

## PUBLICATIONS OF WALTER D. KOENIG

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### *Books*

1. **Koenig, W. D.** and R. L. Mumme. 1987. *Population Ecology of the Cooperatively Breeding Acorn Woodpecker*. xiii+435 pp. Monographs in Population Biology 24, Princeton University Press, Princeton, NJ.
2. Stacey, P. B. and **W. D. Koenig** (editors). 1990. *Cooperative Breeding in Birds: Long-term Studies of Ecology and Behavior*. xviii+615 pp. Cambridge University Press, Cambridge.
3. **Koenig, W. D.** and J. L. Dickinson (editors). 2004. *Ecology and Evolution of Cooperative Breeding in Birds*. ix+293 pp. Cambridge University Press, Cambridge.
4. **Koenig, W. D.** and J. L. Dickinson (editors). 2016. *Cooperative Breeding in Vertebrates: Studies in Ecology, Evolution and Behavior*. x+379 pp. Cambridge University Press, Cambridge.

### *Technical articles*

1. Gutiérrez, R. J. and **W. D. Koenig**. 1978. Characteristics of storage trees used by acorn woodpeckers in two California woodlands. *Journal of Forestry* 76: 162-164.
2. **Koenig, W. D.** and P. L. Williams. 1979. Notes on the status of acorn woodpeckers in central Mexico. *Condor* 81: 317-318.
3. **Koenig, W. D.** and F. A. Pitelka. 1979. Relatedness and inbreeding avoidance: counterplays in the communally nesting acorn woodpecker. *Science* 206: 1103-1105.
4. **Koenig, W. D.** 1980. The determination of runt eggs in birds. *Wilson Bulletin* 92: 103-107.
5. **Koenig, W. D.** 1980. The incidence of runt eggs in woodpeckers. *Wilson Bulletin* 92: 169-176.
6. **Koenig, W. D.** 1980. Variation and age determination in a population of acorn woodpeckers. *Journal of Field Ornithology* 51: 10-16.
7. Davis, J., **W. D. Koenig** and P. L. Williams. 1980. Birds of Hastings Reservation, Monterey County California. *Western Birds* 11:113-128.
8. **Koenig, W. D.** 1980. Acorn storage by acorn woodpeckers in an oak woodland: an energetics analysis. Pp. 265-269 in *Symposium on the Ecology, Management, and Utilization of California Oaks* (T. R. Plumb, technical coordinator). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW44.
9. Williams, P. L. and **W. D. Koenig**. 1980. Water dependence of birds in a temperate oak woodland. *Auk* 97: 339-350.
10. **Koenig, W. D.** 1981. Space competition in the acorn woodpecker: power struggles in a cooperative breeder. *Animal Behaviour* 29: 396-409.
11. **Koenig, W. D.** 1981. Reproductive success, group size, and the evolution of cooperative breeding in the acorn woodpecker. *American Naturalist* 117: 421-443.
12. **Koenig, W. D.**, and F. A. Pitelka. 1981. Ecological factors and kin selection in the evolution of cooperative breeding in birds. Pp. 261-280 in *Natural Selection and Social Behavior: Recent Research and New Theory* (R. D. Alexander and D. W. Tinkle, editors)

Chiron Press, New York.

13. **Koenig, W. D.** 1981. Coalitions of male lions: making the best of a bad job? *Nature* 293: 413.
14. **Koenig, W. D.** 1982. Ecological and social factors affecting hatchability of eggs. *Auk* 99:526-536.
15. Joste, N. E., **W. D. Koenig**, R. L. Mumme and F. A. Pitelka. 1982. Intragroup dynamics of a cooperative breeder: an analysis of reproductive roles in the acorn woodpecker. *Behavioral Ecology & Sociobiology* 11: 195-201.
16. **Koenig, W. D.**, R. L. Mumme, and F. A. Pitelka. 1983. Female roles in cooperatively breeding acorn woodpeckers. Pp. 235-261 in *Social Behavior of Female Vertebrates* (S. K. Wasser, editor) Academic Press, New York.
17. Mumme, R. L., **W. D. Koenig** and F. A. Pitelka. 1983. Mate-guarding in the acorn woodpecker: within-group reproductive competition in a cooperative breeder. *Animal Behaviour* 31:1094-1106.
18. Mumme, R. L., **W. D. Koenig** and F. A. Pitelka. 1983. Are acorn woodpecker territories aggregated? *Ecology* 64: 1305-1307.
19. Mumme, R. L., **W. D. Koenig** and F. A. Pitelka. 1983. Reproductive competition in the communal acorn woodpecker: sisters destroy each other's eggs. *Nature* 306: 583-584.
20. **Koenig, W. D.** 1984. Clutch size of the gilded flicker. *Condor* 86: 89-90.
21. **Koenig, W. D.**, R. L. Mumme and F. A. Pitelka. 1984. The breeding system of the acorn woodpecker in central coastal California. *Zeitschrift für Tierpsychologie* 65: 289-308.
22. **Koenig, W. D.** 1984. Geographic variation in clutch size in the northern flicker (*Colaptes auratus*): support for Ashmole's hypothesis. *Auk* 101: 698-706.
23. Mumme, R. L., **W. D. Koenig**, R. M. Zink and J. A. Marten. 1985. An analysis of genetic variation and parentage in a California population of acorn woodpeckers. *Auk* 102: 305-312.
24. **Koenig, W. D.** and S. S. Albano. 1985. Patterns of territoriality and mating success in the white-tailed skimmer *Plathemis lydia* (Odonata: Anisoptera). *American Midland Naturalist* 114: 1-12.
25. **Koenig, W. D.** 1985. Dunking of prey by Brewer's blackbirds: a novel source of water for nestlings. *Condor* 87: 444-445.
26. Hannon, S. J., R. L. Mumme, **W. D. Koenig** and F. A. Pitelka. 1985. Replacement of breeders and within-group conflict in the cooperatively breeding acorn woodpecker. *Behavioral Ecology & Sociobiology* 17: 303-312.
27. Moore, W. S. and **W. D. Koenig**. 1986. Comparative reproductive success of yellow-shafted, red-shafted and hybrid flickers across a hybrid zone. *Auk* 103: 42-51.
28. **Koenig, W. D.** and S. S. Albano. 1986. On the measurement of sexual selection. *American Naturalist* 127: 403-409.
29. **Koenig, W. D.** 1986. Geographic ecology of clutch size variation in North American woodpeckers. *Condor* 88: 499-504.
30. Hannon, S. J., R. L. Mumme, **W. D. Koenig**, S. Spon and F. A. Pitelka. 1987. Poor acorn crop, dominance, and decline in numbers of acorn woodpeckers. *Journal of Animal Ecology* 56: 197-207.
31. **Koenig, W. D.** and S. S. Albano. 1987. Lifetime reproductive success, selection, and the

- opportunity for selection in the white-tailed skimmer *Plathemis lydia* (Odonata: Libellulidae). *Evolution* 41: 22-36.
32. **Koenig, W. D.** and M. D. Reynolds. 1987. Potential poisoning of yellow-billed magpies by compound 1080. *Wildlife Society Bulletin* 15: 274-276.
  33. **Koenig, W. D.** and S. S. Albano. 1987. Breeding site fidelity in *Plathemis lydia* (Anisoptera: Libellulidae). *Odonatologica* 16: 249-259.
  34. Carmen, W. J., **W. D. Koenig** and R. L. Mumme. 1987. Acorn production by five species of oaks over a seven year period at the Hastings Reservation, Carmel Valley, California. Pp. 429-434 in *Symposium on Multiple-Use Management of California's Hardwood Resources* (T. R. Plumb and N. H. Pillsbury, technical coordinators). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW100.
  35. **Koenig, W. D.** 1987. Morphological and dietary correlates of clutch size in North American woodpeckers. *Auk* 104: 757-765.
  36. **Koenig, W. D.**, S. J. Hannon, R. L. Mumme and F. A. Pitelka. 1988. Parent-offspring conflict in the acorn woodpecker. *Proceedings of the International Ornithological Congress* 19: 1221-1230.
  37. Mumme, R. L., **W. D. Koenig** and F. A. Pitelka. 1988. Costs and benefits of joint nesting in the acorn woodpecker. *American Naturalist* 131: 654-677.
  38. **Koenig, W. D.** 1988. Reciprocal altruism in birds: a critical review. *Ethology and Sociobiology* 9: 73-84.
  39. **Koenig, W. D.** 1988. On the determination of viable population size in birds and mammals. *Wildlife Society Bulletin* 16: 230-234.
  40. **Koenig, W. D.** and M. K. Heck. 1988. Ability of two species of oak woodland birds to subsist on acorns. *Condor* 90: 705-708.
  41. **Koenig, W. D.** 1988. Internal migration in the contemporary United States: comparison of measures and partitioning of stages. *Human Biology* 60: 927-944.
  42. **Koenig, W. D.** 1989. Sex-biased dispersal in the contemporary United States. *Ethology and Sociobiology* 10: 263-278.
  43. Mumme, R. L., **W. D. Koenig** and F. L. W. Ratnieks. 1989. Helping behaviour, reproductive value, and the future component of indirect fitness. *Animal Behaviour* 38: 331-343.
  44. **Koenig, W. D.** 1990. Territory size and duration in the white-tailed skimmer *Plathemis lydia* (Odonata: Libellulidae). *Journal of Animal Ecology* 59: 317-334.
  45. Stacey, P. B. and **Koenig, W. D.** 1990. Introduction. Pp. ix-xviii in *Cooperative Breeding in Birds: Long-term Studies of Ecology and Behavior* (P. B. Stacey and W. D. Koenig, editors). Cambridge University Press, Cambridge.
  46. **Koenig, W. D.** and P. B. Stacey. 1990. Acorn woodpeckers: Group living and food storage under contrasting ecological conditions. Pp. 415-453 in *Cooperative Breeding in Birds: Long-term Studies of Ecology and Behavior* (P. B. Stacey and W. D. Koenig, editors). Cambridge University Press, Cambridge.
  47. **Koenig, W. D.** and R. L. Mumme. 1990. Levels of analysis and the functional significance of helping behavior. Pp. 268-303 in *Interpretation and explanation in the study of behavior, vol. 2: Explanation, Evolution, and Adaptation* (M. Bekoff and D. Jamieson, editors). Westview Press, Boulder, Colorado. Reprinted in: *Readings in Animal Cognition* (M. Bekoff and D. Jamieson, editors). MIT Press, Cambridge, Massachusetts.

