

# *Western Specialty:* **Sooty Grouse**



Photo by © Michael A. Schroeder, Washington Department of Fish and Wildlife:  
Sooty Grouse (*Dendragapus fuliginosus*) male  
Near Rockport, Washington, 25 May 2001.  
This male displays yellow apteria typical of this coastal species.



**Figure 10. Displaying male Sooty Grouse (*Dendragapus fuliginosus sitkensis*) at Gravina Island 17 April 2004. Like all Sooty Grouse in the Ketchikan area, this bird gave six to eight very loud call notes characteristic of this species; however, it exhibited the reddish apteria of the interior species, the Dusky Grouse (*D. obscurus*), rather than yellow apteria typical of the coastal Sooty Grouse.**

**Photo by A. W. Piston**

## FEATURED PHOTO

### REGIONAL PHENOTYPIC VARIATION IN THE SOOTY GROUSE

MICHAEL A. SCHROEDER, Washington Department of Fish and Wildlife, P. O. Box 1077, Bridgeport, Washington 98813; schromas@dfw.wa.gov

STEVEN C. HEINL, P.O. Box 23101, Ketchikan, Alaska 99901

ANDREW W. PISTON, P. O. Box 1116, Ward Cove, Alaska 99928

FRED C. ZWICKEL, Box 81, Manson's Landing, British Columbia V0P 1K0

Long united as a single species under the name Blue Grouse, the more coastal Sooty Grouse (*Dendragapus fuliginosus*) and the more inland Dusky Grouse (*D. obscurus*) have received substantial attention in recent years. Zwickel and Bendell (2004) addressed the biology and natural history of these birds, specifying their regional variation. Coastal males have yellow cervical apteria (unfeathered skin on the sides of the neck; see this issue's inside front cover) and a black tail with a contrasting gray terminal band, while most interior males have red cervical apteria (see this issue's back cover) and the tail band, if any, much less distinct. In addition, the song of male Sooty Grouse is much louder than that of the Dusky Grouse. Barrowclough et al. (2004) concluded from a molecular study that two species exist. Subsequently, "on the basis of genetic evidence (Barrowclough et al. 2004) and differences in voice (hooting), behavior, and plumage (Brooks 1929)" Banks et al. (2006:929) accepted reclassification of these birds as two species. Through history, the birds' classification, as followed by the American Ornithologists' Union, has oscillated from a single species (1886, 1895, 1910) to two species (1931), back to one species (1944, 1957, 1983, 1998), and back to two species (Banks et al. 2006).

Questions about the color of the apteria of the Sooty and Dusky Grouse arose during a trip to southeast Alaska in May 2006. While en route to Prince of Wales Island, Schroeder and Zwickel noted mounted specimens of male Sooty Grouse in a taxidermy store in Ketchikan. Although most literature has reported coastal birds to have yellow apteria, all specimens on display had the apteria painted red. When asked about the color, the taxidermist said he painted them red because that was the way he remembered them in the living bird. Later that day Heinel shared a photograph of a Sooty Grouse taken on nearby Gravina Island by Piston in which the apteria were clearly red (Heinel and Piston 2009: Figure 10).

To the best of our knowledge, males with red apteria have not been reported previously from any coastal population of grouse. Swarth (1921) described the Sooty Grouse of southeast Alaska as subspecies *sitkensis*, basing his description on the plumage of females and stating "adult male not appreciably different from the male of *D. o. fuliginosus*" (the subspecies of the Sooty Grouse inhabiting the mainland from southwestern Yukon south to northwestern California). Although Swarth did not describe the apteria of *sitkensis*, Gabrielson and Lincoln (1959) reported them as "deep yellow," as Brooks (1926) described the apteria of all coastal birds—hence the confusion.

Confirmation of male Sooty Grouse with red apteria led us to investigate the geographic extent of this characteristic, especially as it differs from the published literature. To address this question we considered several avenues of inquiry. First we evaluated our field notes from previous trips to many portions of the range (Zwickel and Bendell 2004). Second, we contacted biologists, photographers, and birdwatchers to obtain information on birds in specific locations. Third, in 2007 and 2008 we visited southeast Alaska and north-coastal British Columbia to observe and photograph as

## FEATURED PHOTO

many coastal males as possible. Here we describe some of the findings to date, with the understanding that portions of this work will likely continue.

