivore: water ambusher
Great Egret <i>Casmerodius albus</i>			Carnivore: water ambusher Crustaceovore: water ambusher
Snowy Egret <i>Egretta thula</i>			Crustaceovore: water ambusher Carnivore: water ambusher
Little Blue Heron <i>Egretta caerulea</i>			Crustaceovore: water ambusher Piscivore: water ambusher
Tricolored Heron <i>Egretta tricolor</i>	Piscivore: coastal ambusher Crustaceovore: coastal ambusher	Piscivore: water ambusher Crustaceovore: water ambusher	
Reddish Egret <i>Egretta rufescens</i>			Piscivore: water ambusher
Cattle Egret <i>Bubulcus ibis</i>			Insectivore: ground gleaner
Green-backed Heron <i>Butorides striatus</i>			Crustaceovore: water ambusher Piscivore: water ambusher
Black-crowned Night-Heron <i>Nycticorax nycticorax</i>			Piscivore: water ambusher Crustaceovore: water ambusher

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Yellow-crowned Night-Heron <i>Nycticorax violaceus</i>			Crustaceovore: water ambusher
White Ibis <i>Eudocimus albus</i>			Crustaceovore: mud prober
Scarlet Ibis <i>Eudocimus ruber</i>		Crustaceovore: mud prober Molluscovore: mud prober	
Glossy Ibis <i>Plegadis falcinellus</i>			Crustaceovore: mud prober Insectivore: mud gleaner
White-faced Ibis <i>Plegadis chihi</i>			Crustaceovore: mud prober Insectivore: mud gleaner
Roseate Spoonbill <i>Ajaia ajaia</i>			Piscivore: water strainer Crustaceovore: mud strainer
Wood Stork <i>Mycteria americana</i>			Carnivore: water ambusher Crustaceovore: water ambusher Molluscovore: water ambusher
Greater Flamingo <i>Phoenicopterus ruber</i>		Omnivore: mud strainer	
Fulvous Whistling-Duck <i>Dendrocygna bicolor</i>			Granivore: ground gleaner freshwater dabbler
Black-bellied Whistling-Duck <i>Dendrocygna autumnalis</i>			Herbivore: freshwater dabbler Granivore: ground gleaner
Tundra Swan <i>Cygnus columbianus</i>	Herbivore: freshwater dabbler	Herbivore: water dabbler	
Whooper Swan <i>Cygnus cygnus</i>		Herbivore: coastal dabbler	
Trumpeter Swan <i>Cygnus buccinator</i>	Herbivore: freshwater dabbler	Herbivore: water dabbler	
Mute Swan <i>Cygnus olor</i>	Herbivore: freshwater dabbler ground grazer	Herbivore: water dabbler	
Pink-footed Goose <i>Anser brachyrhynchus</i>	Herbivore: ground grazer		
Greater White-fronted Goose <i>Anser albifrons</i>			Herbivore: ground grazer
Snow Goose <i>Chen caerulescens</i>		Herbivore: water grubber	Herbivore: ground grazer
Ross' Goose <i>Chen rossii</i>			Herbivore: ground grazer
Emperor Goose <i>Chen canagica</i>	Herbivore: ground grazer	Herbivore: coastal dabbler	
Brant <i>Branta bernicla</i>	Herbivore: ground grazer	Herbivore: coastal dabbler	
Barnacle Goose <i>Branta leucopsis</i>	Herbivore: ground grazer		
Canada Goose <i>Branta canadensis</i>	Herbivore: water dabbler	Herbivore: water dabbler	Herbivore: ground grazer

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Wood Duck <i>Aix sponsa</i>			Granivore: ground gleaner freshwater surface gleaner
Green-winged Teal <i>Anas crecca</i>	Granivore: freshwater dabbler	Granivore: water dabbler	
American Black Duck <i>Anas rubripes</i>			Omnivore: water dabbler
Mottled Duck <i>Anas fulvigula</i>			Omnivore: marsh dabbler
Mallard <i>Anas platyrhynchos</i>	Granivore: ground gleaner	Herbivore: ground grazer	Granivore: freshwater dabbler
Northern Pintail <i>Anas acuta</i>	Granivore: freshwater dabbler	Omnivore: coastal beach forager coastal dabbler	
Blue-winged Teal <i>Anas discors</i>			Omnivore: freshwater dabbler
Cinnamon Teal <i>Anas cyanoptera</i>	Omnivore: freshwater dabbler	Herbivore: freshwater dabbler	
Northern Shoveler <i>Anas clypeata</i>	Omnivore: freshwater strainer	Omnivore: water strainer	
Gadwall <i>Anas strepera</i>	Herbivore: freshwater dabbler	Herbivore: water dabbler	
Eurasian Wigeon <i>Anas penelope</i>		Herbivore: coastal dabbler	
American Wigeon <i>Anas americana</i>	Herbivore: ground grazer		Herbivore: water dabbler
Canvasback <i>Aythya valisineria</i>	Omnivore: freshwater bottom forager	Omnivore: water bottom forager	
Redhead <i>Aythya americana</i>			Herbivore: water diver
Ring-necked Duck <i>Aythya collaris</i>	Omnivore: freshwater bottom forager	Omnivore: water bottom forager	
Tufted Duck <i>Aythya fuligula</i>		Molluscovore: water bottom gleaner Crustaceovore: water bottom gleaner	
Greater Scaup <i>Aythya marila</i>	Omnivore: freshwater bottom gleaner	Molluscovore: coastal bottom gleaner	
Lesser Scaup <i>Aythya affinis</i>	Crustaceovore: freshwater bottom gleaner	Omnivore: water bottom forager	
Common Eider <i>Somateria mollissima</i>			Molluscovore: coastal bottom gleaner Crustaceovore: coastal bottom gleaner
King Eider <i>Somateria spectabilis</i>	Molluscovore: water bottom gleaner Crustaceovore: water bottom gleaner	Molluscovore: coastal bottom gleaner Crustaceovore: coastal bottom gleaner	
Spectacled Eider <i>Somateria fischeri</i>	Omnivore: water dabbler	Molluscovore: coastal bottom gleaner	
Steller's Eider <i>Polysticta stelleri</i>	Omnivore: coastal bottom forager	Molluscovore: coastal bottom gleaner Crustaceovore: coastal bottom gleaner	
Harlequin Duck <i>Histrionicus histrionicus</i>	Insectivore: riparian bottom gleaner	Crustaceovore: coastal bottom gleaner Molluscovore: coastal bottom gleaner	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Oldsquaw <i>Clangula hyemalis</i>	Omnivore: water bottom forager	Crustaceovore: coastal bottom gleaner Molluscovore: coastal bottom gleaner	
Black Scoter <i>Melanitta nigra</i>	Omnivore: water bottom forager	Molluscovore: coastal bottom gleaner Crustaceovore: coastal bottom gleaner	
Surf Scoter <i>Melanitta perspicillata</i>	Omnivore: freshwater bottom forager	Molluscovore: coastal bottom forager Crustaceovore: coastal bottom gleaner	
White-winged Scoter <i>Melanitta fusca</i>	Molluscovore: freshwater bottom gleaner Crustaceovore: freshwater bottom gleaner	Molluscovore: coastal bottom gleaner Crustaceovore: coastal bottom gleaner	
Common Goldeneye <i>Bucephala clangula</i>	Omnivore: freshwater bottom forager	Omnivore: water bottom forager	
Barrow's Goldeneye <i>Bucephala islandica</i>	Omnivore: freshwater bottom forager	Omnivore: water bottom forager	
Bufflehead <i>Bucephala albeola</i>	Insectivore: freshwater bottom gleaner	Omnivore: water bottom gleaner	
Hooded Merganser <i>Lophodytes cucullatus</i>	Piscivore: freshwater diver Insectivore: freshwater bottom gleaner Crustaceovore: freshwater bottom gleaner	Piscivore: water diver Insectivore: water bottom gleaner Crustaceovore: water bottom gleaner	
Common Merganser <i>Mergus merganser</i>			Piscivore: freshwater diver
Red-breasted Merganser <i>Mergus serrator</i>	Piscivore: freshwater diver	Piscivore: coastal diver	
Ruddy Duck <i>Oxyura jamaicensis</i>	Omnivore: freshwater bottom forager	Omnivore: water bottom forager	
Masked Duck <i>Oxyura dominica</i>	Herbivore: freshwater diver	Herbivore: water diver	
Black Vulture <i>Coragyps atratus</i>			Carnivore: ground scavenger
Turkey Vulture <i>Cathartes aura</i>			Carnivore: ground scavenger
California Condor <i>Gymnogyps californianus</i>			Carnivore: ground scavenger
Osprey <i>Pandion haliaetus</i>			Piscivore: water foot-plunger
American Swallow-tailed Kite <i>Elanoides forficatus</i>	Insectivore: air hawk Carnivore: ground hawk		
Black-shouldered Kite <i>Elanus caeruleus</i>			Carnivore: ground hawk
Snail Kite <i>Rostrhamus sociabilis</i>			Molluscovore: fresh-marsh hover-gleaner
Mississippi Kite <i>Ictinia mississippiensis</i>			Insectivore: air hawk
Bald Eagle <i>Haliaeetus leucocephalus</i>			Piscivore: water foot-plunger Carnivore: ground scavenger

