The Pacific Northwest region of the United States is famous for its towering forests of spruce and fir but is also known for the great diversity of other habitats it encompasses and its equally impressive array of bird species. From the towering Cascade Mountains, to the high desert and marshes of eastern Oregon, to the rocky Pacific shoreline, Bird Songs of the Pacific Northwest features the sounds of 316 species, including those species for which the region is best known, such as Harlequin Duck, Mountain Quail, Marbled Murrelet, Spotted Owl, White-headed Woodpecker, American Dipper, and Hermit Warbler, as well as migrants and winter visitors like Cackling Goose, Wandering Tattler and Golden-crowned Sparrow.

The most comprehensive compilation of Pacific Northwest bird sounds ever assembled, Bird Songs of the Pacific Northwest is a 5-CD set with recordings averaging well over a minute per species. It also includes region-specific song dialects and comprehensive treatment of most species’ vocal repertoires. Many of these recordings and vocalizations have never been published before.

Whether you’re involved in conservation, conducting avian surveys, or birding for pleasure, this CD set is the perfect tool for learning to identify birds by ear in the Pacific Northwest.
Bird Songs of the Pacific Northwest

By Geoffrey A. Keller and Gerrit Vyn

Foreword

The sharp notes of a pair of Black Oystercatchers penetrating the fog on a rocky coastline; the haunting, ethereal notes of a Varied Thrush floating through the Olympic rainforest; the animated calls of a mixed flock of Chestnut-backed Chickadees, Golden-crowned Kinglets, Hutton’s Vireos, and Townsend’s Warblers on a dreary winter day; the resounding chorus of shrub steppe birds providing background as Greater Sage-Grouse display at first light in the Columbia Basin: bird vocalizations are an essential part of the Pacific Northwest experience.

Birding in the Pacific Northwest is enhanced by an easy familiarity with bird songs and calls. The dim light, dense foliage and extremely tall trees in many forests make viewing some birds difficult at best. The songs or calls of Townsend’s Warbler and Brown Creeper are often the only clue that they’re nearby. Recognizing Song Sparrow and Fox Sparrow chips allow Pacific Northwest birders to identify a bird tucked within an impenetrable blackberry thicket. And knowledge of bird sounds can impress our friends and birding companions. It’s fun to announce, before anyone has even raised their binoculars, that a Eurasian Wigeon is among a distant duck flock, because we recognized its distinctive call.

Perhaps most importantly, recognizing bird vocalizations is vital to conservation. One of the primary requirements for a birder to participate in a Breeding Bird Survey, organized by the U.S. Geological Survey, is a demonstrated knowledge of the bird songs and calls of that area. Contributions to eBird, organized by Audubon and the Cornell Lab of Ornithology, are far more comprehensive and valuable when participants recognize birds by sound as well as by sight. Birders who know the avian vocalizations of their area also provide more accurate and useful results for Christmas Bird Counts, Breeding Bird Atlas, and other surveys. Birding-by-ear skills are essential to participation in many conservation tools.

Birding by ear can also simplify many tough identifications, allowing population studies to be more accurate. When there is doubt about the identity of an Empidonax flycatcher, waiting for a vocalization is useful because the songs and call notes often differ more between species than do the plumages. Knowing shorebird calls helps sort out the identities of peeps as a flock flies past, or allows us to pick out the single Baird’s Sandpiper mixed in with Westerns on a mudflat.

This CD set, the first comprehensive guide to the vocalizations of Pacific Northwest birds, allows us to familiarize ourselves with typical bird vocalizations before we head into the field. We hope the sounds included will rekindle memories of your favorite birding experiences in the Pacific Northwest, will enhance your future visits, and will contribute to the conservation and enjoyment of birds in this magnificent region of the country.

Bill Tufts, Washington Biologist and Birder
Using This Audio Guide

This audio guide features the songs and calls of 316 species of birds occurring in the Pacific Northwest region of the United States and Canada. It focuses on the vocalizations of species that breed within this region but also includes calls of many migrants and winter visitors one is likely to encounter. Each track is composed of one or several individual recordings that are separated by a quiet pause. The text for each recording provides a description followed by reference information. This information usually includes the state or province where the recording was made, the month the recording was made, the Macaulay Library’s catalog number, and the recordist’s identifying initials. Additional information about the recording can be located online using the Macaulay Library’s catalog number at www.birds.pyrro.co.uk.

Common and scientific names used in this guide follow The AOU Checklist of North American Birds, Seventh Edition (47th supplement). CD track numbers precede each species’ common name. An alphabetized list of common names and corresponding track numbers is also provided for quick reference at the end of this booklet.

Playing Recordings In The Field

Please use the recordings on this guide responsibly. Playing recordings in the field can be disruptive to birds. Please refrain from using playback near nesting birds or for any extended period of time.

Acknowledgments

We are grateful to the many individuals and organizations that have made this audio guide possible. We extend our sincerest thanks to Bill Tweit for reviewing this project in its final stages and providing excellent suggestions for its improvement and to Greg Budney for providing invaluable help and guidance throughout the production process.

We are especially thankful to all the recordists who have contributed recordings for inclusion in this audio guide. Of particular note are the outstanding contributions by David S. Herr, Randolph S. Little and Thomas G. Sander.

Thanks also to Greg Clark, Kevin Colver, Jim Morgan, Bret Whitney, Olga Veprinsev and the BBC Natural History Unit for providing access to additional recordings for this production.

Geoff Keller would like to thank Jack Thomas, Ben Fawer, Tim Rodenkirk, Barbara Griffin, Dave Lauten, Kathy Castelein, and Joy McDowell for sharing their knowledge in field identification and suggesting great locations for bird song recording. He would also like to thank Brad and Scott Jackson for introducing him to birding and bird recording.

Contributing Recordists

AA  . . . . . . . . Arthur A. Allen
ABvdB . . . . . . . Arnaud B. van den Berg
AT . . . . . . . . . Arthur T. Prater
BJK . . . . . . . . Byrl J. Kellogg
BJM . . . . . . . . Brian J. McCaffery
BMW . . . . . . . Bret M. Whitney
BNV . . . . . . . Boris N. Veprinsev
CAM . . . . . . . Curtis A. Maramrz
CAS . . . . . . . Charles A. Sutherland
CDD . . . . . . . Charles D. Duncan
CW . . . . . . . . Carnes Weeks
DCE . . . . . . . David C. Evers
DGA . . . . . . . David G. Allen
DJK . . . . . . . Donald J. Kerr
DM . . . . . . . . Dolly Minis
DR . . . . . . . . . Diane Richardson
DRG . . . . . . . Donald R. Gunn
dSH . . . . . . . . David S. Heer
DWS . . . . . . . David W. Steemple
EJF . . . . . . . . Ernest J. Franzgrote
ESB . . . . . . . . Ernest S. Booth
FWT . . . . . . . . Fred W. Trumbull
GAK . . . . . . . . Geoffrey A. Keller
GBR . . . . . . . . George B. Reynard
GC . . . . . . . . . Greg Clark
GBF . . . . . . . . Gregory F. Budney
GMB . . . . . . . Grace M. Bell
GV . . . . . . . . . Gerrit Vyn
HLM . . . . . . . . Heather L. Major
JFB . . . . . . . . John F. Burton
JK . . . . . . . . . John Kirby
JLG . . . . . . . . James L. Gullidge
JM . . . . . . . . . Jim Morgan
JMH . . . . . . . . James M. Hartshorne
JRS . . . . . . . . Jonathan R. Storm
JWK . . . . . . . . James W. Kimball
KDG . . . . . . . Kathleen D. Groschupf
KJC . . . . . . . Kevin J. Colver
KBS . . . . . . . Kendra B. Sewall
LID . . . . . . . . L. Irby Davis
LJP . . . . . . . . Leonard J. Peyton
LP . . . . . . . . . Laura Plitz
LUG . . . . . . . . Lucie R. Guinn
MAM . . . . . . . Mathew D. Medler
MJA . . . . . . . Michael J. Andersen
MFJ . . . . . . . . Martha J. Fischer
MMP . . . . . . . Marian P. McChesney
OHH . . . . . . . . Oliver H. Hewitt
PPK . . . . . . . . Peter Paul Kellogg
RCF . . . . . . . . Robert C. Fautett
RCS . . . . . . . . Robert C. Stein
RDB . . . . . . . . Range D. Bayer
RR . . . . . . . . . Robert Righter
RSL . . . . . . . . Randolph S. Little
SJC . . . . . . . . Susan E. Conners
SGW . . . . . . . . Steven G. Wilson
SRP . . . . . . . . Steven R. Pante
SW . . . . . . . . . Scott Weidensaul
TAS . . . . . . . . Todd A. Sanders
TGS . . . . . . . . Thomas G. Sander
TLG . . . . . . . . Terri L. Gallion
TAP . . . . . . . . Theodore A. Parker, III
WG . . . . . . . . . William Guion
WAK . . . . . . . . Wendy A. Kuntz
WHL . . . . . . . . Willibr. L. Hershberger
WRF . . . . . . . . William R. Fish
WWHG . . . . . William W. H. Gunn
WYB . . . . . . . . Warren Y. Brockelman

Bird Songs of the Pacific Northwest

By Geoffrey A. Keller and Gerrit Vyn
DISC 1

1. Greater White-fronted Goose
   *Anser albifrons*
   • Typical, multi-syllable calls given in flight (Alaska, June, ML 131491, GV).

2. Snow Goose
   *Chen caerulescens*
   • Primary vocalization is a nasal, high-pitched whouk (Manitoba, May, ML 61205, WWHG).
   • Flight calls of a migrant flock (California, January, ML 11093, TGS).

3. Cackling Goose
   *Branta hutchinsii*
   • Flight calls. Calls are variable depending on race but are usually significantly higher in pitch and delivered more rapidly than those of Canada Goose. (California, March, ML 119465, GAK).

4. Canada Goose
   *Branta canadensis*
   • Typical calls by a pair. The male’s call is a honk. The female’s is a shorter, higher-pitched hrink. (Oregon, April, ML 105209, GAK).
   • Flight calls of a flock. Calls vary depending on race but are usually lower and delivered more slowly than Cackling Goose. (Oregon, May, ML 125351, TGS).

5. Brant
   *Branta bernicla*
   • Typical calls include a short crak and a drawn-out crronk. (Alaska, June, ML 132127, GV).
   • Flight calls (Alaska, June, ML 131276, MJA).

6. Trumpeter Swan
   *Cygnus buccinator*
   • Typical honk calls of a mated pair (Oregon, April, ML 133094, GAK).
   • Calls of a winter flock (Montana, March, ML 3750, JMH).
   • Calls given in flight and wing noise (Montana, March, ML 3748, JMH).

7. Tundra Swan
   *Cygnus columbianus*
   • Flight calls of a migrant flock (North Carolina, November, GV).
   • Triumph or greeting calls of a family group (Alaska, June, ML 136376, MJA).

8. Wood Duck
   *Aix sponsa*
   • Male whistle (New Jersey, November, ML 2468, GBR).
   • Female calls including the loud on-EEK call that is often given repeatedly by birds taking flight (West Virginia, October, ML 107495, WLH).

9. Gadwall
   *Anas strepera*
   • Female quack is higher-pitched and more nasal than that of female Mallard (North Dakota, April, ML 43089, WWHG).
   • Male “burb” call (Manitoba, May, ML 43090, WWHG).
   • Female decrescendo call is a short series of quacks descending in pitch and volume (Florida, January, ML 3459, AAA and PPK).
   • Feeding chatter is a soft tickety-tickety-tickety. Redheads are also heard. (New York, February, ML 3462, AAA and DGA).

10. Eurasian Wigeon
    *Anas penelope*
    • Male whistle is a rapidly ascending then descending, wh-EEEE-oh (England, March, ML 3418, MPM).
    • Male call (Scotland, May, ML 103425, DWS).

11. American Wigeon
    *Anas americana*
    • Typical male whistle is a three syllable whoo-WHEW-whoow (Alaska, June, ML 130820, MJA).
    • Repeated male whistles and female calls (Florida, January, ML 2485, AAA and PPK).
    • Call of an alarmed female with a brood (North Dakota, July, ML 39727, CW).
    • Call of female in flight (Saskatchewan, May, ML 62736, WWHG).

12. Mallard
    *Anas platyrhynchos*
    • Female quack is higher-pitched and more nasal than that of female Mallard (North Dakota, April, ML 43089, WWHG).
    • Female call (Alberta, May, ML 61496, WWHG).
    • Female decrescendo call typically has an introductory note followed by a series of brief, evenly spaced notes (Manitoba, May, ML 66880, WWHG).

13. Blue-winged Teal
    *Anas discors*
    • Male whistle call is a high-pitched asheow (Manitoba, May, ML 66879, WWHG).
    • Male whistle calls in flight (Manitoba, May, ML 66878, WWHG).
    • Female quack and male whistle call (Alberta, May, ML 66887, WWHG).
    • Quacks of an alarmed female assembling her brood (Washington, July, ML 3411, CAS).

14. Cinnamon Teal
    *Anas cyanoptera*
    • Male call during courtship display is a breathy, low-pitched, rattling karr-check karr karr karr (Oregon, June, ML 133148, GFB).
    • Female call is a nasal gack (California, June, ML 106764, RSL).

15. Northern Shoveler
    *Anas clypeata*
    • Typical male courtship call is a repeated thik-thuk (Manitoba, May, ML 43121, WWHG).
    • Male call (Saskatchewan, May, ML 43123, WWHG).
    • Female quack (Alberta, June, ML 43124, WWHG).
    • Male calls and wing noise (Manitoba, May, ML 43118, WWHG).
    • Calls and wing noise as a male takes flight (Oregon, June, ML 106818, RSL).
16. Northern Pintail
Anas acuta
- Male and female calls. First heard are the staccato kuk-kuk-kuk calls of a female followed by the loud whistle of the male and female quacks. Soft, wheezy male whistles are present throughout the recording. The male’s loud whistle is similar to the call of the male Green-winged Teal but is lower and has a breathy, hollow quality. (Manitoba, June, ML 43082, WWHG).

17. Green-winged Teal
Anas crecca
- Male whistle is a shrill, piping note that is higher and less hollow than the similar call of the male Northern Pintail (Pennsylvania, December, ML 3405, GBR).
- Female decrescendo call is a rapid series of wheezy, muted notes decreasing in volume that is much weaker than other ducks (Florida, March, ML 3404, RSL).
- Male whistle, chitter and multi-noted whistle during display (Manitoba, May, ML 43112, WWHG).

18. Canvasback
Aythya valisineria
- Typical female call is a low, rasping hrrrr-hrrrr (Manitoba, June, ML 57941, WWHG).
- Male cooing display vocalizations (New York, February, ML 3538, AAA and DGA).

19. Redhead
Aythya americana
- Female calls include a low-pitched, guttural kerr-kerr-kerr (Manitoba, June, ML 59598, WWHG).
- Male display vocalization is a wheezy whee-ough (Manitoba, May, ML 62200, WWHG).

20. Ring-necked Duck
Aythya collaris
- During courtship males produce a variety of soft, piping notes. Females emit a harsh, growling kerp-kerp-kerp-kerp. (Alaska, June, ML 43112, WWHG).

21. Lesser Scap
Aythya affinis
- Female giving a grating harrr-harrr (British Columbia, July, ML 3526, RCS).
- During courtship, females produce a harsh, growling garr-garr-garr... (Alberta, May, ML 42995, WWHG).
- Female giving an abrupt, incessant bark-like call (Alberta, May, ML 42994, WWHG).
- Male call during courtship is a soft, whistled whew (Florida, March, ML 42922, WWHG).

22. Harlequin Duck
Histrionicus histrionicus
- Typical male call is a high, squaky whistle (British Columbia, October, ML 3781, GMB).
- Females produce a coarse ek-ek-ek... (British Columbia, October, ML 59424, GMB and WWHG).

23. Black Scoter
Melanitta nigra
- Typical male call is a series of plaintive whistles (New Jersey, February, ML 130900, GV).
- Male display vocalization is a low, frog-like croak (OHH).

24. Long-tailed Duck
Clangula hyemalis
- Distinctive male call is a yodeling ow ow ow-ow-ow-ow-ow-ow-ow (Alaska, June, ML 43101, WWHG).

25. Bufflehead
Bucephala albeola
- Female alarm call is a grating, guttural krrup (British Columbia, July, ML 3706, RCS).
- Male calls during courtship chase (Ontario, April, ML 131469, GV).

26. Common Goldeneye
Bucephala clangula
- Male display vocalization (Alberta, April, ML 43100, WWHG).
- Female call (Ontario, March, ML 43098, WWHG).
- Wing whistle in flight (Alberta, May, ML 43100, WWHG).

27. Barrow’s Goldeneye
Bucephala islandica
- Female call (British Columbia, July, ML 3711, RCS).
- Wing whistle in flight (Alberta, June, ML 60822, WWHG).

