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A Cavity-Nesting Bird Bibliography— Including Related Titles on Forest Snags, Fire, Insects, Disease, and Decay

THE AUTHORS

WILLIAM C. FISCHER is a research forester for the Fire Effects and Use Research and Development Program at the Northern Forest Fire Laboratory. His current assignment is to identify and apply existing knowledge to improve the practice of fire management, with special emphasis on fire effects, fire use, and fuel management. He received his B.S. degree in forestry from the University of Michigan, Ann Arbor.

B. RILEY McCLELLAND is an associate professor of forestry at the University of Montana. He recently completed a major study of the relationships between cavity-nesting birds, forest snags, and decay in western Montana larch/Douglas-fir forests. This bibliography is a byproduct of that study. Dr. McClelland earned his B.S. and M.S. degrees at Colorado State University, Fort Collins. He was awarded a Ph.D. by the University of Montana, Missoula, in 1977. Dr. McClelland also a National Park Service ecologist is currently studying the bald eagle at Glacier National Park, MT.

RESEARCH SUMMARY

This report provides an index to the contents of more than 1,700 references pertaining to cavity-nesting birds and the related topics of forest snags, fire, insects, disease, and decay.

The list of titles is arranged alphabetically by author and each title is assigned a reference number. The reference number identifies the title in the indexes provided.

The indexes include a forest snag index; a fire, insect, disease, and decay index; a cavity-nesting bird index; and a geographic index.

The cavity-nesting bird index contains separate sections for each of 86 different bird species. Keywords used are: habitat management, habitat, foraging behavior, breeding, nesting, nest and roost trees, nest boxes and houses, biology, ecology, life history, relations with other fauna, territory, distribution, population density, status, identification, taxonomy, and damage.

USDA, National Agricultural Library
NAL Bldg
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A Cavity-Nesting Bird Bibliography—Including Related Titles on Forest Snags, Fire, Insects, Disease, and Decay

William C. Fischer
B. Riley McClelland

INTRODUCTION

This bibliography resulted from a study of the ecological relationships between cavity-nesting birds, forest snags, and decay in western Montana larch-fir forests.¹ Its Purpose is twofold: (1) to help forest managers find information they can use to prescribe forestry practices that are sensitive to the needs of cavity-nesting birds, and (2) to help researchers identify existing knowledge gaps.

Cavity-nesting birds (also called hole-nesting birds) are those that either excavate nest holes in trees or nest in existing holes created by disease, decay, mechanical injury, or other cavity-nesters. Eighty-five bird species have been identified as cavity-nesters in North American forests.² This important group of forest inhabitants includes woodpeckers, flycatchers, swallows, chickadees, titmice, nuthatches, wrens, bluebirds, swifts, hawks, owls, and ducks.

Forest snags and live trees with heartwood decay are prime habitat for cavity-nesting birds. Such snags and cull trees are scattered throughout most forests, either as isolated individuals or in groups. Fire and insects create large numbers of snags, especially in western coniferous forests. Lightning, wind, and disease also create significant numbers of snags. Decay is usually prerequisite to successful hole excavation by cavity-nesting birds.

Traditionally, snags have been discriminated against in American forestry. In the West, they were generally considered to be prime targets for firestarting lightning strikes. More recently, snag removal has been encouraged for esthetic reasons and to increase fiber utilization. Currently, the increasing demand of dead wood for paper, particle board, house logs, and firewood make it both possible and practical for a forest manager to completely remove all snags from many forest stands. Total snag removal could eliminate most cavity-nesting birds from affected stands.

As a general rule, most foresters would choose to maintain or increase present populations of cavity-nesting birds in the forests they manage. This desire reflects an appreciation of the insect-feeding habits of these birds as well as an awareness that “they (the birds) enliven the forest and please the eye.”³

The recent surge in the literature on this subject reflects current interest on the part of forest managers to consider the needs of cavity-nesting birds in their forestry practices. This bibliography is designed to allow the interested forest manager to more easily access this literature.

¹McClelland, B. R. 1977. Relationships between hole-nesting birds, forest snags, and decay in western larch-Douglas-fir forests of the Northern Rocky Mountains. Ph.D. diss. Univ. Mont., Missoula. 428 p.

²Scott, V. E., K. E. Evans, D. R. Patton, and C. P. Stone. 1977. Cavity-nesting birds of North American Forests. USDA For. Serv. Agric. Handb. 5111, 112 p. Washington, D.C.

³Fisher, W. R. 1907. Dr. Schlich's Manual of Forestry, vol. 4. Bradbury, Agnew and Co., London.

THE BIBLIOGRAPHY

The bibliography is organized in three major parts: the numbered list of titles, the subject matter indexes, and the geographic index.

