

BIRD SONGS OF CALIFORNIA

Geoffrey A. Keller



This audio guide features the songs and calls of more than 220 bird species that are mostly permanent residents or summer breeders in California. The species selected for inclusion on this audio guide are primarily ones that are conspicuously vocal, and whose sounds can play a very important role in identification. The vast majority of these recordings were made during the normal breeding season, which extends from early February in the southern and lowermost elevations through mid-June in the higher elevations of the Sierra Nevada.



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*This audio guide is dedicated to Terri Gallion,
whose indomitable spirit and insatiable curiosity for
the natural world provides inspiration for us all.*



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Foreword

California is a birder's paradise. The diverse habitats of the Golden State include the deserts from the western extension of the Great Basin in the northeast to the Mojave and Colorado deserts in the southeast, the mountains from the Sierra Nevada to the Coast Range, the 500-mile-long Central Valley at the heart of the state, and the world-renowned California coast.

A sampling of birding experiences here might include participating in one of numerous Christmas Bird Counts that have tallied up 150 or more species, encountering massive spring migrations at desert oases in winter, searching for the state's 314 regularly nesting species, witnessing fall migrants of shorebirds by the thousands, or being overwhelmed by the sheer number of birds at the Salton Sea, the tens of thousands of Snow Geese in the Sacramento Valley, or a dozen wintering warbler species in Santa Barbara.

With Bird Songs of California, birders have an unprecedented tool at their disposal to explore California's birdlife. Geoff Keller and the Cornell Lab of Ornithology are to be applauded for their professional and comprehensive efforts resulting in this unique set, the latest in their series of excellent regional birdsong CDs.

The Lab of Ornithology's emphasis on regional guides is a "sound" one. Many bird species have one or more distinctly regional dialects. Only a guide with regional emphasis can capture some or all of these, such as the striking recordings of the Sage Sparrow and Savannah Sparrow complex featured here.

The number of newly published vocalizations selected for this CD set is truly impressive, reflecting the great efforts in the sound recording fieldwork to capture as many different vocalizations as possible for this guide. Listening to the tracks of species such as Greater Roadrunner, Willow Flycatcher, and Lawrence's Goldfinch reveals how successful those efforts were.

This audio guide is clearly leading edge. As would confidently be expected, *Bird Songs of California* sets a new standard of excellence that will lead the way to even better regional birdsong audio guide sets in the future, ultimately to the benefit of us all.

*Bob Barnes
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Acknowledgments

We are most grateful to all of the individuals and organizations who made this audio guide a reality, and we sincerely extend our warmest thanks to the following: To the gracious folks at Audubon-California's Kern River Preserve, who allowed the author to use the Preserve as a base of operations for recording work in the surrounding area. The Preserve itself served as the epicenter for recording many of the hard-to-locate specialty birds of southern California. To

Bob Barnes, Outreach Director of the Kern River Preserve, for his tireless enthusiasm and helpful suggestions on the project, his wealth of knowledge about birds of the surrounding region, and his suggestions to improve the booklet. Bob also played a key role in locating other knowledgeable individuals whose expertise helped make valuable contributions to this audio guide. To Terri Gallion, Research Associate of the Southern Sierra Research Station, for her time, effort, and multifaceted input. Terri not only accompanied the author on numerous field trips to help locate key species of the region, but she made valuable contributions from start to finish by making suggestions to improve upon both the discs and the booklet. In addition, Terri personally became one of the major contributors of sound recordings for this guide, choosing to tackle several of the most difficult species on the project. Her stunning and labor-intensive recording of the western race of the Yellow-billed Cuckoo surely qualifies as one of the most amazing recordings of a nonpasserine in North America. Thanks to Mary Whitfield of the Kern River Preserve, for helping with

the logistics of gathering recordings from the extimus race of the Willow Flycatcher and, in a similar fashion, to Murrelet Halterman for her help with the logistics of recording the Yellow-billed Cuckoo. Also of special note was the help the author received from Tim Burr, who took the author to locations for the recordings of the Least Bell's Vireo, Gray Vireo, and Belding's Savannah Sparrow. Tim personally contributed several key recordings to this project, not the least of which are his rare recordings of the Island Scrub-Jay, recordings that required extra expense and effort on his part. We would also like to thank the biologists at Marine Corps Base Camp Pendleton for providing access to some great riparian habitat on the Santa Margarita River where the Least Bell's Vireos were recorded. Other major contributors of recordings on this project were Greg Clark, David S. Herr, Randolph S. Little, and Jim Morgan. Each of these individuals contributed multiple recordings of species that are very difficult to record, and have thus made significant contributions to the overall completeness of this audio guide. Thanks to Bob Steele for all of his time and effort capturing the splendid photo of

Lawrence's Goldfinch, which was used for our cover photograph, and thanks to the individuals at the Cleveland National Forest for helping the author gain access to record key species in some of the more remote locations of the forest. We are indebted and grateful to Jon Dunn, Kimball Garrett, and Curtis Marantz for donating their time and expertise by reviewing the booklet and material contained on this audio guide for authenticity. Thanks to California State University-Bakersfield F.A.C.T. for access to their raptor rehabilitation facilities where Terri Gallion recorded vocalizations of Golden Eagle. Finally, thank you to director Jim Steele and his staff at the San Francisco State University's Sierra Nevada Field Campus for sharing their expertise and a superbly-run base from which to conduct recording forays.

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Using This Audio Guide

This audio guide features the songs and calls of more than 220 bird species that are mostly permanent residents or summer breeders in California. The species selected for inclusion on this audio guide are primarily ones that are conspicuously vocal, and whose sounds can play a very important role in identification. The vast majority of these recordings were made during the normal breeding season, which extends from early February in the southern and lowermost elevations through mid-June in the higher elevations of the Sierra Nevada. Key recordings made at Audubon-California's Kern River Preserve are designated as KRP.

Comments on Making Birdsong Recordings

Although recording bird song is becoming increasingly popular, relatively few people, so far, have the appropriate equipment, or have actually attempted to record birds in the field. Once one attempts to record bird song, a newly found appreciation develops for the

degree of difficulty in acquiring a clean, well-executed recording with minimal distracting noise from either the recordist or from the environment. Foremost, it is becoming increasingly difficult to find quiet places to record birds due to the ever-increasing amount of air traffic, highway traffic, off-road vehicle use, and sheer numbers of people who want to enjoy the national parks, forests, and wildlife refuges. Southern California in particular proved to be exceptionally challenging in this regard. Natural sounds can challenge the recordist attempting to make a clear and accurate recording—problems include excessive wind noise, the sound of a rushing mountain stream, or the white-noise roar of ocean surf. Other less obvious problems arise when attempting to record nonpasserines. In general, nonpasserines have a tendency to vocalize infrequently, and without warning. This alone makes them significantly more difficult to record than the average passerine. In a similar fashion, call notes are very difficult to record since they too are often given without warning and many times only fleetingly. In every instance, special attention was

paid to the quality of the recordings provided herein, and it is hoped that the listener of this audio guide will be able to more fully appreciate the degree of difficulty in obtaining these high-quality recordings.

Playing Recordings in the Field

Please use the recordings in this guide responsibly. Playing recordings in the field can be disruptive to birds. Please refrain from using playback near nesting birds or when a bird shows signs of agitation.

List of Songs and Calls

Common and scientific names follow *The American Ornithologists' Union Check-list of the North American Birds, Seventh Edition*. Track numbers precede the species' common name. In a few instances multiple track numbers for a single species are assigned to correspond with multiple subspecies. An alphabetized list of common names and corresponding track numbers is also provided for quickly locating a particular species' track number. Additional data for

any recording used on this guide is available by contacting the Macaulay Library at the Cornell Lab of Ornithology.

Contributing Recordists

Arthur A. Allen, Jonathan L. Atwood, Joe Barth, John Bauhs, Gregory F. Budney, Timothy A. Burr, Greg Clark, Rob C. Fawcett, William R. Fish, Terri L. Gallion, William W. H. Gunn, David S. Herr, Oliver H. Hewitt, Rick Hibbard, Geoffrey A. Keller, Peter P. Kellogg, Louise Knecht, Randolph S. Little, Curtis A. Marantz, Matthew D. Medler, Jim Morgan, S. Kim Nelson, Steven R. Pantle, Margery R. Plymire, Tim Price, Clayton Reeves, Robert Righter, Todd A. Sanders, Robert C. Stein, Charles A. Sutherland.

BIRD SONGS OF CALIFORNIA TRACK LIST

1. Bird Songs of California

2. American Bittern

Botaurus lentiginosus

Tunk, tunk, tunk, tunk, tunk followed by low pitched *gunk-a-lunk* or *pumper-unk* (Franklin Co., NY).

3. Least Bittern *Ixobrychus exilis*

Song is a series of eight or more hollow, *coo-coo-coo-coo* notes in rapid succession. One call is a series of blackbird-like *kek-kek-kek* notes (Inyo Co., CA).

4. White-faced Ibis *Plegadis chibi*

Usually silent, but creaky door *eert* given when flushed, in flight, and landing (Siskiyou Co., CA).