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
White-tailed Eagle <i>Haliaeetus albicilla</i>			Piscivore: water foot-plunger Carnivore: air hawker
Northern Harrier <i>Circus cyaneus</i>			Carnivore: ground hawker
Sharp-shinned Hawk <i>Accipiter striatus</i>			Carnivore: air hawker ground hawker
Cooper's Hawk <i>Accipiter cooperii</i>			Carnivore: air hawker ground hawker
Northern Goshawk <i>Accipiter gentilis</i>			Carnivore: air hawker ground hawker
Common Black-Hawk <i>Buteogallus anthracinus</i>			Carnivore: ground hawker
Harris' Hawk <i>Parabuteo unicinctus</i>			Carnivore: ground hawker
Gray Hawk <i>Buteo nitidus</i>	Carnivore: ground hawker Insectivore: air hawker		
Red-shouldered Hawk <i>Buteo lineatus</i>			Carnivore: ground hawker
Broad-winged Hawk <i>Buteo platypterus</i>			Carnivore: ground hawker
Short-tailed Hawk <i>Buteo brachyurus</i>			Carnivore: ground hawker
Swainson's Hawk <i>Buteo swainsoni</i>			Carnivore: ground hawker Insectivore: air hawker
White-tailed Hawk <i>Buteo albicaudatus</i>			Carnivore: ground hawker
Zone-tailed Hawk <i>Buteo albonotatus</i>			Carnivore: ground hawker
Red-tailed Hawk <i>Buteo jamaicensis</i>			Carnivore: ground hawker
Ferruginous Hawk <i>Buteo regalis</i>			Carnivore: ground hawker
Rough-legged Hawk <i>Buteo lagopus</i>			Carnivore: ground hawker
Golden Eagle <i>Aquila chrysaetos</i>		Carnivore: ground scavenger	Carnivore: ground hawker
Crested Caracara <i>Polyborus plancus</i>			Carnivore: ground scavenger
American Kestrel <i>Falco sparverius</i>	Insectivore: air hawker		Carnivore: ground hawker
Merlin <i>Falco columbarius</i>			Carnivore: air hawker
Aplomado Falcon <i>Falco femoralis</i>	Carnivore: ground hawker Insectivore: air hawker		
Peregrine Falcon <i>Falco peregrinus</i>			Carnivore: air hawker
Gyr Falcon <i>Falco rusticolus</i>			Carnivore: air hawker

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Prairie Falcon <i>Falco mexicanus</i>			Carnivore: air hawk ground hawk
Plain Chachalaca <i>Ortalis vetula</i>			Frugivore: ground gleaner Herbivore: upper-canopy forager
Gray Partridge <i>Perdix perdix</i>	Omnivore: ground forager	Granivore: ground gleaner	
Chukar <i>Alectoris chukar</i>			Herbivore: ground forager
Ring-necked Pheasant <i>Phasianus colchicus</i>	Omnivore: ground forager	Herbivore: ground forager	
Spruce Grouse <i>Dendragapus canadensis</i>	Omnivore: ground forager	Herbivore: upper-canopy forager	
Blue Grouse <i>Dendragapus obscurus</i>	Omnivore: ground forager	Herbivore: upper-canopy forager	
Willow Ptarmigan <i>Lagopus lagopus</i>	Herbivore: ground forager	Herbivore: lower-canopy forager	
Rock Ptarmigan <i>Lagopus mutus</i>	Herbivore: ground forager	Herbivore: lower-canopy forager	
White-tailed Ptarmigan <i>Lagopus leucurus</i>	Herbivore: ground forager	Herbivore: lower-canopy forager	
Ruffed Grouse <i>Bonasa umbellus</i>	Omnivore: ground forager	Herbivore: upper-canopy forager	
Sage Grouse <i>Centrocercus urophasianus</i>			Herbivore: ground forager
Greater Prairie-Chicken <i>Tympanuchus cupido</i>	Omnivore: ground forager	Herbivore: ground forager	
Lesser Prairie-Chicken <i>Tympanuchus pallidicinctus</i>	Omnivore: ground forager	Herbivore: ground forager	
Sharp-tailed Grouse <i>Tympanuchus phasianellus</i>	Omnivore: ground forager	Herbivore: upper-canopy forager	
Wild Turkey <i>Meleagris gallopavo</i>	Omnivore: ground forager	Herbivore: ground forager	
Montezuma Quail <i>Cyrtonyx montezumae</i>	Omnivore: ground forager	Herbivore: ground grubber	
Northern Bobwhite <i>Colinus virginianus</i>			Omnivore: ground forager
Scaled Quail <i>Callipepla squamata</i>			Omnivore: ground forager
Gambel's Quail <i>Callipepla gambelii</i>			Herbivore: ground forager
California Quail <i>Callipepla californica</i>	Granivore: ground gleaner	Herbivore: ground forager	
Mountain Quail <i>Oreortyx pictus</i>	Herbivore: ground forager	Granivore: ground gleaner	
Yellow Rail <i>Coturnicops noveboracensis</i>	Omnivore: fresh-marsh forager	Omnivore: marsh forager	
Black Rail <i>Laterallus jamaicensis</i>	Insectivore: marsh gleaner Crustaceovore: marsh gleaner	Crustaceovore: salt-marsh gleaner	
Clapper Rail <i>Rallus longirostris</i>	Crustaceovore: salt-marsh gleaner Molluscovore: salt-marsh gleaner	Omnivore: salt-marsh forager	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
King Rail <i>Rallus elegans</i>	Crustaceovore: marsh prober Insectivore: marsh prober	Omnivore: salt-marsh prober	
Virginia Rail <i>Rallus limicola</i>	Insectivore: marsh prober Molluscovore: marsh prober	Omnivore: marsh forager	
Sora <i>Porzana carolina</i>	Omnivore: fresh-marsh forager	Omnivore: marsh forager	
Purple Gallinule <i>Porphyryula martinica</i>			Omnivore: fresh-marsh forager
Common Moorhen <i>Gallinula chloropus</i>			Omnivore: fresh-marsh forager
American Coot <i>Fulica americana</i>	Omnivore: freshwater dabbler freshwater diver	Herbivore: water dabbler water diver	
Limpkin <i>Aramus guarauna</i>			Molluscovore: fresh-marsh gleaner
Sandhill Crane <i>Grus canadensis</i>			Omnivore: fresh-marsh forager ground forager
Whooping Crane <i>Grus americana</i>	Omnivore: fresh-marsh forager	Omnivore: marsh forager	Omnivore: ground forager
Black-bellied Plover <i>Pluvialis squatarola</i>	Crustaceovore: shoreline gleaner Insectivore: shoreline gleaner Vermivore: shoreline gleaner	Crustaceovore: coastal beach gleaner Molluscovore: coastal beach gleaner Insectivore: coastal beach gleaner Vermivore: coastal beach gleaner	
Lesser Golden-Plover <i>Pluvialis dominica</i>	Insectivore: ground gleaner		
Snowy Plover <i>Charadrius alexandrinus</i>	Crustaceovore: shoreline gleaner	Crustaceovore: coastal beach gleaner Vermivore: coastal beach gleaner	
Wilson's Plover <i>Charadrius wilsonia</i>			Insectivore: coastal beach gleaner Crustaceovore: coastal beach gleaner
Common Ringed Plover <i>Charadrius hiaticula</i>	Omnivore: coastal beach forager		
Semipalmated Plover <i>Charadrius semipalmatus</i>	Molluscovore: shoreline gleaner Crustaceovore: shoreline gleaner Insectivore: shoreline gleaner	Molluscovore: coastal beach gleaner Crustaceovore: coastal beach gleaner Insectivore: coastal beach gleaner	Vermivore: mud gleaner
Piping Plover <i>Charadrius melodus</i>	Insectivore: shoreline gleaner Crustaceovore: shoreline gleaner	Insectivore: coastal beach gleaner Crustaceovore: coastal beach gleaner	
Killdeer <i>Charadrius vociferus</i>	Insectivore: ground gleaner	Insectivore: shoreline gleaner	
Mountain Plover <i>Charadrius montanus</i>			Insectivore: ground gleaner