The List of Titles and Reference Numbers

The list of titles is arranged alphabetically and is numbered consecutively.

The Subject Matter Indexes

Three subject matter indexes are provided. The first deals with forest snags; the second with fire, insects, disease, and decay; and the third with cavity-nesting birds.

THE FOREST SNAG INDEX

This index consists of five categories or keywords:

- Snags-general
- Snag management and bird use
- Snag-fire control relationships
- Snag removal and use by man
- Snag longevity

The key word "snags—general" is a summary category. All of the titles relating to snags are listed after this keyword even though they may also be listed after other keywords in this index. The keyword "snag removal and use by man" refers to use of snags by humans for other than wildlife related uses.

THE FIRE, INSECT, DISEASE, AND DECAY INDEX

The categories or keywords included in this index are:

- Fire effects on cavity-nesting birds
- Insect-cavity-nesting bird relationships
- Nest tree disease and decay

THE CAVITY-NESTING BIRD INDEX

This index has 88 major divisions. The first division is an index of references that contain general information on cavity-nesting birds. It is not species specific. This index is labeled "cavity-nesting birds—general information" and the keywords are:

- Habitat management
- Land use impacts on habitat
- Habitat
- Foraging behavior
- Breeding, nesting
- Nest and roost trees
- Nests
- Biology, ecology, life history
- Population, densities, distribution, diversity
- Urban-area habitat
- Relation to agriculture
- Damage (by birds)
- Relations with other fauna
- Study methods
- Literature reviews and bibliographies
- Checklists
- Extinct species

The balance of the cavity-nesting bird index consists of separate indexes for each of 86 different cavity-nesting birds

known to frequent North American forests. A "woodpeckers—general information" index precedes the indexes for specific woodpeckers. This was necessary to handle the large amount of literature that deals with these birds as a group. Keywords used for the species (and group) specific indexes are:

- Summary
- Habitat management
- Habitat
- Foraging behavior
- Breeding, nesting
- Nest and roost trees
- Nest boxes and houses
- Biology, ecology, life history
- Relations with other fauna
- Territory
- Distribution, population, density, status
- Identification, taxonomy
- Damage

All of the references listed for a given species are summarized following the keyword "summary." Conversely, each reference listed after the keyword "summary" is also listed after one or more of the other keywords used for the bird species.

If one of the keywords is not used for a given species, it is because appropriate references are not included in this bibliography.

The selection and order of the index words is arbitrary. They are purposely biased towards the needs of the forest manager. Birds are listed in the order prescribed by the American Ornithologist's Union.⁴

The Geographic Index

The Geographic Index is designed to help users find information pertaining to a specific area. Titles are indexed according to country and, for U.S. and Canadian literature, State or Province. U.S. references are also indexed according to section, i.e., Northeast, Southeast, etc. The important thing to remember when using the Geographic Index is that literature is indexed at the most specific level possible and then not included at a broader level. For example, a reference about the eastern bluebird in New York will be listed following the keyword "New York" and **will not** be repeated following the keywords "Northeast," "United States," or "North America."

How to Use the Bibliography

This bibliography is designed for easy use. The user should become familiar with the indexes and their keywords before starting a search. To make a search, select the appropriate index and keywords and list the reference numbers provided. Use these reference numbers to identify the author, title, and source of the reference in the list of titles and reference numbers.

FINDING CURRENT LITERATURE

Most of the titles listed in this bibliography were published before 1980. Three of the many sources of information about cavity-nesting birds and related current literature that forest

⁴American Ornithologist's Union. 1957 Check-list of North American Birds. 691 p. Lord Baltimore Press, Baltimore, Md.

managers might find useful because of their easy availability are:

1. **USDA Forest Service**—lists of current research publications. These lists are distributed regularly by the Forest and Range Experiment Stations. To get your name on the mailing list, write to the Station's Director at one of the following addresses:

Intermountain Forest and Range Experiment Station
507 25th St., Ogden, UT 84401

North Central Forest Experiment Station
1992 Folwell Ave., St. Paul, MN 55108

Northeastern Forest Experiment Station
370 Reed Rd., Broomall, PA 19008

Pacific Northwest Forest and Range Experiment Station
809 NE 6th Ave., Box 3141, Portland, OR 97208

Pacific Southwest Forest and Range Experiment Station
1960 Addison St., Box 245, Berkeley, CA 94701

Rocky Mountain Forest and Range Experiment Station
240 W. Prospect St., Fort Collins, CO 80521

Southeastern Forest Experiment Station
Post Office Building, Box 2570, Asheville, NC 28802

Southern Forest Experiment Station
U.S. Postal Service Building, 701 Loyola Ave.,
New Orleans, LA 70113

2. **Wildlife Review**—an indexing and abstracting publication of the Fish and Wildlife Service, U.S. Department of the Interior. For subscription information, write to the Editorial Office, U.S. Fish and Wildlife Service, 270 Ayleworth Hall, Colorado State University, Fort Collins, CO 80523.