48. Weathers, W. W., **W. D. Koenig** and M. T. Stanback. 1990. Breeding energetics and thermal ecology of the acorn woodpecker in central coastal California. *Condor* 92: 341-359.
49. Mumme, R. L., **W. D. Koenig** and F. A. Pitelka. 1990. Individual contributions to cooperative nest care in the acorn woodpecker. *Condor* 92: 360-368.
50. **Koenig, W. D.** 1990. Dispersal, effective population size and the genetic structure of the contemporary United States. *American Journal of Human Biology* 2: 165-170.
51. **Koenig, W. D.** 1990. Opportunity of parentage and nest destruction in polygynandrous acorn woodpeckers, *Melanerpes formicivorus*. *Behavioral Ecology* 1: 55-61.
52. **Koenig, W. D.**, S. S. Albano and J. L. Dickinson. 1991. A comparison of methods to partition selection acting via components of fitness: do larger male bullfrogs have greater hatching success? *Journal of Evolutionary Biology* 4: 309-320.
53. **Koenig, W. D.** 1991. The effects of tannins and lipids on the digestibility of acorns by acorn woodpeckers. *Auk* 108: 79-88.
54. **Koenig, W. D.**, W. J. Carmen, M. T. Stanback and R. L. Mumme. 1991. Determinants of acorn productivity among five species of oaks in central coastal California. Pp.136-142 in *Proceedings of the Symposium on Oak Woodlands and Hardwood Rangeland Management*. (R. B. Standiford, technical coordinator). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW126.
55. **Koenig, W. D.**, M. T. Stanback, P. N. Hooge and R. L. Mumme. 1991. Distress calls in the acorn woodpecker. *Condor* 93: 637-643.
56. Mumme, R. L. and **W. D. Koenig**. 1991. Explanations for avian helping behavior. *Trends in Ecology & Evolution* 6: 343-344.
57. **Koenig, W. D.** 1991. Levels of female choice in the white-tailed skimmer *Plathemis lydia* (Odonata: Libellulidae). *Behaviour* 119: 193-224.
58. **Koenig, W. D.**, P. A. Gowaty and J. L. Dickinson. 1992. Boxes, barns, and bridges: confounding factors or exceptional opportunities in ecological studies? *Oikos* 63: 305-308.
59. Stanback, M. T. and **W. D. Koenig**. 1992. Cannibalism in birds. Pp. 277-298 in *Cannibalism: Ecology and Evolution among Diverse Taxa* (M. A. Elgar and B. J. Crespi, editors). Oxford University Press, Oxford.
60. **Koenig, W. D.**, F. A. Pitelka, W. J. Carmen, R. L. Mumme and M. T. Stanback. 1992. The evolution of delayed dispersal in cooperative breeders. *Quarterly Review of Biology* 67: 111-150.
61. Eichholz, M. W. and **W. D. Koenig**. 1992. Gopher snake attraction to birds' nests. *Southwestern Naturalist* 37: 293-298.
62. Birkhead, T. R., K. Clarkson, M. D. Reynolds and **W. D. Koenig**. 1992. Copulation and mate guarding in the colonial yellow-billed magpie *Pica nuttalli* and a comparison with the solitary black-billed magpie *P. pica*. *Behaviour* 121: 110-130.
63. **Koenig, W. D.**, R. L. Mumme, W. J. Carmen and M. T. Stanback. 1994. Acorn production by oaks in central coastal California: variation within and among years. *Ecology* 75: 99-109.
64. Stanback, M. T. and **W. D. Koenig**. 1994. Techniques for capturing birds inside natural cavities. *Journal of Field Ornithology* 65: 70-75.
65. Du Plessis, M., W. W. Weathers and **W. D. Koenig**. 1994. Energetic benefits of

- communal roosting by acorn woodpeckers during the non-breeding season. *Condor* 96: 631-637.
66. Leonard, M. L., K. L. Teather, A. G. Horn, **W. D. Koenig** and J. L. Dickinson. 1994. Provisioning in western bluebirds is not related to offspring sex. *Behavioral Ecology* 5: 455-459.
  67. Knops, J. M. H. and **W. D. Koenig**. 1994. Water use strategies of five sympatric species of *Quercus* in central coastal California. *Madroño* 41: 290-301.
  68. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, M. T. Stanback and R. L. Mumme. 1994. Estimating acorn crops using visual surveys. *Canadian Journal of Forest Research* 24: 2105-2112.
  69. **Koenig, W. D.** 1994. Two new bird-mammal associations from Kenya, with comments on host use by wattled starlings. *Ostrich* 65: 337-338.
  70. **Koenig, W. D.**, R. L. Mumme, M. T. Stanback and F. A. Pitelka. 1995. Patterns and consequences of egg destruction among joint-nesting acorn woodpeckers. *Animal Behaviour* 50: 607-621.
  71. Dickinson, J. L., J. Haydock, **W. D. Koenig**, M. T. Stanback and F. A. Pitelka. 1995. Genetic monogamy in single-male groups of acorn woodpeckers. *Molecular Ecology* 4: 765-770.
  72. Leonard, M. L., J. L. Dickinson, A. G. Horn and **W. D. Koenig**. 1995. An experimental test of offspring recognition in western bluebirds. *Auk* 112: 1062-1064.
  73. **Koenig, W. D.**, P. B. Stacey, M. T. Stanback and R. L. Mumme. 1995. Acorn woodpecker (*Melanerpes formicivorus*). In *The Birds of North America*, No. 194 (A. Poole and F. Gill, editors) Academy of Natural Sciences, Philadelphia; American Ornithologists' Union, Washington, D.C.
  74. Dickinson, J. L., **W. D. Koenig** and F. A. Pitelka. 1996. Fitness consequences of helping behavior in the western bluebird. *Behavioral Ecology* 7: 168-177.
  75. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, M. T. Stanback and R. L. Mumme. 1996. Acorn production by oaks in central coastal California: influence of weather at three levels. *Canadian Journal of Forest Research* 26: 1677-1683.
  76. **Koenig, W. D.** and J. L. Dickinson. 1996. Nestling sex-ratio variation in western bluebirds. *Auk* 113: 902-910.
  77. **Koenig, W. D.**, D. Van Vuren and P. N. Hooge. 1996. Detectability, philopatry, and the distribution of dispersal distances in vertebrates. *Trends in Ecology & Evolution* 11: 514-517.
  78. Lidicker, W. Z., Jr. and **W. D. Koenig**. 1996. Responses of terrestrial vertebrates to habitat edges and corridors. Pp. 85-109 in *Metapopulations and Wildlife Conservation* (D. R. McCullough, editor) Island Press, Washington, D.C.
  79. **Koenig, W. D.** 1997. Host preferences and behavior of oxpeckers: coexistence of similar species in a fragmented landscape. *Evolutionary Ecology* 11: 91-104.
  80. Monk, D. S. and **W. D. Koenig**. 1997. Individual, brood, and sex variation in begging calls of western bluebirds. *Wilson Bulletin* 109: 328-332.
  81. Fincke, O. M., J. K. Waage and **W. D. Koenig**. 1997. Natural and sexual selection components of Odonate mating patterns. Pp. 58-74 in *The Evolution of Mating Systems in Insects and Arachnids* (J. C. Choe and B. J. Crespi, editors) Cambridge University Press, Cambridge.

