

INDEX TO VOLUME 105

COMPILED BY K. ELIZABETH K. PACALA

This index is primarily one to new information. Previously published information referred to in this volume has not been indexed unless extensive comparisons or reinterpretations are involved. For some species, especially ones not in the A.O.U. check-list, only scientific names have been entered, and, in some instances, entries under scientific names are more extensive than those under vernacular names. New generic, specific, and subspecific names are printed in **boldface** type.

- Able, Kenneth P., see Terrill, Scott B., and ———
Accipiter nisus, 282-284
A. striatus venator, 649-660
Actitis macularia, 98, 99
Adamus, Paul R., Atlas of breeding birds in Maine, 1978-1983 (rev.), 606
Aechmophorus occidentalis, 98, 99, 100
Aegolius funereus, 783-788
Aethia cristatella, 345-348, 446-451
A. pusilla, 345-348
Age, determination of, 783, 786-788
Agelaius phoeniceus, 89-95, 197-199, 379-383, 799-801
Aguilar, Roberto E., see Guerra, Carlos G., et al.
Ahlquist, Jon E., see Sibley, Charles G., et al.
Aix sponsa, 452-458
Alaska, 193-194, 345-348
Alberta, 727-734
Alca torda, 681, 683-694
Alcidae, 681-695
Alcedo ulnulus, 681, 688, 693
Ali, Sálím, and S. Dillon Ripley, Handbook of the birds of India and Pakistan. Vol. 5, Larks to the Grey Hypocolius (rev.), 405
American Ornithologists' Union, Information for contributors to *The Auk*, 231-233; William Brewster Memorial Award, 406; Elliott Coues Award, 407; Proceedings of the One-Hundred-Fifth Stated Meeting, 1AA-32AA
Ammodramus savannarum, 792-793
Amundsen, Trond, see Stokland, Jogeir N., and ———
Anas acuta, 98, 99
A. bahamensis, 452-458
A. clypeata, 98, 99, 164-165, 167, 168, 175
A. discors, 164-165, 167, 168, 175
A. platyrhynchos, 98, 99, 102-108, 452-458, 804-806, 807
A. rubripes, 804-806, 807
Anatidae, 161-168, 174-176
Anatomy and morphology of *Aethia cristatella*, 446-451; *Agelaius phoeniceus*, 379-383; Alcidae, 681-695; *Aptenodytes forsteri*, 446-451; *A. patagonica*, 446-451; *Bombycilla cedrorum*, 379-383; *Carduelis tristis*, 379-383, 715-719; *Carpodacus mexicanus*, 715-719; *Catharus fuscescens*, 379-383; *Cephus columba*, 446-451; *Coccythraustes vespertinus*, 715-719; *Coccyzus americanus*, 446-451; *Colaptes auratus*, 446-451; *Colinus virginianus*, 446-451; *Columba livia*, 446-451; *Cyclorhynchus psittacula*, 446-451; Darwin's finches, 666-667; *Dendroica coronata*, 379-383; *Eudypetes chrysolophus*, 446-451; *E. crestatus*, 446-451; *Fratercula cirrhata*, 446-451; *F. corniculata*, 446-451; *Gracula religiosa*, 446-451; *Hesperornis*, 111-120; *Hylocichla mustelina*, 446-451; *Icterus galbula*, 379-383; *Larus delawarensis*, 379-383; *L. occidentalis*, 446-451; *Loxia curvirostra*, 715-719; *L. leucoptera*, 578-579, 715-719; *Melanitta nigra*, 446-451; *Melanospiza richardsoni*, 666-667; *Parahesperornis*, 111-120; *Passer domesticus*, 379-383; *Passerina cyanea*, 379-383; *Pelecanoides georgicus*, 446-451; *P. urinatrix*, 446-451; *Pinguinus impennis*, 681-695; *Porzana carolina*, 446-451; *Ptychoramphus aleuticus*, 446-451; *Pygoscelis adeliae*, 446-451; *P. antarctica*, 446-451; *P. papua*, 446-451; *Quiscalus quiscula*, 379-383; *Ramphastos ambiguus*, 446-451; *Rissa tridactyla*, 446-451; *Seiurus noveboracensis*, 379-383; *Sericornis* spp., 622-623, 624-625; *Setophaga ruticilla*, 379-383; *Sphyrapicus varius*, 383; *Sporophila aurita*, 666; *Sturnus vulgaris*, 379-383; *Synthliboramphus antiquus*, 446-451; *Tachycineta bicolor*, 379-383; *Tiaris bicolor*, 666; *T. olivacea*, 666; *Tyto alba*, 701-704; *Uria aalge*, 446-451; *U. lomvia*, 446-451; *Volatinia jacarina*, 666-667; *Zonotrichia leucophrys*, 379-383
Anderson, Daniel W., review by, 605-606
Ankney, C. Davison, and Darrel G. Dennis, Commentary: Response to Hepp et al., 807-808
Anous stolidus, 589-590
Anser indicus, 452-458
Anseranas semipalmata, 452-458
Antarctica, 428-431
Aptenodytes forsteri, 446-451
A. patagonica, 446-451
Aquila chrysaetos, 793-795
Arenaria interpres, 460-464
Argentina, 439-444, 585-588
Arizona, 70-76, 177-189, 286-294, 789-791
Auk, Great, 681-695
Auklet, Crested, 345-348; Least, 345-348; Parakeet, 345-348
Australia, 78-86, 616-627
Avisé, John C., and Robert M. Zink, Molecular genetic divergence between avian sibling species: King and Clapper rails, Long-billed and Short-billed

- dowitchers, Boat-tailed and Great-tailed grackles, and Tufted and Black-crested titmice, 516-528
 Avocet, American, 98, 99, 100
Aythya nyroca, 452-458
A. valisineria, 543-551
- Badgerow, John P., An analysis of function in the formation flight of Canada Geese, 749-755
- Baker, Ann Eileen Miller, see Baker, Myron Charles, et al.
- Baker, Myron Charles, Eric Stone, Ann Eileen Miller Baker, Robert J. Shelden, Patricia Skillicorn, and Mark D. Mantych, Evidence against observational learning in storage and recovery of seeds by Black-capped Chickadees, 492-497
- Balát, František, [Key to the identification of our birds in nature] (rev.), 228
- Balda, Russell P., see Marzluff, John M., and ———; see Sydeman, William J., et al.
- Bananaquit, 298-301, 664
- Baptista, Luis F., and Pepper W. Trail, On the origin of Darwin's finches, 663-671
- Barclay, Robert M. R., Variation in the costs, benefits, and frequency of nest reuse by Barn Swallows (*Hirundo rustica*), 53-60
- Barlow, Jon C., see Hardy, John Williams, et al.
- Barn-Owl, Common, 699-704
- Barzen, Jeb A., see Lovvorn, James R., and ———
- Baverstock, Peter R., see Christidis, Leslie, et al.
- Beardsell, C. M., see Emerson, W. B., et al.
- Beehler, B. M., T. K. Pratt, and D. A. Zimmerman, Birds of New Guinea (rev.), 816-818
- Behavior, activity patterns, 21-25, 384-385, 428-431; age-related, 3-8, 93, 94, 128-139, 152, 153, 154, 155, 157, 158, 278-284, 316, 317-319, 322-323, 424-427, 486-487, 489-490; agonistic, 39-40, 41-42, 292, 293, 502, 651, 656; altruistic (see Communal breeding); antipredator, 436, 437, 580-581; breeding, 17-25, 64-68, 149-158, 196-199, 252-258, 268-275, 278-284, 303-306, 316-323, 428-431, 433-438, 536-541, 575-577, 649-660, 667-668, 672-679, 727-734, 737-747, 799-801; cannibalistic, 744; copulatory, 149-158, 668, 745-746; courtship, 256, 303-306, 651, 656, 667, 668; dominance, 89-95, 424-427, 727-734; effect of environment on, 11-16, 23, 583-584; feeding, 14-15, 17, 21-25, 36, 133-139, 244-250, 345-348, 370-371, 384-385, 428-431, 492-497, 578-579, 652, 653, 654, 658-659, 672-679, 715-719, 720-725; feeding aggregation, 583-584; flight, 749-754; food-begging, 145-146; foraging (see Behavior, feeding); incubation, 428-431, 652; individual distance, 91-94, 95, 197, 252-258, 585-588; interspecific, 583-584; learning, 492-497, 536-541; mate replacement, 429-431, 500, 575-576, 732; mating preference, 64, 65-68, 186-187, 256, 257-258, 278-284, 291, 294, 303-306, 327-328, 429-431, 500, 502; nest helper (see Communal breeding); nest-site tenacity, 193, 268-275, 339-343, 430, 431, 480-490, 649, 650-651; nesting, 53-59, 103, 196-199, 252-258, 268-275, 339-343, 372-374, 433-438, 536-541, 649, 650-652, 667-668, 789-791; ontogeny of, 142-147; pair, 193, 268-275, 278-284, 286-294, 428-431, 483-484, 651, 652, 653; parental care, 83, 85-86, 149-158, 270, 372-374, 502, 561-562, 575-577, 580-581, 581-582, 653, 654, 655, 658-659, 672-679, 792-793; roosting, 123-126; sexual differences in, 36-37, 39-40, 41-44, 131, 135, 136, 139, 247-248, 249, 424-427, 483-484, 486, 487-489, 667; site fidelity, 132-133, 134-136, 268-275, 334, 335, 339-343, 429-430, 442, 443, 480-490, 630-636, 642-643, 644, 649, 650-651, 792; social, 72, 293-294; territorial, 3-5, 6-8, 11-16, 17-25, 36-44, 370-371, 651, 656, 727-734; thermoregulatory, 124-126; vocal, 11-16, 142-147, 298-299, 589-590, 609-615, 652, 653, 667-668, 669
- Behavior of *Accipiter nisus*, 282-284; *A. striatus venator*, 649-660; *Agelaius phoeniceus*, 89-95, 799-801; *Ammodramus savannarum*, 792-793; *Bombycilla cedrorum*, 64-68; *Branta canadensis*, 749-754; *Carduelis tristis*, 384-385; *Charadrius melodus*, 268-275, 630-636; *Circus cyaneus*, 303-306; Darwin's finches, 667-669; *Empidonax traillii*, 17-25; *Falco sparverius*, 36-44; *Fregata minor*, 252-258; *Fulmarus glacialis*, 193; *Gymnorhinus cyanocephalus*, 286-294; *Hirundo pyrrhonota*, 737-747; *H. rustica*, 53-59; *Lanius excubitor*, 580-581, 581-582; *Larus glaucescens*, 282-284; *L. novaehollandiae*, 282-284; *L. occidentalis*, 128-139; *Loxia leucoptera*, 370-371; *Megadyptes antipodes*, 282-284; *Melanospiza richardsoni*, 667-669; *Nymphicus hollandicus*, 536-541; *Parus atricapillus*, 492-497, 727-734; *Passerina cyanea*, 149-158, 372-374; *Phalacrocorax atriceps*, 278, 282-284; *Pheucticus melanocephalus*, 3-9; *Phoeniculus purpureus*, 124-126; *Pygoscelis adeliae*, 278, 282-284, 428-431; *Rissa tridactyla*, 282-284; *Sarcoramphus papa*, 196; *Setophaga ruticilla*, 609-615; *Sialia sialis*, 575-577; *Sporophila aurita*, 667, 668; *Sterna caspia*, 339-343; *S. dougallii*, 433-438; *S. hirundo*, 142-147, 433-438; *S. paradisaea*, 282-284; *S. striata*, 282-284; *Tiaris bicolor*, 667-669, *T. olivacea*, 667-669; *Troglodytes aedon*, 480-490; *Volatinia jacarina*, 667-669; *Xanthocephalus xanthocephalus*, 672-679; *Zonotrichia querula*, 424-427
- Bellrose, Frank C., see Sanderson, Glen C., and ———
- Benkman, Craig W., Why White-winged Crossbills do not defend feeding territories, 370-371; A 3:1 ratio of mandible crossing direction in White-winged Crossbills, 578-579; Sex handling ability, bill structure, and the cost of specialization for crossbills, 715-719
- Berger, Andrew J., review by, 399-400
- Berman, Susan L., review by, 603-604
- Berrett, D. G., see Pratt, H. D., et al.
- Bicanovsky, Lesley, see Raikow, Robert J., et al.
- Bildstein, Keith L., review by, 214-215
- Bird, David M., review by, 811-812