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Eurasian Dotterel <i>Charadrius morinellus</i>	Insectivore: coastal beach gleaner		
American Oystercatcher <i>Haematopus palliatus</i>			Molluscovore: coastal beach prober
American Black Oystercatcher <i>Haematopus bachmani</i>			Molluscovore: coastal rock gleaner
Black-necked Stilt <i>Himantopus mexicanus</i>			Insectivore: freshwater gleaner
American Avocet <i>Recurvirostra americana</i>			Omnivore: marsh forager
Northern Jacana <i>Jacana spinosa</i>	Insectivore: fresh-marsh gleaner		
Greater Yellowlegs <i>Tringa melanoleuca</i>			Piscivore: water ambusher
			Insectivore: water surface gleaner
			Insectivore: water surface gleaner
			Crustaceovore: water surface gleaner
Lesser Yellowlegs <i>Tringa flavipes</i>			
Wood Sandpiper <i>Tringa glareola</i>	Insectivore: freshwater gleaner		
Solitary Sandpiper <i>Tringa solitaria</i>	Insectivore: freshwater gleaner	Insectivore: water surface gleaner	Crustaceovore: freshwater gleaner
Willet <i>Catoptrophorus semipalmatus</i>	Insectivore: shoreline prober Crustaceovore: shoreline prober	Insectivore: coastal beach prober Crustaceovore: coastal beach prober	
Wandering Tattler <i>Heteroscelus incanus</i>	Insectivore: freshwater shoreline gleaner	Insectivore: coastal beach gleaner	
Spotted Sandpiper <i>Actitis macularia</i>			Insectivore: shoreline gleaner
Upland Sandpiper <i>Bartramia longicauda</i>	Insectivore: ground gleaner		
Eskimo Curlew <i>Numenius borealis</i>	Insectivore: ground gleaner		
Whimbrel <i>Numenius phaeopus</i>	Omnivore: shoreline forager	Crustaceovore: coastal beach prober Molluscovore: coastal beach prober	
Bristle-thighed Curlew <i>Numenius tahitiensis</i>	Omnivore: shoreline forager		
Long-billed Curlew <i>Numenius americanus</i>	Omnivore: ground forager	Insectivore: shoreline gleaner Crustaceovore: shoreline prober	
Hudsonian Godwit <i>Limosa haemastica</i>	Omnivore: shoreline prober		
Bar-tailed Godwit <i>Limosa lapponica</i>	Insectivore: shoreline prober Molluscovore: shoreline prober Crustaceovore: shoreline prober Vermivore: coastal beach prober		
Marbled Godwit <i>Limosa fedoa</i>	Insectivore: shoreline prober	Crustaceovore: coastal beach prober	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
	Molluscovore: shoreline prober	Molluscovore: coastal beach prober Vermivore: coastal beach prober Crustaceovore: coastal rock gleaner Molluscovore: coastal rock gleaner	
Ruddy Turnstone <i>Arenaria interpres</i>	Omnivore: coastal beach forager		
Black Turnstone <i>Arenaria melanocephala</i>			Molluscovore: coastal rock gleaner Crustaceovore: coastal rock gleaner coastal beach gleaner
Surfbird <i>Aphriza virgata</i>	Insectivore: ground gleaner	Molluscovore: coastal rock gleaner Crustaceovore: coastal rock gleaner	
Red Knot <i>Calidris canutus</i>	Crustaceovore: freshwater shoreline gleaner Insectivore: freshwater shoreline gleaner	Molluscovore: coastal beach gleaner Crustaceovore: coastal beach gleaner	
Sanderling <i>Calidris alba</i>	Insectivore: freshwater shoreline gleaner Crustaceovore: freshwater shoreline gleaner	Crustaceovore: coastal beach prober Molluscovore: coastal beach prober	
Semipalmated Sandpiper <i>Calidris pusilla</i>	Insectivore: shoreline gleaner Crustaceovore: shoreline gleaner		
Western Sandpiper <i>Calidris mauri</i>	Insectivore: shoreline gleaner Crustaceovore: shoreline gleaner	Insectivore: coastal beach gleaner Molluscovore: coastal beach gleaner Vermivore: coastal beach gleaner	
Rufous-necked Stint <i>Calidris ruficollis</i>	Insectivore: shoreline gleaner Crustaceovore: shoreline gleaner		
Least Sandpiper <i>Calidris minutilla</i>	Insectivore: freshwater shoreline gleaner Crustaceovore: freshwater shoreline gleaner Vermivore: freshwater shoreline gleaner	Insectivore: shoreline gleaner Crustaceovore: shoreline gleaner Vermivore: shoreline gleaner	
White-rumped Sandpiper <i>Calidris fuscicollis</i>	Insectivore: mud gleaner Crustaceovore: mud prober Vermivore: ground prober		
Baird's Sandpiper <i>Calidris bairdii</i>	Insectivore: mud gleaner Crustaceovore: mud gleaner		
Pectoral Sandpiper <i>Calidris melanotos</i>	Insectivore: ground gleaner		

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Purple Sandpiper <i>Calidris maritima</i>	Omnivore: shoreline forager	Insectivore: coastal rock gleaner Crustaceovore: coastal rock gleaner	
Rock Sandpiper <i>Calidris ptilocnemis</i>	Insectivore: ground gleaner Crustaceovore: shoreline gleaner	Molluscovore: coastal rock gleaner Crustaceovore: coastal rock gleaner Insectivore: coastal rock gleaner	
Dunlin <i>Calidris alpina</i>	Insectivore: mud gleaner Molluscovore: mud prober Crustaceovore: mud prober Vermivore: ground prober	Molluscovore: coastal beach prober Crustaceovore: coastal beach prober Vermivore: coastal beach gleaner Insectivore: coastal beach gleaner	
Curlew Sandpiper <i>Calidris ferruginea</i>	Insectivore: ground gleaner		
Stilt Sandpiper <i>Calidris himantopus</i>	Vermivore: shoreline prober Insectivore: shoreline gleaner Crustaceovore: shoreline prober Molluscovore: shoreline prober		
Buff-breasted Sandpiper <i>Tryngites subruficollis</i>	Insectivore: ground gleaner		
Short-billed Dowitcher <i>Limnodromus griseus</i>	Omnivore: mud prober	Insectivore: coastal beach gleaner Vermivore: coastal beach prober	
Long-billed Dowitcher <i>Limnodromus scolopaceus</i>	Insectivore: ground gleaner	Insectivore: coastal beach gleaner	
Common Snipe <i>Gallinago gallinago</i>	Vermivore: ground prober		Omnivore: mud forager
American Woodcock <i>Scolopax minor</i>			Vermivore: ground prober
Wilson's Phalarope <i>Phalaropus tricolor</i>	Insectivore: freshwater shoreline gleaner		
Red-necked Phalarope <i>Phalaropus lobatus</i>	Insectivore: water surface gleaner		
Red Phalarope <i>Phalaropus fulicaria</i>	Insectivore: water surface gleaner Crustaceovore: water surface gleaner		
Pomarine Jaeger <i>Stercorarius pomarinus</i>	Carnivore: coastal scavenger air hawker ground hawker	Carnivore: pelagic scavenger pelagic food pirate	
Parasitic Jaeger <i>Stercorarius parasiticus</i>	Carnivore: coastal food pirate ground scavenger	Carnivore: pelagic food pirate	
Long-tailed Jaeger <i>Stercorarius longicaudus</i>	Carnivore: air hawker ground hawker		

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Great Skua <i>Catharacta skua</i>	Carnivore: coastal food pirate coastal scavenger ground hawker	Carnivore: pelagic scavenger	
South Polar Skua <i>Catharacta maccormicki</i>		Carnivore: pelagic scavenger	
Laughing Gull <i>Larus atricilla</i>	Carnivore: coastal beach scavenger	Piscivore: coastal surface gleaner coastal food pirate	
Franklin's Gull <i>Larus pipixcan</i>	Insectivore: air hawker		
Little Gull <i>Larus minutus</i>	Insectivore: freshwater surface gleaner		
Common Black-headed Gull <i>Larus ridibundus</i>		Insectivore: air hawker Carnivore: coastal beach scavenger Vermivore: mud gleaner	
Bonaparte's Gull <i>Larus philadelphia</i>	Insectivore: air hawker ground gleaner	Carnivore: coastal beach scavenger coastal surface gleaner	
Heermann's Gull <i>Larus heermanni</i>		Piscivore: pelagic surface gleaner coastal surface gleaner Carnivore: coastal beach scavenger	
Mew Gull <i>Larus canus</i>	Carnivore: shoreline gleaner Insectivore: ground gleaner	Carnivore: coastal beach scavenger	
Ring-billed Gull <i>Larus delawarensis</i>	Insectivore: ground gleaner Carnivore: ground hawker	Carnivore: coastal beach scavenger	
California Gull <i>Larus californicus</i>	Insectivore: ground gleaner Carnivore: ground hawker	Carnivore: coastal beach scavenger	
Herring Gull <i>Larus argentatus</i>	Omnivore: shoreline scavenger	Carnivore: shoreline scavenger	
Thayer's Gull <i>Larus thayeri</i>	Carnivore: coastal beach scavenger	Carnivore: shoreline scavenger	
Iceland Gull <i>Larus glaucoides</i>		Carnivore: coastal beach scavenger	Carnivore: coastal scavenger
Lesser Black-backed Gull <i>Larus fuscus</i>		Carnivore: shoreline scavenger	
Yellow-footed Gull <i>Larus livens</i>		Carnivore: coastal beach scavenger	
Western Gull <i>Larus occidentalis</i>			Carnivore: coastal beach scavenger
Glaucous-winged Gull <i>Larus glaucescens</i>		Carnivore: coastal beach scavenger	
Glaucous Gull <i>Larus hyperboreus</i>	Carnivore: air hawker		Carnivore: coastal scavenger
Great Black-backed Gull <i>Larus marinus</i>			Carnivore: coastal beach scavenger
Black-legged Kittiwake <i>Rissa tridactyla</i>			Piscivore: pelagic diver