28. Hooded Merganser
Lophodytes cucullatus
- Male call (Maine, May, ML 101078, CDD).
- Wing whistle in flight (Ontario, April, ML 61563, WWHG).

29. Common Merganser
Mergus merganser
- Alarm call (Ontario, June, ML 61558, WWHG).
- Alarm call (Manitoba, June, ML 61560, WWHG).

30. Ruddy Duck
Oxyura jamaicensis
- Male call or “belching” during bubbling courtship display (California, June, ML 45345, RSL and GFB).
- Male display flight includes a popping sound produced by the feet (Manitoba, June, ML 43068, WWHG).

31. Chukar
Alectoris chukar
- Rally call and harsh squeals. The rally call is primarily used by disbanded birds trying to locate one another. (Russia, May, ML 77126, BNV).
- Rally call and harsh squeals (New York, June, ML 2550, ALP).
- Flush and squealing ground alarm calls (Russia, April, ML 76483, BNV).

32. Gray Partridge
Perdix perdix
- Male territorial or “rusty gate” call (England, JK).
- Calls given by a flushed bird (England, JFB).

33. Ring-necked Pheasant
Phasianus colchicus
- Male crowing call is a loud, harsh kook-kook followed by wing drumming (California, June, ML 105675, GAK).
34. Ruffed Grouse
Bonasa umbellus
• Male wing drumming begins slowly, accelerates rapidly and then tapers off in both speed and intensity (Oregon, April, JRS).
• Male wing drumming from Vancouver Island (British Columbia, May, ML 59280, WWHG).
• Alarm call of female with chicks (Alberta, July, ML 52281, WWHG).
• Alarm call of female and chick calls (Minnesota, June, ML 2381, RCS).

35. Greater Sage-Grouse
Centrocercus urophasianus
• Sounds and calls produced during the male’s strutting display (Oregon, March, ML 111166, TGS).

36. Spruce Grouse
Falcipennis canadensis
• Female alarm call is a long series of clucking notes (Maine, June, ML 36985, CDD).

37. Rock Ptarmigan
Lagopus muta
• Guttural vocalizations by male displaying to female (Alaska, June, ML 50022, LJF).
• Vocalizations of two males dueling on breeding grounds (Northwest Territories, July, ML 62348, WWHG).
• Male rattle call (Alaska, June, ML 50025, LJF).

38. White-tailed Ptarmigan
Lagopus leucura
• Male chatter, clucks, and flight scream (Colorado, June, ML 105283, GAK).

39. Dusky Grouse
Dendragapus obscurus
• Male song or hoot is very low-pitched and usually delivered in a series of five. Song does not travel far and can usually only be detected at short distances. (British Columbia, June, ML 59201, WWHG).

40. Sooty Grouse
Dendragapus fuliginosus
• Male song or hoot is slightly higher than Dusky Grouse and is usually given in a series of six. This song can be heard up to a half mile away unlike the Dusky Grouse’s song which can usually only be detected at short distances. (California, June, ML 80333, RSL).

41. Sharp-tailed Grouse
Tympanuchus phasianellus
• Vocalizations and mate-like foot stamping produced by males displaying at a lek (Idaho, April, ML 45990, BMW).
• Other male calls at lek include an owl-like oh-OOO and chuckling buckle-up (Idaho, April, ML 45990, BMW).

42. Wild Turkey
Meleagris gallopavo
• The male gobble is used to attract mates and repel rival males (Hawaii, April, ML 129251, GFB).
• Calls including purrs and yelps (Nebraska, April, ML 50137, GAK).

43. Mountain Quail
Oreortyx pictus
• The male advertisement call or crow is an explosive, two-noted quee-ark (Oregon, May, ML 42202, GAK).
• Alarm call is a rolling, creaking cre-ark (Michigan, May, ML 125339, TGS).

44. Northern Bobwhite
Colinus virginianus
• Male advertisement call is a repeated cu-CA-cu. It is used to attract the female (North Dakota, June, ML 4237, GAK).
• Assembly call (California, April, ML 11018, TGS).

45. Northern Bobwhite
Colinus virginianus
• Male advertisement call is a repeated cu-CA-cu. It is used to attract the female (North Dakota, June, ML 4237, GAK).
• Assembly call (California, April, ML 11018, TGS).
• Male aggressive calls are given during disputes over dominance (California, May, ML 56880, GAK).
• Alarm call is a repeated pit-pit-pit (California, May, ML 50185, GAK).

46. Red-throated Loon
Gavia stellata
• Wail call (Alaska, June, ML 131243, MJA).
• Quack call is a fat-carrying kark (Alaska, June, CV).

47. Common Loon
Gavia immer
• Given only by males, the yodel is this loon’s loudest vocalization and is used to announce a territory (Michigan, May, ML 72725, DCE).
• Tremolo calls by a mated pair (New York, July, ML 53188, SRP).
• Wail calls given by a mated pair resemble the howl of a wolf (New York, May, ML 107963, SRP).

• Male alarm call is similar in tonal quality to crowing, but emphasis is on the second syllable (North Dakota, June, ML 4237, GAK).
• Male alarm call is similar in tonal quality to crowing, but emphasis is on the second syllable (North Dakota, June, ML 4237, GAK).
• Wail call (New York, November, ML 914, PPK).
• Hoot calls are short, low frequency notes (Michigan, May, ML 72737, DCE).

48. Pied-billed Grebe
Podilymbus podiceps
• Song announces territory and is used in mate communication (South Carolina, June, ML 10421, GAK).
• Greeting call is a high, chuckling rattle (South Carolina, March, ML 102192, DWS).

49. Red-necked Grebe
Podiceps grisegena
• Whinny-braying duets are performed by pairs on the breeding grounds (Alaska, June, ML 132192, GV).

50. Eared Grebe
Podiceps nigricollis
• Advertisement call of male is a repeated poo-EE-chk (Oregon, June, ML 61245, WWHG).
• Advertisement call of female is similar, but higher-pitched and shorter in duration (Oregon, June, ML 133198, GFB).

51. Western Grebe
Aechmophorus occidentalis
• Advertisement call of male is a harsh, rolling creec- CreENT (Manitoba, June, ML 61245, WWHG).

52. Clark’s Grebe
Aechmophorus clarkii
• Advertisement call is composed of one long note in contrast to the Western Grebe’s two-parted note (Utah, April, KJC).

53. Fork-tailed Storm-Petrel
Oceanodroma furcata
• Typical nocturnal call given at breeding colonies consists of 3 to 5 raspy, descending notes (Alaska, June, ML 53166, SRP).

54. Leach’s Storm-Petrel
Oceanodroma leucorhoa
• Chatter call and purring call given inside a nest burrow at night (Alaska, June, ML 53166, SRP).

55. American White Pelican
Pelecanus erythrorhynchos
• Nestling begging calls (Montana, July, ML 2005, RSL and WYB).

56. Brandt’s Cormorant
Phalacrocorax penicillatus
• Typical call of adult is a sharp show or show (West Virginia, July, ML 107436, WLH).

57. Double-crested Cormorant
Phalacrocorax auritus
• Various calls during aggressive encounter with another heron (Oregon, April, ML 31453, RDB).

58. Pelagic Cormorant
Phalacrocorax pelagicus
• Courtship calls at nest and departure call (Alaska, June, GV).

59. American Bittern
Botaurus lentiginosus
• Male song is a deep, gulping pump-ev-lunk (New York, May, ML 53166, SRP).

60. Least Bittern
Ixobrychus exilis
• Male song is a hollow, wooden series of chuckling notes (California, June, GAK).

61. Great Blue Heron
Ardea herodias
• Call is a deep, trumpeting frawnk (Washington, July, ML 2034, CAS).

62. Great Egret
Ardea alba
• Call of adult is a sharp show or show (West Virginia, July, ML 107436, WLH).

63. Snowy Egret
Egretta thula
• Typical call is a deep, angry squawk (Florida, March, ML 59444, WWHG).

64. Green Heron
Butorides virescens
• Advertising call of male is an explosive show-ev (Florida, May, ML 105717, GAK).

65. Black-crowned Night-Heron
Nycticorax nycticorax
• Typical call when flushed is a nasal, low-pitched graa, graa, graa… (Oregon, July, ML 45304, DSH).

66. White-faced Ibis
Plegadis chihi
• When alarmed utters a repeated kuk-kuk-kuk… call (Florida, March, ML 69283, GFB).

67. Turkey Vulture
Cathartes aura
• Hissing calls given during aggressive interactions at a carcass (Arizona, April, GC).
68. Osprey  
*Pandion haliaetus*  
- Typical call is a series of slow, whistled notes dropping rapidly in pitch like *tiioooop, tiioooop*… (Florida, May, ML 105731, GAK).  
- Alarm call is a long series of brief, whistled notes (California, June, ML 106651, RSL).  
- Male screaming call is used during aerial courtship displays (Ontario, May, ML 61666, WWHG).

69. White-tailed Kite  
*Elanus leucurus*  
- Various calls including the Osprey-like *kwee* call, the twirler, and the harsh, grating *grr-kkk* call (California, May, ML 119488, GAK).  
- *Ee-grack* call is a high-pitched, prolonged scream (British Columbia, June, [?]).

70. Bald Eagle  
*Haliaeetus leucocephalus*  
- Calls include the charter, a short sequence of high-pitched notes descending in pitch like *kee-kee-kee*… and the peal call, a high-pitched, prolonged scream (British Columbia, June, [?]).

71. Northern Harrier  
*Circus cyaneus*  
- Female food call is a piercing, descending scream like *eyah, eyah, eyah*… (Maine, May, ML 110167, CDD).  
- Male alarm call near a nest is sequence of *keb-keb-keb*… notes (Alaska, June, ML 130867, MJA).  
- Male and female alarm calls near a nest. Female alarm call is a higher-pitched *ke-ke-ke*… (Alaska, June, ML 130867, MJA).  
- Male call (California, April, ML 119477, GAK).

DISC 1

68. Osprey  
*Pandion haliaetus*  
- Typical call is a series of slow, whistled notes dropping rapidly in pitch like *tiioooop, tiioooop*… (Florida, May, ML 105731, GAK).  
- Alarm call is a long series of brief, whistled notes (California, June, ML 106651, RSL).  
- Male screaming call is used during aerial courtship displays (Ontario, May, ML 61666, WWHG).

69. White-tailed Kite  
*Elanus leucurus*  
- Various calls including the Osprey-like *kwee* call, the twirler, and the harsh, grating *grr-kkk* call (California, May, ML 119488, GAK).  
- *Ee-grack* call is a high-pitched, prolonged scream (British Columbia, June, [?]).

70. Bald Eagle  
*Haliaeetus leucocephalus*  
- Calls include the charter, a short sequence of high-pitched notes descending in pitch like *kee-kee-kee*… and the peal call, a high-pitched, prolonged scream (British Columbia, June, [?]).

DISC 1

72. Sharp-shinned Hawk  
*Accipiter striatus*  
- Alarm call is a long series of *kwee-kwee-kwee*… notes, higher and thinner than those of Cooper’s Hawk (New York, May, GFB).  
- Adult squawking call is high-pitched, plaintive *kree-kree* (Wisconsin, June, ML 4155, RCS).  
- Juvenile solicitation call is a squawking *kwee-kwee* (Ontario, June, ML 59298, WWHG).

73. Cooper’s Hawk  
*Accipiter cooperii*  
- Alarm call of adult is lower-pitched, slightly nasal and not as shrill as the call of Sharp-shinned Hawk (Arizona, May, ML 109074, GAK).  
- Juvenile solicitation call is a squawling *spEEEEEEn* (Utah, July, ML 51161, KJC).

74. Northern Goshawk  
*Accipiter gentilis*  
- Alarm call is louder and more piercing than the alarm calls of other accipiters (Oregon, May, ML 101169, GAK).  
- Wail call is often used in mate contact (Alaska, June, ML 132189, GV).  
- Juvenile wail or solicitation call (Arizona, July, ML 61215, WWHG).

75. Red-shouldered Hawk  
*Buteo lineatus*  
- Typical territorial vocalizations include a two-parted, peevish *KEE-yuur* and more attenuated, three-parted *KEEEE-EEE-EEE* (California, March, ML 111083, TGS).

76. Swainson’s Hawk  
*Buteo swainsoni*  
- Male alarm call is high-pitched *KEE-oooo* trailing off in energy near the end (Montana, July, ML 4313, RSL and WYB).  
- Alarm calls by a pair. The female’s call is lower pitched and shorter. (Montana, July, ML 4313, RSL and WYB).  
- High intensity alarm call (Washington, July, ML 50539, DSH).

77. Red-tailed Hawk  
*Buteo jamaicensis*  
- Scream call is a hoarse *KEEE-arrrr* that descends in pitch (Washington, May, ML 47538, DSH).  
- Juvenile solicitation call has an Osprey-like quality. Often two-parted with second note higher in pitch. (Utah, July, ML 51143, KJC).

78. Ferruginous Hawk  
*Buteo regalis*  
- Alarm call is long sequence of raspy *kree-kree-kree* notes (Oregon, June, ML 133146, DSH).

79. Golden Eagle  
*Aquila chrysaetos*  
- Call of male is in a repeated, five note pattern of *click-click, click-click-click*… notes. Call can be closely imitated by tapping two small stones together. (Oregon, May, ML 125394, TGS).

80. American Kestrel  
*Falco sparverius*  
- *Kee* or *killy* call is a rapid series of high-pitched notes (Oregon, June, ML 133146, DSH).

81. Merlin  
*Falco columbarius*  
- Call is rapid sequence of strident *ki-ki-ki-ki* notes slowing near the end (New Jersey, September, ML 4408, GBR).
- Call (Manitoba, June, ML 105837, GAK).

82. Peregrine Falcon  
*Falco peregrinus*  
- Female alarm call is huskier, lower-pitched, and more monotone than that of male (Alaska, June, ML 132160, GV).  
- Male alarm call (Alaska, June, ML 132160, GV).

83. Prairie Falcon  
*Falco mexicanus*  
- Alarm call given during courtship (Oregon, May, ML 107609, DSH).

84. Yellow Rail  
*Coturnicops noveboracensis*  
- Call of male is in a repeated, five note pattern of *click-click, click-click-click*… notes. Call can be closely imitated by tapping two small stones together. (Oregon, May, ML 125394, TGS).
1. Virginia Rail
*Rallus limicola*
- Grant call is an explosive sequence of pig-like notes that lose energy near the end. Pairs usually produce it in duet. (Oregon, October, ML 105502, GAK).
- Unpaired females produce a sharp, metallic sequence like che-che-che-cheEEAR early in the breeding season (Oregon, June, ML 129004, MJA).
- Male breeding call is a mechanical series of ka-DIK, ka-DIK, ka-DIK notes (California, June, ML 45631, RSL and GFB).
- Kiu calls from a pair are sharp and piercing (Manitoba, June, ML 62628, WWYG).
- Hard ik-ik calls (Oregon, October, ML 105500, GAK).

2. Sora
*Porzana carolina*
- Whinny call is an explosive sequence of pig-like notes that lose energy near the end. (Oregon, May, ML 120236, GAK).
- A plaintive, whistled kw-WEE call (Oregon, May, ML 120236, GAK).
- Kerp call (Alberta, August, ML 64216, WWHG).
- A sharp quick-quick-quick-quick call may be given if birds are disturbed at a nest (Massachusetts, August, ML 2864, CAS).
- A soft tug and coot-like call of an adult with a chick (Manitoba, July, ML 26429, SEC).

3. American Coot
*Fulica americana*
- Recognition call of male is a high, clear puh-puh (California, June, GFB).
- Recognition call of female is a low, nasal puh-puh (Oregon, June, ML 105695, GAK).
- Series of tuhk-tuhk calls given by female (Florida, January, ML 2807, PPK and BJK).
- Perturbation call is a plaintive puhk-cowah (New York, March, ML 2810, AAA and DGA).
- Second example of perturbation call (Manitoba, June, ML 43002, WWHG).
- Third example of perturbation calls by pair (Florida, December, ML 2805, AAA and DGA).
- Puhek-uh given as a warning call (Manitoba, May, ML 43001, WWHG).
- Second example of warning call (New York, March, ML 2810, AAA and DGA).
- Alarm call series (Manitoba, May, ML 43003, WWHG).
- Chick calls and puhk calls of an adult (Alberta, June, ML 43004, WWHG).

4. Sandhill Crane
*Grus canadensis*
- Loud rattle calls (Nevada, July, ML 110882, TGS).
- Pair duet includes a trumpeting rattle by the male and a staccato tuck-a-tuck-a-tuck-a by the female (California, May, ML 120249, GAK).