- Birkhead, Mike, and Christopher Perrins, The Mute Swan (rev.), 812-813
- Black-Grouse, Eurasian, 378-379
- Blackbird, Red-winged, 89-95, 197-199, 379-383, 799-801; Yellow-headed, 672-679
- Bledsoe, Anthony H., Nuclear DNA evolution and phylogeny of the New World nine-primaried oscines, 504-515; see Raikow, Robert J., et al.
- Blokpoel, H., and G. D. Tessier, Commentary: Learning to live with nature: a commendable philosophy with practical limitations, 396-397
- Bluebird, Eastern, 575-577; Western, 789-791
- Boardman, W. L., see Burger, Joanna, et al.
- Bobwhite, Northern, 776-777, 778
- Boersma, P. Dee, see Capurro, Angel, et al.
- Bolen, Eric G., review by, 595-596
- Bombycilla cedrorum*, 61-68, 379-383, 808
- Brachyramphus marmoratus*, 98, 99, 100
- Branta canadensis*, 98, 99, 749-754
- B. ruficollis*, 452-458
- Braun, Michael J., see Houde, Peter, and ———
- Brawn, Jeffrey D., Selectivity and ecological consequences of cavity nesters using natural vs. artificial nest sites, 789-791
- Breeding of *Accipiter nisus*, 282-284; *A. striatus venator*, 649-660; *Aegolius funereus*, 784, 785; *Agelaius phoeniceus*, 197-199, 799-801; *Ammodramus savannarum*, 792-793; *Anas platyrhynchos*, 102-108; *Aquila chrysaetos*, 793-795; *Bombycilla cedrorum*, 64-68; *Charadrius melodus*, 268-275; *Circus cyaneus*, 303-306; *Fregata minor*, 252-258; *Gymnorhinus cyanocephalus*, 286-294; *Hirundo pyrrhonota*, 737-747; *H. rustica*, 53-59; *Lagopus lagopus*, 330-336; *Lanius excubitor*, 581-582; *Larus glaucescens*, 282-284; *L. novaehollandiae*, 282-284; *Megadyptes antipodes*, 282-284; *Nymphicus hollandicus*, 536-541; *Parus atricapillus*, 727-734; *Passerina cyanea*, 149-158, 372-374; *Phalacrocorax atriceps*, 278, 282-284; *Poephila guttata*, 78-86; *Pygoscelis adeliae*, 278, 282-284, 428-431; *Quiscalus mexicanus*, 197-199; *Rissa tridactyla*, 282-284; *Sialia sialis*, 575-577; *Sitta pygmaea*, 70-76; *Sterna caspia*, 339-343; *S. dougallii*, 433-438; *S. hirundo*, 433-438, 720-725; *S. paradisaea*, 282-284; *S. striata*, 282-284; *Strix uralensis*, 316-323; *Sturnella magna*, 325-328; *Troglodytes aedon*, 480-490; *Xanthocephalus xanthocephalus*, 672-679
- Breeding season of *Accipiter striatus venator*, 649, 650, 651, 652, 653, 657-658; *Aegolius funereus*, 785; *Agelaius phoeniceus*, 197-199, 799-801; *Anas platyrhynchos*, 103-104, 105-108; *Fregata minor*, 255, 256; *Hirundo pyrrhonota*, 740, 741; *H. rustica*, 54-55, 59; *Lagopus lagopus*, 332-333, 336; *Lanius excubitor*, 581-582; *Parus atricapillus*, 732; *Pygoscelis adeliae*, 429; *Quiscalus mexicanus*, 197-199; *Sterna dougallii*, 434; *S. hirundo*, 720-725; *Strix uralensis*, 319; *Xanthocephalus xanthocephalus*, 674-675
- Breeding success, 5, 6, 8, 21, 55-56, 57, 58, 64-65, 66, 70, 72-75, 78-86, 193-194, 201-202, 207, 255, 258, 270-271, 272, 273, 290-293, 305, 320-321, 322-323, 326-328, 334, 336, 341-343, 372-374, 429, 484-486, 489, 498-503, 536-541, 576, 642, 643, 644-645, 649, 655-656, 659-660, 674, 677, 742-743, 744, 792, 793
- Breeding success of *Accipiter striatus venator*, 649, 655-656, 659-660; *Ammodramus savannarum*, 792, 793; *Bombycilla cedrorum*, 64-65, 66; *Charadrius melodus*, 270-271, 272, 273; *Chen caerulescens caerulescens*, 642, 643, 644-645; *Circus cyaneus*, 305; *Empidonax traillii*, 21; *Fregata minor*, 255, 258; *Fulmarus glacialis*, 193-194; *Gymnorhinus cyanocephalus*, 290-293; *Hirundo pyrrhonota*, 742-743, 744; *H. rustica*, 55-56, 57, 58; *Junco hyemalis*, 201-202; *Lagopus lagopus*, 334, 336; *Nymphicus hollandicus*, 536-541; *Passerina cyanea*, 372-374; *Pheucticus melanocephalus*, 5, 6, 8; *Picoides borealis*, 498-503; *Poephila guttata*, 78-86; *Pygoscelis adeliae*, 429; *Sialia sialis*, 576; *Sitta pygmaea*, 70, 72-75; *Sterna caspia*, 341-343; *Strix uralensis*, 320-321, 322-323; *Sturnella magna*, 326-328; *Troglodytes aedon*, 484-486, 489; *Xanthocephalus xanthocephalus*, 674, 677
- British Columbia, 330-336
- Brown, Bryan T., Steven W. Carothers, and R. Roy Johnson, Grand Canyon birds (rev.), 216-217
- Brown, Charles R., and Mary Bomberger Brown, The costs and benefits of egg destruction by conspecifics in colonial Cliff Swallows, 737-748
- Brown, Mary Bomberger, see Brown, Charles R., and ———
- Bruner, P. L., see Pratt, H. D., et al.
- Brunton, Dianne H., Energy expenditure in reproductive effort of male and female Killdeer (*Charadrius vociferus*), 553-564
- Brush, Alan H., Editorials, 592, 803; reviews by, 228-229, 404-405, 606, 607, 826-828
- Bubo virginianus*, 98
- Buckley, P. A., see Cooke, F., and ———
- Bühler, Paul, Larry D. Martin, and Lawrence M. Witmer, Cranial kinesis in the late Cretaceous birds *Hesperornis* and *Paraesperornis*, 111-122
- Bunting, Indigo, 149-158, 372-374, 379-383
- Burger, Joanna, and Michael Gochfeld, Nest-site selection and temporal patterns in habitat use of Roseate and Common terns, 433-438; M. Gochfeld, and W. I. Boarman, Experimental evidence for sibling recognition in Common Terns (*Sterna hirundo*), 142-148; see Safina, Carl, and ———
- Burt, Edward H., Jr., An analysis of physical, physiological, and optical aspects of avian coloration with emphasis on wood-warblers (rev.), 212-214
- Busto, Benjamin, see Ramo, Cristina, and ———
- Buteo jamaicensis*, 98
- B. swainsoni*, 98
- Cacicus cela*, 510-513
- Cactospiza heliobates*, 663-670
- C. pallida*, 663-670
- Calidris canutus rufa*, 439-444
- C. tenuirostris*, 460, 464

- California, 97-100, 128-139, 177-189, 529-534
 Calls (see Vocalizations)
Camarhynchus pauper, 663-670
C. psittacula, 663-670
 Canvasback, 543-551
 Cardinal, 773-775
 Capurro, Angel, Esteban Frere, Marcelo Gandini, Patricia Gandini, Tomas Holik, Victoria Lichtschein, and P. Dee Boersma, Nest density and population size of Magellanic Penguins (*Spheniscus magellanicus*) at Cabo Dos Bahias, Argentina, 585-588
Cardinalis cardinalis, 504-513, 773-775
Carduelis pinus, 504-513
C. tristis, 379-383, 384-385, 715-719
 Carey, Cynthia, see Ligon, J. David, et al.
 Carlsson, Bengt-Göran, see Hörnfeldt, Birger, et al.
 Carothers, Steven W., see Brown, Bryan T., et al.
Carpodacus mexicanus, 510-513, 715-719
 Cary, John R., see Temple, Stanley A., and ——
Catamblyrhynchus diadema, 504-513
 Catchpole, Clive K., review by, 593
Catharus fuscescens, 379-383, 756-766
C. guttatus, 756-766
C. ustulatus, 756-766
Catoptrophorus semipalmatus, 98, 99
 Census methods, 296-301, 585-588
Cephus columba, 446-451
Certhia americana, 583-584
Certhidea bifasciata, 663-670
Charadrius melodus, 260-266, 268-275, 630-636
C. vociferus, 98, 99, 553-562
 Chat, Yellow-breasted, 386-390
Chauna chavaria, 452-458
Chen caerulescens caerulescens, 467-477, 639-646
C. rossii, 98, 99
 Cheng Tsohsin, A synopsis of the avifauna of China (rev.), 827-828
 Chickadee, Black-capped, 492-497, 583-584, 727-734; Mountain, 789-791
 Chile, 779-782
 Chilton, Glen, review by, 404
Chloronis riefferii, 510-513
Chlorostilbon maugaeus, 654
 Christensen, S., see Hollom, P. A. D., et al.
 Christidis, Leslie, Richard Schodde, and Peter R. Baverstock, Genetic and morphological differentiation and phylogeny in the Australo-Papuan scrubwrens (*Sericornis*, Acanthizidae), 616-629
Circus cyaneus, 98, 303-306
Clangula hyemalis, 98, 99
 Clark, George A., Jr., reviews by, 404, 823-824
 Clutch size of *Accipiter striatus venator*, 652, 653, 655, 659; *Agelaius phoeniceus*, 801; *Anas clypeata*, 164-165, 167, 168, 175; *A. discors*, 164-165, 167, 168, 175; *A. platyrhynchos*, 102-108; Anatidae, 161-168, 174-176; *Bombycilla cedrorum*, 66; *Chen caerulescens caerulescens*, 642, 643, 644-645; *Empidonax traillii*, 21; *Hirundo pyrrhonota*, 741, 742; *H. rustica*, 55; *Junco hyemalis*, 201; *Lagopus lagopus*, 332; *Lanius excubitor*, 581, 582; *Nymphicus hollandicus*, 538-539; *Passerina cyanea*, 153, 156, 157-158, *Phalacrocorax aristotelis*, 309; *Pygoscelis adeliae*, 429; *Strix uralensis*, 320, 321, 323; *Sturnella magna*, 326
 Coates, Brian J., The birds of Papua New Guinea (rev.), 827
Coccythraustes vespertinus, 715-719
Coccyzus americanus, 446-451
 Cockatiel, 536-541
Coereba flaveola, 298-301, 510-513, 664
 Coffey, Ben B., Jr., see Hardy, John William, et al.
Colaptes auratus, 98, 446-451
Colinus virginianus, 446-451, 776-777, 778
 Collias, Nicholas E., Commentary: Progressive analysis of avian vocal repertoires with special reference to the Brown Noddy, 589-590
 Collopy, Michael W., In memoriam: James R. Koplín, 192; see Edwards, Thomas C., Jr., et al.
 Colorado, 177-189, 492-497
Columba livia, 98, 446-451
C. squamosa, 298-301
 Commentaries, Do Kirtland's Warblers migrate in one hop?, see Mayfield, Harold F.; Bird migration terminology, see Terill, Scott B., and Kenneth P. Able; Spacing behavior and population limitation in Red Grouse, see Watson, Adam, and Robert Moss; Growth-curve analysis: a critical re-evaluation, see Zach, Reto; Ornithology in Central and South America: cause for optimism?, see Duffy, David Cameron; Learning to live with nature: a commendable philosophy with practical limitations, see Blokpoel, H., and G. D. Tessier; Response to H. Blokpoel and G. D. Tessier, see Southern, William E.; Progressive analysis of avian vocal repertoires with special reference to the Brown Noddy, see Collias, Nicholas E.; Female song in Willow Flycatchers, see Davis, David E.; Response to D. E. Davis, see Seutin, Gilles; Genetic distance and hybridization of Black Ducks and Mallards: a morph of a different color?, see Hepp, G. R., et al.; Response to Hepp et al., see Ankney, C. Davison, and Darrel G. Dennis; Are weekend data suspect?, see Yunick, Robert P.; Response to R. P. Yunick, see Mountjoy, D. James, and Raleigh J. Robertson
 Communal breeding in *Ammodramus savannarum* 792-793; *Sitta pygmaea*, 70, 72-75; *Phoeniculus purpureus*, 125-126; *Picoides borealis*, 500
 Cooke, F., and P. A. Buckley (Eds.), Avian genetics: a population and ecological approach (rev.), 818-819; D. T. Parkin, and R. F. Rockwell, Evidence of former allopatry of the two color phases of Lesser Snow Geese (*Chen caerulescens caerulescens*), 467-479; see Davies, J. Chris, et al.
 Cooperative breeding (see Communal breeding)
 Coot, American, 98, 99, 100
Corvus corax, 98
 Cowbird, Brown-headed, 153