3. **Journal of Forestry**—current forestry literature is listed in each issue. The Journal is mailed monthly to members of the Society of American Foresters. For information, write Society of American Foresters, 5400 Grosvenor Lane, Bethesda, MD 20014.

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13, 38, 39, 57, 112, 201, 212, 223, 261, 273, 281, 302, 402, 440, 463, 508, 524, 551, 588, 598, 605, 617, 662, 695, 731, 738, 757, 847, 878, 892, 921, 928, 945, 959, 981, 984, 991, 1046, 1047, 1167, 1196, 1206, 1208, 1237, 1243, 1267, 1284, 1289, 1345, 1353, 1354, 1397, 1402, 1437, 1445, 1446, 1437, 1445, 1446, 1518, 1565, 1670, 1686

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201, 281, 402, 440, 524, 598, 662, 959, 1046, 1047, 1397, 1518, 1667, 1686

HABITAT

13, 212, 551, 662, 695, 731, 921, 945, 981, 1046, 1047, 1167, 1208, 1243, 1284, 1289, 1345, 1353, 1354, 1397, 1402, 1518, 1565, 1670

FORAGING BEHAVIOR

302, 440, 463, 695, 878, 984, 1167, 1353, 1354, 1437, 1446, 1518

BREEDING, NESTING

13, 38, 57, 201, 212, 273, 302, 598, 605, 617, 695, 731, 847, 928, 1196, 1237, 1243, 1289, 1353, 1354, 1437, 1518

NEST AND ROOST TREES

13, 281, 440, 991, 1208, 1289, 1518, 1686

NEST BOXES AND HOUSES

13, 281, 440, 508, 588, 598

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 551, 757, 928, 945, 1267, 1445, 1518,

RELATIONS WITH OTHER FAUNA

273, 892

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 261, 302, 551, 731, 921, 1196, 1284, 1402

IDENTIFICATION, TAXONOMY

1196, 1206, 1208, 1243, 1284, 1289

WHISKERED OWL, *OTUS TRICHOPSIS*

SUMMARY

38, 112, 223, 261, 463, 757, 1196, 1208, 1284, 1353, 1354, 1445, 1565

HABITAT

1208, 1284, 1353, 1354, 1565

FORAGING BEHAVIOR

463, 1353, 1354

BREEDING, NESTING

1196, 1354, 1355, 1566

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 757, 1445

DISTRIBUTION, POPULATION DENSITY, STATUS

261, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

FLAMMULATED OWL, *OTUS FLAMMEOLUS*

SUMMARY

38, 62, 112, 123, 201, 203, 212, 223, 261, 400, 463, 486, 617, 684, 724, 731, 757, 779, 928, 945, 977, 1042, 1094, 1196, 1208, 1237, 1284, 1353, 1354, 1445, 1520, 1565, 1667

HABITAT MANAGEMENT

201, 400, 486, 1520, 1667

HABITAT

62, 123, 201, 212, 400, 486, 684, 731, 945, 1208, 1284, 1353, 1354, 1520, 1565

FORAGING BEHAVIOR

463, 724, 779, 1353, 1354, 1520

BREEDING, NESTING

201, 202, 212, 617, 731, 928, 1196, 1237, 1353, 1354, 1520, 1565

NEST AND ROOST TREES

202, 1208, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 202, 223, 757, 928, 945, 1445, 1520

TERRITORY

977

DISTRIBUTION, POPULATIONS DENSITY, STATUS

62, 212, 261, 684, 731, 1094, 1196, 1284

IDENTIFICATION, TAXONOMY

1042, 1196, 1208, 1284

HAWK OWL, *SURNIA ULULA*

SUMMARY

38, 39, 112, 212, 223, 261, 302, 463, 551, 625, 626, 731, 757, 945, 1039, 1196, 1208, 1243, 1284, 1289, 1354, 1445, 1565

HABITAT

212, 551, 731, 1039, 1208, 1243, 1284, 1289, 1354, 1565

FORAGING BEHAVIOR

302, 463, 1039, 1354

BREEDING, NESTING

39, 212, 302, 625, 626, 731, 1196, 1243, 1289, 1354, 1565

NEST AND ROOST TREES

1208, 1289

BIOLOGY, ECOLOGY LIFE HISTORY

38, 112, 223, 551, 757, 1445

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 261, 302, 551, 731, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1243, 1284, 1289

PYGMY OWL, *GLAUCIDIUM GNOMA*

SUMMARY

38, 62, 111, 184, 193, 201, 212, 223, 261, 400, 463, 486, 617, 731, 747, 757, 928, 1038, 1046, 1047, 1167, 1180, 1196, 1208, 1237, 1284, 1333, 1353, 1354, 1445, 1504, 1520, 1565