5. Black-bellied Plover
*Pluvialis squatarolai*
- Call is a melancholy whee-er-ee-oo, with the middle note dropping in pitch (Ontario, September, ML 43029, WWHG).

6. American Golden-Plover
*Pluvialis dominica*
- Call is a high, urgent klee-seep with the second note rising in pitch (Alaska, June, ML 136416, MJA).

7. Pacific Golden-Plover
*Pluvialis fulva*
- Call is a two-parted gur-ut of a subtly three-parted kWIdl, with the middle note slurred upward. Call more reminiscent of Semipalmated Plover than American Golden-Plover. (Alaska, September, BJM).

8. Snowy Plover
*Charadrius alexandrinus*
- One call is a repeated, rolling purrrrt and another call is a low whistle with rising inflection like turwheet (Oregon, July, ML 105498, GAK).

9. Semipalmated Plover
*Charadrius semipalmatus*
- Call is an emphatic, whistled tsee-seep (Alaska, July, GV).

10. Killdeer
*Charadrius vociferus*
- Killdeer call given in flight (Virginia, May, ML 110228, WILH).
- Alarm calls include a single, plaintive deey call and a higher intensity series, DEE-deey-deey-deey with the first note rising in pitch (Oregon, June, ML 129054, MJA).

11. Black Oystercatcher
*Haematopous bachmani*
- Call of adult is a loud, piercing kee (British Columbia, May, ML 2918, AAA).
- Keé calls from pair of birds (British Columbia, May, ML 2918, AAA).
- Calls given by pair during the territorial piping display (British Columbia, May, ML 2918, AAA).
- Whee call (British Columbia, August, ML 23536, GMB).
- Whee call grading into piping display (British Columbia, May, ML 2920, GMB).

12. Black-necked Stilt
*Himantopus mexicanus*
- Alarm call is an incessant sep-sep-sep… (Oregon, June, ML 130731, MJA).
- Another alarm call is a rasping errerrrr, errerrrr… (California, May, ML 50190, GAK).
- Calls of a flushed bird (Florida, March, ML 135380, MJA).

13. American Avocet
*Recurvirostra americana*
- Alarm call of adult is a ringing kleer (Oregon, June, ML 130732, DSH).
- Kleer alarm call given in flight (California, June, ML 44645, EFJ).
• Calls given during tightrope display (Oregon, June, ML 130733, DSH).
• Calls of two pairs during the circle display (Alberta, May, ML 57185, WWHG).

14. Spotted Sandpiper
(Actitis macularius)
• One song type is a series of twee-twee-twee notes given on a single pitch (Alaska, June, ML 132195, GV).
• Call is a ringing peet-weet (Alaska, June, ML 132195, GV).
• Alarm call of an adult with a chick is a repeated pink (Alaska, June, ML 132195, GV).

15. Solitary Sandpiper
(Tringa solitaria)
• Calls include a whistled peet-WHEET, often given in flight, a sharp, metallic pik and a series of rising notes (Alberta, May, ML 43065, WWHG).

16. Wandering Tattler
(Tringa incana)
• Given singly or in series the typical call is a piping kree or tweet-tweet-tweet… (Alaska, May, ML 66874, WWHG).

17. Greater Yellowlegs
(Tringa melanoleuca)
• Call is a ringing ten-ten-ten usually repeated three of four times (Alberta, May, ML 63712, WWHG).

18. Willet
(Tringa semipalmata)
• Flight song is a ringing pill-will-willet (Oregon, June, ML 105697, GAK).
• A two-parted ka-LUT, ka-LUT given in alarm (Oregon, June, ML 129053, MJA).
• Two call types given in flight (Oregon, June, ML 129049, MJA).
• Interaction among three birds including copulation (California, June, ML 43310, RSL).

19. Lesser Yellowlegs
(Tringa flavipes)
• Typical call is a ringing single or double-noted tu (Massachusetts, August, ML 3229, CAS).
• Tu notes given in a continuous sequence (South Dakota, August, ML 3231, CAS).

20. Upland Sandpiper
(Batrachia longicauda)
• Typical call is a rapid, bubbly quip-ip-ip-ip-ip-ip-ip. Another vocalization, often given in display flight, is a prolonged howling whistle that rises then falls in pitch. (North Dakota, June, ML 4202, GAK).

21. Whimbrel
(Numerus phaeopus)
• Typical call during migration is a series of piping whistled notes (Alaska, June, ML 132116, GV).

22. Long-billed Curlew
(Numerus americanus)
• Flight display (Oregon, June, ML 105700, GAK).

28. Western Sandpiper
(Calidris mauri)
• Typical call is a weak, harsh sheep (Washington, July, ML 3095, CAS).

29. Least Sandpiper
(Calidris minutilla)
• Call is a high, trilled, rolling preet (Alaska, July, GV).

30. Baird’s Sandpiper
(Calidris bairdii)
• Call given in flight is a slightly trilled preet. Alarm call is also heard. (Alaska, July, GV).

31. Pectoral Sandpiper
(Calidris melanotos)
• Call given in flight is a rich, trilled chirrup (Alaska, July, GV).

32. Sharp-tailed Sandpiper
(Calidris acuminata)
• Call given in flight is a soft pweet (Alaska, September, BJM).

33. Rock Sandpiper
(Calidris ptilocnemis)
• Call is an abrupt, scratchy cheet (Alaska, June, ML 63775, WWHG).

23. Marbled Godwit
(Limosa fedoa)
• Calls of a wintering flock (California, April, ML 126433, TGS).

24. Ruddy Turnstone
(Arenaria interpres)
• Rattle calls (Alaska, June, ML 131275, MJA).
• Alarm call is a sharp whistled aw (Alaska, June, ML 131275, MJA).

25. Black Turnstone
(Arenaria melanocela)
• Calls of a wintering flock (British Columbia, September, ML 67768, GMB).

26. Sanderling
(Calidris alba)
• Conversational twittering and wick calls (Texas, April, ML 87474, MDM).

27. Semipalmated Sandpiper
(Calidris pusilla)
• A husky cheep given in flight and an alarm trill (Alaska, July, GV).
• Calls (Massachusetts, August, ML 3116, CAS).
• Calls (New York, September, ML 3121, RSL).
• Interaction calls of a flock (Massachusetts, August, ML 63779, WWHG).

28. Western Sandpiper
(Calidris mauri)
• Typical call is a weak, harsh sheep (Washington, July, ML 3095, CAS).
• A variety of calls and song elements are often given by migrating birds around the breeding season (Alaska, June, ML 136333, MJA).

30. Baird’s Sandpiper
(Calidris bairdii)
• Call given in flight is a slightly trilled preet. Alarm call is also heard. (Alaska, July, GV).

31. Pectoral Sandpiper
(Calidris melanotos)
• Call given in flight is a rich, trilled chirrup (Alaska, July, GV).

32. Sharp-tailed Sandpiper
(Calidris acuminata)
• Call given in flight is a soft pweet (Alaska, September, BJM).

33. Rock Sandpiper
(Calidris ptilocnemis)
• Call is an abrupt, scratchy cheet (Alaska, June, ML 63775, WWHG).

• Conversational calls of a migrant flock (Alaska, September, BJM).
34. Dunlin
*Calidris alpina*
- Call given in flight is a raspy, trilled *treep* (Alaska, July, GV).
- Chatter of a migrant flock (British Columbia, October, ML 59435, WWHG).

35. Short-billed Dowitcher
*Limnodromus griseus*
- Flight call is a rapid burst of *tu-tu-tu* notes (Washington, July, ML 3161, CAS).

36. Long-billed Dowitcher
*Limnodromus scolopaceus*
- Call is a sharp, strident *keek* (British Columbia, October, ML 59417, WWHG).

37. Wilson's Snipe
*Gallinago delicata*
- The winnow, produced by the tail feathers in a diving display flight, is a rapid series of *bu-bu-bu-bu* sounds that increase then decrease in volume (New York, May, ML 94350, WLH).
- Calls during the breeding season include long series of *kuk* notes (Alaska, June, ML 125349, TGS).
- When flushed, a raspy *scape* is given (Arkansas, March, ML 128920, GV).

38. Wilson's Phalarope
*Phalaropus tricolor*
- Call is a sharp, grating *kew* (Oregon, July, ML 105882, RCF).

39. Red-necked Phalarope
*Phalaropus lobatus*
- Call given in flight is a hard, flat *kett* (Alaska, June, ML 130956, GV).

40. Red Phalarope
*Phalaropus fulicarius*
- Call given in flight is a sharp, high-pitched *pit* (Alaska, June, ML 131272, MJA).

41. Franklin's Gull
*Larus pipixcan*
- Calls near colony include *keow* calls and long call (Oregon, June, GF).
- Alarm call is a series of staccato *kuk-kuk-kuk* notes (Oregon, June, GF).

42. Mew Gull
*Larus canus*
- Calls consist of a variety of strident, nasal screams and squeals (Alaska, June, ML 132251, MJA).

43. Ring-billed Gull
*Larus delawarensis*
- Calls at colony include *KEEEEEEnah* and long series of *kabakabaka* alarm calls (Montana, July, ML 3334, RSL).

44. California Gull
*Larus californius*
- Vocalizations at a colony (California, June, ML 130705, DSH).
- Long call (California, June, ML 130705, DSH).

45. Western Gull
*Larus occidentalis*
- Long call (Oregon, May, ML 82083, GF).
- Calls at a nesting colony (California, November, ML 110906, TGS).
- Plaintive *yow* call given in flight (Oregon, May, ML 106653, RSL).

46. Glaucous-winged Gull
*Larus glaucescens*
- Various calls given in flight including an anxiety call, a plaintive *keow*, and a rapidly repeated *ka-ka-ka-ka* given in alarm (Washington, May, ML 3350, AAA).
- Long call (Washington, May, ML 3350, AAA).
- Long call and other calls (Washington, August, ML 3348, ESB).

47. Caspian Tern
*Hydroprogne caspia*
- Typical call is a harsh, *kik* (Quebec, June, ML 3284, AA and PPK).
- Juvenile solicitation call is a wheezy, thin whistle (Florida, April, ML 3286, RCS).

48. Black Tern
*Chlidonias niger*
- Call is a sharp, grating *kyew* (Oregon, June, ML 105691, GAK).
- Another call is a high-pitched *kik* at *keek* (Oregon, June, ML 129045, MJA).

49. Common Tern
*Sterna hirundo*
- Most common call is a harsh, descending *kee-arr*. A high sharp *kip* is also given. (South Dakota, August, ML 3827, CAS).
- Mobbing calls (Montana, July, ML 3826, RSL).

50. Forster's Tern
*Sterna forsteri*
- Typical call is a complaining, raspy, down-slawered *kee* (Oregon, June, ML 129050, MJA).
- Another call is a relatively soft and non-abrasive *ke-ke-ke* (Oregon, June, ML 129034, MJA).
- An even more complaining, long and drawn out *zaaanaa* (Oregon, June, ML 129046, MJA).

51. Elegant Tern
*Thalasseus elegans*
- Call is a grating, nasal *karreeek* (Peru, July, ML 29394, TAP).

52. Common Murre
*Uria aalge*
- Calls of adults at a breeding colony (Alaska, July, GV).
- Calls of an adult and chick at sea (British Columbia, August, ML 110982, TGS).

53. Pigeon Guillemot
*Cepphus columba*
- Duet trill (Oregon, June, ML 109262, GAK).
- Complex vocalization of calls and trills (Oregon, June, ML 109262, GAK).
- Alarm scream (Washington, June, ML 3855, RCS).

54. Marbled Murrelet
*Brachyramphus marmoratus*
- Most common vocalization at nesting sites and at sea is the piercing *keer* call (California, July, ML 110975, TGS).
55. Ancient Murrelet
*Synthliboramphus antiquus*
• Churr call is given both at nesting sites and at sea (British Columbia, May, HLM).

56. Cassin’s Auklet
*Ptychoramphus aleuticus*
• Calls of chick in burrow (California, August, ML 3864, AT).

57. Rhinoceros Auklet
*Cerorhinca monocerata*
• Repeated Mooing calls interspersed with chuck sounds (California, July, ML 110904, TGS).
• Nest call is a long sequence of Kee-ker-Chirrup calls (California, July, ML 110974, TGS).

58. Tufted Puffin
*Fratercula cirrhata*
• Warning or alarm call (Washington, July, ML 50547, GAK).

59. Rock Pigeon
*Columba livia*
• Primary song is variable, low, muffled cooing of repeated two-hoo-two notes (New York, July, ML 69278, ALP).
• Nest call is a long sequence of oh-on-oh notes that increase then decrease in intensity (New York, July, ML 69278, ALP).

60. Band-tailed Pigeon
*Patagioenas fasciata*
• Advertising song begins with a series of low, cooing wooOoo notes then changes into a series of coarse notOOon notes (Oregon, July, ML 107666, TAS).
• Grunt calls (Oregon, July, ML 107638, TAS).
• Grunt calls and wing claps (Oregon, July, ML 107667, TAS).
• Wing claps (Oregon, July, ML 107665, TAS).

61. Eurasian Collared-Dove
*Streptopelia decaocto*
• Song is a repeated, three-syllable coo-coo-coo (Netherlands, June, ML 26380, ABvdB).

62. Mourning Dove
*Zenaida macroura*
• Song is a sorrowful coo-WAH-who-who-who (California, June, ML 22930, WRF).

63. Barn Owl
*Tyto alba*
• Territorial scream, most likely produced by a male, is a drawn-out hissing screech rendered as harr-r-r-v-e-r-v-ick (California, May, ML 50147, GAK).
• Territorial scream, most likely produced by a female, is rendered as threeeee (Washington, July, ML 50540, DSH).
• Warning or alarm call (Washington, July, ML 50541, DSH).
• Kleak-kleak call is a rapid series of staccato, metallic notes (California, June, ML 8322, RCS).

64. Flammulated Owl
*Otus flammeolus*
• Male advertising song is a sequence of low-pitched hollow hoots (Oregon, May, ML 47540, DSH).
• Bark call of alarmed female (Oregon, July, ML 50536, DSH).

65. Western Screech-Owl
*Megascops kennicottii*
• Double trill song followed by bouncing ball song (Washington, December, ML 47092, DSH).
• Agitated bark call and bill claps (Washington, November, ML 63001, DSH).
• Te-te-do call progressing into agitated double trill (Oregon, September, ML 50549, DSH).

66. Great Horned Owl
*Bubo virginianus*
• Double trill hoot (Washington, November, ML 63001, DSH).
• Double trill (Oregon, September, ML 50549, DSH).
• Female two-phrase hoot is typically rendered as COOOO-er (California, April, ML 119481, CAS).
• Alarm chatter (California, May, ML 118856, GAK).

67. Northern Pygmy-Owl
*Glaucidium gnoma*
• Male primary advertising song of the coastal subspecies is an evenly spaced, long sequence of hollow toot notes given approximately two seconds apart (Oregon, June, ML 105504, GAK).

68. Burrowing Owl
*Athene cunicularia*
• Primary song of male is an emphatic COO-COOOO-o (California, April, ML 119481, GAK).
• Alarm chatter (California, May, ML 118856, GAK).

69. Spotted Owl
*Strix occidentalis*
• Male advertisement hooting, or four note location call, sounds like hoo….bul-bul….boo, with essentially no pause between the middle two hoots (Oregon, May, ML 125367, TGS).
• Female advertisement hooting is similar to the males but is higher in pitch (Oregon, June, ML 125377, TGS).
• Male series location call (Oregon, May, ML 125369, TGS).
• Female series location call (Oregon, June, ML 125377, TGS).
• Contact whistle (Oregon, May, ML 125361, TGS).
• Female bark series (Oregon, May, ML 125373, TGS).
• Fleeting begging calls are raspy with rising inflection (New Mexico, June, WAK).

70. Barred Owl
*Strix varia*
• Female two-phrase hoot is typically rendered as Who cooks for you? Who cooks for you-all? Second example in this recording.
is an atypical three-phase hoot. (Oregon, May, ML 125364, TGS).

- Female ascending hoot (Oregon, May, ML 125365, TGS).
- Male Hon-ow call (Arkansas, March, ML 128927, GV).
- Pair caterwauling duet is a raucous jumble of hoots, cackles, and quacks (Washington, May, ML 63003, DSH).
- The female solicitation call is a drawn-out, ascending whistle (Arkansas, March, ML 128902, GV).
- Fledgling begging call is a long, raspy, ascending note (Maryland, June, ML 79462, WLH).

71. Great Grey Owl Strix nebulosa

- Male territorial hoot (Alaska, April, ML 49945, LJP).
- Defensive or warning hooting (Oregon, March, ML 48904, DSH).
- Defensive hooting of a highly agitated female (Oregon, March, ML 48904, DSH).
- Female contact call or whoop (Oregon, May, ML 47532, DSH).
- Fledgling begging call is a loud, strident sher-rick (Oregon, July, ML 42253, GAK).