- Crane, Sandhill, 773-775
 Creeper, Brown, 583-584
 Crossbill, Red, 715-719; White-winged, 370-371, 578-579, 715-719
 Cruz, Alexander, see Delannoy, Carlos A., and —
 Cruz, Justine B., review by, 823
 Cuculiformes, 29-34
 Cuthill, Innes C., see Lohrer, Fred E., et al.
 Cuthbert, Francesca J., Reproductive success and colony-site tenacity in Caspian Terns, 339-344; review by, 594-595
Cyanerpes cyaneus, 510-513
Cyclorhynchus psittacula, 345-348, 446-451
Cygnus buccinator, 452-458
 Cytology of *Colinus virginianus*, 776-777, 778
- Davies, J. Chris, R. F. Rockwell, and Fred Cooke, Body-size variation and fitness components in Lesser Snow Geese (*Chen caerulescens caerulescens*), 639-648
 Davis, David E., Commentary: Female song in Willow Flycatchers, 590-591
 Davis, Lloyd S., Coordination of incubation routines and mate choice in Adélie Penguins (*Pygoscelis adeliae*), 428-432
 Davis, William E., Jr., History of the Nuttall Ornithological Club, 1873-1986 (rev.), 813
 Dee, T. J., The endemic birds of Madagascar (rev.), 820-821
 de Kloet, Siwo R., see Madsen, Cort S., et al.
 de Kock, Johannes M., The development of the chondrocranium of *Melopsittacus undulatus* (rev.), 404
 Delannoy, Carlos A., and Alexander Cruz, Breeding biology of the Puerto Rican Sharp-shinned Hawk (*Accipiter striatus venator*), 649-662
Dendrocygna viduata, 452-458
Dendroica caerulescens, 756-766
D. coronata, 379-383
D. fusca, 756-766
D. kirtlandii, 204-205
D. striata, 504-513
D. virens, 756-766
 Dennis, Darrel G., see Ankney, C. Davison, and —
- de Queiroz, Kevin, and David A. Good, the scleral ossicles of *Opisthocomus* and their phylogenetic significance, 29-35
 Derrickson, Kim C., review by, 822-823
 DeSante, David F., see Pyle, Peter, et al.
 Desrochers, André, Susan J. Hannon, and Kelly E. Nordin, Winter survival and territory acquisition in a northern population of Black-capped Chickadees, 727-736
Diglossa albilatera, 510-513
D. lafresnayii, 510-513
 Diseases and parasites of *Accipiter striatus venator*, 649, 656; *Hirundo rustica*, 54, 56, 57-58
 Distribution of Andean birds, 47-51; *Charadrius mel-*
odus, 260, 261, 630-636; *Chen caerulescens caerulescens*, 467-477; *Larus occidentalis*, 128-139; *Pheucticus melanocephalus*, 4-5; *Porzana tabuensis*, 391; *Sericornis* spp., 617, 619-627; *Uria aalge*, 346; *U. lomvia*, 346; Vulturidae, 529, 531, 532-534
 Distribution, spatial, 4-5, 47-51, 254, 346, 585-588
Diuca diuca, 510-513
 Dove, Rock, 98; Zenaida, 654
 Dowitcher, Long-billed, 516-526; Short-billed, 516-526
 Drilling, Nancy E., and Charles F. Thompson, Natal and breeding dispersal in House Wrens (*Troglodytes aedon*), 480-491
 Duck, American Black, 804-806, 807; Freckled, 452-458; Ruddy, 98, 99, 452-458; Wood, 452-458
 Duffy, David Cameron, Commentary: Ornithology in Central and South America: cause for optimism?, 395-396
 Dunn, Pete, David Sibley, and Clay Sutton, Hawks in flight (rev.), 826-827
 Dunning, John B., Jr., review by, 216-217
 Dyck, Jan, review by, 212-214
- Eagle, Golden, 793-795
 Ecology, breeding communities, 433-438; community structure, 97-100, 346-347, 350-362, 583-584, 756-766; competition, 257, 350-362; demography, 207, 265, 332-333, 586-588, 794; dispersal, 47-51, 128-139, 630-636; habitat partitioning, 36-44, 350-362, 433-438, 620-622; habitat selection, 39, 41, 43, 434-438; population structure, 585-588, 729-731; predator-prey relationships, 244-250, 305-306, 346-348, 720-725, 764, 794-795; seasonal variation, 106-108, 128-139, 244-250, 374-377; territoriality, 17-25, 36-44
 Ecology of *Anas platyrhynchos*, 106-108; *Aquila chrysaetos*, 794-795; *Catharus fuscescens*, 756-766; *C. guttatus*, 756-766; *C. ustulatus*, 756-766; *Charadrius melodus*, 265, 630-636; *Dendroica caerulescens*, 756-766; *D. fusca*, 756-766; *D. virens*, 756-766; *Empidonax minimus*, 350-362, 756-766; *E. traillii*, 17-25; *Falco sparverius*, 36-44; *Hylocichla mustelina*, 756-766; *Junco hyemalis*, 756-766; *Larus occidentalis*, 128-139; *Pandion haliaetus*, 244-250; *Pheucticus ludovicianus*, 756-766; *Picoides pubescens*, 756-766; *P. villosus*, 756-766; *Piranga olivacea*, 756-766; *Pinguinus impennis*, 694-695; *Rissa tridactyla*, 345-348; *Seiurus aurocapillus*, 756-766; *Sericornis* spp. 620-622; *Setophaga ruticilla*, 350-362, 756-766; *Sitta carolinensis*, 756-766; *Sphyrapicus varius*, 756-766; *Sterna dougallii*, 433-438; *S. hirundo*, 433-438, 720-725; *Strix uralensis*, 316-323; *Thryothorus ludovicianus*, 11-16; *Troglodytes troglodytes*, 756-766; *Turdus migratorius*, 374-377; *Uria aalge*, 345-348; *U. lomvia*, 345-348; *Vireo olivaceus*, 756-766
 Editorials, K. Elizabeth K. Pacala, 592; Letter of transmittal, 803
 Edwards, Thomas C., Jr., Temporal variation in prey preference patterns of adult Ospreys, 244-251;

- Michael W. Collopy, Karen Steenhof, and Michael N. Kochert, Sex ratios of fledgling Golden Eagles, 793-796
- Eggs, 102-108, 161-168, 174-176, 308-314, 652, 653, 737-747; composition, 105, 106; density, specific gravity, and volume, 309; destruction of, 737-747; laying, 102-108, 319, 330, 332-336, 538, 540-541, 652, 741
- Eggs, descriptions and measurements, *Accipiter striatus venator*, 652, 653; *Anas clypeata*, 164-165, 167, 168, 175; *A. discors*, 164-165, 167, 168, 175; *A. platyrhynchos*, 104-105, 106; Anatidae, 161-168, 174-176; *Phalacrocorax aristotelis*, 308-314
- Eldridge, Jan L., and Gary L. Krapu, The influence of diet quality on clutch size and laying pattern in Mallards, 102-110
- Emerson, W. B., C. M. Beardsell, R. I. Normand, and R. H. Lyon, Atlas of Victoria birds (rev.), 606
- Empidonax alnorum*, 235-241
- E. difficilis*, 177-189
- E. minimus*, 350-362, 756-766
- E. traillii*, 17-25, 27-28, 235-241, 590-591
- Emslie, Steven D., An early condor-like vulture from North America, 529-535
- Endangered species, 433-438, 498-503
- Engbring, John, and Andrew Engilis Jr., Rediscovery of the Sooty Rail (*Porzana tabuensis*) in American Samoa, 391
- Engilis, Andrew, Jr., see Engbring, John, and
- Environment, influence on *Accipiter striatus venator*, 657; *Anas platyrhynchos*, 106-108; Andean birds, 47-51; *Catharus guttatus*, 765; *C. ustulatus*, 765; *Certhia americana*, 583-584; *Chen caerulescens caerulescens*, 644; *Empidonax minimus*, 765; *Hyalocichla ustulata*, 765; *Junco hyemalis*, 765; *Lagopus lagopus*, 330-336; *Parus atricapillus*, 583-584; *Picoides pubescens*, 583-584, 765; *P. villosus*, 583-584, 765; *Piranga olivacea*, 765; *Regulus satrapa*, 583-584; *Sitta carolinensis*, 583-584, 765; *S. pygmaea*, 75; *Sterna hirundo*, 725; *Strix uralensis*, 316-323; *Tachycineta bicolor*, 712; *Thryothorus ludovicianus*, 11-16; *Troglodytes troglodytes*, 765
- Eudytes chrysocome*, 796-799
- E. chrysolophus*, 446-451
- E. crestatus*, 446-451
- Evolution, molecular, 565-572
- Evolution of communal breeding, 75-76; cranial kinesis, 111-120; flightlessness, 692-695; mating systems, 292, 294, 325, 328; phenotypic variation, 639-646; timing of hatching, 313-314; wing structure, 446-451
- Evolution of *Empidonax difficilis*, 188-189; *Sericornis* spp. 623-627
- Falco sparverius*, 36-44, 98
- Feathers (see Molts and plumages)
- Finch, Black, 663-670; Cocos, 663-670; House, 715-719; Plush-capped, 504-513; Warbler, 663-670; Zebra, 78-86
- Finches, Darwin's, 663-670
- Finfoot, African, 773-775; Asiatic, 773-775
- Finland, 316-323
- Fitzpatrick, Lloyd C., see Guerra, Carlos G., et al.
- Fledging, success of (see Breeding success)
- Flicker, Northern, 98
- Florida, 36-44, 244-250, 439-444
- Flycatcher, Alder, 235-241; Least, 350-362, 756-766; Western, 177-189; Willow, 17-25, 27-28, 235-241, 590-591
- Food and feeding habits of *Accipiter striatus venator*, 652, 653, 654, 658-659; *Aethia cristatella*, 345-348; *A. pusilla*, 345-348; *Anas platyrhynchos*, 102-108; *Agelaius phoeniceus*, 799-801; *Ammodramus saviannarum*, 792-793; *Carduelis tristis*, 384-385, 715-719; *Carpodacus mexicanus*, 715-719; *Chen caerulescens caerulescens*, 470-471; *Circus cyaneus*, 304; *Coccythraustes vespertinus*, 715-719; *Cyclorhynchus psittacula*, 345-348; *Empidonax traillii*, 22-25; *Fratercula corniculata*, 345-348; *Fulmarus glacialis*, 345-348; *Larus occidentalis*, 133-138; *Loxia curvirostra*, 715-719; *L. leucoptera*, 370-371, 578-579, 715-719; *Pandion haliaetus*, 244-250; *Parus atricapillus*, 492-497; *Phalaropus fulicaria*, 345-348; *Pygoscelis adeliae*, 428-431; *Rissa tridactyla*, 345-348; *Sterna hirundo*, 720-725; *Thryothorus ludovicianus*, 14-15; *Turdus migratorius*, 374-377; *Uria aalge*, 345-348; *U. lomvia*, 345-348
- Foraging (see Food and feeding habits; Behavior, feeding)
- Ford, Hugh A., see Lohrer, Fred E., et al.
- Ford, Norman L., review by, 824-825
- Fossils, 97, 99-100, 111-120, 529-534
- Fossils of *Hadrogyys aigialeus*, 529-534; *Hesperornis*, 111-120; *Parahesperornis*, 111-120
- Fraser, Conon, Beyond the Roaring Forties: New Zealand's subantarctic islands (rev.), 228-229
- Fraser, James D., review by, 819-820
- Fratercula cirrhata*, 446-451
- F. corniculata*, 345-348, 446-451
- Fregata ariel*, 255
- F. magnificens*, 98, 99
- F. minor*, 252-258
- Frere, Esteban, see Capurro, Angel, et al.
- Frigatebird, Great, 252-258; Lesser, 255; Magnificent, 98, 99
- Fringilla coelebs*, 504-513
- Fry, C. Hilary, see Urban, Emil K., et al.
- Fulica americana*, 98, 99, 100
- Fulmar, Northern, 193-194, 345-348
- Fulmarus glacialis*, 193-194, 345-348
- Galápagos, 663-670
- Galliformes, 29-34
- Gandini, Marcelo, see Capurro, Angel, et al.
- Gandini, Patricia, see Capurro, Angel, et al.
- Gaston, Anthony J., review by, 601-602