5. Osprey *Pandion haliaetus*

Rising whistled series *que, que, que*. Also muted, guttural, creaking (Sierra Co., CA).

6. White-tailed Kite *Elanus leucurus*

High, piercing, *tew* notes, given singly or in rapid succession. Also, an atonal, creaking *craw*, a squeaky *que-craw*, and a creaking *qua-cree-craw* (San Diego Co., CA).

7. Bald Eagle

Haliaeetus leucocephalus

Kleet-kleet-kleet... or *kee-kee-kee...* with short nasal coughs (Denver Co., CO; captive bird).

8. Northern Harrier *Circus cyaneus*

Nasal *che, che, che, che...* and guttural *AAA-nah, AAA-nah, AAA-nah...* (Tulare Co., CA).

9. Sharp-shinned Hawk

Accipiter striatus

High, insistent, shrill *ki, ki, ki, ki, ki...* More closely resembles the call of the American Kestrel than Cooper's Hawk (Tompkins Co., NY).

10. Cooper's Hawk

Accipiter cooperii

Insistent *kak, kak, kak...* which is much lower and of a different tonal quality than Sharp-shinned Hawk. Also a rough *HAAAA* and a squeaky *queeep* (Pima Co., AZ).

11. Northern Goshawk

Accipiter gentilis

Alarm calls from nest site are downward inflected long series of *kleet, kleet, kleet...* (Harney Co., OR). Second example is clear, plaintive *ka, ka, ka...* (Pima Co., AZ).

12. Red-shouldered Hawk

Buteo lineatus

Although the recording on this guide is from an eastern population, the loud, piercing, *KEE-yer, KEE-yer, KEE-yer...* is essentially identical to the vocalizations of western populations (Monroe Co., FL).

13. Swainson's Hawk

Buteo swainsoni

Although less raspy, the call is a high-pitched, piercing, descending scream much like that of the Red-tailed Hawk (Saskatchewan, Canada).

14. Red-tailed Hawk

Buteo jamaicensis

Raspy, forceful, descending *tseer-r-r-r*. Calls from young birds are emphatic, whistled, osprey-like notes (Siskiyou Co., CA).

15. Golden Eagle *Aquila chrysaetos*

Usually silent. Unbefitting such a magnificent bird, a muted, mellow, *qua, qua, qua...* (Kern Co., CA; captive bird).

16. American Kestrel *Falco sparverius*

Shrill *killy-killy-killy...* Higher in pitch than similar sounding call of Sharp-shinned Hawk (Umatilla Co., OR).

17. Prairie Falcon *Falco mexicanus*

Repeated *caar, caar, caar, caar...* Some calls are long and drawn out while others are short, raspy, and closely spaced (Siskiyou Co., CA).

18. Ring-necked Pheasant

Phasianus colchicus

Piercing, shrill *skull-cock* call followed by wing flapping (Siskiyou Co., CA). Also, a rapid series of *kek-kek-kek* notes (Bottineau Co., ND).

19. Ruffed Grouse *Bonasa umbellus*

Courtship territorial display by male performed on fallen log that acts as a resonator. Male beats his wings on air, faster and faster, creating a far-carrying *thud, thud thud-thud-ud-ud-du-ud*. At close range, the sound is felt almost as much as it is heard (Walla Walla Co., WA).

20. Greater Sage-Grouse

Centrocercus urophasianus

Males on lek produce an unearthly arrangement of swishing, popping, and belching sounds (Deschutes Co., OR).

21. Sooty Grouse

Dendragapus obscurus

Series of very deep, booming *broo, broo, broo, broo...* (Sierra Co., CA).

22. Mountain Quail *Oreortyx pictus*

Primary territorial call is a far- carrying *too-OOK, too-OOK...* (Sierra Co., CA). Also, *wick-wick-wick...* calls and “spitting” calls indicating alarm (Lake Co., CA).

23. California Quail

Callipepla californica

Occasional *Chi-ca-go* songs interspersed with numerous *WA-ah* and “spit-like” notes indicating alarm (San Benito Co., CA). Final recording is wing *wooosh* of incoming Cooper’s Hawk with entire covey going into alarm mode (Santa Cruz Island, CA).

24. Gambel’s Quail

Callipepla gambelii

Up-slurred, and sometimes almost squeaky, *kWA-ab* (Kern Co., CA). Second example has a different tonal quality of *kWA-ab* or *kWA-al*, plus *hake, spit*, and *butt* notes ending with *where-are-you-all* (Pima Co., AZ).

25. Yellow Rail

Coturnicops noveboracensis

Territorial song is a unique, rhythmic tic-tic, tic-tic-tic... (Modoc Co., CA).

26. Black Rail *Laterallus jamaicensis*

Territorial song is snappy *Kick-EE-do* (Marin Co., CA).

27. Yuma Clapper Rail

Rallus longirostris yumanensis

A repeated and halting *check, check, check...* (Imperial Co., CA). Note: *R. l. yumanensis* may also give the “clapping” series presented in the next track.

28. Light-footed Clapper Rail

Rallus longirostris levipes

“Clapping” series from two birds (coastal San Diego Co., CA). Note: *R. l. levipes* may also give the *check, check, chek* series presented in the previous track.

29. Virginia Rail

Rallus limicola

Metallic accelerating *ka-DICK, ka-DICK, ka-DICK...* (Sierra Co., CA). An explosive onset of *oink-oink-oink-oink-der-der-errrrrr* (Coos Co., OR). Location call (?) is a random *gik, gik, gik...* with grunt-like quality (Inyo Co., CA).

30. Sora *Porzana carolina*

At close range, an ear-piercing call of *Pirr-EEET, pirr-EEET, pirr-EEET...* occasionally followed by explosive, descending song of *WE-BEE-BEE-bee-bee-be-be* (Klamath Co., OR).

31. Sandhill Crane *Grus canadensis*

One of the greatest sounds from a North American bird. A haunting, resonant, hollow-sounding *ah-grrrrr-oo* (Modoc Co., CA).

32. Snowy Plover

Charadrius alexandrinus

A burry *churrr*, and *per-REE-to*, sometimes with brief pause between the second and third segment (Coos Co., OR).

33. Killdeer *Charadrius vociferus*

A plaintive, inquisitive *dee* or descending *dee-dee-dee*, along with trill on one pitch (Kern Co., CA). Also the familiar, high, penetrating, *kill-deer*, sometimes given with a stuttering quality (Siskiyou Co., CA).

34. Black Oystercatcher

Haematopus bachmani

Loud enough to be heard over most any surf is the *quee, queep, queep...* sometimes, at the end of a sequence, run together in a blur (Victoria, BC).

35. Black-necked Stilt

Himantopus mexicanus

Alarm calls are a strident *kyip-kyip-kyip...* and under continued duress a hoarse *kou, kou, kou...* (Siskiyou Co., CA).

36. American Avocet

Recurvirostra americana

Slightly less irritating than the calls of the Black-necked Stilt, with which it frequently associates, are the ringing *kleet, kleet, kleet...* calls of the avocet. Also an agitated *ka-LEEP* (Siskiyou Co., CA).

37. Willet

Catoptrophorus semipalmatus

Calls include *ka-LUT, ka-LUT, ka-LUT...* and the display is a ringing *pill-will-willet...* (Lake Co., OR). Tern-like *kreeet* calls are given in flight (Sierra Co., CA).

38. Spotted Sandpiper

Actitis macularia

A series of clear whistled *weet, weet, weet...* notes which trail off in intensity at the end. Also a ringing *peet, peet-weet* (Sierra Co., CA).

39. Long-billed Curlew
Numenius americanus
Territorial display contains long, drawn out slurred whistles, and one alarm call is a loud, raspy *kee-kee-kee*... (Lake Co., OR). Also *cur-LEE, cur-LEE, cur-LEE*... (Alberta, Canada).

40. Wilson's Snipe
Gallinago delicata
Song is an evenly spaced *TEK-a, TEK-a, TEK-a*... ending with strident *kek-kek-kek* notes (Harney Co., OR). "Winnowing" flight display sound generated by tail feathers (Sierra Co., CA).

41. Wilson's Phalarope
Phalaropus tricolor
Primary call is a low-pitched, hollow-sounding *avoot* or *arut* given singularly or in a series. Also a sputtering *churr*, and *nit, nit, nit*... (Sierra Co., CA).

42. Pigeon Guillemot
Cepphus columba
High-pitched and ear-piercing whistles that can project over the sound of most any surf. Usually starts with a long, continuous whistle, then progresses into series of much shorter fragments (Coos Co., OR).

43. Marbled Murrelet
Brachyramphus marmoratus
Nesting as much as 17 miles inland, the gull-like *klew* seems out of place coming from the canopy of old growth forest in which the murrelets nest (Lincoln Co., OR).

44. Band-tailed Pigeon
Columba fasciata
Low pitched *boo-woOOoo, boo-woOOoo*..., wing clap, growling *boooOOOOOoo*... and gruff *haaaw* (Lincoln Co., OR).