Our results indicate that red apteria in Sooty Grouse are distributed regionally—we have found no site with both phenotypes. Males with red apteria have been found in Alaska's Alexander Archipelago on Douglas, Admiralty, Mitkof, Gravina, and Revillagigedo islands, on the mainland of southeast Alaska around Bartlett Cove and Juneau, and in north-coastal British Columbia at Stewart, near Prince Rupert at the mouth of the Skeena River, and inland along the Skeena River as far as the Terrace area (see this issue's back cover). The most northerly population of Sooty Grouse with yellow apteria has been documented on Graham Island (Haida Gwaii or Queen Charlotte Islands), British Columbia. The northernmost point on the coastal mainland where males with yellow apteria have been found is near Bella Coola, British Columbia, about 275 km south-southeast of where we examined birds near Terrace.

Our survey of Sooty Grouse is not complete. We may yet find a north-coastal area where males have yellow apteria or a south-coastal area where males have red apteria. We may also determine where the two phenotypes meet, likely between Terrace and Bella Coola. Expansion of the genetic surveys to northern British Columbia and Alaska might help address this issue. This phenotypic variation highlights another instance where the southeast Alaska/coastal British Columbia area emerges as a focus for biogeographical research.

We thank Dan Gibson and Leslie Robb for their very helpful reviews of our manuscript.

## LITERATURE CITED

- American Ornithologists' Union. 1886. The Code of Nomenclature and Check-list of North American Birds. Am. Ornithol. Union New York.
- American Ornithologists' Union. 1895. Check-list of North American Birds, 2<sup>nd</sup> ed. Am. Ornithol. Union, New York.
- American Ornithologists' Union. 1910. Check-list of North American Birds, 3<sup>rd</sup> ed. Am. Ornithol. Union, New York.
- American Ornithologists' Union. 1931. Checklist of North American Birds, 4<sup>th</sup> ed. Am. Ornithol. Union, New York.
- American Ornithologists' Union. 1944. Nineteenth supplement to the American Ornithologists' Union *Check-list of North American Birds*. Auk 61:441–464.
- American Ornithologists' Union. 1957. Check-list of North American Birds, 5<sup>th</sup> ed. Am. Ornithol. Union, Baltimore.
- American Ornithologists' Union. 1983. Check-list of North American Birds, 6<sup>th</sup> ed. Am. Ornithol. Union, Lawrence, KS.
- American Ornithologists' Union. 1998. Check-list of North American Birds, 7<sup>th</sup> ed. Am. Ornithol. Union, Washington, DC.
- Banks, R. C., Cicero, C., Dunn, J. L., Kratter, A. W., Rasmussen, P. C., Remsen, J. V., Jr., Rising, J. D., and Stotz, D. F. 2006. Forty-seventh supplement to the American Ornithologists' Union *Check-list of North American Birds*. Auk 123:926–936.
- Barrowclough, G. F., Groth, J. G., Mertz, L. A., and Gutiérrez, R. J. 2004. Phylogeographic structure, gene flow and species status in Blue Grouse (*Dendragapus obscurus*). Molecular Ecology 13:1911–1922.
- Brooks, A. 1926. The display of Richardson's Grouse with some notes on the species and subspecies of the genus *Dendragapus*. Auk 43:281–287.
- Brooks, A. 1929. On *Dendragapus obscurus obscurus*. Auk 446:111–113.

## FEATURED PHOTO

- Gabrielson, I. N., and Lincoln, F. C. 1959. *The Birds of Alaska*. Stackpole, Harrisburg, PA.
- Heinl, S. C., and A. W. Piston. 2009. Birds of the Ketchikan area, southeast Alaska. *W. Birds*. 40:54–144.
- Swarth, H. S. 1921. The Sitkan race of the Dusky Grouse. *Condor* 23:59–60.
- Zwickel, F. C., and Bendell, J. F. 2004. *Blue Grouse: Their Biology and Natural History*. NRC Research Press, Ottawa, Ontario.
- 
- 

## THANK YOU TO OUR SUPPORTERS

The board of Western Field Ornithologists and the editorial team of *Western Birds* thank the following generous contributors to the WFO's scholarship and publications fund in 2008, including sponsors of this issue's "Birds of the Ketchikan Area, Southeast Alaska."

