



Figure 6.5

Sonogram of the A) duet of a White-breasted Woodwren pair B) a song type shared by different females in the same Pipeline Road population and C) a different song type also shared by females in the Pipeline Road population. Drawing from Wetmore (1984).

- it related to feeding strategies? *Auk* **102**: 701–713.
- Bleiweiss, R. 1997. Covariation of sexual dichromatism and plumage colours in lekking and non-lekking birds: a comparative analysis. *Evol. Ecol.* **11**: 217–235.
- Boag, P. R. and P. R. Grant. 1984. Darwin's Finches (Geospiza) on Isla Daphne Major, Galapagos: breeding and feeding ecology in a climatically variable environment. *Ecol. Monogr.* **54**: 463–489.
- Bradbury, J. W. 1981. The evolution of leks. Pp 138–169 In: *Natural selection and social behavior* (R. D. Alexander and D. Tinkle, Eds). Chiron Press, New York.
- Breitwisch, R., P. G. Merritt and G. H. Whitesides. 1984. Why do Northern Mockingbirds feed fruit to their nestlings? *Condor* **86**: 281–287.
- Brenowitz, E. A., K. Lent and D. E. Kroodsmas. 1995. Brain space for learned song in birds develops independently of song learning. *J. Neurosci.* **15**: 6281–6286.
- Brown, J. L. 1987. *Helping and communal breeding in birds*. Princeton Univ. Press, Princeton.
- Brown, J. L., E. R. Brown, J. Sedransk and S. Ritter. 1997. Dominance, age, and reproductive success in a complex society: a long-term study of the Mexican jay. *Auk* **114**: 279–286.
- Burley, N. 1988. The differential allocation hypothesis: an experimental test. *Amer. Nat.* **132**: 611–628.
- Burns, K. 1998. A phylogenetic perspective on the evolution of sexual dichromatism in tanagers (Thraupidae): the role of female versus male plumage. *Evolution* **52**: 1219–1224.
- Buskirk, W. H. 1976. Social systems in a tropical forest avifauna. *Amer. Nat.* **110**: 293–310.
- Catchpole, C. K. and B. Leisler. 1996. Female aquatic warblers (*Acrocephalus paludicola*) are attracted by playback of longer and more complicated songs. *Behaviour* **133**: 1153–1164.
- Charnov, E. R. and J. R. Krebs. 1975. The evolution of alarm calls: altruism or manipulation? *Am. Nat.* **109**: 107–112.
- Chen, D. M. and T. H. Goldsmith. 1986. Four spectral classes of cone in the retinas of birds. *J. Comp. Phys. A* **159**: 473–479.
- Cipollini, M. L. and E. W. Stiles. 1993a. Fruit rot, antifungal defense, and palatability of fleshy fruits for frugivorous birds. *Ecology* **74**: 751–762.
- Cipollini, M. L. and E. W. Stiles. 1993b. Fungi as biotic defense agents of fleshy fruits: alternative hypotheses, predictions, and evidence. *Am. Nat.* **141**: 663–673.
- Cockburn, A. 1998. Evolution of helping behavior in cooperatively breeding birds. *Ann. Rev. Ecol. Syst.* **29**: 141–177.
- Cody, M. L. 1966. A general theory of clutch size. *Evolution* **20**: 174–184.
- Conrad, K. E., M. F. Clarke, R. J. Robertson and P. T. Boag. 1998. Paternity and the relatedness of helpers in the cooperatively breeding bell miner. *Condor* **100**: 343–349.
- Cott, H. B. 1940. *Adaptive coloration in animals*. Methuen, London.