45. White-winged Dove
Zenaida asiatica
Song is a mournful *boo-loo-ka-loo* often alternating with a halting, descending series of *hoo-HOO-hoo*... notes (Pima Co., AZ).

46. Mourning Dove
Zenaida macroura
Song is *coooo-WAH, whoo, whoo, whoo*, sometimes mistaken for the voice of an owl. Also, an occasional *whoo-WAH-who* (CA).

47. Inca Dove *Columbina inca*
Song is a raspy *WHIRL-pool*. Another type of song has a slightly hoarse quality and sounds like *la-la-la-look-BELOW, look-BELOW* (Cochise Co., AZ).

48. Common Ground-Dove
Columbina passerina
Song is a monotonous *hoooo-oh, hoooo-oh, hoooo-oh*... within each phrase the pitch rising slightly from beginning to end (Pima Co., AZ).

49. Yellow-billed Cuckoo
Coccyzus americanus
A long series of *cuc-cuc-cuc*... *kowlp-kowlp-kowlp*... notes that lose speed and energy at the end, or an accelerating *kowlp, kowlp, kowlp*... Also, "knocking" notes given in alarm; this vocalization is relatively soft (KRP, Kern Co., CA).

50. Greater Roadrunner
Geococcyx californianus
Mournful descending *ooh, ooh, ooh, ooh, ooh, ooooh*, slowing at the end, given by the male. Second recording is a fairly low-pitched *kek, kek-kek-kek-kek* from a female (Kern Co., CA). Bill snapping with underlying vocalization (Yavapai Co., Arizona).

51. Barn Owl *Tyto alba*
Shrill, raspy *kkkschhhhhhh* or *kkkschhhhhhh-eeek*. Also metallic twitters (San Joaquin Co., CA).

52. Flammulated Owl
Otus flammeolus
Series of deep resonant *hoop* or *hoo-dip, hoo*, delivered at approximately two-second intervals (Union Co., OR). Also a raspy *wow* or *wow-wow, oh* (Umatilla Co., OR).

53. Western Screech-Owl
Otus kennicottii
Hoos delivered in a "bouncing ball" style. Also, a two-part, mellow, tremulous trill on a single pitch (Cochise Co., AZ).

54. Great Horned Owl
Bubo virginianus
Deep resonant *who-who-WHO, who, who* from a pair of birds (Monterey Co., CA), and raspy *screeeech* from a fledged young bird (Walla Walla Co., WA).

55. Northern Pygmy-Owl
Glaucidium gnoma
A rather unimaginative *toot* given at approximately three-second intervals (Josephine Co., OR).

56. Burrowing Owl

Athene cunicularia

Territorial and courtship *COO-HOO-ob* of male is given on one pitch. Alarm calls are a *quick-quick-quick* in rapid series (Tulare Co., CA).

57. Spotted Owl

Strix occidentalis

Deep resonant *HOO...hoo-hoo, HOO-hoo* location call. Also a shrill, ascending whistle from female, an emphatic *AOW*, and twittering (Coos Co., OR).

58. Long-eared Owl *Asio otus*

Deep monotonous *hooooo* (Walla Walla Co., WA).

59. Short-eared Owl *Asio flammeus*

Raspy, bark-like *yak-yak-yak-yak...* (Malheur Co., OR).

60. Northern Saw-whet Owl

Aegolius acadicus

Long series of whistled *toots*, sometimes beginning rather timidly. Sounds similar to the backup warning sound of heavy equipment (Del Norte Co., CA).

61. Lesser Nighthawk

Chordeiles acutipennis

Durring courtship listen for a soft, continuous, mellow trill on one pitch (Imperial Co., CA). Also, an extremely nasal *whaa-a-a-a-a* (Pima Co., AZ). Unlike Common Nighthawks, which routinely call during migration, Lesser Nighthawks are usually silent outside of the breeding season.

62. Common Nighthawk

Chordeiles minor

Nasal *peent* typically given in flight (Modoc Co., CA). "Booming" produced in aerial display dive sounds like a truck roaring down a highway (Harney Co., OR).

63. Common Poorwill

Phalaenoptilus nuttallii

Repeated *poor-will* or *poor-will-ip* at close range, and wing clap (Sierra Co., CA). Also *poit, poit...* of flight call? (Pima Co., AZ).

64. Vaux's Swift *Chaetura vauxi*

High pitched chip, much higher and thinner than that of the Chimney Swift (Union Co., OR).

65. White-throated Swift

Aeronautes saxatalis

Scratchy *skee-e-e-e-e* notes, often descending in loudness at end of a series (Yavapai Co., AZ).

66. Black-chinned Hummingbird

Archilochus alexandri

Display flight is a pulsating hum and a scratchy *scheuu*. Call notes from a second bird at feeder (Cochise Co., AZ).

67. Anna's Hummingbird

Calypte anna

Song is a back and forth, scratchy, unmusical warble. Calls include an atonal *smack* (Kern Co., CA).

68. Costa's Hummingbird

Calypte costae

Song is a very high, thin, wiry *zing* given both in flight and when perched. The most often heard vocalization is a light, bushtit-like *pit, pit-pit, pit...* (Mohave Co., AZ).

69. Calliope Hummingbird

Stellula calliope

High-pitched, sharp *tsew* call. *Ziing* vocalizations given during U-shaped aerial display dive. Bumblebee-like sound delivered from willow cover following aerial display (Sierra Co., CA).

70. Broad-tailed Hummingbird

Selasphorus platycercus

Most noticeable is the distinctive cricket-like wing whistle from male birds. Calls are a dry *chup* (Cochise Co., AZ).

71. Rufous Hummingbird

Selasphorus rufus

Atonal, buzzy, *tew-tew-tew-tew* is given during circular display flight. The chase call is a peevish, *zeee, zeee, zeee-chuppity-chup* (Coos Co., OR).

72. Allen's Hummingbird

Selasphorus sasin

Calls are *chup* or *chip*, and the chase call is essentially identical to that of the Rufous Hummingbird (Monterey Co., CA).

73. Belted Kingfisher

Ceryle alcyon

A woody, dry rattle with some variation in pitch and intensity, given in flight or from perch (Sullivan Co., IN).

74. Lewis's Woodpecker

Melanerpes lewis

This species is generally silent. Muffled but harsh *churr*. Males give a *yick*, females a *yick-it*. Drum is weak (Lake Co., OR).

75. Acorn Woodpecker
Melanerpes formicivorus

Vocalizations include a series of nasal *wack-up, wack-up, wack-up...* as well as nasal *churr* (San Benito Co., CA), and *waaah* notes (Cochise Co., AZ).

76. Gila Woodpecker
Melanerpes uropygialis

Call is a high pitched, squeaky *yip-yip-yip...* and a loud *churr, churr, churr...* Drum slows toward end (Pima Co., AZ).

77. Williamson's Sapsucker
Sphyrapicus thyroideus

A series of muted, burry, *yuk, yuk, yuk...* notes at nest site, and a nasal *quee-ark, quee-ark* contact call. Also a *churrrr* that rises then falls in pitch (Sierra Co., CA). Drum exhibits the typical broken sapsucker cadence and slows considerably near the end (Inyo Co., CA).

78. Red-breasted Sapsucker
Sphyrapicus ruber

Primary call is a generic sapsucker whine (Sierra Co., CA). Also, nasal, muted *churrr* and *quee-ark* notes. Drum has typical broken sapsucker cadence (Tulare Co., CA).

79. Ladder-backed Woodpecker
Picooides scalaris

Peek calls are similar to those of the Nuttall's Woodpecker but are higher in frequency. Rattle ends in *eerrr* (Cochise Co., AZ). Drum is even and rapid (Inyo Co., CA).

80. Nuttall's Woodpecker
Picooides nuttallii

Typical contact call is a fast, double-noted, *kick-it, kick-it...* (San Luis Obispo Co., CA) which is sometimes run together in a rattle (San Benito Co., CA). Also, rapid *peak-peak-peak...* and subtle *wick, wick, wick...* contact notes (Kern Co., CA). Drum is steady and of medium pace (San Luis Obispo Co., CA).

81. Downy Woodpecker
Picooides pubescens

Rattle is a descending *ki-ki-ki-ki-ki...* and the *pik* call is higher pitched and flatter sounding than that of Hairy Woodpecker (NY). Drum is a steady cadence and slower paced than that of a hairy (Coos Co., OR).

82. Hairy Woodpecker
Picooides villosus

Loud, sharp *peek* followed by one example of rattle comprised of similar sounding notes in rapid-fire sequence (Sierra Co., CA). The *peek* of the hairy is sharper, louder and more forceful than the flat *pik* of the Downy Woodpecker. Drum cadence is steady and faster paced than downy (Kern Co., CA).

83. White-headed Woodpecker
Picooides albolarvatus

Calls are closely spaced series of *peek* notes given in pairs or as triplets (Deschutes Co., OR). Rattle is a rapid-fire sequence of similar-sounding notes. Drum is relatively slow and tapers off somewhat at the end (Sierra Co., CA).

84. Black-backed Woodpecker
Picooides arcticus

The primary call is a flat *kip*. Also, a squeaky *ke-ke-ke-growl* (Deschutes Co., OR). The drum is rather slow and tapers off gradually (Sierra Co., CA).