72. Long-eared Owl Asio otus

- Male advertising song on hunt (Washington, April, ML 49907, DSH).
- Female nest call with male advertising hunt in the background (Washington, March, ML 48901, DSH).
- Male wing clap and female nest call (Washington, May, ML 47531, DSH).
- Male barking alarm call (Oregon, June, ML 107553, DSH).
- Fledgling begging call (Vermont, June, ML 126495, DMDM).

73. Short-eared Owl Asio flammeus

- Bark calls given in alarm at a nest include a scratchy kwe-ow, and a barking kow (Manitoba, June, ML 22671, AAA and PPK).
- Bark call from a perched bird (New York, February, ML 128922, GV).
- Aggressive bark call in flight (New York, February, ML 128922, GV).
- Rapid sequence of bark calls in flight (Oregon, July, ML 45302, DSH).
- Hooting song of male followed by wing claps during display flight (Alaska, May, ML 50052, BJM).

74. Boreal Owl Aegolius funereus

- Male primary song (Alaska, April, ML 49450, LJP).
- Howl or screech (Minnesota, June, SGW).
- Mew-a call used to announce a food delivery to the nest (Minnesota, June, SGW).
- Nestling begging call (Alaska, June, ML 130989, GV).

75. Northern Saw-whet Owl Aegolius acadicus

- Male advertising song is a long, steady stream of high-pitched, evenly spaced toots given on a single pitch (Oregon, May, ML 42199, GAK).
- Whine-like call (Utah, February, KJC).
- Kieow call (Pennsylvania, October, SW).
- Whine call is a gradually ascending weeeeeeee (Pennsylvania, October, SW).

76. Common Nighthawk Chordeiles minor

- Typical call given by both sexes is a buzzy, nasal peent. Males also produce a non-vocal sound referred to as a boom. This sound is produced at the end of a steep dive as air rushes through the wings. (Oregon, June, ML 130729, DSH).

77. Common Poorwill Phalaenoptilus nuttallii

- Song of the male is a repeated, soft, mellow poor-will or poor-will-up (Arizona, June, ML 40634, GAK).
- Wing clap and call (Arizona, March, GC).

78. Black Swift Cypseloides niger

- Call is a flat pok, often given in a twittering series (Colorado, June, ML 53196, RR).

79. Vaux's Swift Chaetura vauxi

- Birds in flight produce a high-pitched, insect-like twittering (Oregon, July, ML 63130, DSH).
- Another flight call is a very high, thin zeet note (Oregon, July, ML 63125, DSH).

80. White-throated Swift Aeronautes saxatalis

- Calls given in flight are a steady stream of scratchy ki-ki-ki-ki-ki-ki notes as well as longer, drawn-out screeee notes that are equally shrill and scraping (Arizona, JMI).

81. Black-chinned Hummingbird Archilochus alexandri

- Male flight display includes a rhythmic pulsating hum and scratchy scree (Arizona, May, ML 109095, GAK).
- Calls include chips and high-pitched seep notes (Arizona, May, ML 109095, GAK).

82. Anna's Hummingbird Calypte anna

- Song is an assemblage of very high, thin, scratchy notes (California, March, ML 111066, TGS).
- Second example of song (California, June, ML 119442, TLG and GAK).
- Harsh buzzy chatter is given during aggressive interactions with other hummingbirds (California, June, ML 119442, TLG and GAK).
- Flight note is a relatively low-pitched, rolling brrr (California, June, ML 119442, TLG and GAK).
- Chip calls given in flight (California, June, ML 119442, TLG and GAK).
- Chip calls given by a perched bird (California, March, ML 6121, DGA).
83. Calliope Hummingbird
*Stellula calliope*
- Male flight display includes bumblebee-like wing sounds. (California, June, GFB).
- Chip calls (California, June, GFB).

84. Rufous Hummingbird
*Selasphorus rufus*
- Chase call is a buzzy zee, zee, zee-chuppy-chuppy-chup call. Chip notes are also heard. (Oregon, March, ML 50107, GAK).
- Aerial display with wing buzz is a stuttering dit-di-di-deeer (Oregon, March, ML 109124, GAK).

85. Allen's Hummingbird
*Selasphorus sasin*
- Chase call is a buzzy zee-chuppy-chuppy-chup very similar to that of the Rufous Hummingbird. Wing buzz and chip notes are also heard. (California, June, ML 6180, CAS).
- Aerial flight display (California, March, ML 110935, TGS).

86. Belted Kingfisher
*Megaceryle alcyon*
- Calls include a variety of dry rattles (Indiana, May, ML 105632, GAK).

87. Lewis's Woodpecker
*Melanerpes lewis*
- Calls, given primarily during the breeding season, include a harsh, descending churr by the male and squeaky, scratchy notes and chatters by both sexes (Oregon, May, ML 50140, GAK).
- Male alarm call is brief, squeaky yick (California, June, ML 107047, RSL).
- Make churr call is the primary courtship signal (Oregon, May, ML 40674, GAK).
- Churr and alarm calls (California, June, ML 80346, RSL).
- Drum is relatively weak and moderate in speed (Oregon, May, ML 63087, DSH).

88. Acorn Woodpecker
*Melanerpes formicivorus*
- Most conspicuous call heard year-round in a variety of social contexts is a raucous, laughing series of waak notes. A rapid, nasal chatter is also heard. (California, May, ML 56900, GAK).
- WAak calls of a large social group and drum. Drum is typically a steady series of evenly spaced taps. (California, April, ML 110973, TGS).
- Single call notes (Arizona, May, ML 20847, RSL).
- Karrit-cut call (Texas, May, ML 62750, WWHG).
- Calls include a rising, nasal quay (Arizona, May, ML 45358, GAK).

1. Williamson's Sapsucker
*Sphyrapicus thyroideus*
- The squeal call is a territorial signal used by both sexes during the breeding season. It consists of several harsh, descending chee-ar notes. (Oregon, April, ML 63063, DSH).
- Ca-bau call is an atonal, raspy, two syllable call given during territorial interaction or as alarm (Oregon, May, ML 111169, TGS).
- Call of female (Oregon, July, ML 45299, DSH).
- Chatter call is a long sequence of ch-ch-ch-ch... notes (Oregon, May, ML 111169, TGS).
- Drum begins with a fast, steady roll, followed by single, irregularly spaced taps. Typically drum is significantly slower and more deliberate than the other sapsucker species. (Oregon, April, ML 63065, DSH).
- Second example of drum (Oregon, April, ML 63069, DSH).

2. Red-naped Sapsucker
*Sphyrapicus nuchalis*
- Distinctive sapsucker call heard year-round is a nasal, squealing waak. Call is nearly indistinguishable from that of the Red-breasted Sapsucker. (Oregon, April, ML 63060, DSH).
- Second example of waak call (Washington, June, ML 47711, DSH).
- Squeal call is a territorial signal used in the breeding season by both sexes. It is a rhythmic series of harsh, squealing waak notes. (Oregon, April, ML 63062, DSH).
- Squeal call consists of several harsh, descending chee-ar notes. A rapid, nasal quay (Arizona, May, ML 45358, GAK).
- Drum begins calls from the nest (Oregon, July, ML 50125, GAK).
- Drum begins with a flurry of rapidly repeated taps followed by single, irregularly spaced taps. (Oregon, April, ML 63080, DSH).

3. Red-breasted Sapsucker
*Sphyrapicus ruber*
- War call is a whining, descending note nearly indistinguishable from the waak call of Red-naped Sapsucker (California, June, GFB).
- Squeal call is a series of swe-ar notes (California, June, ML 63011, DSH).
- Interaction call (California, May, ML 119418, GAK).
- Adult call at nest (California, June, ML 47587, DSH).
- Chick begging calls from the nest (California, June, ML 47587, DSH).
- Drum consists of an initial burst of regularly spaced taps followed by single taps with irregular cadence (California, June, ML 53263, FWT).

4. Downy Woodpecker
*Picoides pubescens*
- Most conspicuous vocalization is a short, flat pik call. Call is higher and flatter than similar call of Hairy Woodpecker. Whinny call is a very rapid burst of descending and accelerating ki-ki-ki… notes. (Maryland, March, ML 107281, WLH).
- Drum is a steady, relatively slow, short series of staccato taps. Drums are typically delivered at a rate of 10-15 per minute. (Oregon, May, ML 44905, GAK).
5. Hairy Woodpecker  
*Picoides villosus*  
- Typical call is an abrupt, sharp *peek*. Call is louder, higher and richer than similar call of Downy Woodpecker. (Oregon, June, ML 44942, GAK).  
- *Pee* calls and rattle call. Rattle is a rapid-fire sequence of notes given so quickly that they almost run together. Notes typically delivered at an even rate and pitch. (California, May, ML 120275, GAK).  
- Series of squeaky *cheek, cheek, cheek…* notes (California, April, ML 118651, GAK).  
- Chick begging calls at nest (California, May, ML 120274, GAK).  
- Drum is typically long, slow and sometimes accelerating (Oregon, May, ML 63084, DSH).  

7. American Three-toed Woodpecker  
*Picoides dorsalis*  
- Call note is a flat *peah*. Softer than the somewhat similar call of the Black-backed Woodpecker. (Oregon, May, ML 47533, DSH).  
- Rattle is a slow, irregular series of *ki-ki-ki…* notes (Alaska, June, ML 132223, MJA).  
- Second example of rattle call (Alaska, June, ML 132275, GV).  
- Nestlings begging calls (Oregon, July, ML 50115, GAK).  
- Fast drum is a loud territorial signal. Drum is relatively slow and typically trails off at the end. (Oregon, April, ML 63077, DSH).  
- Slow drum is primarily used in mate contact (British Columbia, June, ML 43095, WWHG).  
- Contact call is a variable, low-level vocalization given in social situations (California, April, ML 111025, TGS).  
- The seldom heard *shwarte* call is a short burst of mellow-sounding *chur-r-r-r* notes given in flight (Alaska, June, ML 132182, GV).  
- Drum is evenly spaced and fast (Oregon, June, ML 63117, DSH).  

6. White-headed Woodpecker  
*Picoides albolarvatus*  
- Contact call is a sharp, metallic, double or triple-noted *pee-dink* or *pee-de-dink* (Oregon, June, ML 44985, GAK).  
- Contact call and rattle. Rattle call is a rapid series of notes similar to the contact note. (California, May, ML 120274, GAK).  
- Short rattle (California, June, ML 84568, MDM).  
- Drum is relatively long and moderate in speed (California, June, ML 107612, DSH).  

8. Black-backed Woodpecker  
*Picoides arcticus*  
- *Kyik* call note is sharper and harder than similar call of American Three-toed Woodpecker. (Oregon, June, ML 82357, KBS).  
- Rattle snarl (Oregon, July, ML 50124, GAK).  
- Short rattle. Calls of Spruce Grouse are also heard. (Maine, June, ML 42708, GFB).  
- Begging calls from nestlings. A few *kyik* calls from an adult are also heard. (Maine, June, ML 40322, CD1).  

9. Northern Flicker  
*Colaptes auratus*  
- Territorial vocalization is a long series of evenly spaced *wik-wik-wuk…* notes on the same pitch (Oregon, April, ML 119469, DSH).  
- Contact call is an explosive, piercing *paah* or *bleah* (California, June, ML 21976, CAM).  
- *Wick-a* call is a variable, low-level vocalization given in social situations (California, April, ML 111025, TGS).  
- The seldom heard *shwarte* call is a short burst of mellow-sounding *chur-r-r-r* notes given in flight (Alaska, June, ML 132182, GV).  
- Drum is evenly spaced and fast (Oregon, June, ML 63117, DSH).  

10. Pileated Woodpecker  
*Dryocopus pileatus*  
- Drum is typically long, slow and sometimes accelerating (Oregon, May, ML 63084, DSH).  

11. Olive-sided Flycatcher  
*Contopus cooperi*  
- Song is a penetrating, whistled *quick-free-beer* (Oregon, June, ML 119461, GAK).  
- At dawn the song pattern is a continuous *quick-free, quick-free-beer…* (Oregon, June, ML 109254, GAK).  
- *Pip-pip-pip* call notes (California, June, ML 120422, GAK).  
- Atypical song and twirter (California, June, ML 120421, GAK).  

12. Western Wood-Pewee  
*Contopus cooperi*  
- Song is a burry, descending, *pee-er* (California, May, ML 111068, TGS).  
- Dawn song is a continuous, burry *a-phoo-a-reeet, pee-er, a-phoo-a-reeet, pee-er…* (California, June, ML 56928, GAK).  
- Call is a burry *creet* (Oregon, June, ML 105685, GAK).  

13. Willow Flycatcher  
*Empidonax traillii*  
- Song is primarily *Fitz-bew* phrases along with occasional, similar sounding *fizz-bew* and *creet* notes (Oregon, June, ML 44938, GAK).  
- One common call is a thick, dry *whit* (Oregon, June, ML 56946, GAK).
14. Least Flycatcher
Empidonax minimus
- Song is a dry, rapidly repeated che-BEK, che-BEK, che-BEK... (North Dakota, June, ML 42230, GAK).
- Call is a dry pit (New York, May, ML 100852, WLLH).
- Pit call notes and other calls (New York, May, ML 100876, WLLH).

15. Hammond’s Flycatcher
Empidonax hammondii
- Song has three elements: a dry, sharp pseet, a low-pitched burry tuuuet and a rough, drawn-out chu-lup. These elements may be delivered in this typical sequence, in different combinations, or individually. Song is similar to that of Dusky Flycatcher but lacks any high, clear notes. (Oregon, June, ML 44984, GAK).
- Typical call is an emphatic psep (Oregon, June, ML 50392, GAK).
- Another call is a descending, whistled pew and a rising pew-it (Oregon, June, ML 56932, GAK).

16. Gray Flycatcher
Empidonax occidentalis
- Song has two elements: an emphatic, two-syllable chuell and a high, whistled sput. The chuell element is more frequently sung, often in rapid pairs or series. (Oregon, May, ML 50956, GAK).
- Dawn song is more rapidly delivered (Oregon, June, ML 42263, GAK).
- Territorial calls (California, June, ML 100666, RSL).

17. Dusky Flycatcher
Empidonax oberholseri
- Song has three elements: a rising, two-syllabled pue-it, a rough, low-pitched preedit, and a clear, high-pitched pteer. The similar song of Hammond’s Flycatcher lacks any high, clear notes. (Oregon, June, ML 44958, GAK).
- A distinctive call given by this species is an emphatic, whistled dew-hic (California, June, ML 59320, RSL).
- Alarm call is a dry white (California, May, ML 119414, GAK).

18. Pacific-slope Flycatcher
Empidonax difficilis
- Song is composed of three elements: pe-SEET, pit, and see-t. Notes are higher and thinner than those of other Northwest Empidonax flycatchers. (Oregon, June, ML 449937, GAK).
- Dawn song is delivered in a rapid, continuous fashion (California, April, ML 110916, TGS).
- Male call is a strongly up-slurred pseet similar to a human attention whistle (Oregon, July, ML 50539, GAK).

19. Cordilleran Flycatcher
Empidonax occidentalis
- Song is difficult to distinguish from that of Pacific-slope Flycatcher though the pit-see element subtly drops in pitch rather than rises (Colorado, June, ML 105315, GAK).
- Distinctive call by male is a two-parted tee-see. Also delivers calls indistinguishable from those of Pacific-slope Flycatcher. (Arizona, May, ML 56894, GAK).

20. Black Phoebe
Sayornis nigricans
- Primary song consists of two hurried, whistled phrases: a tee-tee phrase with a rising inflection and a tee-ba phrase that descends in pitch. (California, May, ML 50171, GAK).
- A common call is a downward inflected tseet (California, May, ML 50172, GAK).
- The most common call during any season is a brief, clear tsip (California, May, ML 118800, GAK).

21. Say’s Phoebe
Sayornis saya
- Primary song is a mournful series of down-slurred pit-tee-ee phrases, sometimes including a burry brrreet and a whistled pit-er-eet with a rising inflection (Nevada, June, ML 50202, GAK).
- Dawn song is a series of simple, abrupt, slightly musical calls (Oregon, July, ML 7978, LID).
- Calls include a variety of sputtering rattles, sharp whit notes and burry, whistled phrases (California, July, ML 449937, GAK).
- Second example of calls (Montana, July, ML 7981, RSL and WY).
- Third example of calls (Arizona, April, ML 105595, TGS).
- Fourth example of calls (California, June, ML 22982, WRF).
- Fifth example of calls (Arizona, May, ML 56850, GAK).
- Sixth example of calls (California, April, ML 118637, GAK).