- Gavia arctica*, 98, 99
G. immer, 98, 99, 100, 114
 Genetic variation (see Genetics, genetic variation)
 Genetics, 177-189, 235-241, 260-266, 386-390, 409-414, 444, 452-458, 467-469, 472-477, 479, 504-513, 516-526, 616-627, 639-641, 643-646, 773-775, 804-806, 807; DNA-DNA hybridization, 409-414, 452-458, 504-513, 773-775; gene flow, 50, 177, 183-184, 185, 188, 260, 265, 444, 467-468, 472-477, 622, 646; genetic variation, 177-189, 235-241, 260-266, 516-526, 804-806, 807
 Genetics of *Aix sponsa*, 452-458; *Anas bahamensis*, 452-458; *A. platyrhynchos*, 452-458, 804-806, 807; *A. rubripes*, 804-806, 807; *Anser indicus*, 452-458; *Anseranas semipalmata*, 452-458; *Aythya nyroca*, 452-458; *Branta ruficollis*, 452-458; *Cacicus cela*, 510-513; *Calidris canutus rufa*, 444; *Cardinalis cardinalis*, 504-513, 773-775; *C. pinus*, 504-513; *Carpodacus mexicanus*, 510-513; *Catamblyrhynchus diadema*, 504-513; *Charadrius melodus*, 260-266; *Chauna chavaria*, 452-458; *Chen caerulescens caerulescens*, 467-469, 472-477, 479, 639-641, 643-646; *Chloronis riefferii*, 510-513; *Coereba flaveola*, 510-513; *Cyanerpes cyaneus*, 510-513; *Cygnus buccinator*, 452-458; *Dendrocygna viduata*, 452-458; *Dendroica striata*, 504-513; *Diglossa albilatera*, 510-513; *D. lafresnayii*, 510-513; *Diuca diuca*, 510-513; *Empidonax alnorum*, 235-241; *E. difficilis*, 177-189; *E. traillii*, 235-241; *Fringilla coelebs*, 504-513; *Geothlypis trichas*, 386-390; *Grus canadensis*, 773-775; *Gymnomystax mexicanus*, 510-513; *Heliopais personata*, 773-775; *Helmitheros vermivorus*, 510-513; *Himatione sanguinea*, 510-513; *Icteria virens*, 386-390; *Junco hyemalis*, 504-513; *Leucosticte arctica*, 510-513; *Limnodromus griseus*, 516-526; *L. scolopaceus*, 516-526; *Lophodytes cucullatus*, 452-458; *Myioborus miniatus*, 510-513; *Neochen jubata*, 452-458; *Nephelornis oneilli*, 504-513; *Oxyura jamaicensis*, 452-456; *Parus bicolor atricristatus*, 516-526; *P. b. bicolor*, 516-526; *Pipilo enucleator*, 510-513; *Podica senegalensis*, 773-775; *Poocetes gramineus*, 504-513; *Psarocolius angustifrons*, 504-513; *Quiscalus major*, 516-526; *Q. mexicanus*, 516-526; *Rallus elegans*, 516-521, 523-526; *R. longirostris*, 516-521, 523-526; *Regulus calendula*, 386-390; *R. satrapa*, 386-390; *Sericornis* spp., 616-627; *Sialia sialis*, 576, 577; *Sicalis luteola*, 504-513; *Spizella arborea*, 510-513; *Stictonetta naevosa*, 452-458; *Tachyphonus rufus*, 504-513; *Tersina viridis*, 504-513; *Troglodytes aedon*, 386-390; *Urothraupis stolzmanni*, 510-513
Geospiza conirostris, 663-670
G. difficilis, 663-670
G. fortis, 663-670
G. magnirostris, 663-670
Geothlypis trichas, 386-390
 Gill, Frank B., review by, 810-811
 Gochfeld, Michael, see Burger, Joanna, and ———; see Burger, Joanna, et al.
 Godwit, Marbled, 98
 Golden-Plover, Lesser, 460-465
 Goldfinch, American, 379-383, 384-385, 715-719
 Good, David A., see de Queiroz, Kevin, and ———
 Goose, Bar-headed, 452-458; Canada, 98, 99, 749-754; Lesser Snow, 467-477, 639-646; Magpie, 452-458; Orinoco, 452-458; Ross', 98, 99
 Gori, David F., Adjustment of parental investment with mate quality by male Yellow-headed Blackbirds (*Xanthocephalus xanthocephalus*), 672-680
 Gowaty, Patricia Adair, see Plissner, Jonathan H., and ———
 Grackle, Boat-tailed, 516-526; Common, 379-383; Great-tailed, 197-199, 516-526
Gracula religiosa, 446-451
 Grant, Peter R., Ecology and evolution of Darwin's finches (rev.), 602-603
 Grassquit, Blue-black, 663-670
 Grau, C. R., see Myers, S. A., et al.
 Graves, Gary R., Linearity of geographic range and its possible effect on the population structure of Andean birds, 47-52
 Grebe, Eared, 97-100; Horned, 98, 99; Pied-billed, 98, 99; Western, 98, 99
 Greenbaum, Ira F., see Hale, David W., et al.
 Grosbeak, Black-headed, 1-9; Evening, 715-719; Rose-breasted, 756-766
 Grouse, Red, 207
 Growth and development of *Accipiter striatus venator*, 652-655, 658; *Chen caerulescens caerulescens*, 639-646; *Larus modestus*, 779-782; *Phalacrocorax arisototelis*, 310-311, 313; *Poephila guttata*, 80-86; *Sturnella magna*, 326, 327; *Tyto alba*, 699-704
Grus canadensis, 773-775
 Guam, 460-465
 Guerra, Carlos G., Lloyd C. Fitzpatrick, and Roberto E. Aguilar, Influence of desert nesting and foraging distance on growth rates in Gray Gulls (*Larus modestus*), 779-783
 Gull, California, 97-100; Glaucous-winged, 282-284; Gray, 779-782; Herring, 341; Ring-billed, 98, 99, 100, 282-284, 341, 379-383, 396-397, 398; Western, 128-139, 141
 Güntert, Marcel, see Sydeman, William J., et al.
 Guttman, Sheldon I., see Ingold, James L., et al.
Gymnomystax mexicanus, 510-513
Gymnorhinus cyanocephalus, 286-294
 Habitat of *Catharus ustulatus*, 765; *Charadrius melodus*, 268-269; *Empidonax minimus*, 764-765; *E. traillii*, 18; *Falco sparverius*, 36, 38, 40, 41; *Hylocichla mustelina*, 765; *Pheucticus melanocephalus*, 3-4; *Porzana tabuensis*, 391; *Setophaga ruticilla*, 765; *Sitta pygmaea*, 72, 75; *Sterna dougallii*, 433-438; *S. hirundo*, 433-438
Hadrogyys aigialeus, 529-534
 Hagan, John M., and J. Michael Reed, Red color bands reduce fledging success in Red-cockaded Woodpeckers, 498-503; see Harrington, Brian A., et al.
 Haig, Susan M., and Lewis W. Oring, Genetic differ-

- entiation of Piping Plovers across North America, 260-267; and Lewis W. Oring, Mate, site, and territory fidelity in Piping Plovers, 268-277; and Lewis W. Oring, Distribution and dispersal in the Piping Plover, 630-638
- Hale, David W., Elizabeth J. Ryder, Philip D. Sudman, and Ira F. Greenbaum, Application of synaptonemal complex techniques for determination of diploid number and chromosomal morphology in birds, 776-779
- Hamel, Paul B., Bachman's Warbler, a species in peril (rev.), 222-223
- Hamerstrom, Frances, Harrier: hawk of the marshes (The hawk that is ruled by a mouse) (rev.), 214-215
- Hamner, William M., see Hunt, George L., Jr., et al.
- Hand, Judith Latta, William E. Southern, and Kees Vermeer (Eds.), Ecology and behavior of gulls (rev.), 601-602
- Hannon, Susan J., Kathy Martin, and Jim O. Schieck, Timing of reproduction in two populations of Willow Ptarmigan in northern Canada, 330-338; see Desrochers, André, et al.
- Hardy, John William, Voices of all the mockingbirds, thrashers and their allies—family Mimidae (rev.), 822-823; G. B. Reynard, and B. B. Coffey Jr., Voices of the New World cuckoos and trogons. Cuculidae and Trogonidae (rev.), 824
- Haresign, Tim, and Andrew Moiseff, Early growth and development of the Common Barn-Owl's facial ruff, 699-705
- Harman, Ian, Australian parrots in bush and aviary (rev.), 405
- Harrier, Northern, 98, 303-306
- Harrington, Brian A., John M. Hagan, and Linda E. Leddy, Site fidelity and survival differences between two groups of New World Red Knots (*Calidris canutus*), 439-445
- Harrison, Greg J., and Linda R. Harrison (Eds.), Clinical avian medicine and surgery (rev.), 604-605
- Harrison, Linda R., see Harrison, Greg J., and —
- Harrison, Nancy M., see Hunt, George L., Jr., et al.
- Harwood, M. (Ed.), Proceedings of hawk migration conference IV (rev.), 225-227
- Hatch, Scott A., Testing for individual variation in breeding success, 193-194
- Hatching, success of (see Breeding success)
- Hatching, timing of, 78-86, 200-202, 255, 308-314, 330, 332-333, 336, 581, 582, 652, 653
- Hawk, Red-tailed, 98; Sharp-shinned, 649-660; Swainson's, 98
- Hawk-Owl, Northern, 732
- Heliopsis personata*, 773-775
- Heinrich, Bernd, One man's owl (rev.), 404-405
- Helmitheros vermivorus*, 510-513
- Hepp, G. R., J. M. Novak, K. T. Scribner, and P. W. Stangel, Commentary: Genetic distance and hybridization of Black Ducks and Mallards: a morph of a different color?, 804-807
- Hesperornis*, 111-120
- Hesperornis regalia*, 114, 115, 118
- Hill, D. J., Breeding and management in birds of prey (rev.), 811-812
- Hill, Geoffrey E., The function of delayed plumage maturation in male Black-headed Grosbeaks, 1-10
- Himantopus mexicanus*, 98, 99
- Himatione sanguinea*, 510-513
- Hirundo pyrrhonota*, 737-747
- H. rustica*, 53-59
- Hixon, Mark A., review by, 813-815
- Hoatzin, 29-34
- Holik, Tomas, see Capurro, Angel, et al.
- Hollom, P. A. D., R. F. Porter, S. Christensen, and Ian Willis, Birds of the Middle East and North Africa: a companion guide (rev.), 823-824
- Holmes, Richard T., and Thomas W. Sherry, Assessing population trends of New Hampshire forest birds: local vs. regional patterns, 756-768; see Sherry, Thomas W., and —
- Hörfeldt, Birger, Bengt-Göran Carlsson, and Åke Nordström, Molt of primaries and age determination in Tengmalm's Owl (*Aegolius funereus*), 783-789
- Houde, Peter, review by, 211-212; and Michael J. Braun, Museum collections as a source of DNA for studies of avian phylogeny, 773-776
- Houston, C. Stuart, In memoriam: Robert S. Arbib Jr., 1915-1987, 369; In memoriam: Hans Albert Hochbaum, 769-770; review by, 815-816
- Howell, Steve N. G., see Pyle, Peter, et al.
- Howell, Thomas R., see Rothstein, Stephen I., et al.
- Hummingbird, Emerald, 654
- Hunt, George L., Jr., Nancy M. Harrison, William M. Hamner, and Bryan S. Obst, Observations of a mixed-species flock of birds foraging on euphausiids near St. Matthew Island, Bering Sea, 345-349
- Hybrids and hybridization of *Anas platyrhynchos* × *A. rubripes*, 805-806, 807; *Chen caerulescens caerulescens*, 471-472, 475-477; *Empidonax alnorum* × *E. traillii*, 235-241; *Parus bicolor atricristatus* × *P. b. bicolor*, 522; *Quiscalus major* × *Q. mexicanus*, 522; *Rallus elegans* × *R. longirostris*, 517
- Hylocichla mustelina*, 392-393, 446-451, 756-766
- Icteria virens*, 386-390
- Icterus galbula*, 379-383
- Idaho, 793-795
- Illinois, 480-490
- Incubation and incubation period of *Accipiter striatus venator*, 649, 652; *Charadrius melodus*, 270; *Fregata minor*, 257; *Nymphicus hollandicus*, 539; *Pygoscelis adeliae*, 428-431
- Ingermann, Rolf L., see Metcalfe, James, et al.