85. Northern Flicker
Colaptes auratus

The most conspicuous vocalization given during the breeding season is a long series of *wick-wick-wick...* notes (Kern Co., CA). Calls include an explosive *clear*, (Modoc Co., CA), and a *flick-a, flick-a, flick-a...* when two birds engage in pair formation or rival interactions (Larimer Co., CO). Listen also for *bwirr*, which is given as a bird takes flight (Santa Cruz Island, CA). Drum is steady and fast (Siskiyou Co., CA).

86. Gilded Flicker
Colaptes chrysoides

Voice is very similar to Northern Flicker. Listen for a long series of *wick-wick-wick...* notes, and a down-slurred *clear* in alarm-threat situations (Pima County, AZ).

87. Pileated Woodpecker
Dryocopus pileatus

Territorial call is a loud, explosive, prehistoric-sounding *kek-kek-kek-kek-kek...* slightly rising in both pitch and intensity before trailing off in volume. Other calls include evenly spaced *kek* notes and *oik* notes (Coos Co., OR). Drum is slow, powerful, and trails off (Sierra Co., CA).

88. Olive-sided Flycatcher

Contopus cooperi

Dawn song is a continuous *quick-free, quick-free, quick-FREE, beer*, (Klamath Co., OR) with the regular song being widely spaced, explosive, *quick-FREE-beer* (Siskiyou Co., CA). Calls include a *pip-pip-pip*, trills, and fragments of song-like vocalizations (Sierra Co., CA).

89. Western Wood-Pewee

Contopus sordidulus

Recorded before sunrise, this dawn song is a strained, whistled *a-pee-a-reet*, alternating with a burry *pee-U* (Sierra Co., CA). Calls are a *pee-U* (San Benito Co., CA) as well as a burry *eeerp* (San Diego Co., CA).

90. Willow Flycatcher

Empidonax traillii extimus

Song is a slower, looser version of *FITZ-bew* than the songs of the other western subspecies. Calls include *wit, brrrrit, wit-we-wit*, trills, and *ka-lit* (KRP, Kern Co., CA).

91. Willow Flycatcher

Empidonax traillii brewsteri

FITZ-bew song from *brewsteri* is comparatively faster and “tighter” (Coos Co., OR).

92. Hammond’s Flycatcher

Empidonax hammondi

Song has three elements: a brisk *se-PUT*; lower, raspy *TE-surrrt*, and a rough *che-lup* (Tulare Co., CA). Song is more raspy than that of the Dusky Flycatcher. Second example of song (Coos Co., OR). Calls include a diagnostic, emphatic *peep*, and a *pew, pew-it* (Grant Co., OR).

93. Gray Flycatcher

Empidonax wrightii

Song is a strong *cha-WIP*, sometimes including a weak *see-ah* (Kern Co., CA). Dawn song (Sierra Co., CA). Third example of song contains trills (Sierra Co., CA). Calls are *pew* and diagnostic *wit*, sometimes delivered in a stuttered fashion (Crook Co., OR).

94. Dusky Flycatcher

Empidonax oberholseri

Song, in comparison to Hammond’s, is less raspy, has more emphasis on the higher notes, and contains *dear-VIT* notes (Inyo Co., CA). The *dew-hic*, or *dew, dew, dew-hic* call is the most diagnostic call of the species (Tulare Co., CA), but the diagnostic *whit* call (Sierra Co., CA) and the *brrrrit* call are more frequently heard (Tulare Co., CA).

95. Pacific-slope Flycatcher

Empidonax difficilis

Song is a continuous *pee-SEEP, slip, sweep* which is given with more gusto during the dawn chorus (Mendocino Co., CA). Second example of song is after dawn chorus (Coos Co., OR). An ascending, slurred, *su-WEEP* is the position note given year round (Coos Co., OR).

96. Black Phoebe *Sayornis nigricans*

Song consists of alternating, rising, *pee-wee* and down-slurred *pee-seer* phrases (San Benito Co., CA). Calls include a sharp, down-slurred *tsew* delivered in an attenuated or abrupt fashion, and a sharp, piercing *pseer* (San Luis Obispo Co., CA).

97. Say’s Phoebe *Sayornis saya*

Song from dawn chorus is a non-stop, mournful series of down-slurred *t-dee-are* phrases, sometimes including burry *brrreep* or a rising *t-dee-are-it*. Second example well after dawn chorus is a relaxed version of above (San Diego Co., CA). Call is a very brief *eeerp* (Yavapai Co., AZ).

98. Vermilion Flycatcher

Pyrocephalus rubinus

Song is a repeated *pit-pit-p-p-pit-a-sea* that begins with much hesitation, rising then falling in pitch as the song progresses. Call is a sharp, metallic *psee* (Pima Co., AZ).

99. Ash-throated Flycatcher

Myiarchus cinerascens

Dawn song is a rather dry and somewhat burry *whos-in-there, ka-brick...* (San Luis Obispo Co., CA). Calls are a *chip, che-beer* (Kern Co., CA), and a dry, flat *ka-breck* and *kip* notes (Siskiyou Co., CA).

100. Brown-crested Flycatcher

Myiarchus tyrannulus

Dawn song is a loud, whistled, *whit-will-do, TEA-four-two*. Calls include a *whit* as well as *breeep* notes and bickering chatter (KRP, Kern Co., CA). Call notes of *whit* (Pima Co., AZ).

101. Cassin’s Kingbird

Tyrannus vociferans

Dawn song is a loud, continuous *ka-deer, ka-DEER, ka-DEE-DA-leer* that builds to a crescendo (Kern Co., CA). Calls include a hoarse, emphatic *chi-weer* and a bickering *ka-deer, ka-deer, ka-deer* (Cochise Co., AZ).

102. Western Kingbird

Tyrannus verticalis

Beginning in the predawn darkness, the *pa-dit, pa-dit, PADIT, dit-dit-dit* dawn song is as subtle as a blast from a referee's whistle. Song grows in intensity and speed as it nears the end (San Luis Obispo Co., CA). Calls include quickly delivered notes of *pa-dit, dit,* and *pit-a-dit-dit-dit* as well as chatter notes (Imperial Co., CA).

103. Loggerhead Shrike

Lanius ludovicianus

Song is a series of harsh, sometimes metallic phrases that are each typically repeated four or more times (Sonora, Mexico). Numerous calls are possible. Presented here are *brraaat* and other harsh-sounding calls (San Clemente Island, CA).

104. "Least" Bell's Vireo

Vireo bellii

Song is a rapid, peevish *cheedle-cheedle-cheedle-CHEW*. Calls given here are a series of low-level, unmusical *mew* or *tew* notes (San Diego Co., CA).

105. Gray Vireo

Vireo vicinior

Song is variable, made up of *chuwee* and *chuwu* phrases. Similar to plumbeous, but note the different rhythm to the songs (San Diego Co., CA). A second example of song contains several *chuwee* notes with a rising inflection. Calls include a fussy, stuttered *jit, di-di-di-di,* and a burry *jit-jeet* note reminiscent of House Finch (Maricopa Co., AZ).

106. Plumbeous Vireo

Vireo plumbeus

Song is mostly a three-parted *vir-ee-oh, vir-ee-uh,* and *vee-oh-ree,* as well as a two-part *vee-oh* and *vee-uh* (Tulare Co., CA). One scold is a raspy *sqew, q-q-q-queep* (Pima Co., AZ).

107. Cassin's Vireo

Vireo cassinii

Song here is mostly two-parts, and sometimes higher-pitched than the similar-sounding plumbeous. Also gives a rapid, exuberant jumble of notes interspersed with song fragments (Humboldt Co., CA). Scold is a peevish *squee-e-e-e-et* and other similar sounding *sweet* notes (Kern Co., CA).

108. Hutton's Vireo

Vireo huttoni

Song is characterized by a long and monotonous series of repeated notes. Included here is a burry *dreeeep* with a rising inflection, followed by *weee-oh, zu-weep,* and *zeeee-u* songs (Del Norte Co., CA). Calls are low *wit* and *bray* (San Diego Co., CA).

109. Warbling Vireo

Vireo gilvus

Song is a melodious, undulating series of notes (Humboldt Co., CA). Second example of song (Coos Co., OR). Scold is a peevish *dray, dray, dray-it* (Sierra Co., CA).

110. Steller's Jay

Cyanocitta stelleri

Capable of many sounds, the Steller's Jay often utters this series of *sbook* or *quesh* notes. Also possible is a raspy *fee-dee-dee-dee-dee, fee-dee-dee-dee-dee* (Tulare Co., CA). More unusual raucous calls include *crauer-crauer* (Del Norte Co., CA) and the imitation of a Red-tailed Hawk (Josephine Co., OR).

111. Island Scrub-Jay

Aphelocoma insularis

Flight call is a series of *quesh-quesh-quesh...* notes. Single *craaw* notes, followed by rattle and *hack* notes. Finally, an odd sounding "warble" follows a rattle (Santa Cruz Island, CA).