22. Ash-throated Flycatcher
Myiarchus cinereus
- Song consists of a repeated series of simple, abrupt, slightly musical calls (Oregon, June, ML 44949, GAK).
- Second example of dawn song (California, April, ML 111043, TGS).
- Gives a variety of calls including a sharp sip and hurried keBRIK (California, June, ML 56924, GAK).
- Second example includes a variety of calls (Oregon, June, ML 44927, GAK).

23. Western Kingbird
Tyrannus verticalis
- Dawn song consists of a stuttering series of squeaky notes that grade into a complex, jumbled climax (California, May, ML 111065, TGS).
- Calls include a variety of sputtering rattlets, sharp whit notes and burry, whistled phrases (California, July, ML 7978, LID).
- Second example of calls (Montana, July, ML 7981, RSL and WY).
- Third example of calls (Arizona, May, ML 18798, JLG).
- Fourth example of calls (California, June, ML 22982, WRF).
- Fifth example of calls (Arizona, May, ML 56850, GAK).
- Sixth example of calls (California, April, ML 118637, GAK).
24. Eastern Kingbird  
_Tyrannus tyrannus_  
- Dawn song is a sputtering stream of very high, sharp notes and rattles with an emphatic ending (Nebraska, June, ML 50238, GAK).  
- Daytime song is a sequence of regularly repeated _zeer_ notes and soft, sputtering notes (North Dakota, June, ML 50286, GAK).  
- Calls include a relatively weak, sharp, buzzy _zeer_ and a rolling chatter (Oregon, June, ML 106890, RSL).

25. Loggerhead Shrike  
_Lanius ludovicianus_  
- Song consists of a wide variety of short, clear notes and phrases repeated mechanically (Arizona, March, ML 55564, WWHG).  
- Typical call is a complaining _jaanaa_ (Saskatchewan, June, ML 42999, WWHG).  
- Another call is a nonmusical, harsh _bezzzz_ (California, April, ML 119484, GAK).

26. Cassin’s Vireo  
_Vireo cassini_  
- Male’s primary song consists of simple, burry phrases that often alternate between ascending and descending elements. Most phrases contain either two or three notes. (Montana, June, ML 50313, GAK).  
- Chatter call and complex vocalization consisting of calls notes and rapidly delivered song elements (Oregon, June, ML 105665, GAK).

27. Hutton’s Vireo  
_Vireo huttoni_  
- Variable song is a monotonous series of simple whistled phrases that either ascend or descend in pitch. Males repeat each phrase many times before switching to a new one. (Oregon, March, ML 119454, GAK).  
- Second example of song (California, March, ML 119468, GAK).  
- Third example of song (Oregon, April, ML 42196, GAK).  
- Typical calls include a low-pitched _whit_ and a raspy, whining, drawn-out, _reeee_ reminiscent of the call of a Spotted Towhee (California, April, ML 111013, TGS).

28. Warbling Vireo  
_Vireo gilvus_  
- Song is an undulating, husky warble (Oregon, July, ML 42271, GAK).  
- Second example of song (California, March, ML 110999, TGS).  
- Call is a buzzy, nasal _reeee-ab_ (California, June, ML 106749, RSL).  
- Second example of calls includes soft _sir_ notes (California, June, ML 50574, RSL).

29. Red-eyed Vireo  
_Vireo olivaceus_  
- Second example of calls (Manitoba, June, ML 106749, RSL).  
- Third example of calls begins with the begging calls of juveniles (Manitoba, June, ML 105796, GAK).  
- Call resembling the contact whistle of a Spotted Owl (Oregon, July, ML 50114, GAK).

30. Gray Jay  
_Perisoreus canadensis_  
- Calls include an assortment of clear whistles, toots, and harsh notes and chatters. Frequently mixes both loud and soft calls. (Washington, July, ML 13510, CAS).  
- Second example of calls (Manitoba, June, ML 105796, GAK).  
- Third example of calls begins with the begging calls of juveniles (Manitoba, June, ML 105796, GAK).  
- Call resembling the contact whistle of a Spotted Owl (Oregon, July, ML 50114, GAK).

32. Western Scrub-Jay  
_Aphelocoma californica_  
- Typical call is a raspy, ascending _zaweeeep_ (California, May, ML 50181, GAK).  
- Other calls include an isolated, ascending _zannaab_ note, and a series of scratchy _scratch-scratch-scratch_ . . . notes (California, May, ML 120228, GAK).

33. Pinyon Jay  
_Cyanocitta cyanocephalus_  
- Common call given while flock is moving between locations is a quavering, descending _kaw_ (Oregon, June, ML 44979, GAK).  
- At the threat of danger a nasal, rising _rack-rack-rack_ is given (Oregon, June, ML 44979, GAK).  
- Quavering, descending _kaw_ and other vocalizations (California, May, ML 119406, GAK).

34. Clark’s Nutcracker  
_Nucifraga columbiana_  
- Distinctive call is a slightly rising, harsh, deep, drawn-out _kraanaa_ (Oregon, June, ML 45000, GAK).  
- Second example of typical call (Oregon, May, ML 50141, GAK).  
- Series of _knaa_ notes (Oregon, May, ML 50141, GAK).  
- Call is a nasal, descending _nnnaaab_ (California, June, ML 99365, RSL).
35. Northwestern Crow

Corvus caurinus

- Chatter, or alarm call is a raucous series of harsh, shrik-shirk-shir叫 notes (Washington, June, ML 42244, GAK).
- Nasal, rising clear calls are given as begging calls by adults during the breeding season (Oregon, June, ML 56943, GAK).
- Chatter and begging calls (California, June, ML 45373, RSL).
- Single calls (Utah, April, ML 55074, KJC).
- Calls and whispered song elements (Washington, June, ML 42244, GAK).

36. American Crow

Corvus brachyrhynchos

- Typical vocalization heard year round is the familiar, variable caw (Oregon, March, ML 50111, GAK).
- Rapid series of caw-notes (Oregon, March, ML 50111, GAK).
- The rattle or comb call consists of 5 to 20 atonal, staccato notes (Oregon, March, ML 50118, GAK).

37. Black-billed Magpie

Pica hudsonia

- Chatter, or alarm call is a variable series (California, June, ML 120924, GAK).
- Calls of this species are slightly lower and hoarser than those of the similar American Crow (Alaska, June, ML 132185, GV).

38. Common Raven

Corvus corax

- Produces a wide variety of vocalizations. Most commonly heard is a variable, deep, croaking rrrroak. Soft, gutturual knocking calls are also heard. (California, July, ML 119451, GAK).
- Second example of calls (Oregon, June, ML 105705, GAK).
- Third example of calls (California, July, ML 110991, TGS).
- Fourth example of calls includes a knocking call produced by the female reminiscent of a woodpecker’s drum (Oregon, June, ML 50329, GAK).

39. Horned Lark

Eremophila alpestris

- Song is a melodic and delicate series of tinkling notes that accelerate and spiral upward (Oregon, June, ML 44976, GAK).
- Call is a weak waa-werter with rising inflection (California, June, ML 45341, RSL).
- Second example of calls (California, June, ML 55559, DJK).

40. Purple Martin

Progne subis

- Song is a rich, liquid warble of bubbling notes interspersed with grating or click- ing sounds (California, June, ML 59693, GAK).
- Alarm call is a buzzy zweetr (California, June, ML 109259, GAK).

41. Tree Swallow

Tachycineta bicolor

- Vocalization is a series of dry, flat frrip-frrip-frrip notes (California, May, ML 120207, GAK).
- Second example of song includes a series of lispng, high-pitched ti-ti-ti-ti notes

42. Violet-green Swallow

Tachycineta thalassina

- Vocalization is a series of dry, flat frrip-frrip-frrip-frrip-frrip notes (California, May, ML 120207, GAK).
- Second example of song includes a series of lispng, high-pitched ti-ti-ti-ti notes

43. Northern Rough-winged Swallow

Stelgidopteryx ruficlonis

- Contact call is a brief, raspy, single or double-noted rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr
that precede the clear whistles (Oregon, April, ML 44888, GAK).  
- Third example of song (Oregon, May, ML 105762, GAK).  
- Fourth example of song (Oregon, March, ML 119464, GAK).  
- Typical calls (Utah, July, ML 49751, KJC).

48. Mountain Chickadee 
Poecile gambelli
- Call is both slower, and huskier than similar call of Black-capped Chickadee. It is a distinctive chika-zee-zee-zee. (Oregon, June, ML 42267, GAK).
- Second example has a variety of calls including high-pitched, wiry notes and the melodic jumble of whistled notes referred to as the “gargle call” (Oregon, April, ML 111115, TGS).
- Song is variable, but in this example it is a sequence of six, clear whistles. The first four are given on a single pitch, while the last two are lower in pitch. (Oregon, May, ML 44916, GAK).
- Second example of song (California, May, ML 120257, GAK).

49. Chestnut-backed Chickadee 
Poecile rufescens
- Calls include series of high-pitched, lisping or piping quality to them (Oregon, April, ML 56826, GAK).
- Second example of calls (California, May, ML 120213, GAK).
- Most common call is a husky chika-dee-dee. Other shrill calls are also heard. (California, May, ML 119498, GAK).
- Second example of chika-dee-dee call (California, May, ML 50180, GAK).
- Third example of chika-dee-dee call (California, April, ML 125259, TGS).

2. Juniper Titmouse 
Baeolophus ridgwayi
- Songs and song patterns are very similar to those of Oak Titmouse. They are highly variable and consist of mechanically repeated sequences of coupled notes, repeated phrases or popping trills. (California, May, ML 120212, GAK).
- Second example of calls (California, May, ML 119458, GAK).
- Typical calls of coastal birds is a high, nasal ceern…ceern…ceern (California, May, ML 56885, GAK).

5. White-breasted Nuthatch 
Sitta carolinensis
- Typical call to those of Golden-crowned Kinglet (Oregon, July, ML 125259, TGS).
- Second example of songs (Arizona, April, ML 67703, WWFHG).
- Calls include a lisping, high-pitched sip, and the tsicka-deer-deer call which contains more notes and is delivered more rapidly than similar call of Oak Titmouse (Arizona, April, ML 67703, WWFHG).
- ShriI, scolding call (Arizona, January, ML 67785, WWFHG).

3. Bushtit 
Psaltriparus minimus
- Typical calls have an anodal, lisping or spitting quality to them (Oregon, April, ML 56826, GAK).
- Second example of calls (California, May, ML 120213, GAK).
- The long-distance contact call is a sequence of very high-pitched re-e-e-e-e notes (California, June, ML 121969, CAM).
- Calls from a flock (California, April, ML 118676, GAK).

4. Red-breasted Nuthatch 
Sitta canadensis
- Song is a drawn-out, nasal yak-yak-yak… (Oregon, June, ML 44959, GAK).
- Call of an agitated bird is a repeated ink-ink-ink… (Oregon, June, ML 50328, GAK).
9. Canyon Wren
*Catherpes mexicanus*
- Song is a beautiful cascade of clear, liquid, melodious notes tumbling down the scale. They often end with one or more nasal buzzes. (California, May, ML 109265, GAK).
- Call is a sharp, metallic buzzing *jizz* (Mexico, May, ML 9042, LID and WG).
- Series of calls (California, May, ML 120265, GAK).

10. Bewick’s Wren
*Thryomanes bewickii*
- Due to each male’s large repertoire of song types and to geographic variation, learning the song of this species often proves to be a challenge. In general, songs are rich and melodic, consisting of three to five phrases and one or two trills. Buzzy or raspy notes along with pure sweet tones are usually incorporated. Another helpful feature is that birds often repeat raspy *see* notes between calls. (California, April, ML 110144, TGS).
- Second example of song (California, April, ML 126475, TGS).
- Third example of song (California, May, ML 120256, GAK).
- Fourth example of song (California, April, ML 125257, TGS).

11. House Wren
*Troglodytes aedon*
- Song is a complex arrangement of intricate, tinkling notes, trills and buzzes (Oregon, April, ML 50129, GAK).
- Typical call is a harsh, dry, metallic *check* (Oregon, March, ML 119456, GAK).
- Rapid series of calls given in alarm (Oregon, March, ML 119457, GAK).

12. Winter Wren
*Troglodytes troglodytes*
- Song is a long, complex arrangement of intricate, tinkling notes, trills and buzzes (Oregon, April, ML 50129, GAK).
- Typical call is a harsh, dry, metallic *check* (Oregon, March, ML 119456, GAK).
- Rapid series of calls given in alarm (Oregon, March, ML 119457, GAK).

13. March Wren
*Cistothorus palustris*
- Song is a mechanical combination of rich, liquid warbling notes and grating, dry chips, trills and rackets (Oregon, April, ML 44882, GAK).
- Second example of song (Oregon, April, ML 44878, GAK).
- Call is a low, nasal, buzzy *sek* (Oregon, June, ML 44923, GAK).

14. American Dipper
*Cinclus mexicanus*
- Song begins with a few high, thin notes before progressing into a lively and powerful undulating warble of rich, clear tones (Oregon, June, ML 44990, GAK).
- Call is a preevish *jir*, *jir* (Oregon, March, ML 50109, GAK).

15. Golden-crowned Kinglet
*Regulus satrapa*
- Song is a rapid series of bubbling rattles and trills (Oregon, April, ML 50129, GAK).
- Second example of song (Oregon, June, ML 50144, GAK).
- Calls include a harsh, rolling rattle dropping in pitch and sputtering notes (Oregon, April, ML 50129, GAK).

16. Ruby-crowned Kinglet
*Regulus calendula*
- Song, given by both sexes, is a loud, elaborate jumble of sweet melodic notes and trills. It is thrasher-like in quality and often contains repetitive notes with raspy *jik* calls periodically interjected. (Oregon, October, ML 105898, GAK).
- Distinctive call is a loud, sharp *jik* given singly or in series (Oregon, July, ML 105899, GAK).

17. Blue-gray Gnatcatcher
*Polioptila caerulea*
- Uncommonly heard, songs are long sequences of scratchy, wheezy, rambling notes and phrases including sharp chips and high-pitched, slurred whistles (California, April, ML 22793, GAK).
- Much more frequently heard are the wheezy, mewing *pvw* call notes (Oregon, June, ML 44928, GAK).
- Soft calls (California, May, ML 120210, GAK).

18. Western Bluebird
*Sialia mexicana*
- Song, usually heard at dawn, is basically a series of husky, whistled call notes (Oregon, April, ML 44896, GAK).
- Charter call is a dry *cut-cut-cut*. Humans intruding on breeding territories will elicit this call. (California, June, ML 42246, GAK).
- A common call is a mellow *few* (Oregon, May, ML 13551, RCS).
- Another call is a low, gravelly *chup* (Arizona, July, GC).

19. Mountain Bluebird
*Sialia currucoides*
- Starting in the predawn light and often given on the wing, the dawn song is a mel- low *chup-chow, chup-chup-chow, chup-chow* (Oregon, June, ML 105706, GAK).
- Daytime song (Oregon, June, ML 63029, DSH).
- Calls include a low, hard *chuck, ot chuck-few* (California, June, ML 56947, GAK).
- Second example of calls (California, June, ML 47578, DSH).
21. Veery
Myadestes townsendi
Song is a downward spiral of ethereal, flute-like notes. Common call is a nasal, descending pew. (Montana, June, ML 50304, GAK).

22. Swainson's Thrush
Catharus ustulatus
Rolling, flute-like song is similar to that of the Veery but spirals upwards rather than downwards (Oregon, June, ML 44936, GAK).

23. Hermit Thrush
Catharus guttatus
Song is a rapid sequence of highly variable short phrases, some of which have a distinctive mewing quality. Songs sometimes incorporate the mimicked sounds of other species. Some of the mimicked vocalizations in this example include Western Wood-Pewee, American Robin, Sora, Dusky Flycatcher, Red-winged Blackbird, Yellow Warbler, Wilson's Snipe, Northern Pintail, Western Kingbird, and Pacific chorus frog. (California, June, GFB).

24. American Robin
Turdus migratorius
Male song is an accelerating series of whistles reminiscent of a bouncing ball, pit-pit-pit-pit-tr-r-r-r-r-r (Oregon, April, ML 44874, GAK).

25. Varied Thrush
Ixoreus naevius
Distinctive song is a variable series of long, widely spaced, whistled notes. Notes vary greatly in pitch and quality with some being clear and others buzzy or trilled. (Oregon, June, ML 105663, GAK).

26. Wrentit
Chamaea fasciata
A variety of high squawling calls are given, often in flight (Oregon, April, ML 42197, GAK).

27. Gray Catbird
Dumetella carolinensis
A variety of high squawling calls are given, often in flight (Oregon, April, ML 42197, GAK).

28. Northern Mockingbird
Mimus polyglottos
Song consists of series of repeated phrases and includes precise imitations of the vocalizations of dozens of other species. Some of the mimicked vocalizations in this example include Western Wood-Pewee, American Robin, Sora, Dusky Flycatcher, Red-winged Blackbird, Yellow Warbler, Wilson's Snipe, Northern Pintail, Western Kingbird, and Pacific chorus frog. (California, June, GFB).