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Red-legged Kittiwake <i>Rissa brevirostris</i>			Piscivore: pelagic diver
Sabine's Gull <i>Xema sabini</i>	Insectivore: freshwater surface gleaner		
Ivory Gull <i>Pagophila eburnea</i>	Carnivore: ground hawker	Carnivore: pelagic scavenger	
Gull-billed Tern <i>Sterna nilotica</i>			Insectivore: water surface gleaner
Caspian Tern <i>Sterna caspia</i>	Piscivore: water plunger	Piscivore: coastal plunger	
Royal Tern <i>Sterna maxima</i>			Piscivore: coastal plunger
Elegant Tern <i>Sterna elegans</i>	Piscivore: coastal plunger		
Sandwich Tern <i>Sterna sandwicensis</i>			Piscivore: coastal plunger
Roseate Tern <i>Sterna dougallii</i>	Piscivore: coastal plunger		
Common Tern <i>Sterna hirundo</i>	Piscivore: water plunger	Piscivore: coastal plunger	
Arctic Tern <i>Sterna paradisaea</i>	Piscivore: water plunger		
Aleutian Tern <i>Sterna aleutica</i>	Piscivore: coastal plunger		
Forster's Tern <i>Sterna forsteri</i>			Insectivore: water surface gleaner Piscivore: water plunger
Least Tern <i>Sterna antillarum</i>	Piscivore: water plunger		
Sooty Tern <i>Sterna fuscata</i>	Piscivore: coastal plunger		
Black Tern <i>Chlidonias niger</i>	Insectivore: freshwater surface gleaner air hawker		
Brown Noddy <i>Anous stolidus</i>	Piscivore: pelagic surface gleaner		
Black Skimmer <i>Rynchops niger</i>			Piscivore: water skimmer Crustaceovore: water skimmer
Dovekie <i>Alle alle</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Common Murre <i>Uria aalge</i>	Piscivore: coastal diver Crustaceovore: coastal diver	Piscivore: pelagic diver Crustaceovore: pelagic diver	
Thick-billed Murre <i>Uria lomvia</i>	Piscivore: coastal diver Crustaceovore: coastal surface gleaner	Piscivore: pelagic diver Crustaceovore: pelagic surface gleaner	
Razorbill <i>Alca torda</i>	Piscivore: coastal surface gleaner Crustaceovore: coastal surface gleaner Molluscovore: coastal diver	Piscivore: pelagic surface gleaner Crustaceovore: pelagic surface gleaner Molluscovore: pelagic diver	
Black Guillemot <i>Cepphus grylle</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Pigeon Guillemot <i>Cepphus columba</i>	Piscivore: coastal diver Piscivore: coastal diver Crustaceovore: coastal diver	Piscivore: pelagic diver Piscivore: pelagic diver Crustaceovore: pelagic diver Molluscovore: pelagic diver Piscivore: pelagic diver	
Marbled Murrelet <i>Brachyramphus marmoratus</i>	Piscivore: coastal diver	Piscivore: pelagic diver	
Kittlitz's Murrelet <i>Brachyramphus brevirostris</i>	Crustaceovore: coastal diver		
Xantus' Murrelet <i>Synthliboramphus hypoleucus</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Ancient Murrelet <i>Synthliboramphus antiquus</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Cassin's Auklet <i>Ptychoramphus aleuticus</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Parakeet Auklet <i>Cyclorhynchus psittacula</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Least Auklet <i>Aethia pusilla</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Whiskered Auklet <i>Aethia pygmaea</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Crested Auklet <i>Aethia cristatella</i>	Crustaceovore: coastal diver	Crustaceovore: pelagic diver	
Rhinoceros Auklet <i>Cerorhinca monocerata</i>	Crustaceovore: coastal diver Piscivore: coastal diver	Crustaceovore: pelagic diver Piscivore: pelagic diver	
Tufted Puffin <i>Fratercula cirrhata</i>	Piscivore: coastal diver	Piscivore: pelagic diver	
Atlantic Puffin <i>Fratercula arctica</i>	Piscivore: coastal diver	Piscivore: pelagic diver	
Horned Puffin <i>Fratercula corniculata</i>	Piscivore: coastal diver	Piscivore: pelagic diver	
Rock Dove <i>Columba livia</i>			Omnivore: ground forager
White-crowned Pigeon <i>Columba leucocephala</i>			Frugivore: upper-canopy gleaner
Red-billed Pigeon <i>Columba flavirostris</i>			Frugivore: upper-canopy gleaner
Band-tailed Pigeon <i>Columba fasciata</i>	Frugivore: lower-canopy gleaner	Frugivore: upper-canopy gleaner	
White-winged Dove <i>Zenaida asiatica</i>			Granivore: ground gleaner
Mourning Dove <i>Zenaida macroura</i>			Granivore: ground gleaner
Inca Dove <i>Columbina inca</i>			Granivore: ground gleaner
Common Ground-Dove <i>Columbina passerina</i>			Granivore: ground gleaner
White-tipped Dove <i>Leptotila verreauxi</i>			Granivore: ground gleaner
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i>	Insectivore: lower-canopy gleaner		
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	Insectivore: lower-canopy gleaner		

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Mangrove Cuckoo <i>Coccyzus minor</i>	Insectivore: lower-canopy gleaner		Insectivore: ground gleaner
Greater Roadrunner <i>Geococcyx californianus</i>			Carnivore: ground chaser
Smooth-billed Ani <i>Crotophaga ani</i>			Insectivore: ground gleaner
Groove-billed Ani <i>Crotophaga sulcirostris</i>			Insectivore: ground gleaner
Common Barn-Owl <i>Tyto alba</i>			Carnivore: ground hawk
Flammulated Owl <i>Otus flammeolus</i>			Insectivore: ground hawk
Eastern Screech-Owl <i>Otus asio</i>	Insectivore: ground hawk		Carnivore: ground hawk
Western Screech-Owl <i>Otus kennicottii</i>	Insectivore: ground hawk		Carnivore: ground hawk
Whiskered Screech-Owl <i>Otus trichopsis</i>			Insectivore: ground hawk
Great Horned Owl <i>Bubo virginianus</i>			Carnivore: ground hawk
Snowy Owl <i>Nyctea scandiaca</i>			Carnivore: ground hawk
Northern Hawk-Owl <i>Surnia ulula</i>			Carnivore: ground hawk
Northern Pygmy-Owl <i>Glaucidium gnoma</i>	Insectivore: ground hawk		Carnivore: ground hawk
Ferruginous Pygmy-Owl <i>Glaucidium brasilianum</i>			Carnivore: ground hawk
Elf Owl <i>Micrathene whitneyi</i>	Insectivore: ground hawk air hawk		
Burrowing Owl <i>Athene cunicularia</i>			Carnivore: ground hawk Insectivore: air hawk
Spotted Owl <i>Strix occidentalis</i>			Carnivore: ground hawk
Barred Owl <i>Strix varia</i>			Carnivore: ground hawk
Great Gray Owl <i>Strix nebulosa</i>			Carnivore: ground hawk
Long-eared Owl <i>Asio otus</i>			Carnivore: ground hawk
Short-eared Owl <i>Asio flammeus</i>			Carnivore: ground hawk
Boreal Owl <i>Aegolius funereus</i>			Carnivore: ground hawk
Northern Saw-whet Owl <i>Aegolius acadicus</i>			Carnivore: ground hawk
Lesser Nighthawk <i>Chordeiles acutipennis</i>	Insectivore: air screener		
Common Nighthawk <i>Chordeiles minor</i>	Insectivore: air screener		
Antillean Nighthawk <i>Chordeiles gundlachii</i>	Insectivore: air screener		
Common Pauraque <i>Nyctidromus albicollis</i>			Insectivore: air screener