82. Knops, J. M. H., **W. D. Koenig**, and T. H. Nash, III. 1997. On the relationship between nutrient use efficiency and fertility in forest ecosystems. *Oecologia* 110: 550-556.
83. Knops, J. M. H. and **W. D. Koenig**. 1997. Site fertility and leaf nutrients of sympatric evergreen and deciduous species of *Quercus* in central coastal California. *Plant Ecology* 130: 121-131.
84. Reynolds, M. D. and **W. D. Koenig**. 1997. Reproductive success of yellow-billed magpies *Pica nuttalli* in central coastal California. *Acta Ornithologica* 32: 99-109.
85. **Koenig, W. D.** and J. M. H. Knops. 1997. Patterns of geographic synchrony in growth and reproduction of oaks within California and beyond. Pp.101-108 in *Proceedings of the Symposium on Oak Woodlands: Ecology, Management, and Urban Interface Issues*. (N. H. Pillsbury, J. Verner, and W. D. Tietje, technical coordinators) Pacific SW For. & Range Exp. Stn Gen. Tech. Rep. PSW-GTR-160.
86. **Koenig, W. D.**, J. Haydock, and M. T. Stanback. 1998. Reproductive roles in the cooperatively breeding acorn woodpecker: incest avoidance versus reproductive competition. *American Naturalist* 151: 243-255.
87. **Koenig, W. D.** and J. M. H. Knops. 1998. Testing for spatial autocorrelation in ecological studies. *Ecography* 21: 423-429.
88. **Koenig, W. D.** 1998. Spatial autocorrelation in California land birds. *Conservation Biology* 12: 612-620
89. **Koenig, W. D.** and S. H. Faeth. 1998. Effects of storage on tannin and protein content of cached acorns. *Southwestern Naturalist* 43: 170-175.
90. **Koenig, W. D.** and J. M. H. Knops. 1998. Scale of mast-seeding and tree-ring growth. *Nature* 396: 225-226.
91. **Koenig, W. D.** 1999. Spatial autocorrelation in ecological studies. *Trends in Ecology & Evolution* 14: 22-26.
92. Hooge, P. N., M. T. Stanback and **W. D. Koenig**. 1999. Nest-site selection in the acorn woodpecker. *Auk* 116: 45-54.
93. **Koenig, W. D.** and J. R. Walters. 1999. Sex-ratio selection in species with helpers at the nest: the repayment model revisited. *American Naturalist* 153: 124-130.
94. **Koenig, W. D.** and J. Haydock. 1999. Oaks, acorns, and the geographical ecology of the acorn woodpecker. *Journal of Biogeography* 26: 159-165. Highlighted in Moore, P. D. 1999 [News and Views] *Nature* 399: 528-529.
95. **Koenig, W. D.**, M. T. Stanback, and J. Haydock. 1999. Demographic consequences of incest avoidance in the cooperatively breeding acorn woodpecker. *Animal Behaviour* 57: 1287-1293.
96. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, and M. T. Stanback. 1999. Spatial dynamics in the absence of dispersal: acorn production by oaks in central coastal California. *Ecography* 22: 499-506.
97. **Koenig, W. D.**, D. R. McCullough, C. E. Vaughn, J. M. H. Knops, and W. J. Carmen. 1999. Synchrony and asynchrony of acorn production at two coastal California sites. *Madroño* 46: 20-24.
98. **Koenig, W. D.** and J. M. H. Knops. 1999. The ecology of blue oak (*Quercus douglasii*) acorn production. *Journal of the International Oak Society* 9: 60-68.
99. **Koenig, W. D.** and J. M. H. Knops. 2000. Patterns of annual seed production by northern hemisphere trees: a global perspective. *American Naturalist* 155: 59-69.

100. **Koenig, W. D.**, P. N. Hooge, M. T. Stanback, and J. Haydock. 2000. Natal dispersal in the cooperatively breeding acorn woodpecker. *Condor* 102: 492-502.
101. Trenham, P. C., H. B. Shaffer, **W. D. Koenig**, and M. R. Stromberg. 2000. Life history and demographic variation in the California tiger salamander (*Ambystoma californiense*). *Copeia* 2000: 365-377.
102. Knops, J. M. H. and **W. D. Koenig**. 2000. Annual variation in xylem water potential in California oaks. *Madroño* 47: 106-108.
103. **Koenig, W. D.**, M. T. Stanback, J. Haydock, and F. Kraaijeveld-Smit. 2001. Nestling sex ratio variation in the cooperatively breeding acorn woodpecker (*Melanerpes formicivorus*). *Behavioral Ecology & Sociobiology* 49: 357-365.
104. Haydock, J., **W. D. Koenig**, and M. T. Stanback. 2001. Shared parentage and incest avoidance in the cooperatively breeding acorn woodpecker. *Molecular Ecology* 10: 1515-1525.
105. **Koenig, W. D.** and J. M. H. Knops. 2001. Seed-crop size and eruptions of North American boreal seed-eating birds. *Journal of Animal Ecology* 70: 609-620.
106. **Koenig, W. D.** 2001. Synchrony and periodicity of eruptions by boreal birds. *Condor* 103: 725-735.
107. **Koenig, W. D.** 2001. Spatial autocorrelation and local disappearances in wintering North American birds. *Ecology* 82: 2636-2644.
108. Trenham, P. C., **W. D. Koenig**, and H. B. Shaffer. 2001. Spatially autocorrelated demography and interpond dispersal in the pond breeding salamander *Ambystoma californiense*. *Ecology* 82: 3519-3530.
109. **Koenig, W. D.** and J. M. H. Knops. 2002. The behavioral ecology of masting in oaks. Pp. 129-148 in *Oak Forest Ecosystems* (W. J. McShea and W. M. Healy, editors) The Johns Hopkins University Press, Baltimore, MD.
110. **Koenig, W. D.** 2002. Global patterns of environmental synchrony and the Moran effect. *Ecography* 25: 283-288.
111. **Koenig, W. D.**, J. M. H. Knops, and W. J. Carmen. 2002. Arboreal seed removal and insect damage in three California oaks. Pp. 193-204 in *Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Changing Landscape* (R. B. Standiford, D. McCreary, and K. L. Purcell, technical coordinators). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW-GTR-184.
112. **Koenig, W. D.** and L. S. Benedict. 2002. Size, insect parasitism, and energetic value of acorns stored by acorn woodpeckers. *Condor* 104: 539-547.
113. Chu, M., **W. D. Koenig**, A. Godinez, C. E. McIntosh, and R. C. Fleischer. 2002. Social and genetic monogamy in territorial and loosely colonial populations of the phainopepla. *Auk* 119: 770-777.
114. Haydock, J. and **W. D. Koenig**. 2002. Reproductive skew in the polygynandrous acorn woodpecker. *Proceedings of the National Academy of Sciences (USA)* 99: 7178-7183.
115. Craft, K. J., M. V. Ashley, and **W. D. Koenig**. 2002. Limited hybridization between *Quercus lobata* and *Quercus douglasii* (Fagaceae) in a mixed stand in central coastal California. *American Journal of Botany* 89: 1792-1798.
116. **Koenig, W. D.** and M. V. Ashley. 2003. Is pollen limited? The answer is blowin' in the wind. *Trends in Ecology & Evolution* 18: 157-159.
117. Haydock, J. and **W. D. Koenig**. 2003. Patterns of reproductive skew in the

- polygynandrous acorn woodpecker. *American Naturalist* 162: 277-289.
118. Trenham, P. C., **W. D. Koenig**, M. J. Mossman, S. L. Stark, and L. A. Jagger. 2003. Regional dynamics of wetland-breeding frogs and toads: turnover and synchrony. *Ecological Applications* 13: 1522-1532.
  119. **Koenig, W. D.** and A. M. Liebhold. 2003. Regional impacts of periodical cicadas on oak radial increment. *Canadian Journal of Forest Research* 33: 1084-1089.
  120. **Koenig, W. D.** 2003. European starlings and their effect on native cavity-nesting birds. *Conservation Biology* 17: 1134-1140.
  121. **Koenig, W. D.**, D. Kelly, V. L. Sork, R. P. Duncan, J. S. Elkinton, M. S. Peltonen and R. D. Westfall. 2003. Dissecting components of population-level variation in seed production and the evolution of masting behavior. *Oikos* 102: 581-591.
  122. Buonaccorsi, J. P., J. Elkinton, **W. Koenig**, R. Duncan, D. Kelly and V. Sork. 2003. Measuring mast seeding behavior: relationships among population variation, individual variation and synchrony. *Journal of Theoretical Biology* 224: 107-114.
  123. **Koenig, W. D.** and J. L. Dickinson. 2004. Introduction. Pp. 1-4 in *Ecology and Evolution of Cooperative Breeding in Birds* (W. D. Koenig and J. L. Dickinson, editors). Cambridge University Press, Cambridge.
  124. **Koenig, W. D.** and J. Haydock. 2004. Incest avoidance. Pp. 142-156 in *Ecology and Evolution of Cooperative Breeding in Birds* (W. D. Koenig and J. L. Dickinson, editors). Cambridge University Press, Cambridge.
  125. Liebhold, A. M., V. Sork, M. Peltonen, **W. D. Koenig**, O. Bjørnstad, R. Westfall, J. Elkinton, and J. M. H. Knops. 2004. Within-population spatial synchrony in mast seeding of North American oaks. *Oikos* 104: 156-164.
  126. Liebhold, A. M., **W. D. Koenig** and O. Bjørnstad. 2004. Spatial synchrony in population dynamics. *Annual Review of Ecology, Evolution, and Systematics* 35: 467-490.
  127. **Koenig, W. D.** and A. M. Liebhold. 2005. Effects of periodical cicada emergences on abundance and synchrony of avian populations. *Ecology* 86: 1873-1882.
  128. **Koenig, W. D.**, E. L. Walters, J. R. Walters, J. S. Kellam, K. G. Michalek, and M. S. Schrader. 2005. Seasonal body weight variation in five species of woodpeckers. *Condor* 107: 810-822.
  129. Monahan, W. B. and **W. D. Koenig**. 2006. Potential effects of SOD on the oak woodland bird community of coastal California. Pp. 195-209 in *Proceedings of the Sudden Oak Death Second Science Symposium: the State of Our Knowledge*. (S. J. Frankel, P. J. Shea, and M. I. Haverty, technical coordinators). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW-GTR-196.
  130. Monahan, W. B. and **W. D. Koenig**. 2006. Estimating the effects of sudden oak death on oak-dependent birds. *Biological Conservation* 127: 146-157.
  131. **Koenig, W. D.**, M. T. Stanback, and J. Haydock. 2006. Abbreviated inner primaries: a sex-linked dimorphism in the acorn woodpecker. *Journal of Field Ornithology* 77: 157-162.
  132. **Koenig, W. D.** 2006. Spatial synchrony of monarch butterflies. *American Midland Naturalist* 155: 39-49.
  133. Wiebe, K. L., **W. D. Koenig**, and K. Martin. 2006. Evolution of clutch size in cavity-excavating birds: the nest site limitation hypothesis revisited. *American Naturalist* 167: 343-353.