- Ingold, James L., Lee A. Weigt, and Sheldon I. Guttman, Genetic differentiation between North American kinglets and comparisons with three allied passerines, 386-390
Iowa, 543-551
Islands, biogeography, 164, 165, 167, 168
Isler, Morton L., and Phyllis R. Isler, The tanagers: natural history, distribution and identification (rev.), 607
Isler, Phyllis R., see Isler, Morton L., and ———
Israel, 580-581, 581-582
- Jackson, Wendy M., Sievert Rohwer, and Robin L. Winnograd, Status signaling is absent within age- and-sex classes of Harris' Sparrows, 424-427
James, Frances C., review by, 227-228
Janssen, Robert B., Birds in Minnesota (rev.), 825
Jay, Pinyon, 286-294
Jehl, Joseph R., Jr., The beached-bird assemblage of a highly saline lake and its relevance for reconstructing paleoenvironments, 97-101; review by, 593-594
Johnsgard, Paul A., Birds of the Rocky Mountains (rev.), 228; Diving birds of North America (rev.), 809-810
Johnson, Ned K., and Jill A. Marten, Evolutionary genetics of flycatchers. II. Differentiation in the *Empidonax difficilis* complex, 177-191
Johnson, R. Roy, see Brown, Bryan T., et al.
Johnston, Richard F. (Ed.), Current ornithology, vol. 4 (rev.), 810-811
Junco, Dark-eyed, 200-202, 756-766
Junco hyemalis, 200-202, 504-513, 756-766
- Kallman, Harmon (Ed.), Restoring America's wildlife (rev.), 595-596
Kansas, 111-120, 424-427
Kaspari, Michael, and Helen O'Leary, Nonparental attendants in a north-temperate migrant, 792-793
Kastner, Joseph, A world of watchers (rev.), 223-225
Kavanau, J. Lee, Lovebirds, cockatiels, budgerigars: behavior and evolution (rev.), 603-604
Keith, Stuart, see Urban, Emil K., et al.
Kemp, A. C., see Tarboton, W. R., et al.
Kemp, M. I., see Tarboton, W. R., et al.
Kepler, Cameron, see Scott, J. Michael, et al.
Kestrel, American, 36-44, 98
Kiff, Lloyd F., review by, 220-221
Killdeer, 98, 99, 553-562
King, Warren B., review by, 820-821
Kinglet, Golden-crowned, 386-390, 583-584; Ruby-crowned, 386-390
Kingbird, Grey, 654
Kittiwake, Black-legged, 282-284, 345-348
Klein, Bert C., Weather-dependent mixed-species flocking during the winter, 583-584
Knapton, Richard W., Nesting success is higher for polygynously mated females than for monoga-
- mously mated females in the Eastern Meadowlark, 325-329
Knot, Red, 439-444; Great, 460, 464
Kochert, Michael N., see Edwards, Thomas C., Jr., et al.
Krapu, Gary L., see Eldridge, Jan L., and ———
Krebs, J. R., see Sterling, D. W., and ———
Kroodsmas, Donald E., review by, 607
- Lagopus lagopus*, 330-336
L. l. scoticus, 207
Lanius excubitor, 580-581, 581-582, 732
Lanyon, Scott M., The stochastic mode of molecular evolution: what consequences for systematic investigations?, 565-573; review by, 215-216
Larus argentatus, 341
L. californicus, 97-100
L. delawarensis, 98, 99, 100, 341, 379-383, 396-397, 398
L. glaucescens, 282-284
L. modestus, 779-782
L. novaehollandiae, 282-284
L. occidentalis, 128-139, 141, 446-451
Leddy, Linda E., see Harrington, Brian A., et al.
Lein, M. Ross, editor of book reviews, 211-229, 399-405, 593-607, 809-828
Lemon, R. E., see Shackell, N. L., et al.
Leucosticte arctoa, 510-513
Lichtschein, Victoria, see Capurro, Angel, et al.
Ligon, J. David, Cynthia Carey, and Sandra H. Ligon, Cavity roosting, philopatry, and cooperative breeding in the Green Woodhoopoe may reflect a physiological trait, 123-127
Ligon, Sandra H., see Ligon, J. David, et al.
Limnodromus griseus, 516-526
L. scolopaceus, 516-526
Limosa fedoa, 98
Livezey, Bradley C., Morphometrics of flightlessness in the Alcidae, 681-698
Lohrer, Fred E., David A. Widenfeld, Hugh A. Ford, and Innes C. Cuthill, editors of *Recent Ornithological Literature*, 1A-31A, 1B-38B, 1C-39C, 1D-35D
Longevity (see Mortality and survival)
Loon, Arctic, 98, 99; Common, 98, 99
Lophodytes cucullatus, 452-458
Louisiana, 516-526
Lovvorn, James R., and Jeb A. Barzen, Molt in the annual cycle of Canvasbacks, 543-552
Lowrie, J. K. (Ed.), Records of the Australian Museum (1985), volume 37, Nos. 3, 4 (rev.), 211-212
Loxia curvirostra, 715-719
L. leucoptera, 370-371, 578-579, 715-719
Lyon, G. L., see Moors, P. J., et al.
Lyon, R. H., see Emerson, W. B., et al.
- Madsen, Cort S., Kevin McHugh, and Siwo R. de Kloet, A partial classification of waterfowl (Anatidae) based on single-copy DNA, 452-459

- Mallard, 98, 99, 102-108, 452-458, 804-806, 807
Mancalla californiensis, 681-695
M. cedrosensis, 681-695
M. diegensis, 681-695
M. emlongi, 681-695
M. milleri, 681-695
 Manitoba, 53-59, 162, 164-165, 167, 168, 260-266, 268-275, 543-551, 578-579, 630-636, 639-646
 Mantych, Mark D., see Baker, Myron Charles, et al.
 Marcström, Vidar, see Willebrand, Tomas, and ———
- Marten, Jill A., see Johnson, Ned K., and ———
 Martin, Brian R., *World birds* (rev.), 405
 Martin, Kathy, see Hannon, Susan J., et al.
 Martin, Larry D., review by, 596-597; see Bühler, Paul, et al.
- Marzluff, John M., and Russell P. Balda, The advantages of, and constraints forcing, mate fidelity in Pinyon Jays, 286-295
- Mass and measurements of *Accipiter striatus venator*, 654, 655; *Aegolius funereus*, 784; *Alca torda*, 684, 686, 687; *Anas platyrhynchos*, 103, 108; Anatidae, 174-176; *Calidris canutus*, 441, 442; *Carduelis tristis*, 716; *Carpodacus mexicanus*, 716; *Cephus grylle*, 684, 686, 687; *Chen caerulescens caerulescens*, 645, 656; *Coccythraustes vesperinus*, 716; **Hadrogyys aigialeus**, 530; *Hirundo rustica*, 58; *Lagopus lagopus*, 333, 334, 335; *Larus modestus*, 780-781; *Loxia curvirostra*, 716; *L. leucoptera*, 716; *Mancalla cedrosensis*, 686, 687, 692; *M. diegensis*, 686, 687, 692; *M. emlongi*, 686, 687, 692; *M. milleri*, 686, 687, 692; *Phalacrocorax aristotelis*, 309, 310, 311; *Pheucticus melanocephalus*, 3, 4; *Phoeniculus purpureus*, 124; *Pinguinus impennis*, 684, 686, 687; *Pliogyps charon*, 530; *Poephila guttata*, 80, 81-84; *Praemancalla* spp., 686, 687, 692; *Sarcoramphus papa*, 530; *Sialia sialis*, 576; *Strix uralensis*, 319-320; *Sturnella magna*, 327, 328; *Tachycineta bicolor*, 708, 709; *Tyto alba*, 701-702, 703; *Uria aalge*, 684, 686, 687; *Xanthocephalus xanthocephalus*, 674, 675
- Massachusetts, 439-444
- Mating systems of *Charadrius melodus*, 268-275; *C. vociferus*, 561-562; *Circus cyaneus*, 303-306; *Gymnorhinus cyanocephalus*, 286-294; *Lanius excubitor*, 581-582; *Passerina cyanea*, 149-158, 372-374; *Sitta pygmaea*, 72; *Sturnella magna*, 325-328
- Mayfield, Harold F., Commentary: Do Kirtland's Warblers migrate in one hop?, 204-205
- McGillivray, W. Bruce, review by, 602-603
 McHugh, Kevin P., see Madsen, Cort S., et al.
 McKinney, Frank, review by, 812-813
 Meadowlark, Eastern, 325-328
 Measurements (see Mass and ———)
- Mees, G. F., In Memoriam: François Haverschmidt, 1906-1987, 368-369
- Megadyptes antipodes*, 282-284
Melanerpes formicivorus, 73
Melanitta nigra, 446-451
Melanospiza richardsoni, 663-670
- Memorial of Sálím Ali, 772; Robert S. Arbib Jr., 369; Donald Louis Bleitz, 192; John Davis, 770-771; Sir Charles Fleming, 574; Herbert Friedman, 365-368; François Haverschmidt, 368-369; Hans Albert Hochbaum, 769-770; James R. Koplín, 192
- Mengel, Robert M., review by, 223-225
- Merganser, Hooded, 452-458
- Metabolism of *Tachycineta bicolor*, 706-712
- Metcalfe, James, Michael K. Stock, and Rolf L. Ingermann (Eds.), *Development of the avian embryo* (rev.), 597-598
- Michigan, 149-158, 339-343, 372-374, 553-562
- Middleton, Alex L. A., see Prescott, David R. C., and ———
- Migration and orientation, 39, 44, 204-205, 205-206, 439-444, 460-465, 472, 544
- Migration and orientation of *Arenaria interpres*, 460-464; *Aythya valisineria*, 544; *Calidris canutus rufa*, 439-444; *C. tenuirostris*, 460, 464; *Chen caerulescens caerulescens*, 472; *Dendroica kirtlandii*, 204-205; *Falco sparverius*, 39, 44; *Pluvialis dominica fulva*, 460-464
- Millam, J. R., see Myers, S. A., et al.
- Minnesota, 260-266, 630-636
- Moiseff, Andrew, see Haresign, Tim, and ———
- Molothrus ater*, 153
- Molts and plumages of *Accipiter striatus venator*, 652-653, 655, 657; *Aegolius funereus*, 783-788; *Aythya valisineria*, 543-551; *Bombicilla cedrorum*, 61-68, 808; *Camarhynchus parvulus*, 664-666; *Chen caerulescens caerulescens*, 467-477; Darwin's finches, 664-666; *Falco sparverius*, 44; *Melanospiza richardsoni*, 665-666; *Pheucticus melanocephalus*, 1-9; *Tiaris bicolor*, 665-666; *T. olivacea*, 665-666; *Tyto alba*, 699-704; *Volatinia jacarina*, 665-666; *Zonotrichia querula*, 424-427
- Monroe, Burt L., Jr., see Sibley, Charles G., et al.
- Moors, P. J., T. W. Speir, and G. L. Lyon, Soil analyses and ¹³C/¹²C ratios identify sites of deserted Rock-hopper Penguin colonies, 796-799
- Morrison, Michael L., see Verner, Jared, et al.
- Mortality and survival of *Accipiter striatus venator*, 649, 656, 659, 660; *Actitis macularia*, 98, 99; *Aechmophorus occidentalis*, 98, 99; *Anas acuta*, 98, 99; *A. clypeata*, 98, 99; *A. platyrhynchos*, 98, 99, 108; *Brachyramphus marmoratus*, 98, 99; *Branta canadensis*, 98, 99; *Bubo virginianus*, 98; *Buteo jamaicensis*, 98; *B. swainsoni*, 98; *Calidris canutus rufa*, 439, 441-444; *Catantrophorus semipalmatus*, 98, 99; *Charadrius vociferus*, 98, 99, 559-560; *Chen caerulescens caerulescens*, 643; *C. rossii*, 98, 99; *Circus cyaneus*, 98; *Clangula hyemalis*, 98, 99; *Colaptes auratus*, 98; *Columba livia*, 98; *Corvus corax*, 98; *Falco sparverius*, 98; *Fregata magnificens*, 98, 99; *Fulica americana*, 98, 99; *Gavia arctica*, 98, 99; *G. immer*, 98, 99; *Gymnorhinus cyanocephalus*, 287, 289-290; *Himantopus mexicanus*, 98, 99; *Hirundo rustica*, 56, 57; *Junco hyemalis*, 201; *Larus californicus*, 98, 99; *L. delawarensis*, 98, 99; *Limosa fedoa*, 98; *Myadestes townsendi*, 99; Nu-