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Common Poorwill <i>Phalaenoptilus nuttallii</i>			Insectivore: air screener
Chuck-will's-widow <i>Caprimulgus carolinensis</i>			Insectivore: air screener
Buff-collared Nightjar <i>Caprimulgus ridgwayi</i>	Insectivore: air screener		
Whip-poor-will <i>Caprimulgus vociferus</i>			Insectivore: air screener
Black Swift <i>Cypseloides niger</i>	Insectivore: air screener		
Chimney Swift <i>Chaetura pelagica</i>	Insectivore: air screener		
Vaux's Swift <i>Chaetura vauxi</i>			Insectivore: air screener
White-throated Swift <i>Aeronautes saxatalis</i>			Insectivore: air screener
Broad-billed Hummingbird <i>Cynanthus latirostris</i>	Omnivore: floral hover-gleaner		
White-eared Hummingbird <i>Hylocharis leucotis</i>	Omnivore: floral hover-gleaner		
Buff-bellied Hummingbird <i>Amazilia yucatanensis</i>	Omnivore: floral hover-gleaner		
Violet-crowned Hummingbird <i>Amazilia violiceps</i>	Omnivore: floral hover-gleaner		
Blue-throated Hummingbird <i>Lampornis clemenciae</i>	Omnivore: floral hover-gleaner		
Magnificent Hummingbird <i>Eugenes fulgens</i>	Omnivore: floral hover-gleaner		
Lucifer Hummingbird <i>Calothorax lucifer</i>	Omnivore: floral hover-gleaner		
Ruby-throated Hummingbird <i>Archilochus colubris</i>			Omnivore: floral hover-gleaner
Black-chinned Hummingbird <i>Archilochus alexandri</i>			Omnivore: floral hover-gleaner
Anna's Hummingbird <i>Calypte anna</i>			Omnivore: floral hover-gleaner Insectivore: air sallyer
Costa's Hummingbird <i>Calypte costae</i>			Omnivore: floral hover-gleaner
Calliope Hummingbird <i>Stellula calliope</i>	Omnivore: floral hover-gleaner		
Broad-tailed Hummingbird <i>Selasphorus platycercus</i>	Omnivore: floral hover-gleaner		
Rufous Hummingbird <i>Selasphorus rufous</i>	Omnivore: floral hover-gleaner		
Allen's Hummingbird <i>Selasphorus sasin</i>	Omnivore: floral hover-gleaner		
Elegant Trogon <i>Trogon elegans</i>	Omnivore: upper-canopy forager Insectivore: air sallyer		
Belted Kingfisher <i>Ceryle alcyon</i>			Piscivore: water plunger
Green Kingfisher <i>Chloroceryle americana</i>			Piscivore: freshwater plunger Insectivore: air sallyer

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Lewis' Woodpecker <i>Melanerpes lewis</i>			Insectivore: air sallyer Granivore: upper-canopy gleaner
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	Insectivore: air sallyer	Frugivore: lower-canopy gleaner	Insectivore: bark gleaner
Acorn Woodpecker <i>Melanerpes formicivorus</i>			Frugivore: upper-canopy gleaner Insectivore: bark gleaner
Gila Woodpecker <i>Melanerpes uropygialis</i>			Insectivore: bark gleaner Frugivore: upper-canopy gleaner
Golden-fronted Woodpecker <i>Melanerpes aurifrons</i>			Insectivore: bark gleaner Omnivore: ground forager
Red-bellied Woodpecker <i>Melanerpes carolinus</i>			Insectivore: bark gleaner Omnivore: ground forager
Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>		Insectivore: bark gleaner	Omnivore: bark excavator
Red-breasted Sapsucker <i>Sphyrapicus ruber</i>		Insectivore: bark gleaner	Omnivore: bark excavator
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i>	Omnivore: bark excavator	Insectivore: bark gleaner	
Ladder-backed Woodpecker <i>Picoides scalaris</i>			Insectivore: bark gleaner Frugivore: lower-canopy gleaner
Nuttall's Woodpecker <i>Picoides nuttallii</i>			Insectivore: bark gleaner Frugivore: lower-canopy gleaner
Downy Woodpecker <i>Picoides pubescens</i>			Insectivore: bark gleaner Frugivore: lower-canopy gleaner
Hairy Woodpecker <i>Picoides villosus</i>			Insectivore: bark gleaner Frugivore: lower-canopy gleaner
Strickland's Woodpecker <i>Picoides stricklandi</i>			Insectivore: bark gleaner Frugivore: upper-canopy gleaner
Red-cockaded Woodpecker <i>Picoides borealis</i>		Granivore: upper-canopy gleaner	Insectivore: bark gleaner
White-headed Woodpecker <i>Picoides albolarvatus</i>		Granivore: upper-canopy gleaner	Insectivore: bark scaler
Three-toed Woodpecker <i>Picoides tridactylus</i>			Insectivore: bark scaler
Black-backed Woodpecker <i>Picoides arcticus</i>			Insectivore: bark scaler
Northern Flicker <i>Colaptes auratus</i>	Insectivore: ground gleaner	Omnivore: ground forager lower-canopy forager	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Pileated Woodpecker <i>Dryocopus pileatus</i>		Omnivore: lower-canopy forager	Insectivore: bark excavator
Ivory-billed Woodpecker <i>Campephilus principalis</i>			Insectivore: bark scaler
			Frugivore: upper-canopy gleaner
Northern Beardless- Tyrannulet <i>Camptostoma imberbe</i>			Insectivore: upper-canopy gleaner
Olive-sided Flycatcher <i>Contopus borealis</i>	Insectivore: air sallier		
Greater Pewee <i>Contopus pertinax</i>	Insectivore: air sallier		
Western Wood-Pewee <i>Contopus sordidulus</i>	Insectivore: air sallier		
Eastern Wood-Pewee <i>Contopus virens</i>	Insectivore: air sallier		
Yellow-bellied Flycatcher <i>Empidonax flaviventris</i>	Insectivore: air sallier		
Acadian Flycatcher <i>Empidonax virescens</i>	Insectivore: air sallier		
Alder Flycatcher <i>Empidonax alnorum</i>	Insectivore: air sallier		
Willow Flycatcher <i>Empidonax traillii</i>	Insectivore: air sallier		
Least Flycatcher <i>Empidonax minimus</i>	Insectivore: air sallier		
Hammond's Flycatcher <i>Empidonax hammondii</i>			Insectivore: air sallier
Dusky Flycatcher <i>Empidonax oberholseri</i>	Insectivore: air sallier		
Gray Flycatcher <i>Empidonax wrightii</i>			Insectivore: air sallier
Western Flycatcher <i>Empidonax difficilis</i>	Insectivore: air sallier		
Buff-breasted Flycatcher <i>Empidonax fulvifrons</i>	Insectivore: air sallier		
Black Phoebe <i>Sayornis phoebe</i>		Frugivore: lower-canopy gleaner	Insectivore: air sallier
Say's Phoebe <i>Sayornis saya</i>			Insectivore: air sallier
Vermilion Flycatcher <i>Pyrcecephalus rubinus</i>			Insectivore: air sallier
Dusky-capped Flycatcher <i>Myiarchus tuberculifer</i>	Insectivore: air sallier		
Ash-throated Flycatcher <i>Myiarchus cinerascens</i>			Insectivore: lower-canopy gleaner air sallier
Great Crested Flycatcher <i>Myiarchus crinitus</i>		Frugivore: lower-canopy gleaner	Insectivore: air sallier
Brown-crested Flycatcher <i>Myiarchus tyrannulus</i>	Insectivore: air sallier		
Great Kiskadee <i>Pitangus sulphuratus</i>			Insectivore: air sallier
			Piscivore: freshwater plunger
Sulphur-bellied Flycatcher <i>Myiodynastes luteiventris</i>	Insectivore: air sallier		