29. Sage Thrasher
Oreoscoptes montanus
A variety of high squawling calls are given, often in flight (Oregon, April, ML 42197, GAK).

30. European Starling
Sturnus vulgaris
A variety of high squawling calls are given, often in flight (Oregon, April, ML 42197, GAK).
31. **Red-throated Pipit**
   *Anthus cervinus*
   - Call, often given in flight, is a high, thin *seeet* (Russia, June, ML 91185, BNV).

32. **American Pipit**
   *Anthus rubescens*
   - Male’s territorial flight song consists of continuously repeated series of high, clear notes (Nanavut, July, ML 62303, DRG).
   - Calls include a rattling *pip-pi-pit* and an abrupt *pip-it* (Alaska, June, ML 131478, GV).
   - Another call is a repeated, rising *weet* (Newfoundland, July, ML 133376, GAK).

33. **Bohemian Waxwing**
   *Bombycilla garrulus*
   - Calls of a foraging flock are lower pitched than those of Cedar Waxwing and include descending, metallic trills (Alaska, June, ML 130932, GV).

34. **Cedar Waxwing**
   *Bombycilla cedrorum*
   - Typical call is a high-pitched, drawn-out, hissy whistle (Oregon, September, ML 105499, GAK).
   - Another typical call is a high-pitched, rapidly trilled whistle (Oregon, June, ML 44955, GAK).

35. **Orange-crowned Warbler**
   *Vermivora celata*
   - Songs are typically sputtery, loose trills that diminish in energy and pitch at some point. First example is a two-parted trill. (Oregon, June, ML 44925, GAK).
   - Second example contains both one and two-parted trills (Oregon, April, ML 44873, GAK).
   - Third example is a two-parted trill (Oregon, April, ML 56824, GAK).
   - Fourth example contains fast one and two-parted trills (Oregon, April, ML 44883, GAK).
   - Distinctive call is a brief, high, sharp *chip* (British Columbia, July, ML 59564, WWHG).
   - Calls including *chip* call, other sputtering notes and a rising *seet* (Alaska, May, ML 130917, GV).

36. **Nashville Warbler**
   *Vermivora ruficapilla*
   - In general songs are two-parted, and begin with several evenly spaced sweet notes followed by a lower-pitched trill. This first example contains both three-parted and two-parted songs. (Oregon, April, ML 44893, GAK).
   - Second example is a two-parted *see-bit* (*see-bit, see-bit, ti-ti-ti-ti*) (Oregon, June, ML 111153, TGS).
   - Call is a dry, sharp *chip* (California, June, ML 106858, RSL).

37. **Virginia’s Warbler**
   *Vermivora virginiae*
   - Song is a sweet, slow trill, composed of one or several distinct syllables or parts. First example contains a single part. (Arizona, May, ML 40596, GAK).
   - Second example is a two-parted song (Utah, June, ML 50221, GAK).
   - Third example is a three-parted song (Utah, June, ML 50215, GAK).
   - Call is high-pitched *chink* (Colorado, June, ML 62231, WWHG).

38. **Yellow Warbler**
   *Dendroica petechia*
   - Songs are highly variable with respect to pattern and structure, but all contain high, clear, sweet notes and usually include emphatic endings (Oregon, May, ML 107534, DSH).
   - Second example of song contains occasional *chip* notes between songs (Oregon, June, ML 56937, GAK).
   - Call is a clear, hard *chip* (Oregon, June, ML 106825, RSL).

39. **Yellow-rumped Warbler**
   *Dendroica coronata*
   - Primary song is a clear, two-parted warble that rises or falls in pitch. Individual song phrases often have two distinct syllables. Songs can sometimes be confused with those of Northern Junco. (Oregon, May, ML 44912, GAK).
   - Second example of song (Oregon, June, ML 44961, GAK).

40. **Black-throated Gray Warbler**
   *Dendroica nigrescens*
   - Songs of this species vary by region and each individual produces two distinct song types. In general, songs have a distinct buzzy quality and often include an emphatic ending. First example is rendered *buzzy-buzzy-buzzy bee-zoo-zoo* (Oregon, April, ML 50127, GAK).
   - Although buzzy, second example displays a different structure, as it ascends the scale (Oregon, June, ML 105664, GAK).
   - Call note is a flat *chit* (Arizona, June, ML 121942, CAM).

41. **Townsend’s Warbler**
   *Dendroica townsendi*
   - Songs of this species vary considerably geographically and each male produces two distinct song types. Some song types are difficult or impossible to distinguish from those of Hermit Warbler. (British Columbia, June, ML 62230, WWHG).
   - Second example of song (Washington, June, ML 47704, DSH).
   - Third example of song (Washington, June, ML 47707, DSH).
42. **Hermit Warbler**

* Dendroica occidentalis
* **Call** is a sharp *tsik* (Montana, June, ML 50325, GAK).
* **Fourth example of song** (Montana, June, ML 50312, GAK).

43. **American Redstart**

* Setophaga ruticilla
* **Songs of this species vary considerably geographically and each male produces two distinct song types. Many songs are difficult or impossible to distinguish from those of Townsend’s Warbler.** (Oregon, June, ML 111146, TGS).
* **Second example of song** (Oregon, May, ML 50184, GAK).
* **Second example of song** (Oregon, June, ML 62705, WWHG).
* **Third example of song** (Canada, April, ML 50299, GAK).
* **Typical call** is a dry *chik* (Oregon, May, ML 111172, TGS).

44. **Northern Waterthrush**

* Seiurus noveboracensis
* **Song** is a loud, emphatic series of clear, ringing notes that usually accelerate and drop in pitch near the end (Montana, June, ML 50318, GAK).
* **Second example of song** (British Columbia, June, ML 62765, WWHG).
* **Common call** is a loud, sharp *spwink* (Yukon, July, ML 62709, WWHG).

45. **MacGillivray’s Warbler**

* Oporornis tolmiei
* **Song** varies in pitch, rate of delivery and number of syllables but is usually easily recognizable as this species. One common delivery sounds like *whispy whispy whispy* (Oregon, April, ML 44876, GAK).
* **Second example of song** (Oregon, June, ML 44872, GAK).
* **Second example of song** (California, April, ML 126421, TGS).
* **Call** is a distinctive, buzzy *tchat* (Arizona, May, ML 599382, RSL).

46. **Common Yellowthroat**

* Geothlypis trichas
* **Song** is a slow, deliberate series consisting of a wide variety of whistles, rattles, cackles and other notes (Oregon, June, ML 42262, GAK).
* **Second example of song** (California, May, ML 50184, GAK).
* **Second example of song** (Oregon, June, ML 42249, GAK).
* **Third example of song** (Oregon, June, ML 50299, GAK).

5. **Spotted Towhee**

* Pipilo maculatus
* **Songs are simple but variable. They usually consist of a dry, mechanical trill that is often preceded by one or several introductory notes.** (Oregon, March, ML 119455, GAK).
* **Second example of song** (Oregon, June, ML 44981, GAK).
* **Third example of song** (Oregon, June, ML 111110, TGS).
* **Typical call** is also heard. (Oregon, June, ML 119401, GAK).

6. **California Towhee**

* Pipilo crissalis
* **Song** is an accelerating series of high, metallic *chink* notes that grade into a trill (Oregon, April, ML 56830, GAK).
* **Second example of song** (California, April, ML 56830, GAK).
* **Call** is a metallic *chink* similar to the introductory notes of the song (Oregon, May, ML 50142, GAK).
7. American Tree Sparrow
Spizella arborea
• Distinctive, jingling calls of a winter flock are a mellow "teel-wit" (West Virginia, November, ML 110381, WLH).
• Teel-wit calls of a single bird (West Virginia, November, ML 110382, WLH).
• Teet and chip calls given during the winter (West Virginia, November, ML 110379, WLH).

8. Chipping Sparrow
Spizella passerina
• Songs are generally long, dry, mechanical trills on a single pitch (Oregon, June, ML 42245, GAK).
• Second example of song (Oregon, May, ML 50145, GAK).
• Call is a very high "zi" (California, June, ML 106556, RSL).

9. Brewer’s Sparrow
Spizella brewerii
• Short songs typically consist of a series of one to three, insect-like, buzzy trills (Oregon, May, ML 106568, RSL).
• Second example of short song (California, June, ML 56014, GAK).
• Often heard at dawn, long songs are one of the premier vocal displays of the West. Beginning with several buzzy "zi" notes, the song blossoms into an impressive multi-parted series of canary-like trills and staccato notes covering a wide range of pitches. (California, June, ML 56015, GAK).
• Call notes are a metallic "tiz" (Oregon, May, ML 106578, RSL).

10. Vesper Sparrow
Pooecetes gramineus
• Song typically begins with two clear, down-slurred notes before progressing into multiple musical trills on different pitches (Oregon, May, ML 111171, TGS).
• Second example of song (Oregon, May, ML 107526, DSH).
• Calls include a high-pitched "teet" and a sharp "chip" (British Columbia, July, ML 15367, RCS).

11. Lark Sparrow
Chondestes grammacus
• Song is a melodious jumble of musical notes and trills and harsh buzzes and rattles (Oregon, June, ML 107556, DSH).
• Second example of song (California, June, ML 56019, GAK).
• Alarm call is a sharp metallic "tip" (Nebraska, June, ML 50237, GAK).

12. Black-throated Sparrow
Amphispiza bilineata
• Song is variable but usually begins with one or two clear, introductory notes followed by musical trills or buzzes (Oregon, May, ML 107555, DSH).
• Second example of song (California, June, ML 56019, GAK).
• Tinkling calls and sub-song (Arizona, March, ML 64229, WWHG).

13. Sage Sparrow
Amphispiza belli
• Typical song is a rich series of rapid, rhythmic trills or bars (Oregon, May, ML 107531, GAK).

14. Savannah Sparrow
Passerculus sandwichensis
• Variable song is a rather weak, insect-like series beginning with several introductory notes and ending with an extended buzzy trill (Oregon, June, ML 106808, RSL).
• Second example of song (California, May, ML 120267, GAK).
• One call is a sharp "chip" (Oregon, June, ML 105701, GAK).

15. Grasshopper Sparrow
Ammodramus savannarum
• Primary song is an insect-like "pit-tup, seeeee, seeeee" (Oregon, July, ML 107589, DSH).
• In addition to regular song, males also deliver a sustained song that is a jumbled series of extremely high, squeaky notes (Oregon, June, ML 120412, GAK).
• Second example of song (California, April, ML 44860, GAK).
• Tinkling calls and sub-song (Arizona, March, ML 64229, WWHG).

16. Fox Sparrow
Passerella iliaca
• Highly variable song generally consists of rich, melodic warbles with many slurred elements and buzzy trills. First example is from the slate-colored group. (Oregon, June, ML 44986, GAK).

17. Song Sparrow
Melospiza melodia
• Distinctive call of the thick-billed group (Montana, June, ML 15670, RSL and WYB).
• Third example of song of the thick-billed group (California, June, ML 96382, WLH).
• Fourth example is song of the sooty group (Oregon, March, ML 44860, GAK).
• Chink call of the thick-billed group (California, June, ML 47656, GFB).
• "Sip" call of the thick-billed group (California, June, ML 47655, GFB).
• Check call of the sooty group (Oregon, February, ML 44843, GAK).
• "Tip" call of the sooty group (Oregon, March, ML 44860, GAK).
18. Lincoln’s Sparrow  
*Melospiza lincolnii*
- Song is a rich wren-like series of husky trills that rise and fall in pitch and have a distinctive vibrato quality (Idaho, June, ML 42255, GAK).
- *Chip* call (Alaska, June, ML 132165, GV).

19. Swamp Sparrow  
*Melospiza georgiana*
- *Chip* call (Alaska, June, ML 132165, GV).

20. White-throated Sparrow  
*Zonotrichia albicollis*
- *Chip* call (Alaska, June, ML 132165, GV).

21. White-crowned Sparrow  
*Zonotrichia leucophrys*
- One common example sounds like oh dear (British Columbia, May, ML 64287, WWHG).
- Various calls and subsong from a wintering bird (Oregon, April, ML 44890, GAK).
- One call is a sharp *chip* (Alaska, June, ML 77079, CAM).

23. Dark-eyed Junco  
*Junco hyemalis*
- Song is a repeated, short, simple trill given on one pitch. Pitch, speed and tonal quality vary considerably. Some songs are very similar to those of Chipping Sparrow. (California, June, ML 99347, RSL).
- Second example of song (Oregon, July, ML 50336, GAK).
- Third example of song is drier and less musical (California, May, ML 118678, GAK).
- Alarm call is a loud *chirp* (California, June, ML 84571, MDM).
- Various calls (Alaska, May, ML 130922, GV).

25. Snow Bunting  
*Plectrophenax nivalis*
- Male gives a wide variety of calls during the breeding season including a flat *check* and a thin, piercing whistle (Oregon, June, ML 106799, RSL).
- Many calls are analogous to those of Red-winged Blackbird but are lower-pitched and have a muted or nasal quality (California, June, ML 56922, GAK).

26. Black-headed Grosbeak  
*Pheucticus melanocephalus*
- Song is a melodious, sweet series of shrilled, whistled phrases. Reminiscent of the song of American Robin but higher-pitched, huskier and delivered at a faster rate. (Oregon, May, ML 106598, RSL).
- Distinctive call is a sharp *sick* (Oregon, June, ML 44952, GAK).

27. Lazuli Bunting  
*Passerina amoena*
- One call is a blackbird-like *chuk* (New York, May, ML 93760, MDM).
- Male *see-yew* call (Maine, June, ML 112686, CAM).
- Call commonly given in flight is a short, musical *pink* (Pennsylvania, June, ML 94429, WLH).

29. Red-winged Blackbird  
*Agelaius phoeniceus*
- Male’s distinctive song is an explosive *oak-a-lee-a* (Washington, April, ML 63064, DSH).
- Song is a fast, sweet warble usually beginning with a few introductory couplets of notes before progressing into more complex buzzes and trills (Oregon, May, ML 50146, GAK).
- Second example of song (Oregon, June, ML 44931, GAK).
- Third example of song (Oregon, June, ML 44926, GAK).
- One common call is a dry *sick* (Oregon, April, ML 44892, GAK).

30. Tricolored Blackbird  
*Agelaius tricolor*
- Male’s song consists of harsh nasal sounds (California, June, ML 56922, GAK).
- Songs from a large flock (California, April, ML 118636, GAK).
- Many calls are analogous to those of Red-winged Blackbird but are lower-pitched and have a muted or nasal quality (California, June, ML 56922, GAK).

28. Bobolink  
*Dolichonyx oryzivorus*
- Song is a complex arrangement of bubbling notes and phrases that build in intensity, speed and complexity (Oregon, June, ML 56942, GAK).
- Second example of song (Oregon, May, ML 106601, RSL).
- Third example of song followed by a *buzz* call (Oregon, May, ML 106601, RSL).
- Buzzy call (Alaska, June, ML 130951, GV).
- One call is a blackbird-like *chuk* (New York, May, ML 93760, MDM).
- Male *see-yew* call (Maine, June, ML 112686, CAM).
- Call commonly given in flight is a short, musical *pink* (Pennsylvania, June, ML 94429, WLH).
31. Western Meadowlark
*Sturnella neglecta*
- Song is a short melodious series of clear, rich, flute-like notes and phrases. Males produce a variety of song variations. (Washington, June, ML 42243, GAK).
- Flight song preceded by a series of plaintive whistle calls (California, May, ML 120219, GAK).
- Rattle call (California, May, ML 120219, GAK).
- Another common call is an atonal *chuck* (Oregon, June, ML 129002, MJA).

32. Yellow-headed Blackbird
*Xanthocephalus xanthocephalus*
- Male's song is an unmelodious, abrasive and tortured *kw-aah-AH-ow....waaaaaaaaw* (California, May, ML 50191, GAK).
- Female vocalizations include a nasal, complaining *waaa-waaa-waaa* (California, June, ML 48821, KJC).
- Male vocalizations (California, June, ML 48821, KJC).
- Tuleek call (California, June, ML 120487, TGS).

33. Brewer's Blackbird
*Euphagus cyanocephalus*
- Songs and calls of a flock (California, March, ML 120487, TGS).
- Single bird alternating whistled *quuee* song with *chucks* (Oregon, June, ML 44978, GAK).
- Another common song is a slurring *chir-r-r-chir-r-up* (Oregon, May, ML 120257, GAK).
- Calls include a mellow, raspy *keep* (Oregon, May, ML 120237, GAK).
- Call is an up-slurred, raspy *po-oop* (California, May, ML 120233, GAK).