- |   |   |
|---|---|
| Arctic Audubon Society, Fairbanks, AK                     | Dexter Kelly, Port Hueneme, CA                                |
| Robert Armstrong, Juneau, AK                              | Dave Krueper, Corrales, NM                                    |
| Paul Baicich, Oxon Hill, MD                               | Peter LaTourrette, Los Altos, CA                              |
| Leonie Batkin, Menlo Park, CA                             | John Lewis, Chico, CA   |
| David Bell, Vacaville, CA                                 | Christine Lewis, Chico, CA                                    |
| Lance Benner, Altadena, CA                                | Richard MacIntosh, Kodiak, AK                                 |
| Ann Brooks, Los Angeles, CA                               | Kevin McKereghan, San Francisco, CA                           |
| Eric Brooks, Los Angeles, CA                              | Kathy Molina, Los Angeles, CA                                 |
| California Department of Fish and Game,<br>Sacramento, CA | David Nelson, San Rafael, CA                                  |
| Douglas Canning, Olympia, WA                              | Kirsten Olson, Menlo Park, CA                                 |
| William Carter, Ada, OK                                   | Eleanor Osgood, Culver City, CA                               |
| Theodore Chase, Jr., Princeton, NJ                        | Mike Parmeter, Napa, CA                                       |
| Charles Collins, Long Beach, CA                           | Dennis Paulson, Seattle, WA                                   |
| Alan Craig, Portal, AZ                                    | Pat Pourchot, Anchorage, AK                                   |
| William Cullen, Rolling Hills Estates, CA                 | Elizabeth Rinnander, Port Hueneme, CA                         |
| Johanna Dawes, Los Angeles, CA                            | Patricia Rose, Juneau, AK                                     |
| Al DeMartini, San Mateo, CA                               | Jeffrey Sauer, Juneau, AK                                     |
| Julian Donahue, Los Angeles, CA                           | Robert Scher, Anchorage, AK                                   |
| Katharine Donahue, Los Angeles, CA                        | Mark Schwan, Juneau, AK                                       |
| Jon Dunn, Bishop, CA                                      | David Seay, La Jolla, CA                                      |
| Judith Fortney, Durham, NC                                | Carol Jean Selvey, Los Angeles, CA                            |
| James Fritzhand, Calistoga, CA                            | Stanley Senner, Anchorage, AK                                 |
| J. B. Hallett, Atlanta, GA                                | Dan Singer, Pacifica, CA                                      |
| Ed Harper, Carmichael, CA                                 | David Sonneborn, Anchorage, AK                                |
| John Harris, Oakdale, CA                                  | Donald Starks, San José, CA                                   |
| William Heckmann, Studio City, CA                         | Langdon Stevenson, Mill Valley, CA                            |
| Diana Herron, Flagstaff, AZ                               | Paul Suchanek, Douglas, AK                                    |
| Jan Hintermeister, Santa Clara, CA                        | Lynn Thomas, Chico, CA  |
| Starlyn Howard, Laguna Beach, CA                          | University of Alaska Friends of<br>Ornithology, Fairbanks, AK |
| HP Company Foundation, Washington, DC                     | Gus Van Vliet, Auke Bay, AK                                   |
| Richard Jeffers, Santa Clara, CA                          | Kevin Winker, Fairbanks, AK                                   |
| Juneau Audubon Society, Juneau, AK                        | Jay Withgott, Portland, OR                                    |
| Susan Kaveggia, Newport Beach, CA                         | Tom Wurster, Monrovia, CA                                     |



Back cover “Featured Photos” by © Michael A. Schroeder of Bridgeport, Washington: (top) Dusky Grouse (*Dendragapus obscurus*), male near Turner Valley, Alberta, 14 May 2005. This male has red apteria on the neck, apparently typical of all Dusky Grouse; (bottom) Sooty Grouse (*Dendragapus fuliginosus*), male south of Terrace, British Columbia, 15 May 2008. Red apteria appear to be the rule in Sooty Grouse from Terrace north through southeastern Alaska, rather than yellow as they are farther south.