134. **Koenig, W. D.**, L. Marcus, T. W. Scott, and J. L. Dickinson. 2007. West Nile virus and California breeding bird declines. *EcoHealth* 4: 18-24.
135. **Koenig, W. D.** and J. T. Stahl. 2007. Late summer and fall nesting in the acorn woodpecker and other North American terrestrial birds. *Condor* 109: 334-350.
136. Wiebe, K., **W. D. Koenig**, and K. Martin. 2007. Costs and benefits of nest reuse versus excavation in cavity-nesting birds. *Annales Zoologici Fennici* 44: 209-217.
137. Knops, J. M. H., **W. D. Koenig**, and W. J. Carmen. 2007. Negative correlation does not imply a tradeoff between growth and reproduction in California oaks. *Proceedings of the National Academy of Sciences (USA)* 104: 16982-16985.
138. **Koenig, W. D.** and J. M. H. Knops. 2007. Long-term growth and persistence of blue oak (*Quercus douglasii*) seedlings in a California oak savanna. *Madroño* 54: 269-274.
139. **Koenig, W. D.**, J. M. H. Knops, and W. J. Carmen. 2008. Timing of flowering and seed production in three California oaks. Pp. 371-380 in *Proceedings of the Sixth Symposium on Oak Woodlands: Today's Challenges, Tomorrow's Opportunities* (A. Merenlender, D. McCreary, and K. L. Purcell, technical coordinators). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW-GTR-217.
140. Garrison, B. A., **W. D. Koenig**, and J. M. H. Knops. 2008. Spatial synchrony and temporal patterns in acorn production by California black oaks. Pp. 343-356 in *Proceedings of the Sixth Symposium on Oak Woodlands: Today's Challenges, Tomorrow's Opportunities* (A. Merenlender, D. McCreary, and K. L. Purcell, technical coordinators). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW-GTR-217.
141. Scott, T., P.-Y. Lee, K. Paggett, R. Carney, S. Husted, and **W. D. Koenig**. 2008. The impact of West Nile virus on birds in California's hardwood rangelands. Pp. 151-163 in *Proceedings of the Sixth Symposium on Oak Woodlands: Today's Challenges, Tomorrow's Opportunities* (A. Merenlender, D. McCreary, and K. L. Purcell, tech. coord.). Pacific SW Forest & Range Exp. Station Gen. Tech. Rep. PSW-GTR-217.
142. **Koenig, W. D.** and J. L. Dickinson. 2008. Cooperative breeding as an alternative reproductive tactic. Pp. 451-470 in *Alternative Reproductive Tactics: an Integrative Approach* (R. Oliveira, M. Taborsky, and J. Brockmann, editors). Cambridge University Press, Cambridge.
143. Crosbie, S. P., **W. D. Koenig**, K. Reisen, V. L. Kramer, L. Marcus, R. Carney, E. Pandolfino, G. M. Bolen, L. R. Crosbie, D. A. Bell, H. B. Ernest. 2008. Early impact of West Nile virus on the yellow-billed magpie (*Pica nuttalli*). *Auk* 125: 542-550.
144. Stromberg, M. R., **W. D. Koenig**, E. L. Walters, and J. Schweisinger. 2008. Estimate of *Trichomonas gallinae*-induced mortality in band-tailed pigeons, upper Carmel Valley, California, winter 2006-2007. *Wilson Journal of Ornithology* 120: 603-606.
145. **Koenig, W. D.** 2008. Lifetime reproductive success and sexual selection theory. Pp. 153-166 in *Dragonflies and damselflies: model organisms for ecological and evolutionary research* (A. Córdoba-Aguilar, editor) Oxford University Press, Oxford, UK.
146. **Koenig, W. D.**, D. J. Schaefer, S. Mambelli, and T. E. Dawson. 2008. Acorns, insects, and the diet of adult versus nestling acorn woodpeckers. *Journal of Field Ornithology* 79: 280-285.
147. Monahan, W. B., **W. D. Koenig**, J. Tse, and M. Garbelotto. 2008. Preserved specimens suggest non-native origins of three species of *Phytophthora* in California. *Mycological Research* 112: 757-758.

148. **Koenig, W. D.**, J. P. McEntee, and E. L. Walters. 2008. Acorn harvesting by acorn woodpeckers: annual variation and comparison with genetic estimates. *Evolutionary Ecology Research* 10: 811-822.
149. Kelly, D., **W. D. Koenig**, and A. M. Liebhold. 2008. An intercontinental comparison of the dynamic behavior of mast seeding communities. *Population Ecology* 50: 329-342.
150. **Koenig, W. D.**, S.-F. Shen, A. H. Krakauer, and J. Haydock. 2009. Reproductive skew in avian societies. Pp. 227-264 in *Reproductive Skew in Vertebrates: Proximate and Ultimate Causes* (R. Hager and C. B. Jones, editors). Cambridge University Press, Cambridge.
151. **Koenig, W. D.**, A. H. Krakauer, W. B. Monahan, J. Haydock, J. M. H. Knops, and W. J. Carmen. 2009. Mast-producing trees and the geographical ecology of western scrub-jays. *Ecography* 32: 561-570.
152. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, and R. D. Sage. 2009. No trade-off between seed size and number in the valley oak *Quercus lobata*. *American Naturalist* 173: 682-688.
153. **Koenig, W. D.**, J. M. H. Knops, J. L. Dickinson, and B. Zuckerberg. 2009. Latitudinal decrease in acorn size in bur oak (*Quercus macrocarpa*) is due to environmental constraints, not avian dispersal. *Botany* 87: 349-356. doi: 10.1139/B09-008
154. **Koenig, W. D.**, E. L. Walters, and J. Haydock. 2009. Helpers and egg investment in the cooperatively breeding acorn woodpecker: testing the concealed helper effects hypothesis. *Behavioral Ecology and Sociobiology* 63: 1659-1665. doi: 10.1007/s00265-009-0773-y
155. **Koenig, W. D.** and M. D. Reynolds (revisors). 2009. Yellow-billed Magpie (*Pica nuttalli*), in *The Birds of North America Online* (A. Poole, editor). Cornell Lab of Ornithology, Ithaca, NY. <http://bna.birds.cornell.edu/bna/species/180>
156. **Koenig, W. D.**, W. M. Hochachka, B. Zuckerberg, and J. L. Dickinson. 2010. Ecological determinants of American crow mortality due to West Nile virus during its North American sweep. *Oecologia* 163: 903-909.
157. **Koenig, W. D.**, J. M. H. Knops, and W. J. Carmen. 2010. Testing the environmental prediction hypothesis for mast-seeding in California oaks. *Canadian Journal of Forest Research* 40: 2115-2122.
158. **Koenig, W. D.**, L. Ries, V. B. K. Olsen, and A. M. Liebhold. 2011. Avian predators are less abundant during periodical cicada emergences, but why? *Ecology* 92: 784-790.
159. Sage, R. D., **W. D. Koenig**, and B. C. McLaughlin. 2011. Fitness consequences of seed size in the valley oak *Quercus lobata* Née (Fagaceae). *Annals of Forest Science* 68: 477-484.
160. Nunn, C. L., V. O. Ezenwa, C. Arnold, and **W. D. Koenig**. 2011. Mutualism or parasitism? Using a phylogenetic approach to characterize the oxpecker-ungulate relationship. *Evolution* 65: 1297-1304. doi: 10.1111/j.1558-5646.2010.01212.x
161. Zuckerberg, B., D. N. Bonter, W. M. Hochachka, **W. D. Koenig**, A. T. DeGaetano, and J. L. Dickinson. 2011. Climatic constraints on wintering bird distributions are modified by urbanization and weather. *Journal of Animal Ecology* 80: 403-413. doi: 10.1111/j.1365-2656.2010.01780.x
162. Scofield, D. G., V. R. Alfaro, V. L. Sork, D. Grivet, E. Martinez, J. Papp, A. R. Pluess, **W. D. Koenig**, and P. E. Smouse. 2011. Foraging patterns of acorn woodpeckers