34. Brown-headed Cowbird
*Molothrus ater*
- Distinctive song is a low gurgling note followed by a high, thin, up-slurred whistle (California, May, ML 120254, GAK).
- Flight whistles (California, June, ML 87904, CAM).
- Female chatter call is a rattling *ch-ch-ch-ch-ch-ch* (Oregon, June, ML 47593, DSH).
- Female chatter call (California, May, ML 119485, GAK).

35. Bullock's Oriole
*Icterus bullockii*
- Song is a rich mellow warble with rolling or undulating changes in pitch (California, June, ML 47580, DSH).
- Call is often double or triple-noted *chee-ee-ee* or *po-pee-pee* that rises in pitch (California, June, ML 47580, DSH).
- Call is a soft, unobtrusive *pip* (California, June, ML 106754, RSL).
- Third example of call (California, June, ML 99387, RSL).

36. Gray-crowned Rosy-Finch
*Leucosticte tephrocotis*
- Typical call is a variable, husky *chew* (California, May, ML 12980, RCS).
- Another call is a two-parted *chee-ee* (California, June, ML 99389, RSL).
- A low-pitched flock call, *pert-pert-pert*, is also heard. (Utah, June, ML 12977, RCS).

37. Black Rosy-Finch
*Leucosticte atrata*
- Call notes similar to Gray-crowned Rosy-Finch, including similar sounding *chee-ee* and *chee* calls. A low-pitched flock call, *pert-pert-pert*, is also heard. (Utah, June, ML 12977, RCS).

38. Pine Grosbeak
*Pinicola enucleator*
- Song is a rich, mellow warble with rolling or undulating changes in pitch (Oregon, June, ML 44965, GAK).
- Call is a soft, unobtrusive *pip* (California, June, ML 106627, RSL).
- Call is an explosive *too-ee-oo* (Oregon, June, ML 44973, GAK).
- Call is a brief *sow* (California, June, ML 80352, RSL).

40. Cassin's Finch
*Carpodacus cassinii*
- Song is a fast, energetic warble from beginning to end. During courtship examples of mimicry are incorporated into song. (Oregon, June, ML 44965, GAK).
- Second example of song (California, June, ML 107518, DSH).
- Short song bouts (California, June, ML 106627, RSL).
- Calls include *keep* and *tidilip* (California, June, ML 80354, RSL).
- Call is an explosive *too-ee-oo* (Oregon, June, ML 44973, GAK).
- Call is a brief *sow* (California, June, ML 80352, RSL).

41. House Finch
*Carpodacus mexicanus*
- Slower than Cassin's or Purple Finch, the song of House Finch is a harsh-sounding warble often ending in an up-slurred *zurrree* (California, June, ML 109669, GAK).
- Second example of song is similar to above, but ends with a burry, down-slurred *zeer* or *zeer* (California, June, ML 105676, GAK).
- Typical call is a wheezy, up-slurred *wheet* (Oregon, June, ML 44967, GAK).
42. Red Crossbill
Loxia curvirostra
- Song often begins with a few introductory notes that are very similar in quality to call notes. In this example it is a rhythmic and symmetrical tip-tip-tip, jeep-jeep-jeep, teeep-teeep-teeep. (Oregon, June, ML 44987, GAK).
- Second example of song (Oregon, June, ML 44987, GAK).
- Typically in a short series, the most frequently heard call is jip-jip-jip. Song fragments are also present in this recording. (Oregon, June, ML 44987, GAK).
- Second example of jip call (Oregon, June, ML 44960, GAK).
- Juvenile call is a repeated chitoo… (Oregon, June, ML 111131, TGS).

43. Common Redpoll
Carduelis flammea
- Calls of a foraging flock include series of che-che-che notes, also given in flight and a variety of trills (Alaska, June, ML 132155, GV).
- Call given by perched birds is a metallic, rising rareeee (Alaska, June, ML 132166, GV).

44. Pine Siskin
Carduelis pinus
- Songs have similarities with those of American Goldfinch, but are much more raspy or harsh. They are long, fast, choppy sequences of scratchy, warbled notes intermixed with twitters, chatters and conspicuously up-slurred notes. (California, May, ML 120288, GAK).
- One common call is a conspicuously up-slurred deeree. Spee-ah call and a fragment of song are also heard. (Oregon, February, ML 44845, GAK).
- Most distinctive call is a raspy, rising az-ahzeeee (California, June, ML 63010, DSH).
- Various calls from a flock (Oregon, March, ML 44858, GAK).

45. Lesser Goldfinch
Carduelis psaltria
- Song is an extremely intricate yet jumbled assortment of grating notes and clear warbles repeated randomly. Songs are not as sweet as those of American Goldfinch. Mimicry of other species is commonly incorporated. (California, April, ML 22869, WRF).
- Second example of song incorporates plaintive, down-slurred tee-yer notes and frequent mimicry (California, May, ML 50174, GAK).
- Calls include a plaintive, down-slurred tee-yer and a rising tee-ah (Oregon, June, ML 44930, GAK).
- Additional raspy and slurred calls (Arizona, May, ML 109055, GAK).

46. American Goldfinch
Carduelis tristis
- Song is a rapid, bubbly sequence of high frequency notes and phrases given in a random order. Call notes are commonly incorporated into the song. (California, April, ML 56837, GAK).
- Second example of song (California, May, ML 110154, TGS).
- Calls include a variety of high, wiry whistles and a soft ti chi chi, often given in flight (California, May, ML 110157, TGS).

47. Evening Grosbeak
Coccothraustes vespertinus
- Typical calls include an explosive keeer, reminiscent of the call of a House Sparrow, and an even-pitched trill. (Oregon, June, ML 111139, TGS).
- Trill calls (Oregon, June, ML 125382, TGS).
- Keer call (California, June, ML 125248, MJA).

48. House Sparrow
Passer domesticus
- Male song is a monotonous series of simple cheep or cheeryup notes. It is given frequently year-round. (Washington, August, ML 50543, DSH).
- Second example of male song (Texas, April, ML 105554, GAK).
- Call is a wheezy wheeaa (Montana, June, ML 26328, RCS).
- Chatter call (Montana, July, ML 14437, RSL).
- Flock calls (Texas, May, ML 14435, PPK).

DISC 5
Alphabetized Species List
Disc number and track number follow common names.

Auklet, Cassin’s
Auklet, Rhinoceros
Avocet, American
Bittern, American
Bittern, Least
Blackbird, Brewer’s
Blackbird, Red-winged
Blackbird, Tricolored
Blackbird, Yellow-headed
Bluebird, Mountain
Bluebird, Western
Bobolink
Bobwhite, Northern
Bunting, Lazuli
Bunting, Snow
Bushtit
Canvasback
Chukar
Collared-Dove
Cassin's 2.56
Rhinoceros 2.57
American 2.13
American 1.59
Least 1.60
Brewer’s 5.33
Red-winged 5.29
Tricolored 5.30
Yellow-headed 5.32
Mountain 4.19
Mountain 4.18
Mountain 4.19
Eurasian 2.61
Oregon, June, ML 44987, GAK).
Oregon, June, ML 44960, GAK).
Oregon, June, ML 111131, TGS).
Oregon, June, ML 132155, GV).
Oregon, June, ML 132166, GV).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
Arizona, June, ML 132166, GV).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
California, April, ML 22869, WRF).
Washington, August, ML 50543, DSH).
Texas, April, ML 105554, GAK).
Montana, June, ML 26328, RCS).
Montana, July, ML 14437, RSL).
Texas, May, ML 14435, PPK).
<table>
<thead>
<tr>
<th>Bird Type</th>
<th>Scientific Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coot, American</td>
<td>Fulica americana</td>
<td>American Coot</td>
</tr>
<tr>
<td>Cormorant, Brandt’s</td>
<td>Phalacrocorax penicillatus</td>
<td>Brandt’s Cormorant</td>
</tr>
<tr>
<td>Cormorant, Double-crested</td>
<td>Phalacrocorax auritus</td>
<td>Double-crested Cormorant</td>
</tr>
<tr>
<td>Cormorant, Pelagic</td>
<td>Phalacrocorax pelagicus</td>
<td>Pelagic Cormorant</td>
</tr>
<tr>
<td>Cowbird, Brown-headed</td>
<td>Molothrus ater</td>
<td>Brown-headed Cowbird</td>
</tr>
<tr>
<td>Crane, Sandhill</td>
<td>Grus canadensis</td>
<td>Sandhill Crane</td>
</tr>
<tr>
<td>Creeper, Brown</td>
<td>Certhia familiaris</td>
<td>Brown Creeper</td>
</tr>
<tr>
<td>Crossbill, Red</td>
<td>Loxia curvirostra</td>
<td>Red Crossbill</td>
</tr>
<tr>
<td>Crow, American</td>
<td>Corvus brachyrhynchos</td>
<td>American Crow</td>
</tr>
<tr>
<td>Crow, Northwestern</td>
<td>Corvus caurinus</td>
<td>Northwestern Crow</td>
</tr>
<tr>
<td>Curlew, Long-billed</td>
<td>Numenius arquata</td>
<td>Long-billed Curlew</td>
</tr>
<tr>
<td>Dipper, American</td>
<td>Cinclus cinclus</td>
<td>American Dipper</td>
</tr>
<tr>
<td>Dove, Eurasian Collared</td>
<td>Streptopelia decaocto</td>
<td>Eurasian Collared Dove</td>
</tr>
<tr>
<td>Dove, Mourning</td>
<td>Zenaida macroura</td>
<td>Mourning Dove</td>
</tr>
<tr>
<td>Dowitcher, Long-billed</td>
<td>Limnodromus scolopaceus</td>
<td>Long-billed Dowitcher</td>
</tr>
<tr>
<td>Dowitcher, Short-billed</td>
<td>Limnodromus griseus</td>
<td>Short-billed Dowitcher</td>
</tr>
<tr>
<td>Duck, Harlequin</td>
<td>Aythya collaris</td>
<td>Harlequin Duck</td>
</tr>
<tr>
<td>Duck, Long-tailed</td>
<td>Aythya americana</td>
<td>Long-tailed Duck</td>
</tr>
<tr>
<td>Duck, Ring-necked</td>
<td>Aythya marila</td>
<td>Ring-necked Duck</td>
</tr>
<tr>
<td>Duck, Ruddy</td>
<td>Aythya fuligula</td>
<td>Ruddy Duck</td>
</tr>
<tr>
<td>Duck, Wood</td>
<td>Aythya affinis</td>
<td>Wood Duck</td>
</tr>
<tr>
<td>Dunlin</td>
<td>Calidris alpina</td>
<td>Dunlin</td>
</tr>
<tr>
<td>Eagle, Bald</td>
<td>Haliaeetus leucocephalus</td>
<td>Bald Eagle</td>
</tr>
<tr>
<td>Eagle, Golden</td>
<td>Accipiter gentilis</td>
<td>Golden Eagle</td>
</tr>
<tr>
<td>Egret, Great</td>
<td>Accipiter fasciatus</td>
<td>Great Egret</td>
</tr>
<tr>
<td>Egret, Snowy</td>
<td>Accipiter gentilis</td>
<td>Snowy Egret</td>
</tr>
<tr>
<td>Falcon, Peregrine</td>
<td>Falco peregrinus</td>
<td>Peregrine Falcon</td>
</tr>
<tr>
<td>Finch, Black Rosy</td>
<td>Ficedula hypoleuca</td>
<td>Black Rosy Finch</td>
</tr>
<tr>
<td>Finch, Cassin’s</td>
<td>Ficedula hyperythra</td>
<td>Cassin’s Finch</td>
</tr>
<tr>
<td>Finch, Gray-crowned Rosy</td>
<td>Ficedula hyperythra</td>
<td>Gray-crowned Rosy Finch</td>
</tr>
<tr>
<td>Finch, House</td>
<td>Ficedula leucoptera</td>
<td>House Finch</td>
</tr>
<tr>
<td>Finch, Purple</td>
<td>Ficedula hypoleuca</td>
<td>Purple Finch</td>
</tr>
<tr>
<td>Flicker, Northern</td>
<td>Colaptes auratus</td>
<td>Northern Flicker</td>
</tr>
<tr>
<td>Flycatcher, Ash-throated</td>
<td>Myiarchus phaeocercus</td>
<td>Ash-throated Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Cordilleran</td>
<td>Myiarchus phaeocercus</td>
<td>Cordilleran Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Dusky</td>
<td>Myiarchus phaeocercus</td>
<td>Dusky Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Gray</td>
<td>Myiarchus phaeocercus</td>
<td>Gray Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Hammond’s</td>
<td>Myiarchus phaeocercus</td>
<td>Hammond’s Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Least</td>
<td>Myiarchus phaeocercus</td>
<td>Least Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Olive-sided</td>
<td>Myiarchus phaeocercus</td>
<td>Olive-sided Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Pacific-slope</td>
<td>Myiarchus phaeocercus</td>
<td>Pacific-slope Flycatcher</td>
</tr>
<tr>
<td>Flycatcher, Willow</td>
<td>Myiarchus phaeocercus</td>
<td>Willow Flycatcher</td>
</tr>
<tr>
<td>Gadwall</td>
<td>Mergus serrator</td>
<td>Gadwall</td>
</tr>
<tr>
<td>Gnatcatcher, Blue-gray</td>
<td>Polioptila caerulea</td>
<td>Blue-gray Gnatcatcher</td>
</tr>
<tr>
<td>Godwit, Marbled</td>
<td>Limnopropus elwesi</td>
<td>Marbled Godwit</td>
</tr>
<tr>
<td>Goldeneye, Barrow’s</td>
<td>Aegolius acadicus</td>
<td>Barrow’s Goldeneye</td>
</tr>
<tr>
<td>Goldeneye, Common</td>
<td>Aegolius acadicus</td>
<td>Common Goldeneye</td>
</tr>
<tr>
<td>Golden-Plover, American</td>
<td>Lonchura punctulata</td>
<td>American Golden-Plover</td>
</tr>
<tr>
<td>Golden-Plover, Pacific</td>
<td>Lonchura punctulata</td>
<td>Pacific Golden-Plover</td>
</tr>
<tr>
<td>Goldfinch, American</td>
<td>Spinus pinus</td>
<td>American Goldfinch</td>
</tr>
<tr>
<td>Goldfinch, Lesser</td>
<td>Spinus pinus</td>
<td>Lesser Goldfinch</td>
</tr>
<tr>
<td>Goose, Cackling</td>
<td>Branta bernicla</td>
<td>Cackling Goose</td>
</tr>
<tr>
<td>Goose, Canada</td>
<td>Branta canadensis</td>
<td>Canada Goose</td>
</tr>
<tr>
<td>Goose, Greater White-fronted</td>
<td>Branta canadensis</td>
<td>Greater White-fronted Goose</td>
</tr>
<tr>
<td>Goose, Snow</td>
<td>Branta canadensis</td>
<td>Snow Goose</td>
</tr>
<tr>
<td>Goshawk, Northern</td>
<td>Accipiter gentilis</td>
<td>Northern Goshawk</td>
</tr>
<tr>
<td>Grebe, Clark’s</td>
<td>Aechmophorus clarki</td>
<td>Clark’s Grebe</td>
</tr>
<tr>
<td>Grebe, Eared</td>
<td>Aechmophorus pelegrinoides</td>
<td>Eared Grebe</td>
</tr>
<tr>
<td>Grebe, Pied-billed</td>
<td>Aechmophorus pelegrinoides</td>
<td>Pied-billed Grebe</td>
</tr>
<tr>
<td>Grebe, Red-necked</td>
<td>Aechmophorus pelegrinoides</td>
<td>Red-necked Grebe</td>
</tr>
<tr>
<td>Grebe, Western</td>
<td>Aechmophorus pelegrinoides</td>
<td>Western Grebe</td>
</tr>
<tr>
<td>Grosbeak, Black-headed</td>
<td>Pheucticus melanocephalus</td>
<td>Black-headed Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Evening</td>
<td>Pheucticus melanocephalus</td>
<td>Evening Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Pine</td>
<td>Pheucticus melanocephalus</td>
<td>Pine Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Dusky</td>
<td>Pheucticus melanocephalus</td>
<td>Dusky Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Greater Sage</td>
<td>Pheucticus melanocephalus</td>
<td>Greater Sage Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Ruffed</td>
<td>Pheucticus melanocephalus</td>
<td>Ruffed Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Sharp-tailed</td>
<td>Pheucticus melanocephalus</td>
<td>Sharp-tailed Grosbeak</td>
</tr>
<tr>
<td>Grosbeak, Spruce</td>
<td>Pheucticus melanocephalus</td>
<td>Spruce Grosbeak</td>
</tr>
<tr>
<td>Guineafowl, Pigeon</td>
<td>Numida meleagris</td>
<td>Guineafowl</td>
</tr>
<tr>
<td>Gall, California</td>
<td>Mergus californicus</td>
<td>California Gall</td>
</tr>
<tr>
<td>Gall, Franklin’s</td>
<td>Mergus francescianus</td>
<td>Franklin’s Gall</td>
</tr>
<tr>
<td>Gall, Glaucous-winged</td>
<td>Mergus glaucoides</td>
<td>Glaucous-winged Gall</td>
</tr>
<tr>
<td>Gall, Mew</td>
<td>Mergus serrator</td>
<td>Mew Gall</td>
</tr>
<tr>
<td>Gall, Ring-billed</td>
<td>Mergus serrator</td>
<td>Ring-billed Gall</td>
</tr>
<tr>
<td>Gall, Western</td>
<td>Mergus serrator</td>
<td>Western Gall</td>
</tr>
<tr>
<td>Harrier, Northern</td>
<td>Lanius excubitor</td>
<td>Northern Harrier</td>
</tr>
<tr>
<td>Hawk, Cooper’s</td>
<td>Milvus cooperi</td>
<td>Cooper’s Hawk</td>
</tr>
<tr>
<td>Hawk, Ferruginous</td>
<td>Milvus peregrinus</td>
<td>Ferruginous Hawk</td>
</tr>
<tr>
<td>Hawk, Red-shouldered</td>
<td>Milvus peregrinus</td>
<td>Red-shouldered Hawk</td>
</tr>
<tr>
<td>Hawk, Red-tailed</td>
<td>Milvus peregrinus</td>
<td>Red-tailed Hawk</td>
</tr>
<tr>
<td>Hawk, Sharp-shinned</td>
<td>Milvus peregrinus</td>
<td>Sharp-shinned Hawk</td>
</tr>
<tr>
<td>Hawk, Swainson’s</td>
<td>Milvus peregrinus</td>
<td>Swainson’s Hawk</td>
</tr>
<tr>
<td>Heron, Black-crowned Night</td>
<td>Ardea melanocephala</td>
<td>Black-crowned Night Heron</td>
</tr>
<tr>
<td>Heron, Great Blue</td>
<td>Ardea cinerea</td>
<td>Great Blue Heron</td>
</tr>
<tr>
<td>Heron, Green</td>
<td>Ardea cinerea</td>
<td>Green Heron</td>
</tr>
<tr>
<td>Hummingbird, Allen’s</td>
<td>Calypte Anna</td>
<td>Allen’s Hummingbird</td>
</tr>
<tr>
<td>Hummingbird, Anna’s</td>
<td>Calypte Anna</td>
<td>Anna’s Hummingbird</td>
</tr>
<tr>
<td>Hummingbird, Black-chinned</td>
<td>Calypte Anna</td>
<td>Black-chinned Hummingbird</td>
</tr>
<tr>
<td>Hummingbird, Caliope</td>
<td>Calypte Anna</td>
<td>Caliope Hummingbird</td>
</tr>
<tr>
<td>Hummingbird, Rufous</td>
<td>Calypte Anna</td>
<td>Rufous Hummingbird</td>
</tr>
<tr>
<td>Ibis, White-faced</td>
<td>Theristicus caudatus</td>
<td>White-faced Ibis</td>
</tr>
<tr>
<td>Jay, Gray</td>
<td>Cyanocitta cristata</td>
<td>Gray Jay</td>
</tr>
<tr>
<td>Jay, Pinyon</td>
<td>Sphyrapicus varius</td>
<td>Pinyon Jay</td>
</tr>
<tr>
<td>Jay, Steller’s</td>
<td>Sphyrapicus varius</td>
<td>Steller’s Jay</td>
</tr>
<tr>
<td>Jay, Western-Scrib</td>
<td>Sphyrapicus varius</td>
<td>Western-Scrib Jay</td>
</tr>
<tr>
<td>Junco, Black-eyed</td>
<td>Junco hyemalis</td>
<td>Black-eyed Junco</td>
</tr>
<tr>
<td>Kestrel, American</td>
<td>Falco tinnunculus</td>
<td>American Kestrel</td>
</tr>
<tr>
<td>Killdeer</td>
<td>Lagopus mutus</td>
<td>Killdeer</td>
</tr>
<tr>
<td>Kingbird, Eastern</td>
<td>Lanius excubitor</td>
<td>Eastern Kingbird</td>
</tr>
<tr>
<td>Kingbird, Western</td>
<td>Lanius excubitor</td>
<td>Western Kingbird</td>
</tr>
<tr>
<td>Kingfisher, Belted</td>
<td>Lophodytes sauritus</td>
<td>Belted Kingfisher</td>
</tr>
<tr>
<td>Kinglet, Golden-crowned</td>
<td>Lophodytes sauritus</td>
<td>Golden-crowned Kinglet</td>
</tr>
<tr>
<td>Kinglet, Ruby-crowned</td>
<td>Lophodytes sauritus</td>
<td>Ruby-crowned Kinglet</td>
</tr>
<tr>
<td>Kite, White-tailed</td>
<td>Milvus migrans</td>
<td>White-tailed Kite</td>
</tr>
<tr>
<td>Lark, Horned</td>
<td>Eremophila alpestris</td>
<td>Horned Lark</td>
</tr>
<tr>
<td>Longspur, Lapland</td>
<td>Calidris fuligula</td>
<td>Lapland Longspur</td>
</tr>
<tr>
<td>Loon, Common</td>
<td>Gavia immer</td>
<td>Common Loon</td>
</tr>
<tr>
<td>Loon, Red-throated</td>
<td>Gavia immer</td>
<td>Red-throated Loon</td>
</tr>
<tr>
<td>Magpie, Black-billed</td>
<td>Pica hudsonia</td>
<td>Black-billed Magpie</td>
</tr>
<tr>
<td>Mallard</td>
<td>Anas platyrhynchos</td>
<td>Mallard</td>
</tr>
<tr>
<td>Martin, Purple</td>
<td>Oenoclea senex</td>
<td>Purple Martin</td>
</tr>
<tr>
<td>Meadowlark, Western</td>
<td>Sturnella magna</td>
<td>Western Meadowlark</td>
</tr>
<tr>
<td>Merganser, Common</td>
<td>Mergus serrator</td>
<td>Common Merganser</td>
</tr>
<tr>
<td>Merganser, Hooded</td>
<td>Mergus serrator</td>
<td>Hooded Merganser</td>
</tr>
<tr>
<td>Merlin</td>
<td>Falco columbarius</td>
<td>Merlin</td>
</tr>
<tr>
<td>Mockingbird, Northern</td>
<td>Mimus polyglottus</td>
<td>Northern Mockingbird</td>
</tr>
<tr>
<td>Murre, Common</td>
<td>Uria aalge</td>
<td>Common Murre</td>
</tr>
<tr>
<td>Murrelet, Ancient</td>
<td>Uria aalge</td>
<td>Ancient Murrelet</td>
</tr>
<tr>
<td>Murrelet, Marbled</td>
<td>Uria aalge</td>
<td>Marbled Murrelet</td>
</tr>
<tr>
<td>Night-Heron, Black-crowned</td>
<td>Ardea melanocephala</td>
<td>Black-crowned Night-Heron</td>
</tr>
<tr>
<td>Nutcracker, Clark’s</td>
<td>Nucifraga columbiana</td>
<td>Clark’s Nutcracker</td>
</tr>
<tr>
<td>Nuthatch, Pygmy</td>
<td>Pygmeus novaterra</td>
<td>Pygmy Nuthatch</td>
</tr>
<tr>
<td>Nuthatch, Red-breasted</td>
<td>Pygmeus novaterra</td>
<td>Red-breasted Nuthatch</td>
</tr>
<tr>
<td>Nuthatch, White-breasted</td>
<td>Pygmeus novaterra</td>
<td>White-breasted Nuthatch</td>
</tr>
</tbody>
</table>