- the timing of reproduction in a cooperative breeder, the Florida scrub jay. *Condor* **98**: 234–244.
- Schwagmeyer, P. L. and E. D. Ketterson. 1999. Breeding synchrony and EPF rates: the key to a can of worms? *Trends Ecol. Evol.* **14**: 47–48.
- Schwagmeyer, P. L., R. C. St. Clair, J. D. Moodie, T. C. Lamey, G. D. Schnell and M. N. Moodie. 1999. Species differences in male parental care in birds: a reexamination of correlates with paternity. *Auk* **116**: 487–503.
- Sealy, S. G. 1989. Defence of nectar sources by migrating Cape May Warblers. *J. Field Ornithol.* **60**: 89–93.
- Searcy, W. A. and K. Yasukawa. 1996. Song and female choice. Pp 454–473 In: *Ecology and evolution of acoustic communication in birds* (D. E. Kroodsma, and E. H. Miller, Eds). Cornell Univ. Press, Ithaca.
- Selander, R. K. 1965. On mating systems and sexual selection. *Amer. Nat.* **99**: 129–141.
- Sheldon, B. C. 1994. Sperm competition in the chaffinch: the role of the female. *Anim. Behav.* **47**: 163–173.
- Sick, H. 1993. *Birds in Brazil*. Princeton U. Press.
- Sieving, K. E. 1992. Nest predation and differential insular extinction among selected forest birds of central Panama. *Ecology* **73**: 2310–2328.
- Simmons, R. E. 1993. Effects of supplementary food on density-reduced breeding in an African eagle: adaptive restraint or ecological constraint? *Ibis* **135**: 394–402.
- Sinclair, A. R. E. 1978. Factors affecting the food supply and breeding season of resident birds and movements of Palearctic migrants in a tropical African savannah. *Ibis* **120**: 480–497.
- Skutch, A. F. 1935. Helpers at the nest. *Auk* **52**: 257–273.
- Skutch, A. F. 1949. Do tropical birds rear as many young as they can nourish? *Ibis* **91**: 430–455.
- Skutch, A. F. 1950. The nesting seasons of Central American birds in relation to climate and food supply. *Ibis* **92**: 185–222.
- Skutch, A. F. 1954. *Life Histories of Central American Birds*. Pacific Coast Avifauna No. 31, Cooper Ornithological Society, Berkeley California.
- Skutch, A. F. 1960. Life histories of Central American birds. *Pacific Coast Avifauna* **34**: 1–593.
- Skutch, A. F. 1969. Life histories of Central American birds. *Pacific Coast Avifauna* **35**: 1–580.
- Skutch, A. F. 1981. *New studies of tropical American birds*. Publ. Nuttall Ornithol. Club No. 19.
- Skutch, A. F. 1985. Clutch size, nesting success, and predation on nests of neotropical birds, reviewed. *Ornithol. Monogr.* **36**: 575–594.
- Skutch, A. F. 1996. *Antbirds and ovenbirds*. Univ. of Texas Press, Austin.
- Skutch, A. F. 1997. *Life of the Flycatcher*. Univ. of Oklahoma Press, Oklahoma.
- Slagsvold, T. and J. Lifjeld. 1997. Incomplete female knowledge may explain variation in extra-pair paternity in birds. *Behavior* **134**: 1–19.
- Smith, D. G. 1972. The role of the epaulets in the Red-winged Blackbird social system (*Agelaius phoeniceus*). *Behavior* **41**: 251–268.

- tropical and temperate forests: ecological implications. *Oikos* 53: 17–30.
- Thiollay, J. 1994. Structure, density and rarity in an Amazonian rainforest bird community. *J. Trop. Ecol.* 10: 449–481.
- Thiollay, J. 1999. Frequency of mixed species flocking in tropical forest birds and correlates of predation risk: an intertropical comparison. *J. Avian Biol.* 30: 282–294.
- Thompson, J. N. and M. F. Willson. 1979. Evolution of temperate bird/fruit interactions: phenological strategies. *Evolution* 33: 973–982.
- Titus, R. C., C. R. Chandler, E. D. Ketterson and V. Nolan Jr. 1997. Song rates of dark-eyed juncos do not increase when females are fertile. *Behav. Ecol. Sociobiol.* 41: 165–169.
- Trail, P. W. 1985. Courtship disruption modifies mate choice in a lek-breeding bird. *Science* 227: 778–779.
- Trail, P. W. 1990. Why should lek-breeders be monomorphic? *Evolution* 44: 1837–1852.
- Trail, P. W. and E. S. Adams. 1989. Active mate choice at cock-of-the-rock leks: tactics of sampling and comparison. *Behav. Ecol. Sociobiol.* 25: 283–292.
- Trivers, R. 1972. Parental investment and sexual selection. Pp. 136–179 In: *Sexual selection and the descent of man, 1871–1971* (B. Campbell, Ed). Aldine, Chicago.
- Tye, H. 1991. Reversal of breeding season by lowland birds at higher altitudes in western Cameroon. *Ibis* 134: 154–163.
- Vanderwerf, E. 1992. Lack's clutch size hypothesis: an examination of the evidence using meta-analysis. *Ecology* 73: 1363–1374.
- van Noordwijk, A. J., R. H. McCleery and C. M. Perrins. 1995. Selection for the timing of great tit breeding in relation to caterpillar growth and temperature. *J. Anim. Ecol.* 64: 451–458.
- Verhencamp, S. L. 1978. The adaptive significance of communal nesting in Groove-billed Anis (*Crotophaga sulcirostris*). *Behav. Ecol. Sociobiol.* 4: 1–33.
- Verhulst, S., S. J. Dieleman and H. K. Parmentier. 1999. A tradeoff between immunocompetence and sexual ornamentation in domestic fowl. *Proc. Natl. Acad. Sci. USA* 96: 4478–4481.
- Verner, J. and M. F. Willson. 1966. The influence of habitats on mating systems of North American passerine birds. *Ecology* 47: 143–147.
- Vleck, C. M. and J. L. Brown. 1999. Testosterone and social and reproductive behaviour in *Aphelocoma* jays. *Anim. Behav.* 58: 943–951.
- Wagner, R. H. 1993. The pursuit of extra-pair copulation by female birds: a new hypothesis of colony formation. *J. Theor. Biol.* 163: 333–346.
- Wagner, R. H. 1998. Hidden leks: sexual selection and the clustering of avian territories. *Ornithol. Monogr.* 49: 123–145.
- Wagner, R. H., M. D. Schug and E. S. Morton. 1996. Condition-dependent control of paternity by female purple martins: implications for coloniality. *Behav. Ecol. Sociobiol.* 38: 379–389.
- Weatherhead, P. J. and S. M. Yezerinac. 1998. Breeding synchrony and extra-pair matings in birds. *Behav. Ecol. Sociobiol.* 40: 151–158.