- (*Melanerpes formicivorus*) on valley oak (*Quercus lobata* Née) in two California oak savanna-woodlands. *Oecologia* 166: 187-196. doi: 10.1007/s00442-010-1828-5
163. Rosenstock, T. S., A. Hastings, **W. D. Koenig**, D. J. Lyles, and P. H. Brown. 2011. Testing Moran's theorem in an agroecosystem. *Oikos* 120: 1434-1440. DOI: 10.1111/j.1600-0706.2011.19360.x
164. Abraham, S. T., D. N. Zaya, **W. D. Koenig**, and M. V. Ashley. 2011. Interspecific and intraspecific pollination patterns of valley oak, *Quercus lobata*, in a mixed stand in coastal central California. *International Journal of Plant Sciences* 172: 691-699. DOI: 10.1086/659646
165. **Koenig, W. D.**, E. L. Walters, and A. M. Liebhold. 2011. Effects of gypsy moth outbreaks on North American woodpeckers. *Condor* 113: 352-361.
166. **Koenig, W. D.**, E. L. Walters, and J. Haydock. 2011. Variable helper effects, ecological conditions, and the evolution of cooperative breeding in the acorn woodpecker. *American Naturalist* 178: 145-158. doi: 10.1086/660832. Data archived in DRYAD, doi:10.5061/dryad.9042
167. Morrison, S. A., T. S. Sillett, C. K. Ghalambor, J. W. Fitzpatrick, D. M. Graber, V. J. Bakker, R. Bowman, C. T. Collins, P. W. Collins, K. S. Delaney, D. F. Doak, **W. D. Koenig**, L. Laughrin, A. A. Lieberman, J. M. Marzluff, M. D. Reynolds, J. M. Scott, J. A. Stallcup, W. Vickers, and W. M. Boyce. 2011. Proactive conservation management of an island-endemic bird species in the face of global change. *BioScience* 61: 1013-1021. doi: 10.1525/bio.2011.61.12.11
168. **Koenig, W. D.** and E. L. Walters. 2011. Age-related provisioning behaviour in the cooperatively breeding acorn woodpecker: testing the skills and the pay-to-stay hypotheses. *Animal Behaviour* 82: 437-444. Highlighted in: Searcy, W. A. 2011. Featured articles. *Animal Behaviour* 82: 423-424. doi: 10.1016/j.anbehav.2011.05.028
169. **Koenig, W. D.**, E. L. Walters, and J. Haydock. 2011. Fitness consequences of within-brood dominance in the cooperatively breeding acorn woodpecker. *Behavioral Ecology and Sociobiology* 65: 2229-2238. doi: 10.1007/s00265-011-1231-1
170. **Koenig, W. D.** and E. L. Walters. 2012. Brooding, provisioning, and compensatory care in the cooperatively breeding acorn woodpecker. *Behavioral Ecology* 23: 181-190. doi: 10.1093/beheco/arr172
171. Zuckerberg, B., A. Desrochers, W. M. Hochachka, **W. D. Koenig**, J. L. Dickinson, and D. Fink. 2012. Overlapping landscapes: a persistent, but misdirected concern when collecting and analyzing ecological data *Journal of Wildlife Management* 76: 1072-1080. doi: 10.1002/jwmg.326
172. **Koenig, W. D.**, K. A. Funk, T. S. Kraft, W. J. Carmen, B. C. Barringer, and J. M. H. Knops. 2012. Stabilizing selection for within-season flowering phenology confirms pollen limitation in a wind-pollinated tree. *Journal of Ecology* 100: 758-763. doi: 10.1111/j.1365-2745.2011.01941.x
173. **Koenig, W. D.** and E. L. Walters. 2012. An experimental study of chick provisioning in the cooperatively breeding acorn woodpecker. *Ethology* 118: 566-574. doi: 10.1111/j.1439-0310.2012.02043.x
174. Knops, J. M. H., and **W. D. Koenig**. 2012. Sex allocation in California oaks: trade-offs or resource tracking? *PLoS One* 7(8): e43492. doi:10.1371/journal.pone.0043492

175. Barringer, B. C., **W. D. Koenig**, and J. M. H. Knops. 2013. Interrelationships among life-history traits in three California oaks. *Oecologia* 171: 129-139. doi:10.1007/s00442-012-2386-9
176. **Koenig, W. D.** and A. M. Liebhold. 2013. Avian predation pressure as a potential driver of periodical cicada cycle length. *American Naturalist* 181: 145-149. Data archived in DRYAD, doi:10.5061/dryad.b6k41. Highlighted in Science NOW, December 2012: <http://news.sciencemag.org/sciencenow/2012/12/cicadas-cycles-control-their-pre.html?ref=hp>; New Scientist, 3 May 2013: <http://www.newscientist.com/article/dn23485-the-swarm-stand-by-for-the-deafening-cicada-orgy.html>
177. **Koenig, W. D.**, and J. M. H. Knops. 2013. Large scale spatial synchrony and cross-synchrony in acorn production by two California oaks. *Ecology* 94: 83-93. For photos see *Bulletin of the Ecological Society of America* 94: 89-91 (2013).
178. Rusk, C. L., E. L. Walters, and **W. D. Koenig**. 2013. Cooperative breeding and long-distance dispersal: a test using vagrant records. *PLoS One* 8(3): e58624. doi:10.1371/journal.pone.0058624
179. **Koenig, W. D.**, A. M. Liebhold, D. N. Bonter, W. M. Hochachka, and J. L. Dickinson. 2013. Effects of the emerald ash borer invasion on four species of birds. *Biological Invasions* 15: 2095-2103. doi:10.1007/s10530-013-0435-x
180. **Koenig, W. D.**, M. Díaz, F. Pulido, R. Alejano, E. Beamonte, and J. M. H. Knops. 2013. Acorn production patterns. Pp. 181 – 209 in *Mediterranean Oak Woodland Working Landscapes: Dehesas of Spain and Ranchlands of California* (P. Campos, L. Huntsinger, J. L. Oviedo, P. F. Starrs, M. Díaz, R. B. Standiford, and G. Montero, editors). Springer Landscape Series, vol. 16.
181. Pearse, I. S., **W. D. Koenig**, and J. M. H. Knops. 2014. Cues versus proximate drivers: testing the mechanism behind masting behavior. *Oikos* 123: 179-184.
182. Pearse, I. S., S. Griswold, D. Pizarro, and **W. D. Koenig**. 2014. Stage and size structure of three species of oaks in central coastal California. *Madroño* 61: 1-8.
183. **Koenig, W. D.**, and J. M. H. Knops. 2014. Environmental correlates of acorn production by four species of Minnesota oaks. *Population Ecology* 56: 63-71.
184. **Koenig, W. D.**, E. L. Walters, I. S. Pearse, W. J. Carmen, and J. M. H. Knops. 2014. Serotiny in California oaks. *Madroño* 61: 151-158.
185. **Koenig, W. D.** and E. L. Walters. 2014. What we don't know, and what needs to be known, about the cooperatively breeding acorn woodpecker (*Melanerpes formicivorus*). *Acta Ornithologica* 49: 221-232.
186. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, and I. S. Pearse. 2015. What drives masting? The phenological synchrony hypothesis. *Ecology* 96: 184-192.
187. Pearse, I. S., **W. D. Koenig**, K. A. Funk, and M. B. Pesendorfer. 2015. Pollen limitation and flower abortion in a wind-pollinated, masting tree. *Ecology* 96: 587-593.
188. Pearse, I. S., K. A. Funk, T. S. Kraft, and **W. D. Koenig**. 2015. Lagged effects of early season herbivores on valley oak fecundity. *Oecologia* 178: 361-368.
189. **Koenig, W. D.**, E. L. Walters, J. M. H. Knops, and W. J. Carmen. 2015. Acorns and acorn woodpeckers: ups and downs in a long-term relationship. Pp. 23-33 in *Proceedings of the 7<sup>th</sup> California Oak Symposium: Managing Oak Woodlands in a Dynamic World* (R. B. Standiford and K. L. Purcell, technical coordinators). Pacific SW Forest &