112. Western Scrub-Jay

Aphelocoma californica californica

Represented here are the calls of the coastal race or "California Scrub-Jay." Calls include a hoarse, ascending *weep,* and the flight call a series of *quesh, quesh, quesh* notes (Siskiyou Co., CA). The calls of "Woodhouses's Scrub-Jay" (*Aphelocoma californica woodhouseii*) are detectably different, with the "weep" calls a bit higher (Cochise Co., AZ).

113. Gray Jay *Perisoreus canadensis*

Calls include a loud *wwae* and *wbeee-oh* as well as a bickering *whzee, cha-cha-cha-cha* (Deschutes Co., OR).

114. Pinyon Jay

Gymnorhinus cyanocephalus

Most distinctive call is a descending, laughter-like *waa-ah-ah-ah* and a more emphatic *ha-ha-ha-ha* (Crook Co., OR). Second example also contains odd purring notes (Kern Co., CA).

115. Clark's Nutcracker
Nucifraga columbiana
Commonly heard is a long, continuous, grating *craaaaaaw* (Klamath Co., OR), which is sometimes reduced in length to *craw-craw* (Sierra Co., CA). High-pitched *kee-are* notes, odd mewing and clicking sounds and rattles are also given (Sierra Co., CA).

116. Black-billed Magpie
Pica hudsonia
A series of raucous *aag-aag-aag-aag...* notes, sounding like a dying car battery trying to turn over (Siskiyou Co., CA). Isolated *maag* notes with a rising inflection (Harney Co., OR).

117. Yellow-billed Magpie
Pica nuttalli
Calls of the Yellow-billed Magpie are essentially identical to those of the black-billed. Listen for a series of raucous *aag-aag-aag-aag* notes and isolated, ascending *maag* (San Luis Obispo Co., CA).

118. American Crow
Corvus brachyrhynchos
First are the classic caws (San Diego Co., CA), which are followed by the less frequently heard rattle (Coos Co., OR). Begging sounds from juveniles (San Diego Co., CA).

119. Common Raven
Corvus corax
Able to produce a wide assortment of odd sounds. The classic call is a hoarse *croak*, which can be low in frequency or rather high pitched. Less frequently heard sounds include those with a "wooden-like" quality, and a snoring rattle (Kern Co., CA).

120. Horned Lark
Eremophila alpestris
Song is an ascending series of tinkling notes, slow to start but accelerating toward end of song (Kern Co., CA). Call is a brief *tee-tu* (Sierra Co., CA).

121. Purple Martin
Progne subis
Song is a rich warble of gurgling and other liquid-sounding notes run together with creaking, grating notes. Alarm call is a loud *geeert* (Siskiyou Co., CA).

122. Tree Swallow
Tachycineta bicolor
Song is a full array of liquid, twittering notes. *Cheer-up*, *churdle-churdle-churdle* (Del Norte Co., CA). Flight calls are machine-gun-like bursts of chattering *cheet* notes (Kern Co., CA). Vocalizations that start before dawn are evenly spaced *chet* and *cheet* notes (Kern Co., CA).

123. Violet-green Swallow
Tachycineta thalassina
Flight calls are dry, atonal, *chet-chet-chet* notes given slowly enough to count. Song contains gurgling, squeaky elements (Siskiyou Co., CA). Vocalizations starting before dawn are evenly spaced *chew-chet*, *chew-chet*, *chew-chet...* (Coos Co., OR).

124. Northern Rough-winged Swallow
Stelgidopteryx serripennis
Rough, buzzy *zrrrrt* calls (Kern Co., CA).

125. Bank Swallow
Riparia riparia
Dry, conversational twittering notes consisting of *burrrrr-it*, *rid-it*, *buzz-buzz-buzz*. Also, high-pitched *tseeeu* notes (Lake Co., OR).

126. Cliff Swallow
Petrochelidon pyrrhonota
Song includes a "squeaky hinge" sound interspersed with sharp whistles and gurgling notes (Siskiyou Co., CA). Alarm calls usually given near a nesting site are a mellow *tew* or *airrrh*. Present in the background are the flat *prrrrrt* calls given in flight (Humboldt Co., CA).

127. Barn Swallow
Hirundo rustica
Song is a complex warble of gurgling, clicking, and liquid-sounding notes. Flight call is a dry *cha-deep* (Coos Co., OR).

128. Black-capped Chickadee
Poecile atricapilla
Populations on the north coast sing a variety of clear-whistled songs, which are different in structure from those of the populations of interior North America. First two examples (Del Norte Co., CA) are a series of five whistles on one pitch, which are followed by two or three clear whistles on one pitch. Second example of song, (Coos Co., OR), is a fairly long whistle followed by two shorter ones and finally a descending series of two to four clear whistles. Calls include a *chick-a-chick*, *seeet* and a *chick-a-dee-dee-dee* (Coos Co., OR).

129. Mountain Chickadee
Poecile gambeli
Noted for considerable regional variation, songs include a clear, whistled *da-fee*, *fee-dee* (Siskiyou Co., CA). Also possible is the "gargle call" and another song type containing three whistles (Sierra Co., CA). Call is a diagnostic, raspy *chick-a-dee-dee* (Sierra Co., CA).

130. Chestnut-backed Chickadee

Poecile rufescens

Without a clear whistled song, listen for a variety of nasal, husky, *chick-a-dee* or *chick-a-see* calls. Second examples are wheezy vocalizations from probable juvenile birds (Del Norte Co., CA). Also, high, thin *seeet* notes (Coos Co., OR).

131. Oak Titmouse

Baeolophus inornatus

With a seemingly infinite repertoire of songs, the Oak Titmouse is capable of just about anything. Presented here are song variations reminiscent of *peter-peter-peter...tea-squirt, tea-quirt...shree-pew, shree-pew... zee-pete-it, zee-pete-it...* (Kern Co., CA), *tee-tee-sic-ah*, (San Benito Co., CA) and a *dib-it, dib-it, dib-it...* (San Diego Co., CA).

132. Juniper Titmouse

Baeolophus ridgwayi

Equally adept at an apparently endless variety of song types, the Juniper Titmouse in these examples sings a *tea-pit, tea-pit, tea-pit...* a slow, rather loose trill, *kibita-kibita-kibita...*, another sputtery trill, *pow-pow-pow*, and finally, scold-like vocalizations (Siskiyou Co., CA).

133. Verdin

Auriparus flaviceps

Squee-utt-utt song begins with a high introductory note followed by two to four lower notes (Cochise Co., AZ). The most commonly heard vocalization is a lackluster, innocuous *tsew* (Imperial Co., CA).

134. Bushtit

Psaltriparus minimus

Calls from the widespread interior race, *plumbeus*, (Inyo Co., CA) are high-pitched, raspy twittering of *te-de-de* notes, which are slower and sharper or harder than those of the coastal race *californicus*. The calls of the coastal race are faster and softer (Kern Co., CA).

135. Red-breasted Nuthatch

Sitta canadensis

Song is a drawn-out nasal *yank, yank, yank...* (Klamath Co., OR). Second example (Sierra Co., CA).

136. White-breasted Nuthatch

Sitta carolinensis aculeata

Vocalizations from the subspecies *aculeata* include widely spaced *ha* notes as well as a series of *twee-twee-twee* (San Luis Obispo Co., CA), and an emphatic *ha-ha-ha-ha...* (Sierra Co., CA). Last example is from *tenuissima*, also a series of *ha-ha-ha...* notes with a different tonal quality from above, as well as similar-sounding notes running together in a trill (Inyo Co., CA).

137. Pygmy Nuthatch *Sitta pygmaea*

Single peeps or a rapid series of *pee-di, pee-di, pee-di...* Also *wee-oh* vocalizations of juvenile birds (Kern Co., CA).

138. Brown Creeper *Certhia americana*

Song is usually comprised of very high-pitched *see-su, see-su-see* notes. Other vocalizations include high, thin *seeet* notes given on various pitches (Coos Co., OR). Calls at nest site (Sierra Co., CA).

139. Cactus Wren

Campylorhynchus brunneicapillus

Songs are a long rolling series of dry, grating *cow-cow-cow...* or *craw-craw-craw* (Kern Co., CA). Second example of song is similar but faster paced (Pima Co., AZ). Calls include a dry *crawer*, a ratchet-like sound, *check* notes, and a peevish, atonal *buzz* (Kern Co., CA).

140. Rock Wren

Salpinctes obsoletus

Song is usually a series of notes typically repeated two to three times; however, more repetitions are possible (Siskiyou Co., CA). Second example is a continuous jumble of scratchy free-form notes (KRP, Kern Co., CA). Scold is a raspy *gee-dee-dee-dee...*, and the call is *ta-wee* (San Clemente Island, CA).

141. Canyon Wren

Catherpes mexicanus

A classic sound of the West, song is a memorable cascade of clear, descending, down-slurred whistles occasionally ending with a *buzz, buzz* (Siskiyou CA). Call is a sharp, electric-sounding *jzeet* (Yavapai Co., AZ).