- cifraga columbiana*, 98; *Oxyura jamaicensis*, 98, 99; *Pandion haliaetus*, 98, 99; *Parus atricapillus*, 727-734; *Passerculus sandwichensis*, 99; *Passerina cyanea*, 372; *Phalaropus lobatus*, 98, 99; *P. tricolor*, 98, 99; *Pheucticus melanocephalus*, 8; *Phoeniculus purpureus*, 125-126; *Picoides borealis*, 501; *P. villosus*, 98; *Podiceps auritus*, 98, 99; *P. nigricollis*, 98, 99; *Podilymbus podiceps*, 98, 99; *Poephila guttata*, 80-82, 84-85; *Porzana carolina*, 98, 99; *Recurvirostra americana*, 98, 99; *Sialia sialis*, 576; *Sitta pygmaea*, 74; *Synthliboramphus antiquus*, 98; *Troglodytes aedon*, 488, 490
- Moss, Robert, see Watson, Adam, and ———
- Mountainspring, Stephen, see Scott, J. Michael, et al.
- Mountjoy, D. James, and Raleigh J. Robertson, Why are waxwings "waxy"? Delayed plumage maturation in the Cedar Waxwing, 61-69; and Raleigh J. Robertson, Commentary: Response to R. P. Yunnick, 808
- Mueller, Helmut C., review by, 225-227
- Muma, Katherine E., see Teather, Kevin L., et al.
- Mumme, Ronald L., review by, 402-403; see Strain, Joy G., and ———
- Murphy, Michael, J., review by, 597-598
- Murre, Common, 345-348; Thick-billed, 345-348
- Murrelet, Ancient, 98; Marbled, 98, 99, 100
- Myadestes townsendi*, 99
- Myers, S. A., J. R. Millam, T. E. Roudybush, and C. R. Grau, Reproductive success of hand-reared vs. parent-reared Cockatiels (*Nymphicus hollandicus*), 536-542
- Myioborus miniatus*, 510-513
- Narins, Peter M., see Waide, Robert B., and ———
- Nebraska, 737-747, 792-793
- Neff, Nancy, review by, 211
- Nei, Masatoshi, Molecular evolutionary genetics (rev.), 399
- Nelson, Bryan, Living with seabirds (rev.), 404
- Neochen jubata*, 452-458
- Nephelornis oneilli*, 504-513
- Nesospingus speculiferus*, 298-301
- Nest and nest site of *Accipiter striatus venator*, 649, 650-652; *Agelaius phoeniceus*, 198; *Charadrius melodus*, 270; *Circus cyaneus*, 304-305; Darwin's finches, 667; *Eudypetes chrysocome*, 796-799; *Fregata minor*, 253; *Hirundo rustica*, 53-59; *Lanius excubitor*, 580; *Melanospiza richardsoni*, 667; *Nymphicus hollandicus*, 541; *Parus gambeli*, 789-791; *Quiscalus mexicanus*, 197-198; *Sarcoramphus papa*, 195-196; *Sialia mexicana*, 789-791; *Sitta carolinensis*, 789-791; *S. pygmaea*, 789-791; *Spheniscus magellanicus*, 585-588; *Sterna dougallii*, 433-438; *S. hirundo*, 433-438; *Tachycineta thalassina*, 789-791; *Tetrao tetrix*, 378-379; *Tiaris bicolor*, 667; *T. olivacea*, 667; *Volatinia jacarina*, 667
- Nest parasitism, 153, 739, 740, 743-747
- Nestling of *Accipiter striatus venator*, 652-654; *Larus modestus*, 779-782; *Phalacrocorax aristotelis*, 308-314; *Poephila guttata*, 78-86; *Sarcoramphus papa*, 195, 196; *Sturnella magna*, 326-327
- Nethersole-Thompson, Desmond, and Maimie Nethersole-Thompson, Waders (rev.), 593-594
- Nethersole-Thompson, Maimie, see Nethersole-Thompson, Desmond, and ———
- Nevada, 177-189
- New Brunswick, 260-266, 303-306, 609-615, 706-712
- New Hampshire, 350-362, 756-766
- New Jersey, 142-147, 439-444
- New Mexico, 1-9
- New York, 374-377, 433-438, 583-584, 715-719, 720-725, 749-754
- New Zealand, 796-799
- Nichol, John, The animal smugglers (rev.), 815
- Noddy, Brown, 589-590
- Nordin, Kelly E., see Desrochers, André, et al.
- Nordström, Åke, see Hörnfeldt, Birger, et al.
- Normand, R. I., see Emerson, W. B., et al.
- North Carolina, 498-503, 543-551
- North Dakota, 102-108, 260-266, 543-551
- Norway, 308-314
- Novak, J. M., see Hepp, G. R., et al.
- Nucifraga columbiana*, 98
- Nuechterlein, Gary L., review by, 809-810
- Nutcracker, Clark's, 98
- Nuthatch, Pygmy, 70-76, 789-791; White-breasted, 583-584, 756-766, 789-791
- Nymphicus hollandicus*, 536-541
- Obst, Bryan S., see Hunt, George L., Jr., et al.
- Ohio, 386-390
- O'Leary, Helen, see Kaspari, Michael, and ———
- Oldsquaw, 98, 99
- Ontario, 17-25, 61-68, 198-199, 325-328, 543-551, 578-579
- Opisthocomus hoazin*, 29-34
- Oregon, 128-139, 177-189
- Orientation (see Migration and ———)
- Oring, Lewis W., see Haig, Susan M., and ———
- Oriole, Northern, 379-383
- Osprey, 98, 99, 244-250
- Osteology of *Alca torda*, 688-689; Alcidae, 685-689; Cuculiformes, 29-34; Galliformes, 29-34; *Gavia immer*, 114; *Hadrogyps aigialeus*, 529-531, 533-534; *Hesperornis*, 111-120 *Mancalla diegensis*, 688-689; *Opisthocomus hoazin*, 29-34; *Parahesperornis*, 111-120; *Pinguinus impennis*, 685-689; *Steatornis caripensis*, 120
- Ovenbird, 756-766
- Owl, Great Horned, 98; Tengmalm's, 783-788; Ural, 316-323
- Owre, Oscar T., review by, 815
- Oxyura jamaicensis*, 98, 99, 100, 452-458
- Padian, K. (Ed.), The origin of birds and the evolution of flight (rev.), 596-597
- Paleontology (see Fossils)
- Pandion haliaetus*, 98, 99, 244-250
- Papua New Guinea, 616-627
- Parahesperornis*, 111-120

- Parasites (see Diseases and ——)
- Pardusco, 504-513
- Parke, Kenneth C., review by, 598-601
- Parkin, D. T., see Cooke, F., et al.
- Parrish, J. R., see Senner, S. E., et al.
- Parus atricapillus*, 492-497, 583-584, 727-734
- P. bicolor atricristatus*, 516-526
- P. b. bicolor*, 516-526
- P. gambeli*, 789-791
- Passer domesticus*, 379-383
- Passerculus sandwichensis*, 99
- Passerina cyanea*, 149-158, 372-374, 379-383
- Paul-Murphy, Joanne, review by, 604-605
- Payne, Robert B., reviews by, 821-822, 825-826
- Paz, Uri, The birds of Israel (rev.), 229
- Pelecanoides georgicus*, 446-451
- P. urinatrix*, 446-451
- Penguin, Adélie, 278, 282-284, 428-431; Magellanic, 585-588; Rockhopper, 796-799; Yellow-eyed, 282-284
- Pennsylvania, 89-95
- Perrins, Christopher, see Birkhead, Mike, and ——
- Peru, 47-51
- Pettingill, Olin Sewall, Jr., Ornithology in laboratory and field (rev.), 594-595
- Phalacrocorax aristotelis*, 308-314
- P. atriceps*, 278, 282-284
- Phalarope, Red, 345-348; Red-necked, 98, 99; Wilson's, 98, 99
- Phalaropus fulicaria*, 345-348
- P. lobatus*, 98, 99
- P. tricolor*, 98, 99
- Pheucticus ludovicianus*, 756, 766
- P. melanocephalus*, 1-9
- Phoeniculus purpureus*, 123-126
- Phylogeny (see Taxonomy)
- Physiology, auditory, 704; egg laying, 103, 108, 165-168, 553-562; energy cost of activities, 27-28, 550-551, 553-562, 706-712, 716-717; growth, 645, 654, 655; incubation, 553-562, 708, 710-711; metabolism, 124, 706-712; molt, 543-551, 657; nutrient reserves, 543, 547-549, 645; temperature regulation, 124-126; water balance, 710, 712
- Physiology of *Anas platyrhynchos*, 103, 108; *Aythya valisineria*, 543-551; *Charadrius vociferus*, 553-562; *Chen caerulescens caerulescens*, 645; *Empidonax traillii*, 27-28; *Loxia curvirostra*, 716-717; *L. leucoptera*, 716-717; *Phoeniculus purpureus*, 124-126; *Tachycineta bicolor*, 706-712; *Tyto alba*, 704
- Picoides borealis*, 498-503
- P. pubescens*, 583-584, 756-766
- P. villosus*, 73, 98, 583-584, 756-766
- Pietiäinen, Hannu, Breeding season quality, age, and the effect of experience on the reproductive success of the Ural Owl (*Strix uralensis*), 316-324
- Pigeon, Scaly-naped, 298-301
- Pigmentation of *Bombycilla cedrorum*, 61-68, 808; *Chen caerulescens caerulescens*, 467-477
- Pimm, Stuart L., review by, 400-402
- Pinaroloxias inornata*, 663-670
- Pinguinus impennis*, 681-695
- Pipicola enucleator*, 510-513
- Pinshow, Berry, see Yosef, Reuven, and ——
- Pintail, Northern, 98, 99; White-cheeked, 452-458
- Piranga olivacea*, 756-766
- Pitelka, Frank A., review by, 403-404; see Sibley, Charles G., and ——
- Platypiza crassirostris*, 663-670
- Plissner, Jonathan H., and Patricia Adair Gowaty, Evidence of reproductive error in adoption of nesting Eastern Bluebirds (*Sialia sialis*), 575-578
- Plover, Piping, 260-266, 268-275, 630-636
- Plumages (see Molts and ——)
- Pluvialis dominica fulva*, 460-464
- Pochard, White-eyed, 452-458
- Podica senegalensis*, 773-775
- Podiceps auritus*, 98, 99
- P. nigricollis*, 97-100
- Podilymbus podiceps*, 98, 99
- Poephila guttata*, 78-86
- Polyandry (see Mating systems)
- Polygyny (see Mating systems)
- Poocetes gramineus*, 504-513
- Popp, James W., Effects of food-handling time on scanning rates among American Goldfinches, 384-385
- Porter, Charlotte M., The eagle's nest: natural history and American ideas, 1812-1842 (rev.), 815-816
- Porter, R. F., see Hollom, P. A. D., et al.
- Porzana carolina*, 98, 99, 446-451
- P. tabuensis*, 391
- Praemancalla lagunensis*, 681-693
- P. wetmorei*, 681-693
- Pratt, H. D., P. L. Bruner, and D. G. Berrett, The birds of Hawaii and the tropical Pacific (rev.), 399-400
- Pratt, T. K., see Beehler, B. M., et al.
- Predation by *Accipiter striatus venator*, 654-655; *Circus cyaneus*, 436; *Lanius excubitor*, 732; *Larus argentatus*, 341, 436; *L. delawarensis*, 341; *Melanerpes formicivorus*, 73; *Picoides villosus*, 73; *Surnia ulula*, 732
- Predation on *Charadrius melodus*, 271, 273; *Chlorostilbon maugaeus*, 654; *Lagopus lagopus*, 334, 335-336; *Lanius excubitor*, 581; *Parus atricapillus*, 732; *Sialia sialis*, 576; *Sitta pygmaea*, 73; *Sterna caspia*, 341; *S. dougallii*, 436; *S. hirundo*, 436-437; *Tetrao tetrix*, 378-379; *Tyrannus dominicensis*, 654; *Zenaidura aurita*, 654
- Prescott, David R. C., and Alex L. A. Middleton, Feeding-time minimization and the territorial behavior of the Willow Flycatcher (*Empidonax traillii*), 17-28
- Psarocolius angustifrons*, 504-513
- Ptarmigan, Willow, 330-336
- Ptychoramphus aleuticus*, 446-451
- Puerto Rico, 296-301, 649-660
- Puffin, Horned, 345-348
- Pygoscelis adeliae*, 278, 282-284, 428-431, 446-451
- P. antarctica*, 446-451