- Range Exp. Station Gen. Tech. Rep. PSW-GTR-251.
190. Pérez-Ramos, I. M., C. M. Padilla-Díaz, **W. D. Koenig**, and T. Marañón. 2015. Environmental drivers of mast-seeding in Mediterranean oak species: does leaf habit matter? *Journal of Ecology* 103: 691-700.
  191. Strong, C., B. Zuckerberg, J. L. Betancourt, and **W. D. Koenig**. 2015. Climatic dipoles drive two principal modes of North American boreal bird irruption. *Proceedings of the National Academy of Sciences (USA)* 112: E2795-E2802. doi: 10.1073/pnas.1418414112.
  192. McMahan, D. E., I. S. Pearse, **W. D. Koenig**, and E. L. Walters. 2015. Tree community shifts and acorn woodpecker population increases over three decades in a California oak woodland. *Canadian Journal of Forest Research* 45: 1113-1120.
  193. Pearse, I. S., J. H. Baty, D. Herrmann, R. Sage, and **W. D. Koenig**. 2015. Leaf phenology mediates provenance differences in herbivore populations on valley oaks in a common garden. *Ecological Entomology* 40: 525-531.
  194. **Koenig, W. D.** and E. L. Walters. 2015. Temporal variability and cooperative breeding: testing the bet-hedging hypothesis in the acorn woodpecker. *Proceedings of the Royal Society B* 282: 20151742.
  195. Ashley, M. V., S. T. Abraham, J. R. Backs, and **W. D. Koenig**. 2015. Landscape genetics and population structure in valley oak (*Quercus lobata* Née). *American Journal of Botany* 102: 2124-2131.
  196. Funk, K. A., **W. D. Koenig**, and J. M. H. Knops. 2016. Fire effects on acorn production are consistent with the stored resource hypothesis for masting behavior. *Canadian Journal of Forest Research* 46: 20-24.
  197. Dickinson, J. L. and **W. D. Koenig**. 2016. Introduction. Pp. 1-5 in: *Cooperative Breeding in Vertebrates: Studies of Ecology, Evolution and Behavior* (W. D. Koenig and J. L. Dickinson, editors). Cambridge University Press, Cambridge.
  198. **Koenig, W. D.**, E. L. Walters and J. Haydock. 2016. Acorn woodpeckers: helping at the nest, polygynandry, and dependence on a variable acorn crop. Pp. 217-236 in: *Cooperative Breeding in Vertebrates: Studies of Ecology, Evolution and Behavior* (W. D. Koenig and J. L. Dickinson, editors). Cambridge University Press, Cambridge.
  199. **Koenig, W. D.**, J. L. Dickinson and S. T. Emlen. 2016. Synthesis: cooperative breeding in the 21<sup>st</sup> century. Pp. 353-374 in: *Cooperative Breeding in Vertebrates: Studies of Ecology, Evolution and Behavior* (W. D. Koenig and J. L. Dickinson, editors). Cambridge University Press, Cambridge.
  200. Pesendorfer, M. B., T. S. Sillett, **W. D. Koenig**, and S. A. Morrison. 2016. Scatter-hoarding corvids as seed dispersers for oaks and pines: a review of a widely distributed mutualism and its utility to habitat restoration. *Condor* 118: 215-237.
  201. Rogers, K. H., Y. A. Girard, **W. D. Koenig**, and C. K. Johnson. 2016. Ecological drivers and population impacts of avian *Trichomonosis* mortality events in band-tailed pigeons (*Patagioenas fasciata*) in California, USA. *Journal of Wildlife Diseases* 52: 484-494.
  202. **Koenig, W. D.** and A. M. Liebhold. 2016. Temporally increasing spatial synchrony of North American temperature and bird populations. *Nature Climate Change* 6: 614-617. doi:10.1038/nclimate2933
  203. Pesendorfer, M., **W. D. Koenig**, I. S. Pearse, J. M. H. Knops, and K. A. Funk. 2016. Individual resource-limitation combined with population-wide pollen availability drives masting in the valley oak (*Quercus lobata*). *Journal of Ecology* 104: 637-645.

204. Pesendorfer, M. B. and **W. D. Koenig**. 2016. The effect of within-year variation in acorn crop size on seed harvesting by avian horders. *Oecologia* 181: 97-106.
205. **Koenig, W. D.** and E. L. Walters. 2016. Provisioning patterns in the cooperatively breeding acorn woodpecker: does feeding behaviour serve as a signal? *Animal Behaviour* 119: 125-134.
206. **Koenig, W. D.**, R. Alejano, M. D. Carbonero, P. Fernández-Rebollo, J. M. H. Knops, T. Marañón, C. M. Padilla-Díaz, I. S. Pearse, I. M. Pérez-Ramos, J. Vázquez-Piqué, and M. B. Pesendorfer. 2016. Is the relationship between mast-seeding and weather in oaks related to their life-history or phylogeny? *Ecology* 97: 2603-2615.
207. Pearse, I. S., **W. D. Koenig**, and D. Kelly. 2016. [Tansley review]. Mechanisms of mast seeding: resources, weather, cues, and selection. *New Phytologist* 212: 546-562.
208. Pesendorfer, M. B. and **W. D. Koenig**. 2016. Competing for seed dispersal: evidence for the role of avian seed hoarders in mediating apparent predation among oaks. *Functional Ecology* 31: 622-631.
209. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, and M. B. Pesendorfer. 2017. Testing the terminal investment hypothesis in California oaks. *American Naturalist* 189: 564-569.
210. **Koenig, W. D.**, E. L. Walters, and P. G. Rodewald. 2017. Testing alternative hypotheses for the cause of population declines: the case of the red-headed woodpecker. *Condor* 119: 143-154.
211. Gharehaghaji, M., E. S. Minor, M. V. Ashley, S. T. Abraham, and **W. D. Koenig**. 2017. Effects of landscape features on gene flow of valley oaks (*Quercus lobata*). *Plant Ecology* 218: 487-499.
212. **Koenig, W. D.** and A. M. Liebhold. 2017. A decade of emerald ash borer effects on regional woodpecker and nuthatch populations. *Biological Invasions* 19: 2029-2037.
213. Cockburn, A., B. J. Hatchwell, and **W. D. Koenig**. 2017. Sociality in birds. Pp. 320-353 in: *Comparative Social Evolution* (D. R. Rubenstein and P. Abbot, editors). Cambridge University Press, Cambridge.
214. Shen, S.-F., S. T. Emlen, **W. D. Koenig**, and D. R. Rubenstein. 2017. The ecology of cooperative breeding behavior. *Ecology Letters* 20: 708-720.
215. **Koenig, W. D.** 2017. Striving for science that is transparent, credible—and enjoyable: a comment on Ihle et al. *Behavioral Ecology* 28: 358.
216. **Koenig, W. D.**, J. M. H. Knops, M. B. Pesendorfer, D. N. Zaya, and M. V. Ashley. 2017. Drivers of synchrony of acorn production in the valley oak (*Quercus lobata*) at two spatial scales. *Ecology* 98: 3056-3062.
217. Pearse, I. S., J. M. LaMontagne, and **W. D. Koenig**. 2017. Inter-annual variation in seed production has increased over time (1900-2014). *Proceedings of the Royal Society B* 284: 20171666. doi: 10.1098/rspb.2017.1666
218. Pesendorfer, M. B. and **W. D. Koenig**. 2018. Does aggression avoidance drive oak tree attendance by corvid scatter-hoarders? *Behavioral Ecology and Sociobiology* 72: 85. doi: 10.1007/s00265-018-2498-2.
219. **Koenig, W. D.**, J. M. H. Knops, W. J. Carmen, M. B. Pesendorfer, and J. L. Dickinson. 2018. Effects of mistletoe (*Phoradendron villosum*) on California oaks. *Biology Letters* 14: 20180240

220. Pardo, M.A., E. A. Sparks, T. S. Kuray, N. D. Hagemeyer, E. L. Walters, and **W. D. Koenig**. 2018. Wild acorn woodpeckers recognize associations between individuals in other groups. *Proceedings of the Royal Society B* 285: 20181017.
221. Schubert, S. C., M. B. Pesendorfer, and **W. D. Koenig**. 2018. Context-dependent post-dispersal predation of acorns in a California oak community. *Acta Oecologica* 92: 52-58.
222. **Koenig, W. D.** and E. L. Walters. 2018. Causes of seasonal decline in reproduction of the cooperatively-breeding acorn woodpecker. *Journal of Avian Biology* 49: e01784. doi: 10.1111/jav.01784
223. Moreira, X., L. Abdala-Roberts, I. M. Pérez-Ramos, J. M. H. Knops, M. B. Pesendorfer, **W. D. Koenig** and K. A. Mooney. 2019. Weather cues associated with masting behavior dampen the negative autocorrelation between past and current reproduction in oaks. *American Journal of Botany* 106: 51-60. doi: 10.1002/ajb2.1210
224. Pesendorfer, M. B., M. Bogdziewicz, **W. D. Koenig**, M. Ledwoń and M. Żywiec. 2019. Declining fruit production before death in a widely distributed tree. *Annals of Forest Science* 76:11. doi: 10.1007/s13595-018-0791-x
225. Barve, S. , **W. D. Koenig**, J. Haydock, and E. L. Walters. 2019. Habitat saturation results in joint-nesting female coalitions in a social bird. *American Naturalist* 193: 830-840. doi: 10.1086/703188
226. **Koenig, W. D.**, E. L. Walters, and S. Barve. 2019. Does helping-at-the-nest help? The case of the acorn woodpecker. *Frontiers in Ecology and Evolution* 7: 272. doi: 10.3389/fevo.2019.00272
227. **Koenig, W. D.**, E. L. Walters, P. B. Stacey, M. T. Stanback, and R. L. Mumme (2019). Acorn Woodpecker (*Melanerpes formicivorus*), version 2.0. In *The Birds of North America* (P. G. Rodewald, editor). Cornell Lab of Ornithology, Ithaca, NY, USA. doi: 10.2173/bna.acowoo.02
228. Fernández-Martínez, M., I. Pearse, J. Sardans, F. Sayol, **W. D. Koenig**, J. M. LaMontagne, M. Bogdziewicz, A. Collalti, A. Hackett-Pain, G. Vacchiano, J. M. Espelta, J. Peñuelas, and I. A. Janssens. 2019. Nutrient scarcity as a selective pressure for mast seeding. *Nature Plants* 5: 1222-1228. doi: 10.1038/s41477-019-0549-y
229. Barve, S., N. D. G. Hagemeyer, R. E. Winter, S. D. Chamberlain, **W. D. Koenig**, D. W. Winkler, and E. L. Walters. 2020. Wandering woodpeckers: foray behavior in a social bird. *Ecology* 101: e02943. doi:10.1002/ecy.2943
230. Barringer, B. C., **W. D. Koenig**, I. S. Pearse, and J. M. H. Knops. 2020. Population ecology and spatial synchrony in population level of leaf gall wasps within and among populations of valley oak (*Quercus lobata*). *Population Ecology* 62:220-232. doi: 10.1002/1438-390X.12040
231. Bogdziewicz, M., D. Ascoli, A. Hackett-Pain, **W. D. Koenig**, M. B. Pesendorfer, I. S. Pearse, A. Satake, P. Thomas, G. Vacchiano, T. Wohlgemuth, and A. Tanentzap. 2020. From theory to experiments for testing the proximate mechanisms of mast seeding: an agenda for an experimental ecology. *Ecology Letters* 23: 210-220. doi: 10.1111/ele.13442
232. Zuckerberg, B., C. Strong, J. M. LaMontagne, S. St. George, J. L. Betancourt, and **W. D. Koenig**. 2020. Climate dipoles as continental drivers of plant and animal populations. *Trends in Ecology & Evolution* 35: 440-453. doi: 10.1016/j.tree.2020.01.01