142. Bewick's Wren

Thryomanes bewickii

First example of song is a *dit-dit-dit, spreee-chee-chee-chee* (San Bernardino Co., CA). Second and third examples include a *spik-your-bree-treeeee*, and *squee, squee, twee-twee-twee* (Kern Co., CA). Fourth and fifth examples include a *drink-your-tea-tea-tea*, and a *spee, spee, your-tea-tree-chee* (Siskiyou Co., CA). One type of scold is a series of *spank* notes (Coos Co., OR).

143. House Wren

Troglodytes aedon

Songs are energetic, bubbly chatter often ending on a lower pitch (Kern Co., CA). Scold is a dry *spttttttttt* (San Benito Co., CA).

144. Winter Wren

Troglodytes troglodytes

One of the premier singers of North America, the Winter Wren sings a delightful, steady stream of exceedingly complex, musical notes that change pitch several times throughout the duration of a given song (Del Norte Co., CA). Calls are a closely spaced *check-check* (Coos Co., OR).

145. Marsh Wren

Cistothorus palustris

From the cattails, a complex, dry, hurried song composed of chips, trills, and buzzes, often ending with a rattle (Del Norte Co., CA). Call is a dry *jit, jit, jit...* (Coos Co., OR).

146. American Dipper

Cinclus mexicanus

Song has a thrasher- or mockingbird-like quality. It includes warbles, whistled notes, and trills that are often repeated (WY). Call is a *z-z-z-z-zeeet* (CO).

147. Golden-crowned Kinglet

Regulus satrapa

Song is a series of high, thin notes rising to a jumble of notes that fall in pitch (Del Norte Co., CA). Call is a high, thin, creeper-like *see-see-see* (Coos Co., OR).

148. Ruby-crowned Kinglet

Regulus calendula

Song, usually beginning with several high, thin tsee notes, progresses into a loud, undulating warble which often contains a *tee-da-dee* and *cheaper, cheaper, cheaper, CHEAP* phrase (Inyo Co., CA). Calls are a peevish *jit, jit, jit* (Coos Co., OR).

149. Blue-gray Gnatcatcher

Poliophtila caerulea

One of the primary calls is a peevish *spEEeee* (Tulare Co., CA). Other calls include a *dee-dear-dee-pit-two* (Tulare Co., CA). Also possible are *dee-spit-chic, dee-dit-dit*, and *spit-chucks* (Inyo Co., CA). The second-to-last example is a jumble of notes possibly representing subsong (San Diego Co., CA), and finally, an example of song, which is well-developed (CA).

150. California Gnatcatcher

Poliophtila californica

Classic call is a whining, mew-like sound, which rises then falls in pitch. Scold is a harsh *schaaaa* (San Diego Co., CA).

151. Black-tailed Gnatcatcher

Poliophtila melanura

Most common call is a dry, grating *che-che-che* (Imperial Co., CA). Second example (Pima Co., AZ). Vocalizations are huskier sounding than those of Blue-gray Gnatcatcher.

152. Western Bluebird

Sialia mexicana

Song is composed of abrupt, harmonically rich, *pew* and *pa-pew* notes (San Luis Obispo Co., CA). Calls include a low, atonal *chuck* (Pima Co., AZ).

153. Mountain Bluebird

Sialia currucoides

Song is a warble of harmonically rich notes, but not as abrupt as that of the Western Bluebird (Crook Co., OR). Calls include a low, hard *chuck* or *chuch-tew* (Siskiyou Co., CA).

154. Townsend's Solitaire

Myadestes townsendi

Song is finch-like but richer and more varied. In the first example the song is quite long and begins quietly. In the second example songs are shorter and begin at full volume (Sierra Co., CA). Diagnostic call is an evenly spaced *tink* (Klamath Co., OR).

155. Swainson's Thrush

Catharus ustulatus

One of North America's most beautiful singers, the Swainson's Thrush sings rich, flute-like songs that spiral upward. Calls include a squeaky *squeee* or *squeee-cheee-e-e-e*, a wit with human-like quality, and an attenuated *peee* (Del Norte Co., CA).

156. Hermit Thrush

Catharus guttatus

Song begins with a clear, whistled note, followed by a series of flute-like ascending or descending notes. No other woodland thrush starts with single note (Sierra Co., CA). One call note, generic for many thrushes, is a high, thin *seeeeee* that may signal the presence of a predator (Coos Co., OR).

157. American Robin

Turdus migratorius

Song is a lively *cheer-up, cheery-o, cheery-lee* (Inyo Co., CA). Calls include a series of complaining *teep* notes or more mellow *tup* notes (Tulare Co., CA). Also given is a *two-wheet-wheet-wheet* (Kern Co., CA).

158. Varied Thrush

Ixoreus naevius

Haunting and beautiful if heard from a distance, the long, sustained, quavering songs of the Varied Thrush are one of the quintessential sounds of tall, humid forests of northwestern California and the Pacific Northwest (Del Norte Co., CA). Calls are reminiscent of the songs, but are quite brief and a bit raspier (Klamath Co., OR).

159. Wrentit

Chamaea fasciata

One of the easiest songs to learn is that of the male Wrentit. It is reminiscent of a bouncing ball and is a characteristic sound of chaparral country (Lake Co., CA). Call is a rather inconspicuous, ratchet-like sound (Coos Co., OR).

160. Northern Mockingbird

Mimus polyglottos

This species' song is comprised largely of imitations of other species, typically repeated two or three times each (Imperial Co., CA). Scold is harsh and grating *scherrrr* (Pima Co., CA).

161. Sage Thrasher

Oreoscoptes montanus

Song is a rhythmical warbled stream of highly varied phrases lasting 10 seconds or more and often includes mimicry. Song is more rhythmical than other thrasher songs (Modoc Co., CA). One call is a hard, blackbird-like *check* (Mohave Co., AZ).

162. Bendire's Thrasher

Toxostoma bendirei

Beginning softly, this species' song increases in volume to a steady warble of slurred whistled and buzzy notes. Calls are seldom heard, but listen for an atonal, blackbird-like *check-check* (Pima Co., AZ).

163. California Thrasher

Toxostoma redivivum

Song is comprised of either short or long phrases of disjointed, harsh notes and whistles (San Luis Obispo Co., CA). Second example of song contains shorter phrases (Mendocino Co., CA). One call type is a two-part *dulit* (San Diego Co., CA).

164. Crissal Thrasher

Toxostoma crissale

Song is a hurried stream of variable notes or phrases with some brief pauses interspersed. This species does repeat phrases, though not all, two or three times. One call is a *chuppy-day-chew* (Pima Co., AZ).

165. Le Conte's Thrasher

Toxostoma lecontei

Song is typically thrasher-like with a long, continuous outpouring of warbled phrases, many notes or fragments of which are repeated two to several times. Song bouts begin softly, increase in volume, and have a more measured or less hurried delivery than those of Crissal Thrasher. The call note is a simple *pooh-ip* (Mohave Co., AZ).

166. European Starling

Sturnus vulgaris

Song is often a jumbled assortment of mimicry, including sounds of birds, mammals, and potentially any sound in the starling's environment. In this example listen for Red-tailed Hawk, Sora, Northern Flicker, Green Heron, and even what appears to be a lamb (Del Norte Co., CA).

167. American Pipit

Anthus rubescens

One call is a wit with rising inflection (WA). Flight song is a continuously repeated *pip-pip-pip-pip-pip...* (Boulder Co., CO). Second example of song is *pip-pip-pip-tew...* (WY).

168. Cedar Waxwing

Bombycilla cedrorum

High, almost inaudible, thin, wiry *zeeeeeeee* (Coos Co., OR).

169. Phainopepla

Phainopepla nitens

Songs are disjointed warbles, rasps, and whistles. Listen for a descending *drrrrrow* (Pima Co., AZ). Second example of song (Imperial Co., CA). The call, a characteristic *whoit*, is heard at the end of the recording (Pima Co., AZ).

170. Orange-crowned Warbler
Vermivora celata lutescens

Typical songs from the coastal slope form are fast, loose, trill-like *titiitiTTTTiti* that diminish in energy and pitch at the end. Second example of song is more mechanical (Del Norte Co., CA).

171. Nashville Warbler
Vermivora ruficapilla

Usually two or three parts, the song is a *sweet, sweet, sweet, zee-zee, zee-bit, zee-bit* (Jackson Co., OR). Second example of song *swee-swee-swee-swee-tee-tee-tee-tee* (Tulare Co., CA).

172. Lucy's Warbler *Vermivora luciae*

Song is a series of sweet notes that rise, then fall in pitch (Imperial Co., CA). At dawn, song may be practically continuous, with very little space between songs. Call, given here between songs, is a sharp *chip* (Pima Co., AZ).

173. Yellow Warbler *Dendroica petechia*
Much variation is possible with songs of the Yellow Warbler. The first example is *sweet-sweet-sweeter-than-su* (Kern Co., CA). Second example of song shows more variety, but still contains notes that are sweet in quality. Call is a sweet, emphatic *chip* (Harney Co., OR).

174. Yellow-rumped Warbler
Dendroica coronata

Song of auduboni group is a slow, loose warble, usually rising or falling at the end (Inyo Co., CA). Second example of song (Kern Co., CA). Diagnostic calls are a low, flat *chep* (Coos Co., OR).