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Tropical Kingbird <i>Tyrannus melancholicus</i>	Insectivore: air sallier		
Couch's Kingbird <i>Tyrannus couchii</i>			Insectivore: air sallier
Cassin's Kingbird <i>Tyrannus vociferans</i>		Frugivore: lower-canopy gleaner	Insectivore: air sallier
Thick-billed Kingbird <i>Tyrannus crassirostris</i>	Insectivore: air sallier		
Western Kingbird <i>Tyrannus verticalis</i>			Insectivore: air sallier
Eastern Kingbird <i>Tyrannus tyrannus</i>	Insectivore: air sallier		
Gray Kingbird <i>Tyrannus dominicensis</i>	Insectivore: air sallier Frugivore: lower-canopy gleaner		
Scissor-tailed Flycatcher <i>Tyrannus forficatus</i>			Insectivore: air sallier
Rose-throated Becard <i>Pachyramphus aglaiae</i>	Insectivore: air sallyer Frugivore: lower-canopy gleaner		
Eurasian Skylark <i>Alauda arvensis</i>	Omnivore: ground forager	Granivore: ground gleaner	
Horned Lark <i>Eremophila alpestris</i>	Omnivore: ground gleaner	Granivore: ground gleaner	
Purple Martin <i>Progne subis</i>	Insectivore air screener		
Tree Swallow <i>Tachycineta bicolor</i>		Frugivore: lower-canopy gleaner	Insectivore: air screener
Violet-green Swallow <i>Tachycineta thalassina</i>			Insectivore: air screener
Northern Rough-winged Swallow <i>Stelgidopteryx serripennis</i>			Insectivore: air screener
Bank Swallow <i>Riparia riparia</i>	Insectivore: air screener		
Cliff Swallow <i>Hirundo pyrrhonota</i>	Insectivore: air screener		
Cave Swallow <i>Hirundo fulva</i>	Insectivore: air screener		
Barn Swallow <i>Hirundo rustica</i>	Insectivore: air screener		
Gray Jay <i>Perisoreus canadensis</i>			Omnivore: upper-canopy forager
Steller's Jay <i>Cyanocitta stelleri</i>			Omnivore: ground forager lower-canopy forager
Blue Jay <i>Cyanocitta cristata</i>			Omnivore: ground forager upper-canopy forager
Green Jay <i>Cyanocorax yncas</i>			Omnivore: ground forager
Brown Jay <i>Cyanocorax morio</i>			Omnivore: ground forager
Scrub Jay <i>Aphelocoma coerulescens</i>			Omnivore: ground forager
Gray-breasted Jay <i>Aphelocoma ultramarina</i>			Omnivore: ground forager

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Pinyon Jay <i>Gymnorhinus cyanocephalus</i>			Omnivore: upper-canopy forager ground forager
Clark's Nutcracker <i>Nucifraga columbiana</i>			Omnivore: upper-canopy forager ground forager
Black-billed Magpie <i>Pica pica</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Yellow-billed Magpie <i>Pica nuttallis</i>	Insectivore: ground gleaner	Omnivore: ground forager	
American Crow <i>Corvus brachyrhynchos</i>			Omnivore: ground forager
Northwestern Crow <i>Corvus caurinus</i>			Omnivore: coastal beach scavenger
Fish Crow <i>Corvus ossifragus</i>			Omnivore: shoreline scavenger
Chihuahuan Raven <i>Corvus cryptoleucus</i>			Omnivore: ground forager
Common Raven <i>Corvus corax</i>			Omnivore: ground scavenger
Black-capped Chickadee <i>Parus atricapillus</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Carolina Chickadee <i>Parus carolinensis</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Mexican Chickadee <i>Parus sclateri</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Mountain Chickadee <i>Parus gambeli</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Siberian Tit <i>Parus cinctus</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Boreal Chickadee <i>Parus hudsonicus</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Chestnut-backed Chickadee <i>Parus rufescens</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Bridled Titmouse <i>Parus wollweberi</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Plain Titmouse <i>Parus inornatus</i>			Omnivore: lower-canopy forager
Tufted Titmouse <i>Parus bicolor</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Verdin <i>Auriparus flaviceps</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Bushtit <i>Psaltiriparus minimus</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Red-breasted Nuthatch <i>Sitta canadensis</i>		Granivore: upper-canopy gleaner	Insectivore: bark gleaner
White-breasted Nuthatch <i>Sitta carolinensis</i>		Granivore: upper-canopy gleaner	Insectivore: bark gleaner
Pygmy Nuthatch <i>Sitta pygmaea</i>			Insectivore: bark gleaner Omnivore: upper-canopy forager
Brown-headed Nuthatch <i>Sitta pusilla</i>		Granivore: upper-canopy gleaner	Insectivore: bark gleaner
Brown Creeper <i>Certhia americana</i>			Insectivore: bark gleaner
Cactus Wren <i>Campylorhynchus brunneicapillus</i>			Omnivore: lower-canopy forager ground forager

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Rock Wren <i>Salpinctes obsoletus</i>			Insectivore: ground gleaner
Canyon Wren <i>Catherpes mexicanus</i>			Insectivore: ground gleaner
Carolina Wren <i>Thryothorus ludovicianus</i>			Insectivore: lower-canopy gleaner
Bewick's Wren <i>Thryomanes bewickii</i>			Insectivore: ground gleaner
House Wren <i>Troglodytes aedon</i>			Insectivore: lower-canopy gleaner
Winter Wren <i>Troglodytes troglodytes</i>			Insectivore: ground gleaner
Sedge Wren <i>Cistothorus platensis</i>			Insectivore: ground gleaner
Marsh Wren <i>Cistothorus palustris</i>			Insectivore: marsh gleaner
American Dipper <i>Cinclus mexicanus</i>			Insectivore: riparian bottom gleaner
Arctic Warbler <i>Phylloscopus borealis</i>	Insectivore: upper-canopy gleaner		
Golden-crowned Kinglet <i>Regulus satrapa</i>			Insectivore: lower-canopy gleaner
Ruby-crowned Kinglet <i>Regulus calendula</i>			Insectivore: lower-canopy gleaner
Blue-gray Gnatcatcher <i>Poliophtila caerulea</i>			Insectivore: upper-canopy gleaner
Black-tailed Gnatcatcher <i>Poliophtila melanura</i>			Insectivore: lower-canopy gleaner
Black-capped Gnatcatcher <i>Poliophtila nigriceps</i>			Insectivore: lower-canopy gleaner
Bluethroat <i>Luscinia svecica</i>	Insectivore: ground gleaner		
Northern Wheatear <i>Oenanthe oenanthe</i>	Insectivore: ground gleaner		
Eastern Bluebird <i>Sialia sialis</i>	Insectivore: ground gleaner	Omnivore: ground forager lower-canopy forager	
	Frugivore: lower-canopy gleaner		
Western Bluebird <i>Sialia mexicana</i>	Insectivore: ground gleaner	Omnivore: lower-canopy forager	
Mountain Bluebird <i>Sialia currucoides</i>		Omnivore: lower-canopy forager	Insectivore: ground gleaner
Townsend's Solitaire <i>Myadestes townsendi</i>			Insectivore: air sallyer
			Omnivore: ground forager
Veery <i>Catharus fuscescens</i>	Omnivore: ground forager lower-canopy forager		
Gray-cheeked Thrush <i>Catharus minimus</i>	Omnivore: ground forager lower-canopy forager		
Swainson's Thrush <i>Catharus ustulatus</i>	Omnivore: ground forager lower-canopy forager		
Hermit Thrush <i>Catharus guttatus</i>	Insectivore: ground gleaner	Omnivore: ground forager lower-canopy forager	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Wood Thrush <i>Hylocichla mustelina</i>	Omnivore: ground forager		
Fieldfare <i>Turdus pilaris</i>	Insectivore: ground gleaner		
American Robin <i>Turdus migratorius</i>	Vermivore: ground gleaner	Omnivore: ground forager	Omnivore: lower-canopy forager
Varied Thrush <i>Ixoreus naevius</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Wrentit <i>Chamaea fasciata</i>		Frugivore: lower-canopy gleaner	Insectivore: bark gleaner
Gray Catbird <i>Dumetella carolinensis</i>			Omnivore: ground forager lower-canopy forager
Northern Mockingbird <i>Mimus polyglottos</i>	Omnivore: ground forager	Frugivore: lower-canopy gleaner	
Sage Thrasher <i>Oreoscoptes montanus</i>	Insectivore: ground gleaner	Omnivore: ground forager lower-canopy forager	
Brown Thrasher <i>Toxostoma rufum</i>			Omnivore: ground forager lower-canopy forager
Long-billed Thrasher <i>Toxostoma longirostre</i>			Omnivore: ground forager lower-canopy forager
Bendire's Thrasher <i>Toxostoma bendirei</i>			Omnivore: ground forager lower-canopy forager
Curve-billed Thrasher <i>Toxostoma curvirostre</i>	Omnivore: ground forager	Frugivore: lower-canopy gleaner	
California Thrasher <i>Toxostoma redivivum</i>			Omnivore: ground forager
Crissal Thrasher <i>Toxostoma dorsale</i>			Omnivore: ground forager lower-canopy forager
Le Conte's Thrasher <i>Toxostoma lecontei</i>			Insectivore: ground gleaner
Yellow Wagtail <i>Motacilla flava</i>	Insectivore: ground gleaner		
White Wagtail <i>Motacilla alba</i>	Insectivore: ground gleaner		
Red-throated Pipit <i>Anthus cervinus</i>	Insectivore: ground gleaner		
Water Pipit <i>Anthus spinoletta</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Sprague's Pipit <i>Anthus spragueii</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Bohemian Waxwing <i>Bombycilla garrulus</i>	Insectivore: air sallyer	Frugivore: lower-canopy gleaner	Frugivore: upper-canopy gleaner
Cedar Waxwing <i>Bombycilla cedrorum</i>			Insectivore: air sallyer
			Frugivore: upper-canopy gleaner
Phainopepla <i>Phainopepla nitens</i>			Frugivore: lower-canopy gleaner
Northern Shrike <i>Lanius excubitor</i>			Carnivore: ground hawk
Loggerhead Shrike <i>Lanius ludovicianus</i>			Carnivore: ground hawk