- P. papua*, 446-451
 Pyle, Peter, Steve N. G. Howell, Robert P. Yunick, and David F. DeSante, Identification guide to North American passerines (rev.), 598-601
- Quebec, 235-241, 715-719
Quiscalus major, 516-526
Q. mexicanus, 197-199, 516-526
Q. quiscula, 379-383
- Raikow, Robert J., Lesley Bicanovsky, and Anthony H. Bledsoe, Forelimb joint mobility and the evolution of wing-propelled diving in birds, 446-451
- Rail, Clapper, 516-521, 523-526; King, 516-521, 523-526; Sooty, 391
Rallus elegans, 516-521, 512-526
R. longirostris, 516-521, 523-526
 Ralph, C. John, see Verner, Jared, et al.
 Ramo, Christina, and Benjamin Busto, Observations at a King Vulture (*Sarcoramphus papa*) nest in Venezuela, 195-196
Ramphastos ambiguus, 446-451
 Ramsay, Fred L., see Scott, J. Michael, et al.
 Rappole, John H., see Winker, Kevin, and ———
 Raveling, Dennis G., review by, 221-222
 Raven, Common, 98
 Razorbill, 681, 683-694
Recurvirostra americana, 98, 99, 100
 Redstart, American, 350-362, 379-383, 609-615, 756-766
 Reed, J. Michael, see Hagan, John M., and ———
Regulus calendula, 386-390
R. satrapa, 386-390, 583-584
 Reid, Walter V., Age correlations within pairs of breeding birds, 278-285
 Remsen, J. V., Jr., review by, 222-223
 Reville, Barry J., Effects of spacing and synchrony on breeding success in the Great Frigatebird (*Fregata minor*), 252-259
 Reynard, G. B., see Hardy, John William, et al.
 Rich, P. V., and G. F. van Tets (Eds.), Kadimakara: extinct vertebrates of Australia (rev.), 211
 Ripley, S. Dillon, In memoriam: Sálím Ali, 1896-1987, 772; see Ali, Sálím, and ———
 Rising, J. D., review by, 217-219
Rissa tridactyla, 282-284, 345-348, 446-451
 Robbins, Mark B., review by, 824
 Roberts, Laurel B., and William A. Searcy, Dominance relationships in harems of female Red-winged Blackbirds, 89-96
 Robertson, Raleigh J., see Mountjoy, D. James, and ———
 Robin, American, 374-377
 Robinson, Jane Washburn, A birder's guide to Japan (rev.), 826
 Rockwell, R. F., see Cooke, F., et al.; see Davies, J. Chris, et al.
 Roff, D., see Shackell, N. L., et al.
 Rohwer, Frank C., Inter- and intraspecific relationships between egg size and clutch size in waterfowl, 161-176
 Rohwer, Sievert, see Jackson, Wendy M., et al.
 Rothstein, Stephen I., Ralph W. Schreiber, and Thomas R. Howell, In memoriam: Herbert Friedmann, 365-368
 Roudybush, T. E., see Myers, S. A., et al.
 Rubinstein, D. I., and R. W. Wrangham (Eds.), Ecological aspects of social evolution: birds and mammals (rev.), 403-404
 Ryder, Elizabeth J., see Hale, David W., et al.
 Ryder, Ronald A., review by, 228
- Safina, Carl, and Joanna Burger, Prey dynamics and the breeding phenology of Common Terns (*Sterna hirundo*), 720-726
 Samoa, 391
 Sanderson, Glen C., and Frank C. Bellrose, A review of the problem of lead poisoning in waterfowl (rev.), 221-222
 Sandpiper, Spotted, 98, 99
 Sapsucker, Yellow-bellied, 383, 756-766
Sarcoramphus papa, 195-196
 Saskatchewan, 260-266
 Savage, Candace, Eagles of North America (rev.), 607
 Schieck, Jim O., see Hannon, Susan J., et al.
 Schodde, Richard, review by, 816-818; see Christidis, Leslie, et al.
 Schreiber, Ralph W., see Rothstein, Stephen I., et al.
 Scott, J. Michael, Stephen Mountainspring, Fred L. Ramsay, and Cameron Kepler, Forest bird communities of the Hawaiian Islands: their dynamics, ecology and conservation (rev.), 400-402
 Screamer, Northern, 452-458
 Scribner, K. T., see Hepp, G. R., et al.
 Scrubwren, Atherton, 616-627; Brown, 616-627; Buff-faced, 616-627; Large, 616-627; Large-billed, 616-627; Olive, 616-627; Pale-billed, 616-627; Papuan, 616-627; Tropical, 616-627; Vogelkop, 616-627; White-browed, 616-627; Yellow-throated, 616-627
 Searcy, William A., see Roberts, Laurel B., and ———
Seiurus aurocapillus, 756-766
S. noveboracensis, 379-383
 Senner, S. E., C. M. White, and J. R. Parrish (Eds.), Raptor conservation: the next 50 years (rev.), 819-820
Sericornis arfakianus, 616-627
S. beccarii, 616-627
S. citreogularis, 616-627
S. frontalis, 616-627
S. humilis, 616-627
S. keri, 616-627
S. magnirostris, 616-627
S. nouhuysi, 616-627
S. papuensis, 616-627
S. perspicillatus, 616-627

- S. rufescens*, 616–627
S. spilodera, 616–627
Setophaga ruticilla, 350–362, 379–383, 609–615, 756–766
 Seutin, Gilles, Commentary: Response to D. E. Davis, 591; and Jean-Pierre Simon, Genetic variation in sympatric Willow Flycatchers (*Empidonax traillii*) and Alder Flycatchers (*E. alnorum*), 235–243
 Sex ratio of *Aquila chrysaetos*, 793–795; *Falco sparverius*, 38, 39, 40; *Larus occidentalis*, 132; *Parus atricapillus*, 730; *Picoides borealis*, 500, 501
 Seychelles, 252–258
 Shackell, N. L., R. E. Lemon, and D. Roff, Song similarity between neighboring American Redstarts (*Setophaga ruticilla*): a statistical analysis, 609–615
 Shag, 308–314; Blue-eyed, 278, 282–284
 Shelden, Robert J., see Baker, Myron Charles, et al.
 Sheldon, Frederick H., review by, 399
 Sherry, Thomas W., and Richard T. Holmes, Habitat selection by breeding American Redstarts in response to a dominant competitor, the Least Flycatcher, 350–364; see Holmes, Richard T., and ———
 Shoveler, Northern, 98, 99, 164–165, 167, 168, 175
 Shrike, Northern, 580–581, 581–582, 732
 Shugart, Gary W., Uterovaginal sperm-storage glands in sixteen species with comments on morphological differences, 379–384
Sialia mexicana, 789–791
S. sialis, 575–577
 Sibley, Charles G., Jon E. Ahlquist, and Burt L. Monroe Jr., A classification of the living birds of the world based on DNA-DNA hybridization studies, 409–423; and Frank A. Pitelka, In memoriam: John Davis, 1916–1986, 770–771
 Sibley, David, see Dunn, Pete, et al.
Sicalis luteola, 504–513
 Simmons, Robert, Honest advertising, sexual selection, courtship displays, and body condition of polygynous male harriers, 303–307
 Simms, Eric, British warblers (rev.), 593
 Simon, Jean-Pierre, see Seutin, Gilles, and ———
 Sinclair, J. C., Ian Sinclair's field guide to the birds of southern Africa (rev.), 821–822
Sitta carolinensis, 583–584, 756–766, 789–791
S. pygmaea, 70–76, 789–791
 Skagen, Susan Knight, Asynchronous hatching and food limitation: a test of Lack's hypothesis, 78–88
 Skillicorn, Patricia, see Baker, Myron Charles, et al.
 Skutch, Alexander F., Helpers at birds' nests (rev.), 402–403
 Smallwood, John A., A mechanism of sexual segregation by habitat in American Kestrel (*Falco sparverius*) wintering in south-central Florida, 36–46
 Smith, Kimberly G., Clutch-size dependent asynchronous hatching and brood reduction in *Junco hyemalis*, 200–203
 Solitaire, Townsend's, 99
 Song (see Vocalizations)
 Sora, 98, 99
 South Carolina, 575–577
 South Dakota, 177–189
 Southern, William E., Commentary: Response to H. Blokpoel and G. D. Tessier, 398; see Hand, Judith Latta, et al.
 Sparrow, Grasshopper, 792–793; Harris', 424–427; House, 379–383; Savannah, 99; White-crowned, 379–383
 Sparrowhawk, Eurasian, 282–284
 Spear, Larry B., Dispersal patterns of Western Gulls from Southeast Farallon Island, 128–141
 Spectrograms of *Coereba flaveola*, 298; *Columba squamosa*, 298; *Geospiza fortis*, 668; *G. magnirostris*, 668; *Melanospiza richardsoni*, 668; *Nesospingus speculiferus*, 298; *Platyspiza crassirostris*, 668; *Setophaga ruticilla*, 611, 614; *Spindalis zena*, 298; *Sterna hirundo*, 144; *Tiaris bicolor*, 668; *Todus mexicanus*, 298; *Vireo altiloquus*, 298; *Volatinia jacarina*, 668
 Speir, T. W., see Moors, P. J., et al.
Spheniscus magellanicus, 585–588
Sphyrapicus varius, 383, 756–766
Spindalis zena, 298–301
Spizella arborea, 510–513
Sporophila aurita, 666, 667, 668
 Stager, Kenneth E., In memoriam: Donald Louis Bleitz, 192
 Stangel, P. W., see Hepp, G. R., et al.
 Starling, European, 379–383
 Statistics and analytical methods, 208–209
 Status signaling, 61–68, 424–427
 Status signaling of *Bombycilla cedrorum*, 61–68; *Zonotrichia querula*, 424–427
 Steadman, David W., Holocene vertebrate fossils from Isla Floreana, Galápagos (rev.), 215–216; and Steven Zousmer, Galápagos: discovery on Darwin's islands (rev.), 823
Steatornis caripensis, 120
 Steenhof, Karen, see Edwards, Thomas C., Jr., et al.
 Stephens, D. W., and J. R. Krebs, Foraging theory (rev.), 813–815
 Sterling, Keir B., review by, 813
Sterna caspia, 339–343
S. dougallii, 433–438
S. hirundo, 142–147, 433–438, 720–725
S. paradisaea, 282–284
S. striata, 282–284
Stictonetta naevosa, 452–458
 Stilt, Black-necked, 98, 99
 Stock, Michael K., see Metcalfe, James, et al.
 Stokland, Jogeir N., and Trond Amundsen, Initial size hierarchy in broods of the Shag: relative significance of egg size and hatching asynchrony, 308–315
 Stone, Eric, see Baker, Myron Charles, et al.
 Strain, Joy G., and Ronald L. Mumme, Effects of food