175. Black-throated Gray Warbler
Dendroica nigrescens

Songs have a characteristic buzzy quality, though pattern may vary significantly. The first example is a *buzzy, buzzy, bee-zee-zoo*, which is followed by an ascending *a-zoo, a-zoo, a-zoo, zeea-zeep* (Coos Co., OR). Third example is a *buzzy azoo-a, azoo-a, azoo-a* (Inyo Co., CA). Call is a flat *chit* (Sierra Co., CA).

176. Townsend's Warbler
Dendroica townsendi

Heard here in migration, the song is a rising, buzzy *zoo-zoo-zoo-zea, zea*. Also present is a segment of subsong and intermittent *chip* notes (San Benito Co., CA).

177. Hermit Warbler
Dendroica occidentalis

Perhaps the most variable of all black-throated warblers' songs, the classic song is *sizzle-sizzle-sizzle-su-see* (Sierra Co., CA). Second example of song is an ascending *sizzle-sizzle-zee-zu-zeep*, with the last note noticeably higher. Third example, a descending *see-su, see-su, see-su, see-su*, is probably a secondary song late in the breeding season. Interspersed calls are an inconspicuous *swit* (Coos Co., OR).

178. MacGillivray's Warbler
Oporornis tolmiei

Song is a two-part *churee, chruee, chruee, chew, chew, chew* that drops in pitch at the end. Two examples of song. Calls are an emphatic *spit* (Tulare Co., CA).

179. Common Yellowthroat
Geothlypis trichas

Numerous variations on a theme are possible in the Common Yellowthroat. In the first example, listen for a loud *witchity-witchity-witchity-witchity* (Kern Co., CA). Second example of song has the same tonal quality but the pattern varies (Coos Co., OR). Calls are a distinctive *tcheck* or *djit* (Kern Co., CA).

180. Wilson's Warbler
Wilsonia pusilla

Song is a rapid, mechanical *che-che-che-che-chet-chet* that sometimes drops in pitch at the end. Second example of song is a *che-che-che-che...* on one pitch (Del Norte Co., CA). Call is a hard *chip* (San Benito Co., CA).

181. Yellow-breasted Chat *Icteria virens*

Song is an unmusical jumble of whistles, clacks, and growls (San Benito Co., CA). Although the example on this guide is from an eastern population, listen for a harsh check and electronic-sounding *chaow* call note (Hampton Co., SC).

182. Summer Tanager
Piranga rubra cooperi

Song heard at dawn has a faster pace with a shorter intersong interval. Listen for a repeated phrase *a-ree-ta-roo*. Second example in mid-morning is slower-paced. One diagnostic call is a rapid, metallic-sounding *pit-tuck* or *pit-tuck-tuck* given in alarm (KRP, Kern Co., CA). Another call is an atonal sputter (Cochise Co., AZ).

183. Western Tanager
Piranga ludoviciana

Song phrases are burry in comparison to the similar sounding songs of American Robin and other tanagers (Del Norte Co., CA). Call is a conspicuous, rising *put-a-tic*. Final example is a subtle *too-lee-tee* contact call (Tulare Co., CA).

184. Green-tailed Towhee *Pipilo chlorurus*

Song often begins with two or three sweet notes, followed by a series of notes on a single pitch, and closing with a burry trill, *wheet-sir-che-e-e-e-churr* (Kern Co., CA). Second example of song recorded before sunrise (Tulare Co., CA). Rising cat-like mew call (Siskiyou Co., CA) is higher pitched than the similar call of Spotted Towhee. High, thin *chit* calls (Wasatch Co., UT).

185. Spotted Towhee *Pipilo maculatus*

Song is extremely variable. First example is an atonal trill (Kern Co., CA), with the second example being somewhat more musical (Del Norte Co., CA). Third example is a loose trill (Tulare Co., CA). Primary call is a diagnostic, cat-like *mew* (Lake Co., CA). Also possible is high, thin twitter (Del Norte Co., CA). These vocalizations differ from Great Basin birds (*montanus*) in that songs are not as complex or musical, and the calls also have a different “shape” or quality to them.

186. California Towhee
Pipilo crissalis

Songs are usually slow to start and often stay on one pitch. They begin with a couple of introductory notes and then accelerate. Frequently, lower-pitched, atonal notes are present at the end of the song. Four examples of songs are provided (San Benito, Lake, Ventura, and Mendocino Counties, CA). Calls are of the same quality as introductory notes at beginning of song (Humboldt Co., CA).

187. Abert's Towhee
Pipilo aberti

Song begins slowly with one or two introductory notes and then accelerates into a series of similar clear notes before changing to a staccato series of atonal notes. Two examples of song (Pima Co., AZ).

188. Rufous-crowned Sparrow
Aimophila ruficeps

Song is a one- to two-second jumble of fast finch-like notes. First two examples of song (Mendocino Co., CA). One song and the distinctive *day, day...or dear, dear...* calls (Kern Co., CA).

189. Chipping Sparrow
Spizella passerina

Songs are generally a long, dry, mechanical trill on a single pitch. Second example recorded at dawn is more exuberant (Tulare Co., CA). Third example is a much faster trill on a single pitch (Mendocino Co., CA). Calls are a high *tsi* (CA).

190. Brewer's Sparrow
Spizella breweri

One of the premier singers of the West, the dawn song of the Brewer's Sparrow sometimes begins with several *tsic* notes, transitioning into an unbroken series of beautiful trills (Siskiyou Co., CA). The typical song is more simplistic, containing a series of trills on two or more pitches. Two examples (Modoc Co., CA). *Tsic* calls (Harney Co., OR).

191. Black-chinned Sparrow
Spizella atrogularis

Song typically begins with a pure, whistled note followed by a rapid trill that transitions into a buzz. The buzz may rise or fall in pitch, decreasing in volume as it does so (Riverside Co., CA). Call is a high, sharp *tisk* (CA).

192. Vesper Sparrow
Poocetes gramineus

Songs generally begin with two clear introductory notes on one pitch, followed by two more notes on a higher pitch, before ending in a jumble of closely spaced notes. One interpretation is *plop, plop, fizz, fizz, oh-what-a-relief-it-is*. Two examples of song (Modoc Co., CA). *Tst* calls (British Columbia, Canada).

193. Lark Sparrow
Chondestes grammacus

Song is a highly variable, complex series of trill, clear whistled notes and buzzes, usually includes snort-like sounds (Siskiyou Co., CA). High, sharp *tseet* calls (Thomas Co., NE).

194. Black-throated Sparrow
Amphispiza bilineata

Song typically begins with one or two clear notes followed by a ringing trill. Two examples of song (Kern Co. and San Bernardino Co., CA). One type of call, *tea-o-wit*, was incorporated with song (Kern Co., CA).

195. “Bell’s” Sage Sparrow

Amphispiza belli belli

Song is a fast, jumbled warble of notes that is less musical than that of the other races. Call of Bell’s is a high, thin *tisk* (Mendocino Co., CA).

196. Sage Sparrow

Amphispiza belli canescens

Song from the interior desert race is more musical and more rhythmic than the songs of Bell’s (Kern Co., CA).

197. Sage Sparrow

Amphispiza belli nevadensis

Songs from the Great Basin race are perhaps the most melodic of all the races. Listen to the tremulous quality of this subspecies’ song (Humboldt Co., NV).

198. “Belding’s” Savannah Sparrow

Passerculus sandwichensis beldingi

Song is an insect-like *tih-tih-tih, tih-SEE, tih-SAY*. Calls are a high-pitched *chip* (San Diego Co., CA).

199. Savannah Sparrow

Passerculus sandwichensis alaudinus

Songs of the northwest coastal race are a *ti-sic, tih-tih-SEEEE, tih-say*, similar to “Belding’s” (Humboldt Co., CA).

200. Savannah Sparrow

Passerculus sandwichensis nevadensis

Song of the interior race is a *sip, sip, sip, tih-SEEEE, need-up*. Calls are high, thin, lispy *tisk* (KRP, Kern Co., CA).

201. Grasshopper Sparrow

Ammodramus savannarum

Song is an insect-like *pit-tup, zeeeeeeeeee*. Second example of song is followed by a rapid, exceedingly high, complex warble or twitter. Call is a simple, high, thin *tsk* (Kern Co., CA).

202. Fox Sparrow

Passerella iliaca

Songs from the “Thick-billed” subspecies group often start with *suwee, chew*, followed by trills and slurred notes that are similar to a Green-tailed Towhee. Other songs just begin with slurred notes and occasionally end with an emphatic *kip* or *kee-ar*. First example (Tulare County, CA), second example (Siskiyou County, CA), and the third example (Sierra County, CA).

203. Song Sparrow

Melospiza melodia

Song begins with three or four introductory notes followed by burry notes that are often on different pitches. First example (San Benito Co., CA). Second example (Tuolumne Co., CA). Most common type of call is a distinctive *chimp*. Other call notes include a wick or *week*, (Del Norte Co., CA). Finally, a *seeeep* call (Coos Co., OR).