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
European Starling <i>Sturnus vulgaris</i>			Omnivore: ground forager
Crested Myna <i>Acridotheres cristatellus</i>			Omnivore: ground forager
White-eyed Vireo <i>Vireo griseus</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Bell's Vireo <i>Vireo bellii</i>	Insectivore: lower-canopy gleaner		
Black-capped Vireo <i>Vireo atricapillus</i>	Insectivore: lower-canopy gleaner		
Gray Vireo <i>Vireo vicinior</i>	Insectivore: lower-canopy gleaner		
Solitary Vireo <i>Vireo solitarius</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Yellow-throated Vireo <i>Vireo flavifrons</i>	Insectivore: upper-canopy gleaner		
Hutton's Vireo <i>Vireo huttoni</i>			Insectivore: lower-canopy gleaner
Warbling Vireo <i>Vireo gilvus</i>	Insectivore: upper-canopy gleaner		
Philadelphia Vireo <i>Vireo philadelphicus</i>	Insectivore: upper-canopy gleaner		
Red-eyed Vireo <i>Vireo olivaceus</i>	Insectivore: upper-canopy gleaner		
Black-whiskered Vireo <i>Vireo altilopuus</i>	Omnivore: upper-canopy forager		
Bachman's Warbler <i>Vermivora bachmanii</i>	Insectivore: upper-canopy gleaner		
Blue-winged Warbler <i>Vermivora pinus</i>	Insectivore: lower-canopy gleaner		
Golden-winged Warbler <i>Vermivora chrysoptera</i>	Insectivore: upper-canopy gleaner		
Tennessee Warbler <i>Vermivora peregrina</i>	Insectivore: upper-canopy gleaner		
Orange-crowned Warbler <i>Vermivora celata</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Nashville Warbler <i>Vermivora ruficapilla</i>			Insectivore: lower-canopy gleaner
Virginia's Warbler <i>Vermivora virginiae</i>	Insectivore: lower-canopy gleaner		
Colima Warbler <i>Vermivora crissalis</i>	Insectivore: lower-canopy gleaner		
Lucy's Warbler <i>Vermivora luciae</i>	Insectivore: lower-canopy gleaner		
Northern Parula <i>Parula americana</i>	Insectivore: upper-canopy gleaner		
Tropical Parula <i>Parula pitiayumi</i>			Insectivore: upper-canopy gleaner
Yellow Warbler <i>Dendroica petechia</i>	Insectivore: lower-canopy gleaner		
Chestnut-sided Warbler <i>Dendroica pensylvanica</i>	Insectivore: lower-canopy gleaner		
Magnolia Warbler <i>Dendroica magnolia</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Cape May Warbler <i>Dendroica tigrina</i>	Insectivore: upper-canopy gleaner	Omnivore: upper-canopy forager	
Black-throated Blue Warbler <i>Dendroica caerulescens</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Yellow-rumped Warbler <i>Dendroica coronata</i>	Insectivore: lower-canopy gleaner	Omnivore: lower-canopy forager	
Black-throated Gray Warbler <i>Dendroica nigrescens</i>			Insectivore: lower-canopy gleaner
Townsend's Warbler <i>Dendroica townsendi</i>			Insectivore: upper-canopy gleaner
Hermit Warbler <i>Dendroica occidentalis</i>	Omnivore: upper-canopy forager		
Black-throated Green Warbler <i>Dendroica virens</i>			Insectivore: upper-canopy gleaner
Golden-cheeked Warbler <i>Dendroica chrysoparia</i>	Insectivore: lower-canopy gleaner		
Blackburnian Warbler <i>Dendroica fusca</i>	Insectivore: upper-canopy gleaner		
Yellow-throated Warbler <i>Dendroica dominica</i>			Insectivore: upper-canopy gleaner bark gleaner
Grace's Warbler <i>Dendroica graciae</i>	Insectivore: upper-canopy gleaner		
Pine Warbler <i>Dendroica pinus</i>	Insectivore: bark gleaner	Omnivore: lower-canopy forager ground forager	
Kirtland's Warbler <i>Dendroica kirtlandii</i>	Insectivore: lower-canopy gleaner		
Prairie Warbler <i>Dendroica discolor</i>			Insectivore: lower-canopy gleaner
Palm Warbler <i>Dendroica palmarum</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Bay-breasted Warbler <i>Dendroica castanea</i>	Insectivore: upper-canopy gleaner		
Blackpoll Warbler <i>Dendroica striata</i>	Insectivore: upper-canopy gleaner		
Cerulean Warbler <i>Dendroica cerulea</i>	Insectivore: upper-canopy gleaner		
Black-and-white Warbler <i>Mniotilta varia</i>			Insectivore: bark gleaner
American Redstart <i>Setophaga ruticilla</i>	Insectivore: lower-canopy gleaner air sallier		
Prothonotary Warbler <i>Protonotaria citrea</i>	Insectivore: lower-canopy gleaner bark gleaner		
Worm-eating Warbler <i>Helmitheros vermivorus</i>	Insectivore: ground gleaner		
Swainson's Warbler <i>Limnothlypis swainsonii</i>	Insectivore: lower-canopy gleaner		
Ovenbird <i>Seiurus aurocapillus</i>	Molluscovore: ground gleaner Insectivore: ground gleaner	Omnivore: ground forager	
Northern Waterthrush <i>Seiurus noveboracensis</i>			Insectivore: freshwater shoreline gleaner
Louisiana Waterthrush <i>Seiurus motacilla</i>	Insectivore: freshwater shoreline gleaner		
Kentucky Warbler <i>Oporornis formosus</i>	Insectivore: ground gleaner		
Connecticut Warbler <i>Oporornis agilis</i>	Insectivore: ground gleaner		

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Mourning Warbler <i>Oporornis philadelphia</i>	Insectivore: ground gleaner		
MacGillivray's Warbler <i>Oporornis tolmiei</i>	Insectivore: lower-canopy gleaner		
Common Yellowthroat <i>Geothlypis trichas</i>			Insectivore: lower-canopy gleaner
Gray-crowned Yellowthroat <i>Geothlypis poliocephala</i>			Insectivore: ground gleaner
Hooded Warbler <i>Wilsonia citrina</i>	Insectivore: lower-canopy gleaner air sallier		
Wilson's Warbler <i>Wilsonia pusilla</i>	Insectivore: lower-canopy gleaner air sallier		
Canada Warbler <i>Wilsonia canadensis</i>	Insectivore: lower-canopy gleaner		
Red-faced Warbler <i>Cardellina rubrifrons</i>	Insectivore: upper-canopy gleaner		
Painted Redstart <i>Myioborus pictus</i>	Insectivore: air sallier ground gleaner bark gleaner		
Yellow-breasted Chat <i>Icteria virens</i>	Omnivore: lower-canopy forager		
Olive Warbler <i>Peucedramus taeniatus</i>	Insectivore: lower-canopy gleaner		
Hepatic Tanager <i>Piranga flava</i>	Insectivore: upper-canopy gleaner		
Summer Tanager <i>Piranga rubra</i>	Insectivore: upper-canopy gleaner		
Scarlet Tanager <i>Piranga olivacea</i>	Insectivore: upper-canopy gleaner		
Western Tanager <i>Piranga ludoviciana</i>	Omnivore: upper-canopy forager Insectivore: air sallier		
Northern Cardinal <i>Cardinalis cardinalis</i>			Omnivore: ground forager
Pyrrhuloxia <i>Cardinalis sinuatus</i>			Omnivore: ground forager
Rose-breasted Grosbeak <i>Pheucticus ludovicianus</i>	Omnivore: upper-canopy forager		
Black-headed Grosbeak <i>Pheucticus melanocephalus</i>	Omnivore: upper-canopy forager		
Blue Grosbeak <i>Guiraca caerulea</i>	Omnivore: ground forager		
Lazuli Bunting <i>Passerina amoena</i>			Omnivore: lower-canopy forager
Indigo Bunting <i>Passerina cyanea</i>			Omnivore: lower-canopy forager
Varied Bunting <i>Passerina versicolor</i>	Omnivore: lower-canopy forager		
Painted Bunting <i>Passerina ciris</i>			Omnivore: lower-canopy forager
Dickcissel <i>Spiza americana</i>	Omnivore: ground forager	Granivore: ground gleaner	
Olive Sparrow <i>Arremonops rufivirgatus</i>			Omnivore: ground forager