233. LaMontagne, J., I. S. Pearse, D. F. Greene, and **W. D. Koenig**. 2020. Mast seeding patterns are asynchronous at a continental scale. *Nature Plants* 6: 460-465. doi: 10.1038/s41477-020-0647-x
234. Pearse, I. S., J. M. LaMontagne, M. Lordon, A. L. Hipp, and **W. D. Koenig**. 2020. Biogeography and phylogeny of masting: do global patterns fit functional hypotheses? *New Phytologist* 227: 1557-1567. doi: 10.1111/nph.16617
235. **Koenig, W. D.**, J. M. H. Knops, and W. J. Carmen. 2020. Can mast history be inferred from radial growth? A test using five species of California oaks. *Forest Ecology and Management* 472: 118233. doi: 10.1016/j.foreco.2020.118233
236. Pardo, M. A., C. E. Hayes, E. L. Walters, and **W. D. Koenig**. 2020. Acorn woodpeckers vocally discriminate current and former group members from non-group members. *Behavioral Ecology* 31: 1120-1128. doi: 10.1093/beheco/araa059
237. **Koenig, W. D.**, J. M. H. Knops, and W. J. Carmen. 2020. Intraspecific variation in the relationship between weather and masting behavior in valley oak *Quercus lobata*. *Canadian Journal of Forest Research* 50: 1299-1306. doi: 10.1139/cjfr-2020-0098
238. Barve, S., A. S. Lahey, R. M. Brunner, **W. D. Koenig**, and E. L. Walters. 2020. Tracking the warriors and spectators of acorn woodpecker wars. *Current Biology* 30: R982-R983. doi: 10.1016/j.cub.2020.07.073
239. Pardo, M. A., E. L. Walters, and **W. D. Koenig**. 2020. Experimental evidence that acorn woodpeckers recognize relationships among third parties no longer living. *Behavioral Ecology* 31: 1257-1265. doi: 10.1093/beheco/araa079
240. **Koenig, W. D.** 2020. What are the competitive effects of invasive species? Forty years of the Eurasian collared-dove in North America. *Biological Invasions* 22: 3645-3652. doi: 10.1007/s10530-020-02350-1
241. **Koenig, W. D.**, E. M. Hallock, D. J. Weber, and E. L. Walters. 2021. Nest cavity reuse by the cooperatively breeding acorn woodpecker. *Ornithology* 138: ukaa088. doi: 10.1093/ornithology/ukaa088
242. Clark, J. S., et al. 2021. Continent-wide tree fecundity driven by indirect climate effects. *Nature Communications* 12: 1242. doi: 10.1038/s41467-020-20836-3.
243. **Koenig, W. D.**, A. C. B. Prinz, J. Haydock, H. L. Dugdale, and E. L. Walters. 2021. Are you my baby? Testing whether paternity affects behavior of cobreeder male acorn woodpeckers. *Behavioral Ecology* 32: 865-874.
244. **Koenig, W. D.** 2021. A brief history of masting research. *Philosophical Transactions of the Royal Society B* 376: 20200423.
245. **Koenig, W. D.**, M. B. Pesendorfer, I. S. Pearse, and J. M. H. Knops. 2021. Budburst timing of valley oaks at Hastings Reservation, central coastal California. *Madroño* 68: 434-442.
246. Barve, S., C. Riehl, E. L. Walters, J. Haydock, H. L. Dugdale, and **W. D. Koenig**. 2021. Lifetime reproductive benefits of cooperative polygamy vary for males and females in the acorn woodpecker (*Melanerpes formicivorus*). *Proceedings of the Royal Society B* 288: 20210579.
247. Qiu, T., et al. 2021. Is there tree senescence? The fecundity evidence. *Proceedings of the National Academy of Sciences (USA)* 118: e2106130118.



248. Sharma, S., et al. 2022. North American tree migration paced by climate in the West, lagging in the East. *Proceedings of the National Academy of Sciences (USA)* 119: e216691118.
249. Hackett-Pain, A., J. J. Foest, I. S. Pearse, J. M. LaMontagne, **W. D. Koenig**, et al. 2022. MASTREE+: time-series of plant reproductive effort from six continents. *Global Change Biology* 28: 3066-3082.
250. Justino, M. A., N. D. G. Hagemeyer, M. T. Banik, J. M. Palmer, D. L. Lindner, M. E. Smith, **W. D. Koenig**, and E. L. Walters. 2022. Fungal communities associated with acorn woodpeckers and their excavations. *Fungal Ecology* 59: 101154.
251. **Koenig, W. D.** and J. M. H. Knops. 2022. Drivers of winter population cycles in the varied thrush *Ixoreus naevius*. *Canadian Journal of Zoology* 100: 607-613.
252. **Koenig, W. D.**, A. M. Liebhold, J. M. LaMontagne, and I. S. Pearse. 2023. Periodical cicada emergences affect masting behavior of oaks. *American Naturalist* 201:
253. **Koenig, W. D.**, S. Barve, J. Haydock, H. L. Dugdale, M. K. Oli, and E. L. Walters. 2023. Lifetime inclusive fitness effects of cooperative polygamy in the acorn woodpecker. *Proceedings of the National Academy of Sciences (USA)* (in press).
254. Halupka, L., et al. 2023. The effect of climate change on avian offspring: a global meta-analysis. *Proceedings of the National Academy of Sciences (USA)* (in press).
255. Hagemeyer, N. D.G., M. B. Pesendorfer, **W. D. Koenig**, and E. L. Walters. 2023. Investigating the drivers of temporal occupancy-abundance relationships in a cooperatively breeding bird. *Landscape Ecology* (in press).

#### *Commentaries, Primers, and News and Views-type articles*

1. **Koenig, W. D.** and J. Haydock. 2001. Dividing up the kids. *Science* 291: 442-443.
2. Dickinson, J. L. and **W. D. Koenig**. 2003. Desperately seeking similarity. *Science* 300: 1887-1889.
3. **Koenig, W. D.** 2005. Persistence in adversity: lessons from the ivory-billed woodpecker. *BioScience* 55: 646-647.
4. **Koenig, W. D.** and E. L. Walters. 2008. A tale of two worlds: molecular ecology and population structure of the threatened Florida scrub-jay. *Molecular Ecology* 17: 1632-1633. doi: 10.1111/j.1365-294X.2008.03704.x
5. **Koenig, W. D.** 2017. What drives cooperative breeding? *PLoS Biology* 15(6): e2002965. doi.org/10.1371/journal.pbio.2002965

#### *General articles*

1. Stacey, P. B., and **W. D. Koenig**. 1984. Cooperative breeding in the acorn woodpecker. *Scientific American* 251(2): 114-121. Reprinted in: *Behavior and Evolution of Birds*. (D. W. Mock, ed.). W. H. Freeman, San Francisco.
2. **Koenig, W. D.** 1988. La vie communicataire chez les oiseaux. *La Recherche* (Paris) 19: 300-308.