204. Lincoln’s Sparrow

Melospiza lincolni

Song typically rises in pitch, then drops at end with a quavery or vibrato quality. Two examples of song (Sierra Co., CA).

205. White-crowned Sparrow

Zonotrichia leucophrys

Songs from the northwest coastal population (*pugetensis*) contain buzzy notes and trills that slightly rise and fall in pitch (Del Norte Co., CA). Songs from the mountain race (*oriantha*) have same buzzy quality, but significantly different structure and tonal quality. Calls are a sharp *spit* (Tioga Pass, Tuolumne Co., CA).

206. Golden-crowned Sparrow

Zonotrichia atricapilla

Example of song from bird in migration is a plaintive, *oh dear me*. Also present is an example of continuous, low-volume subsong (Jackson Co., OR).

207. Dark-eyed Junco

Junco hyemalis

Songs are simple trills given on one pitch although pitch may vary significantly from bird to bird. Also, trills vary in speed. First example (Del Norte Co., CA), second, third, and fourth examples (Coos Co., OR). *Smack* call note (Del Norte Co., CA).

208. Black-headed Grosbeak

Pheucticus melanocephalus

Melodious song of sweet, slurred whistles, warbles, and purrs. Although similar to that of American Robin, Black-headed Grosbeak song is higher pitched. Two examples of song (San Luis Obispo, and San Benito Counties, CA). Diagnostic squeaky *peaK* calls (Douglas Co., OR).

209. Blue Grosbeak

Passerina caerulea

Rhythmical, rising and falling “husky” House Finch-like song. Listen for the vibrato quality apparent in many of the whistled notes. Metallic, explosive *pink* or *chink* calls. One example of song (Tulare Co., CA), and another example of both song and calls (Kern Co., CA).

210. Lazuli Bunting

Passerina amoena

Song is a fast warble that often contains both sweet and atonal notes. First example from (Humboldt Co., CA) followed by two from (Tulare Co., CA). *Pit* and *tisk* call notes (Humboldt Co., CA).

211. Indigo Bunting

Passerina cyanea

Indigo Buntings occur in southern California essentially every year. Some other individuals are Lazuli x Indigo bunting hybrids. When the two species are in close proximity, expect the songs of the Indigo Buntings to be extremely variable or plastic, ranging from classic eastern songs to essentially Lazuli Bunting-like in sound and structure. In this example, (KRP, Kern Co., CA), the song has the structure and quality of a Lazuli Bunting. Call is a flat *kit* (Monroe Co., IN).

212. Red-winged Blackbird

Agelaius phoeniceus

First example of song is *oh-ka-lee-ah* (Riverside Co., CA). Second example of song is similar. This recording also includes *check* and *beek* notes (Merced Co., CA). Third example includes chatter calls from several birds (Modoc Co., CA). Fourth example represents both songs and calls from various individuals of the Kern race. Songs are *oh-kleee-oh* and *oh-ka-lee-oh*. Calls include a “*spink*,” “*benk*,” “*chink*,” “*chuck-zee-eight*,” and a “*chuck-chuck-chuck, teet-teet*” (KRP, Kern Co., CA).

213. Tricolored Blackbird

Agelaius tricolor

Song is a tortured, unearthly sound reminiscent of a sick cat (Siskiyou Co., CA). Cat-like quality is more prominent in second example (Kern Co., CA).

214. Western Meadowlark

Sturnella neglecta

Generally, songs contain clear, rich, melodious notes with a flute-like quality. First example contains typical songs plus a brief “warble.” Then, pew calls precede extended flight song. Second example of song ends with rapid flurry of whisper-like song. All examples of songs (Modoc Co., CA). *Tiuk* calls (Modoc Co., CA) and rattle (Kern Co., CA) finish recording.

215. Yellow-headed Blackbird

Xanthocephalus xanthocephalus

Song is an unmelodious, harsh, and raucous *caaaa-ow*. Various calls include *toots*, *squaws*, *clacks*, and a *ka-luck* (Siskiyou Co., CA).

216. Brewer’s Blackbird

Euphagus cyanocephalus

Capable of singing many variations on a theme. The song in the first example is an unmusical, electronic-sounding *spew-lee* (Kern Co., CA). Second example is an upslurred *per-REET* (Siskiyou Co., CA). Other calls include a *be-beep*, and a ubiquitous *check* (Lake Co., OR).

217. Great-tailed Grackle

Quiscalus mexicanus

Very loud comical-sounding assortment of wheezing whistles and other strange sounds. Although individual sounds vary considerably from location to location, Great-tailed Grackles have an unmistakable voice (Riverside Co., CA).

218. Brown-headed Cowbird

Molothrus ater

Song is a *glug glug gleese*. The *gleese* is a very thin, high-pitched note. Whistles most often given in flight are a high, thin *see-se-ee* (Siskiyou Co., CA). Female rattle sound is a *ch-ch-ch-ch-ch...* (San Diego Co., CA).

219. Hooded Oriole

Icterus cucullatus

Song is a characteristic oriole warble of whistles, chatter, burry, and non-musical calls, but less full-bodied and faster than that of other orioles (Pima Co., AZ). Call is a high-pitched *eeek* (Kern Co., CA).

220. Bullock’s Oriole

Icterus bullockii

Song often begins with several raspy check notes followed by clear, slurred whistled notes. Calls include a dry, mechanical *cha-cha-cha-cha...*, an atonal *baaah* (San Luis Obispo Co., CA). Final example is a bluebird-like *pew* (Kern Co., CA).

221. Scott’s Oriole

Icterus parisorum

Containing very rich, liquid, flute-like notes, Scott’s Oriole is considered by many to be the most beautiful singer of all orioles (Kern Co., CA). Call is a soft *tew* (Inyo Co., CA).

222. Gray-crowned Rosy-Finch

Leucosticte tephrocotis

Voice is a rather mundane, fuzzy *chew* (CA).

223. Pine Grosbeak

Pinicola enucleator

Rollicking warbled song. Arguably the most musical of all forest finch songs. Call is a double-noted *cha-vlee* (Sierra Co., CA).

224. Purple Finch

Carpodacus purpureus

A rich warble that often increases in volume and pitch before descending in volume and pitch. Second example is a less commonly heard, vireo-like *a-jerry, reeep*. Flight call is a dry *pit* (Del Norte Co., CA).

225. Cassin's Finch

Carpodacus cassinii

Song is perhaps the fastest of all North American finch songs. It is an explosive, energetic warble from beginning to end (Modoc Co., CA). Second example of song contains elements of mimicry (Klamath Co., OR). Third example is a typical song progressing into whisper-like song that also contains elements of mimicry (Sierra Co., CA). The "vireo-like" call is an assertive *cheed-lee-ob* (Crook Co., OR). Last example is *sweee-u* call (Inyo Co., CA).

226. House Finch

Carpodacus mexicanus

Pleasant warble, sometimes ending in a rising *zeeeeet* (Siskiyou Co., CA). Songs may be long as in first example or rather brief as in second example. Distinctive rising *whert* calls (Imperial Co., CA).

227. Red Crossbill

Loxia curvirostra

First example of song is a long series of *tip-tip-tip, jeep-jeep-jeep, tee-pee, teep*. Second example is mostly *kip* notes (Deschutes Co., OR). Calls are a hard *jip*, and in this recording heard mostly one or two at a time (Kern Co., CA). Final recording from small flock (Sierra Co., CA).

228. Pine Siskin

Carduelis pinus

Song is a nasal-sounding jumble of twitters and chatter. Incorporated into the song is a rising *deeee*. *Chit-chit* notes and an ascending *zzzzzzzzeee* are also present (Mono Co., CA). Last recording is a *per-chick-ab-tee* (Sierra Co., CA).

229. Lesser Goldfinch

Carduelis psaltria

Songs are a jumble of twitters with numerous, slurred *teeee* notes usually incorporated within. Mimicked phrases are also possible. Most common call is an unhurried *tee-aa, tee-yer* (San Luis Obispo Co., CA). *TEE-tew* calls from juvenile bird (Pima Co., AZ).

230. Lawrence's Goldfinch

Carduelis lawrencei

Song is rather similar to the continuous warbles of other goldfinches, but more melodic, and perhaps more complex. Elements of mimicry are also possible. Calls include, "tinkle-like" notes, which are the typical call of the species. (San Benito County, CA). Various calls include *cheedle-cheedle*, a slurred *tee-er*, a raspy *whee-ear*, and *psee-eee* (San Luis Obispo Co., CA). Final recording is a distinctive, "ungoldfinch-like" *chink-a-pea* (Tulare Co., CA).

231. American Goldfinch

Carduelis tristis

In this example of song, which is a lively jumble of notes and phrases, listen for the distinctive *per-chick-o-ree* (San Benito Co., CA).

232. Evening Grosbeak

Coccothraustes vespertinus

Calls are a penetrating *tew* and a rolling *brrrrreee* (Modoc Co., CA). Second example is a rare, brief recording of "song." Notice the evenly spaced notes, most of which are similar to the calls but are mostly comprised of a rolling *tweee* and *whew* (Sierra Co., CA).

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