- supplementation, song playback, and temperature on vocal territorial behavior of Carolina Wrens, 11-16
- Strix uralensis*, 316-323
- Stuart, S. N. (Ed.), Conservation of Cameroon montane forests (rev.), 820-821
- Sturnella magna*, 325-328
- Sturnus vulgaris*, 379-383
- Sudman, Philip D., see Hale, David W., et al.
- Sutton, Clay, see Dunn, Pete, et al.
- Surnia ulula*, 732
- Swallow, Barn, 53-59; Cliff, 737-747; Tree, 379-383; Violet-Green, 789-791
- Swallow-Tanager, 504-513
- Swan, Trumpeter, 452-458
- Sweden, 378-379, 783-788
- Sydeman, William J., Marcel Güntert, and Russell P. Balda, Annual reproductive yield in the cooperative Pygmy Nuthatch (*Sitta pygmaea*), 70-77
- Synthliboramphus antiquus*, 98, 446-451
- Szöke, Peter, The unknown music of birds (rev.), 607
- Tachycineta bicolor*, 379-383, 706-712
- T. thalassina*, 789-791
- Tachyphonus rufus*, 504-513
- Tanager, Puerto Rican, 298-301; Scarlet, 756-766; Stripe-headed, 298-301
- Tarboton, W. R., M. I. Kemp, and A. C. Kemp, Birds of the Transvaal (rev.), 825-826
- Taxonomy, 34, 177, 184-187, 189, 389-390, 392-393, 409-422, 477, 526, 565-572, 616-627
- Taxonomy of *Anas platyrhynchos*, 804-806, 807; *A. rubripes*, 804-806, 807; Anatidae, 452-458; *Cacicus cela*, 504, 511-513; *Cardinalis cardinalis*, 504, 508-513; *C. pinus*, 504, 508-513; *Carpodacus mexicanus*, 504, 511-513; *Catamblyrhynchus diadema*, 504, 508-513; *Chen caerulescens caerulescens*, 477; *Chloronis riefferii*, 504, 511-513; *Coereba flaveola*, 504, 511-513, 664; *Cyanerpes cyaneus*, 504, 511-513; Darwin's finches, 663-670; *Dendroica striata*, 504, 508-513; *Diglossa albilatera*, 504, 511-513; *D. lafresnayii*, 504, 511-513; *Diuca diuca*, 504, 511-513; *Empidonax difficilis*, 177, 184-187, 189; *Fringilla coelebs*, 504, 508-513; *Geothlypis trichas*, 389-390; *Gymnomystax mexicanus*, 504, 511-513; *Helminthos vermivorus*, 504, 511-513; *Himatione sanguinea*, 504, 511-513; *Hylodichla mustelina*, 392-393; *Icteria virens*, 389-390; *Junco hyemalis*, 504, 508-513; *Leucosticte arctoa*, 504, 511-513; *Limnodromus griseus*, 526; *L. scolopaceus*, 526; *Melanospiza richardsoni*, 663-670; *Myioborus miniatuus*, 504, 511-513; *Nepheleornis oneilli*, 504, 508-513; New World oscines, 504-513; *Opisthocomus hoazin*, 34; *Parus bicolor atricristatus*, 526; *P. b. bicolor*, 526; Passeriformes, 413; *Pinicola enucleator*, 504, 511-513; *Poocetes gramineus*, 504, 508-513; *Psarocolius angustifrons*, 504, 508-513; *Quiscalus major*, 526; *Q. mexicanus*, 526; *Rallus elegans*, 526; *R. longirostris*, 526; *Regulus calendula*, 389-390; *R. satrapa*, 389-390; *Sericornis* spp., 616-627; *Sicalis luteola*, 504, 508-513; *Spizella arborea*, 504, 511-513; *Tachyphonus rufus*, 504, 508-513; *Tersina viridis*, 504, 508-513; *Tiaris bicolor*, 663-670; *T. olivacea*, 663-670; *Troglodytes aedon*, 389-390; Turnicidae, 411; *Urothraupis stolzmanni*, 504, 511-513; *Volatinia jacarina*, 663-670
- Teal, Blue-winged, 164-165, 167, 168, 175
- Teather, Kevin L., Katherine E. Muma, and Patrick J. Weatherhead, Estimating female settlement from nesting data, 196-200
- Temple, Stanley A., and John R. Cary, Wisconsin birds: a seasonal and geographical guide (rev.), 824-825
- Tennessee, 11-16
- Tern, Arctic, 282-284; Caspian, 339-343; Common, 142-147, 433-438, 720-725; Roseate, 433-438; White-fronted, 282-284
- Terrill, Scott B., and Kenneth P. Able, Commentary: Bird migration terminology, 205-206
- Territory of *Empidonax traillii*, 20, 22, 23; *Falco sparverius*, 36-44; *Lanius excubitor*, 582; *Pheucticus melanocephalus*, 3-4; *Thryothorus ludovicianus*, 12
- Tersina viridis*, 504-513
- Tessier, G. D., see Blokpoel, H., and ———
- Tetrao tetrix*, 378-379
- Texas, 197-199, 516-526
- Thompson, Charles F., see Drilling, Nancy E., and ———
- Thrush, Hermit, 756-766; Swainson's, 756-766; Wood, 392-393, 756-766
- Thryothorus ludovicianus*, 11-16
- Tiaris bicolor*, 663-670
- T. olivacea*, 663-670
- Titmouse, Black-crested, 516-526; Tufted, 516-526
- Todus mexicanus*, 298-301
- Tody, Puerto Rican, 298-301
- Trail, Pepper W., see Baptista, Luis F., and ———
- Troglodytes aedon*, 386-390, 480-490
- T. troglodytes*, 756-766
- Turdus migratorius*, 374-377
- Turnstone, Ruddy, 460-465
- Tyrannus dominicensis*, 654
- Tyto alba*, 699-704
- Udvardy, M. D. F., review by, 228
- Urban, Emil K., C. Hilary Fry, and Stuart Keith (Eds.), The birds of Africa. Vol. 2, Gamebirds to pigeons (rev.), 219-220
- Uria aalge*, 345-348, 446-451
- U. lomvia*, 345-348, 446-451
- Urothraupis stolzmanni*, 510-513
- Utah, 177-189, 200-202
- van Tets, G. F., see Rich, P. V., and ———
- Veery, 379-383, 756-766
- Venezuela, 195-196
- Vermeer, Kees, see Hand, Judith Latta, et al.
- Verner, Jared, Michael L. Morrison, and C. John Ralph

- (Eds.), *Wildlife 2000: modeling habitat relationships of terrestrial vertebrates* (rev.), 227-228
- Vireo, Black-whiskered, 298-301; Red-eyed, 756-766
- Vireo altiloquus*, 298-301
- V. olivaceus*, 756-766
- Vocalizations, 143-146, 296-301, 589-590, 590-591, 609-615; variety of, 609-615
- Vocalizations of *Accipiter striatus venator*, 652, 653; *Anous stolidus*, 589-590; *Columba squamosa*, 300, 301; Darwin's finches, 667-669; *Empidonax traillii*, 590-591; *Melanospiza richardsoni*, 668-669; *Setophaga ruticilla*, 609-615; *Spindalis zena*, 300, 301; *Sterna hirundo*, 143-146; *Tiaris bicolor*, 668-669; *T. olivacea*, 668; *Todus mexicanus*, 300, 301; *Vireo altiloquus*, 300, 301; *Volatinia jacarina*, 668-669
- Volatinia jacarina*, 663-670
- Vulture, King, 195-196
- Vulturidae, 529-534
- Waide, Robert B., and Peter M. Narins, Tropical forest bird counts and the effect of sound attenuation, 296-302
- Warbler, Blackburnian, 756-766; Black-throated Blue, 756-766; Black-throated Green, 756-766; Kirtland's, 204-205; Yellow-rumped, 379-383
- Warham, John, In memoriam: Sir Charles Fleming, 574
- Washington, 128-139, 672-679, 799-801
- Waterthrush, Northern, 379-383
- Watson, Adam, and Robert Moss, Commentary: Spacing behavior and population limitation in Red Grouse, 207-208
- Waxwing, Cedar, 61-68, 379-383, 808
- Weather, influence on (see Environment, influence on)
- Weatherhead, Patrick J., see Teather, Kevin L., et al.
- Weigt, Lee A., see Ingold, James L., et al.
- Westneat, David F., Male parental care and extrapair copulations in the Indigo Bunting, 149-160; The relationships among polygyny, male parental care, and female breeding success in the Indigo Bunting, 372-374
- Wheelwright, Nathaniel T., Seasonal changes in food preferences of American Robins in captivity, 374-378
- Whistling-Duck, White-faced, 452-458
- White, C. M., see Senner, S. E., et al.
- Wiedenfeld, David A., see Lohrer, Fred E., et al.
- Wilbur, Sanford R., *Birds of Baja California* (rev.), 605-606
- Willebrand, Tomas, and Vidar Marcström, On the danger of using dummy nests to study predation, 378-379
- Willet, 98, 99
- Williams, Janet M., see Williams, Timothy C., and ———
- Williams, Joseph B., Field metabolism of Tree Swallows during the breeding season, 706-714
- Williams, Timothy C., and Janet M. Williams, Radar and visual observations of autumnal (southward) shorebird migration on Guam, 460-466
- Willis, Ian, see Hollom, P. A. D., et al.
- Wimberger, Peter H., Food supplement effects on breeding time and harem size in the Red-winged Blackbird (*Agelaius phoeniceus*), 799-802
- Winker, Kevin, and John H. Rappole, The relationship between *Hylocichla* and *Catharus* (Turdinae), 392-394
- Winnograd, Robin L., see Jackson, Wendy M., et al.
- Wisconsin, 384-385, 543-551
- Witmer, Lawrence M., see Bühler, Paul, et al.
- Woodhoopoe, Green, 123-126
- Woodpecker, Acorn, 73; Downy, 583-584, 756-766; Hairy, 73, 98, 583-584, 756-766; Red-cockaded, 498-503
- Wrangham, R. W., see Rubinstein, D. I., and ———
- Wren, Carolina, 11-16; House, 386-390, 480-490; Winter, 756-766
- Wyoming, 177-189
- Xanthocephalus xanthocephalus*, 672-679
- Yellowthroat, Common, 386-390
- Yosef, Reuven, and Berry Pinshow, Nestling transfer in the Northern Shrike (*Lanius excubitor*), 580-581; and Berry Pinshow, Polygyny in the Northern Shrike (*Lanius excubitor*), 581-582
- Yunick, Robert P., Commentary: Are weekend data suspect?, 808; see Pyle, Peter, et al.
- Zach, Reto, Commentary: Growth-curve analysis: a critical reevaluation, 208-210
- Zenaida aurita*, 654
- Zimmerman, Dale A., review by, 219-220; see Beehler, B. M., et al.
- Zink, Robert M., Patterns and evolutionary significance of geographic variation in the *schistacea* group of the Fox Sparrow (*Passerella iliaca*) (rev.), 217-219; review by, 818-819; see Avise, John C., and ———
- Zonotrichia leucophrys*, 379-383
- Z. querula*, 424-427
- Zousmer, Steven, see Steadman, David W., and ———
- Zwinger, Ann, John Xántus: the Fort Tejon letters (rev.), 220-221