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Green-tailed Towhee <i>Pipilo chlorurus</i>			Omnivore: ground forager
Rufous-sided Towhee <i>Pipilo erythrophthalmus</i>			Omnivore: ground forager
Brown Towhee <i>Pipilo fuscus</i>			Omnivore: ground forager
Abert's Towhee <i>Pipilo aberti</i>			Omnivore: ground forager
White-collared Seedeater <i>Sporophila torqueola</i>			Granivore: ground gleaner
Bachman's Sparrow <i>Aimophila aestivalis</i>			Omnivore: ground forager
Botteri's Sparrow <i>Aimophila botterii</i>	Omnivore: ground forager		
Cassin's Sparrow <i>Aimophila cassinii</i>	Insectivore: ground gleaner	Granivore: ground gleaner	
Rufous-winged Sparrow <i>Aimophila carpalis</i>	Omnivore: lower-canopy forager	Granivore: ground gleaner	
	Insectivore: air sallyer		
Rufous-crowned Sparrow <i>Aimophila ruficeps</i>	Omnivore: ground forager	Granivore: ground gleaner	
Chipping Sparrow <i>Spizella passerina</i>	Omnivore: ground forager	Granivore: ground gleaner	
Clay-colored Sparrow <i>Spizella pallida</i>	Omnivore: lower-canopy forager ground forager		
Brewer's Sparrow <i>Spizella breweri</i>	Insectivore: ground gleaner	Omnivore: lower-canopy forager ground forager	
Field Sparrow <i>Spizella pusilla</i>	Omnivore: ground forager	Granivore: ground gleaner	
Black-chinned Sparrow <i>Spizella atrogularis</i>	Omnivore: ground forager	Granivore: ground gleaner	
Vesper Sparrow <i>Poocetes gramineus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Lark Sparrow <i>Chondestes grammacus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Black-throated Sparrow <i>Amphispiza bilineata</i>	Insectivore: lower-canopy gleaner ground forager	Granivore: ground gleaner	
Five-striped Sparrow <i>Amphispiza quinquestriata</i>	Omnivore: ground forager	Granivore: ground gleaner	
Lark Bunting <i>Calamospiza melanocorys</i>			Omnivore: ground forager
Savannah Sparrow <i>Passerculus sandwichensis</i>	Omnivore: ground forager	Granivore: ground gleaner	
Baird's Sparrow <i>Ammodramus bairdii</i>	Insectivore: ground gleaner	Granivore: ground gleaner	
Grasshopper Sparrow <i>Ammodramus savannarum</i>			Omnivore: ground forager
Henslow's Sparrow <i>Ammodramus henslowii</i>			Omnivore: ground forager
Le Conte's Sparrow <i>Ammodramus leconteii</i>			Omnivore: ground forager
Sharp-tailed Sparrow <i>Ammodramus caudacutus</i>			Omnivore: ground forager

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Seaside Sparrow <i>Ammodramus maritimus</i>			Crustaceovore: salt-marsh gleaner Molluscovore: salt-marsh gleaner Insectivore: salt-marsh gleaner
Fox Sparrow <i>Passerella iliaca</i>	Omnivore: ground forager	Granivore ground gleaner	
Song Sparrow <i>Melospiza melodia</i>	Omnivore: lower-canopy forager ground forager	Granivore: ground gleaner	
Lincoln's Sparrow <i>Melospiza lincolnii</i>	Omnivore: ground forager	Granivore: ground gleaner	
Swamp Sparrow <i>Melospiza georgiana</i>	Omnivore: ground forager	Granivore: ground gleaner	
White-throated Sparrow <i>Zonotrichia albicollis</i>	Omnivore: ground forager	Granivore: ground gleaner	
Golden-crowned Sparrow <i>Zonotrichia atricapilla</i>	Omnivore: ground forager	Granivore: ground gleaner	
White-crowned Sparrow <i>Zonotrichia leucophrys</i>	Omnivore: ground forager	Granivore: ground gleaner	
Harris' Sparrow <i>Zonotrichia querula</i>	Omnivore: ground forager	Granivore: ground gleaner	
Dark-eyed Junco <i>Junco hyemalis</i>	Omnivore: ground forager	Granivore: ground gleaner	
Yellow-eyed Junco <i>Junco phaeonotus</i>			Omnivore: ground forager
McCown's Longspur <i>Calcarius mccownii</i>	Omnivore: ground forager	Granivore: ground gleaner	
Lapland Longspur <i>Calcarius lapponicus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Smith's Longspur <i>Calcarius pictus</i>			Omnivore: ground forager
Chestnut-collared Longspur <i>Calcarius ornatus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Snow Bunting <i>Plectrophenax nivalis</i>	Omnivore: ground forager	Granivore: ground gleaner	
McKay's Bunting <i>Plectrophenax hyperboreus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Bobolink <i>Dolichonyx oryzivorus</i>	Omnivore: ground forager		
Red-winged Blackbird <i>Agelaius phoeniceus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Tricolored Blackbird <i>Agelaius tricolor</i>			Omnivore: ground forager
Eastern Meadowlark <i>Sturnella magna</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Western Meadowlark <i>Sturnella neglecta</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Yellow-headed Blackbird <i>Xanthocephalus xanthocephalus</i>			Omnivore: ground forager
Rusty Blackbird <i>Euphagus carolinus</i>	Insectivore: ground gleaner	Omnivore: ground forager	
Brewer's Blackbird <i>Euphagus cyanocephalus</i>			Omnivore: ground forager
Great-tailed Grackle <i>Quiscalus mexicanus</i>			Omnivore: ground forager

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Boat-tailed Grackle <i>Quiscalus major</i>			Omnivore: ground forager
Common Grackle <i>Quiscalus quiscula</i>			Omnivore: ground forager
Bronzed Cowbird <i>Molothrus aeneus</i>	Omnivore: ground forager	Granivore: ground gleaner	
Brown-headed Cowbird <i>Molothrus ater</i>	Omnivore: ground forager	Granivore: ground gleaner	
Orchard Oriole <i>Icterus spurius</i>	Insectivore: upper-canopy gleaner		
Hooded Oriole <i>Icterus cucullatus</i>	Omnivore: lower-canopy forager		
Altamira Oriole <i>Icterus gularis</i>			Omnivore: upper-canopy forager
Audubon's Oriole <i>Icterus graduacauda</i>			Omnivore: lower-canopy forager
Northern Oriole <i>Icterus galbula</i>	Omnivore: upper-canopy forager		
Scott's Oriole <i>Icterus parisorum</i>	Omnivore: lower-canopy forager		
Rosy Finch <i>Leucosticte arctoa</i>	Omnivore: ground forager	Granivore: ground gleaner	
	Insectivore: air sallyer		
Pine Grosbeak <i>Pinicola enucleator</i>	Omnivore: upper-canopy forager	Granivore: upper-canopy gleaner ground gleaner	
Purple Finch <i>Carpodacus purpureus</i>	Granivore: upper-canopy gleaner	Granivore: ground gleaner	
	Frugivore: upper-canopy gleaner		
Cassin's Finch <i>Carpodacus cassinii</i>	Omnivore: ground forager	Granivore: upper-canopy gleaner ground gleaner	
House Finch <i>Carpodacus mexicanus</i>	Frugivore: ground gleaner		Granivore: ground gleaner
Red Crossbill <i>Loxia curvirostra</i>	Omnivore: upper-canopy forager	Granivore: upper-canopy gleaner	
White-winged Crossbill <i>Loxia leucoptera</i>	Omnivore: upper-canopy forager	Granivore: upper-canopy gleaner	
Common Redpoll <i>Carduelis flammea</i>	Omnivore: ground forager lower-canopy forager	Granivore: ground gleaner	
Hoary Redpoll <i>Carduelis hornemannii</i>	Omnivore: ground forager lower-canopy forager	Granivore: ground gleaner	
Pine Siskin <i>Carduelis pinus</i>	Omnivore: upper-canopy forager ground forager	Granivore: upper-canopy gleaner ground gleaner	
Lesser Goldfinch <i>Carduelis psaltria</i>			Granivore: ground gleaner lower-canopy gleaner
Lawrence's Goldfinch <i>Carduelis lawrencei</i>			Granivore: ground gleaner lower-canopy gleaner
American Goldfinch <i>Carduelis tristis</i>	Omnivore: lower-canopy forager ground forager	Granivore: lower-canopy gleaner ground gleaner	

Appendix I. Continued.

Species name (Sci. name AOU list)	Breeding period	Nonbreeding period	Year round
Evening Grosbeak <i>Coccothraustes vespertinus</i>	Omnivore: upper-canopy forager	Granivore: upper-canopy gleaner ground gleaner	
House Sparrow <i>Passer domesticus</i>			Granivore: ground gleaner
Eurasian Tree Sparrow <i>Passer montanus</i>			Granivore: ground gleaner

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