3. **Koenig, W. D.** 1990. Oaks, acorns, and the acorn woodpecker. *Fremontia* 18: 77-79.
4. **Koenig, W. D.** 1991. The acorn woodpecker. Pp. 86-87 in *Oaks of California* (Written by B. M. Pavlik, P. C. Muick, S. Johnson, and M. Popper). Cachuma Press, Los Olivos, CA.
5. **Koenig, W. D.** 1992. [Defender of granaries: the acorn woodpecker]. *Animals on Earth (Asahi Encyclopedia, weekly)* 29: 137-139 [In Japanese].
6. **Koenig, W. D.** 1993. Acorn woodpecker. Pp. 243-244 in *The Marin County Breeding Bird Atlas: a Distributional and Natural History of Coastal California Birds*, by W. D. Shuford. Bushtit Books, Bolinas, CA.
7. **Koenig, W.** and J. Knops. 1995. Acorn production in California. *Oaks 'n' folks* 10(1): 1-4.
8. **Koenig, W. D.** and J. Knops. 1995. Why do oaks produce boom-and-bust seed crops? *California Agriculture* 49(5): 7-12.
9. **Koenig, W. D.** and R. L. Mumme. 1997. The great egg-demolition derby. *Natural History* 106(5): 32-37.
10. **Koenig, W.** and J. Knops. 1997. Geographical ecology of acorn production by California oaks. *Oaks 'n' folks* 12(2): 6-7.
11. **Koenig, W. D.** 1998. 'Cooperative breeding, evolution of' (pp. 159-160) and 'ecological constraint hypothesis' (p. 211) in *The Encyclopedia of Ecology and Environmental Management*. (P. Calow, editor-in-chief). Blackwell Publications, Oxford.
12. Kraaijeveld-Smit, F., and **W. Koenig**. 1998. Groepsgedrag van de Eikelspecht. *Natura* 1998(5): 140-141 [In Dutch].
13. **Koenig, W. D.** 2000. Oaks, acorns, and acorn woodpeckers. *Oaks 'n' folks* 15(1):5, 7.
14. **Koenig, W. D.** and J. Haydock. 2002. Group sex in the acorn woodpecker: who comes out on top, and why? *The Biologist* 49: 150-154.
15. **Koenig, W. D.** and J. M. H. Knops. 2005. The mystery of masting in trees. *American Scientist* 93: 340-347.
16. **Koenig, W. D.** 2006. A look at Sudden Oak Death. *BirdScope* 20(2): 15.
17. **Koenig, W.** 2006. Acorn production by California oaks: a role for pollen limitation? *Oaks 'n' folks* 21(2): 1-2.
18. Dickinson, J. L. and **W. D. Koenig**. 2009. Social behaviour, animal. *Encyclopaedia Britannica online*; <http://www.britannica.com/EBchecked/topic/550897/animal-social-behaviour>
19. Tietje, W. and **W. Koenig**. ND. Oaks, acorns, and acorn woodpecker. p. 8 in *Wildlife among the oaks*, written by S. G. Johnson with technical editing by W. D. Tietje. A publication of the Integrated Hardwood Range Management Program.
20. **Koenig, W.** 2011. Acorn woodpecker. p. 17 in *The Monterey Pine Forest*, by the Monterey Pine Forest Watch. Pine Nut Press, Carmel-by-the-Sea, California.
21. Pearse, I. S., and **W. D. Koenig**. 2013. Acorns, acorns everywhere, but not in every year. *International Oaks* 24: 116-121.
22. **Koenig, W. D.**, and J. L. Dickinson. 2014. Let's get together: the evolution of social behavior. Pp. 257-293 in *Animal Behavior, vol. 2: Function and Evolution* (K. Yasukawa, ed.). Praeger, Santa Barbara, CA.

23. **Koenig, W. D.** 2016. Population biology. Pp. 495-534 in: *Handbook of Bird Biology, 3<sup>rd</sup> edition* (I. Lovette and J. W. Fitzpatrick, editors). Cornell Lab of Ornithology, Ithaca, NY and Wiley, Hoboken, NJ.
24. Komdeur, J. and **W. D. Koenig.** 2017. Helpers and reproductive behavior in birds and mammals. In: *Reference Module in Life Sciences, Elsevier*. ISBN: 978-0-12-809633-8; <http://dx.doi.org/10.1016/B978-0-12-809633-8.01282-6>.
25. **Koenig, W. D.,** M. B. Pesendorfer, and J. M. H. Knops. 2017. Evolutionary drivers, proximate mechanisms, and spatial synchrony of acorn production in oaks. *International Oaks* 28: 29-40.
26. **Koenig, W. D.** 2019. Acorn production and California oaks in a changing world. *International Oaks* 30: 45-52.
27. **Koenig, W.** 2022. The acorn count: unraveling the mystery of oak tree mast years and their copious acorn crops is a big numbers game (with some weather thrown in). *Bay Nature* 22(3): 32-36.

### **Book reviews**

1. **Koenig, W. D.** 1983. *Woodpeckers of the World*, by L. L. Short. *Wilson Bulletin* 95: 698-700.
2. **Koenig, W. D.** 1985. *Perspectives in Ornithology*, edited by A. H. Brush and G. A. Clark, Jr. *American Scientist* 73: 81-82.
3. **Koenig, W. D.** 1985. *The Florida Scrub Jay: Demography of a Cooperative-breeding Bird*, by G. E. Woolfenden and J. W. Fitzpatrick. *Animal Behaviour* 33: 1402-1404.
4. **Koenig, W. D.** 1986. *The Life of the Woodpecker*, by A. F. Skutch. *Auk* 103: 652-653.
5. **Koenig, W. D.** 1987. *Ecological Aspects of Social Evolution*, edited by D. I. Rubenstein and R. W. Wrangham. *Animal Behaviour* 35: 1908-1909.
6. **Koenig, W. D.** 1990. *Reproductive Success. Studies of Individual Variation in Contrasting Breeding Systems*, edited by T. H. Clutton-Brock. *Auk* 107: 223-224.
7. **Koenig, W. D.** 1991. *Food Hoarding in Animals*, by S. B. Vander Wall. *Journal of Evolutionary Biology* 4: 690.
8. **Koenig, W. D.** 1993. *The Ostrich Communal Breeding System*, by B. C. R. Bertram. *Condor* 95: 762-763.
9. **Koenig, W. D.** 1994. *The Natural History of Inbreeding and Outbreeding*, edited by N. W. Thornhill. *Journal of Wildlife Management* 58: 797-798.
10. **Koenig, W. D.** 1996. *Woodpeckers: a Guide to Woodpeckers of the World*, by H. Winkler, D. A. Christie, and D. Nurney. *Auk* 113: 726-727.
11. Wolff, J. O. and **W. D. Koenig.** 1997. *Cooperative Breeding in Mammals*, edited by N. G. Solomon and J. A. French. *Trends in Ecology & Evolution* 12: 412-413.
12. **Koenig, W. D.** 1998. *Made for Each Other, a Symbiosis of Birds and Pines*, by R. N. Lanner. *Quarterly Review of Biology* 73: 100.
13. **Koenig, W. D.** 1999. *Fairy-wrens and Grasswrens*, by I. Rowley and E. Russell. *Quarterly Review of Biology* 74: 88-89.
14. **Koenig, W. D.** 2000. *Helpers at Birds' Nests: a Worldwide Survey of Cooperative Breeding and Related Behavior*, by A. F. Skutch. *Auk* 117: 273-274.

15. **Koenig, W. D.** 2000. *Hope is the Thing with Feathers*, by C. Cokinos. *Condor* 102: 963-964.
16. **Koenig, W. D.** 2002. *Dispersal*, edited by J. E. Danchin, A. A. Dhondt, and J. D. Nichols. *Ecology* 83: 879-880.
17. **Koenig, W. D.** 2002. *The Red-cockaded Woodpecker: Surviving in a Fire-maintained Ecosystem*, by R. N. Conner, D. C. Rudolph, and J. R. Walters. *Animal Behaviour* 63: 831-832.
18. **Koenig, W. D.** 2010. *Wytham Woods: Oxford's Ecological Laboratory*, edited by P. S. Savill, C. M. Perrins, K. J. Kirby, and N. Fisher. *Wilson Journal of Ornithology* 122: 813-814.
19. **Koenig, W. D.**, and E. L. Walters. 2014. *Woodpeckers of the World: a Photographic Guide*, by G. Gorman. *Journal of Field Ornithology* 85: 435-436.

### *Obituaries*

1. **Koenig, W. D.** and P. W. Sherman. 2004. In Memoriam: Frank Alois Pitelka, 1916-2003. *International Society for Behavioral Ecology Newsletter* 16: 4-5.
2. **Koenig, W. D.** and P. W. Sherman. 2004. In Memoriam: Frank Alois Pitelka, 1916-2003. *Auk* 121: 963-965.
3. **Koenig, W. D.** 2007. In Memoriam: Howard L. Cogswell, 1915-2006. *Auk* 124: 1096.
4. **Koenig, W. D.** and P. P. Marra. 2014. In Memoriam: Russell S. Greenberg, 1953-2013. *Auk* 131: 255-256.
5. Davis, W. M., Jr. and **W. D. Koenig**. 2019. In Memoriam: Thomas W. Custer, 1945-2018. *Auk* 136(4): ukz004, <https://doi.org/10.1093/auk/ukz004>

### *Films and CD-ROMs*

1. 1995. Featured in a 30-minute film on the ecology and social behavior of acorn woodpeckers produced by NHK, Japan, aired Oct. 1995.
2. 1997. Featured in *Cal Alive! Exploring Biodiversity*, an interactive educational CD-ROM about California biodiversity produced by the California Institute for Biodiversity.
3. 1998. *For a few acorns more*. National Geographic Explorer Series; produced and filmed by Oxford Scientific Films. 27 min film devoted to Koenig's study of acorn woodpeckers. Originally aired 29 March 1998.
4. 1999. *The Life of Birds*. BBC; short section on acorn storage by acorn woodpeckers.
5. 2000. *Birdwatch*. PBS series; 9 min section on acorn woodpeckers and Koenig's study.
6. 2003. *Natural reserve system: Hastings Reservation*. A UCTV production airing nationally over cable TV featuring Hastings Reservation and including an extensive segment focusing on Koenig's study of acorn woodpeckers. First aired 3 Dec. 2003. Available at <http://www.uctv.tv/teachers/standards.asp?showID=8312>
7. 2010. Featured in a 25-minute film on the behavior of acorn woodpeckers produced by NHK, Japan, aired August 2010.
8. 2013. Featured in *North America*. Wild Horizons Ltd. for Discovery USA. 3 min section on storage behavior and granary defense by acorn woodpeckers.