28
<table>
<thead>
<tr>
<th>Bird</th>
<th>Frequency</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oriole, Bullock’s</td>
<td>5.35</td>
<td>3.6</td>
</tr>
<tr>
<td>Osprey</td>
<td>1.68</td>
<td>1.3</td>
</tr>
<tr>
<td>Owl, Barn</td>
<td>2.63</td>
<td>2.0</td>
</tr>
<tr>
<td>Owl, Barred</td>
<td>2.70</td>
<td></td>
</tr>
<tr>
<td>Owl, Boreal</td>
<td>2.74</td>
<td></td>
</tr>
<tr>
<td>Owl, Burrowing</td>
<td>2.68</td>
<td></td>
</tr>
<tr>
<td>Owl, Flammulated</td>
<td>2.64</td>
<td></td>
</tr>
<tr>
<td>Owl, Great Gray</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>Owl, Great Horned</td>
<td>2.66</td>
<td></td>
</tr>
<tr>
<td>Owl, Long-eared</td>
<td>2.72</td>
<td></td>
</tr>
<tr>
<td>Owl, Northern Pygmy</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>Owl, Northern Saw-whet</td>
<td>2.75</td>
<td></td>
</tr>
<tr>
<td>Owl, Short-eared</td>
<td>2.73</td>
<td></td>
</tr>
<tr>
<td>Owl, Spotted</td>
<td>2.60</td>
<td></td>
</tr>
<tr>
<td>Owl, Western Screech</td>
<td>2.65</td>
<td></td>
</tr>
<tr>
<td>Oystercatcher</td>
<td>2.11</td>
<td></td>
</tr>
<tr>
<td>Partridge, Gray</td>
<td>3.26</td>
<td></td>
</tr>
<tr>
<td>Pelican, American White</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Petrel, Fork-tailed</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td>Petrel, Least</td>
<td>1.54</td>
<td></td>
</tr>
<tr>
<td>Pewee, Western Wood</td>
<td>3.12</td>
<td></td>
</tr>
<tr>
<td>Phalarope, Red</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>Phalarope, Red-necked</td>
<td>2.39</td>
<td></td>
</tr>
<tr>
<td>Phalarope, Wilson</td>
<td>2.38</td>
<td></td>
</tr>
<tr>
<td>Pheasant, Ring-necked</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>Phoebe, Black</td>
<td>3.20</td>
<td></td>
</tr>
<tr>
<td>Phoebe, Say’s</td>
<td>3.21</td>
<td></td>
</tr>
<tr>
<td>Pigeon, Band-tailed</td>
<td>2.60</td>
<td></td>
</tr>
<tr>
<td>Pigeon, Rock</td>
<td>2.59</td>
<td></td>
</tr>
<tr>
<td>Pintail, Northern</td>
<td>1.16</td>
<td></td>
</tr>
<tr>
<td>Pipit, American</td>
<td>4.32</td>
<td></td>
</tr>
<tr>
<td>Pipit, Red-throated</td>
<td>3.31</td>
<td></td>
</tr>
<tr>
<td>Plover, American Golden</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Plover, Black-bellied</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Plover, Pacific Golden</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Plover, Semipalmated</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>Plover, Snowy</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Poorwill, Common</td>
<td>2.77</td>
<td></td>
</tr>
<tr>
<td>Pramigian, Rock</td>
<td>1.37</td>
<td></td>
</tr>
<tr>
<td>Pramigian, White-tailed</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Puffin, Tufted</td>
<td>2.58</td>
<td></td>
</tr>
<tr>
<td>Pygmy-Owl, Northern</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>Quail, California</td>
<td>1.44</td>
<td></td>
</tr>
<tr>
<td>Quail, Mountain</td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>Rail, Virginia</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Rail, Yellow</td>
<td>1.84</td>
<td></td>
</tr>
<tr>
<td>Raven, Common</td>
<td>3.38</td>
<td></td>
</tr>
<tr>
<td>Redhead</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>Redpoll, Common</td>
<td>5.43</td>
<td></td>
</tr>
<tr>
<td>Redstart, American</td>
<td>4.43</td>
<td></td>
</tr>
<tr>
<td>Robin, American</td>
<td>4.24</td>
<td></td>
</tr>
<tr>
<td>Rosy-Finch, Black</td>
<td>3.57</td>
<td></td>
</tr>
<tr>
<td>Rosy-Finch, Gray-crowned</td>
<td>3.36</td>
<td></td>
</tr>
<tr>
<td>Sage-Grouse, Greater</td>
<td>1.35</td>
<td></td>
</tr>
<tr>
<td>Sandpiper</td>
<td>2.26</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Baird</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Least</td>
<td>2.29</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Pectorial</td>
<td>2.31</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Rock</td>
<td>2.33</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Semipalmated</td>
<td>2.27</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Sharp-tailed</td>
<td>2.32</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Solitary</td>
<td>2.15</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Spotted</td>
<td>2.14</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Upland</td>
<td>2.20</td>
<td></td>
</tr>
<tr>
<td>Sandpiper, Western</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>Sapsucker, Red-breasted</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Sapsucker, Red-naped</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>Sapsucker, Williamson</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Scaup, Lesser</td>
<td>1.21</td>
<td></td>
</tr>
<tr>
<td>Scooter, Black</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Screech-Owl, Western</td>
<td>2.65</td>
<td></td>
</tr>
<tr>
<td>Scrub-Jay, Western</td>
<td>3.32</td>
<td></td>
</tr>
<tr>
<td>Shoveler, Northern</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Shrike, Loggerhead</td>
<td>3.25</td>
<td></td>
</tr>
<tr>
<td>Siskin, Pine</td>
<td>5.44</td>
<td></td>
</tr>
<tr>
<td>Snipe, Wilson’s</td>
<td>2.37</td>
<td></td>
</tr>
<tr>
<td>Solitaire, Townsend</td>
<td>4.20</td>
<td></td>
</tr>
<tr>
<td>Sora</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Sparrow, American Tree</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Black-throated</td>
<td>5.12</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Brewer’s</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Chipping</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Fox</td>
<td>5.16</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Golden-crowned</td>
<td>5.22</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Grasshopper</td>
<td>5.15</td>
<td></td>
</tr>
<tr>
<td>Sparrow, House</td>
<td>5.48</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Lark</td>
<td>5.11</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Lincoln’s</td>
<td>5.18</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Sage</td>
<td>5.13</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Savannah</td>
<td>5.14</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Song</td>
<td>5.17</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Swamp</td>
<td>5.19</td>
<td></td>
</tr>
<tr>
<td>Sparrow, Vesper</td>
<td>5.10</td>
<td></td>
</tr>
<tr>
<td>Sparrow, White-crowned</td>
<td>5.21</td>
<td></td>
</tr>
<tr>
<td>Sparrow, White-throated</td>
<td>5.20</td>
<td></td>
</tr>
<tr>
<td>Starling, European</td>
<td>4.30</td>
<td></td>
</tr>
<tr>
<td>Stilt, Black-necked</td>
<td>2.12</td>
<td></td>
</tr>
<tr>
<td>Storm-Petrel, Fork-tailed</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td>Storm-Petrel, Leach’s</td>
<td>1.54</td>
<td></td>
</tr>
<tr>
<td>Swallow, Bank</td>
<td>3.44</td>
<td></td>
</tr>
<tr>
<td>Swallow, Barn</td>
<td>3.46</td>
<td></td>
</tr>
<tr>
<td>Swallow, Cliff</td>
<td>3.45</td>
<td></td>
</tr>
<tr>
<td>Swallow, Northern Rough-winged</td>
<td>3.43</td>
<td></td>
</tr>
<tr>
<td>Swallow, Tree</td>
<td>3.41</td>
<td></td>
</tr>
<tr>
<td>Swallow, Violet-green</td>
<td>3.42</td>
<td></td>
</tr>
<tr>
<td>Swan, Trumpeter</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Swan, Tundra</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Swift, Black</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Swift, Vaux’s</td>
<td>2.79</td>
<td></td>
</tr>
<tr>
<td>Swift, White-throated</td>
<td>2.80</td>
<td></td>
</tr>
<tr>
<td>Tanager, Western</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Tattler, Walking</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td>Teal, Blue-winged</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td>Teal, Cinnamon</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Teal, Green-winged</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Tern, Black</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>Tern, Caspian</td>
<td>2.47</td>
<td></td>
</tr>
<tr>
<td>Tern, Common</td>
<td>2.49</td>
<td></td>
</tr>
<tr>
<td>Tern, Elegant</td>
<td>2.51</td>
<td></td>
</tr>
<tr>
<td>Tern, Forster’s</td>
<td>2.50</td>
<td></td>
</tr>
<tr>
<td>Thrasher, Sage</td>
<td>4.29</td>
<td></td>
</tr>
<tr>
<td>Thrush, Hermit</td>
<td>4.23</td>
<td></td>
</tr>
<tr>
<td>Thrush, Swainson’s</td>
<td>4.22</td>
<td></td>
</tr>
<tr>
<td>Thrush, Varied</td>
<td>4.25</td>
<td></td>
</tr>
<tr>
<td>Titrmouse, Juniper</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Titrmouse, Oak</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Towhee, California</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Towhee, Green-tailed</td>
<td>5.4</td>
<td></td>
</tr>
</tbody>
</table>