HABITAT MANAGEMENT

201, 400, 486, 1046, 1047, 1520

HABITAT

62, 201, 212, 400, 486, 731, 747, 1038, 1046, 1047, 1167, 1180, 1208, 1284, 1353, 1354, 1504, 1520, 1565

FORAGING BEHAVIOR

184, 463, 1167, 1354, 1520, 1565

BREEDING, NESTING

201, 212, 617, 731, 928, 1196, 1237, 1353, 1354, 1520

NEST AND ROOST TREES

1208, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 757, 928, 1445, 1520

DISTRIBUTION, POPULATION DENSITY, STATUS

62, 193, 212, 261, 731, 747, 1196, 1284, 1520

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

FERRUGINOUS OWL, *GLAUCIDIUM BRASILIANUM*

SUMMARY

38, 112, 223, 261, 463, 617, 743, 757, 1196, 1208, 1243, 1284, 1354, 1445, 1565

HABITAT

743, 1208, 1243, 1284, 1354, 1565

FORAGING BEHAVIOR

463, 1354

BREEDING, NESTING

617, 1196, 1243, 1354, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 757, 1445

DISTRIBUTION, POPULATION DENSITY, STATUS

261, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1243, 1284

ELF OWL, *MICRATHENE WHITNEYI*

SUMMARY

38, 112, 223, 261, 463, 615, 617, 757, 922, 981, 1196, 1208, 1284, 1353, 1354, 1445, 1565, 1596, 1670

HABITAT MANAGEMENT

1596

HABITAT

615, 981, 1208, 1284, 1353, 1354, 1565, 1670

FORAGING BEHAVIOR

463, 1353, 1354

BREEDING, NESTING

617, 1196, 1353, 1354, 1565, 1596

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 223, 757, 922, 1445

TERRITORY

1596

DISTRIBUTION, POPULATION DENSITY, STATUS

261, 615, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

BARRED OWL, *STRIX VARIA*

SUMMARY

34, 38, 112, 181, 199, 223, 233, 261, 302, 374, 400, 402, 440, 463, 502, 550, 551, 558, 598, 605, 662, 695, 757, 778, 945, 959, 1019, 1039, 1132, 1136, 1196, 1206, 1208, 1209, 1243, 1267, 1284, 1289, 1354, 1378, 1397, 1402, 1437, 1445, 1515, 1520, 1596, 1647, 1686

HABITAT MANAGEMENT

34, 400, 402, 440, 502, 598, 662, 959, 1019, 1397, 1515, 1596, 1647, 1686

HABITAT

34, 181, 400, 550, 598, 605, 662, 695, 945, 1132, 1136, 1208, 1243, 1284, 1289, 1354, 1397, 1402, 1515, 1520

FORAGING BEHAVIOR

302, 440, 463, 589, 695, 1039, 1354, 1437, 1520

BREEDING, NESTING

302, 598, 605, 695, 1019, 1196, 1243, 1289, 1354, 1437, 1520, 1596

NEST AND ROOST TREES

440, 1019, 1208, 1289, 1520, 1686

NEST BOXES AND HOUSES

440, 588, 598, 605, 695, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

34, 112, 223, 551, 757, 778, 945, 1136, 1209, 1267, 1378, 1445, 1515, 1520

TERRITORY

1596

DISTRIBUTION, POPULATION DENSITY, STATUS

199, 233, 261, 302, 374, 550, 551, 778, 1196, 1284, 1402

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1289

SPOTTED OWL, *STRIX OCCIDENTALIS*

SUMMARY

38, 39, 112, 193, 201, 223, 261, 392, 463, 480, 544, 594, 617, 684, 690, 724, 731, 757, 928, 978, 1046, 1196, 1208, 1245, 1284, 1340, 1353, 1354, 1445, 1520, 1565, 1702

HABITAT MANAGEMENT

201, 1046, 1340, 1520, 1702

HABITAT

201, 594, 684, 731, 978, 1046, 1208, 1284, 1353, 1354, 1520, 1565

FORAGING BEHAVIOR

463, 594, 690, 724, 978, 1353, 1354, 1520

BREEDING, NESTING

39, 201, 617, 731, 928, 1196, 1353, 1354, 1520, 1565

NEST AND ROOST TREES

1208, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 392, 480, 757, 928, 1445, 1520

DISTRIBUTION, POPULATION DENSITY, STATUS

193, 261, 544, 684, 731, 1196, 1245, 1284, 1702

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

BOREAL OWL, *AEGOLIUS FUNEREUS*

SUMMARY

38, 39, 112, 162, 212, 223, 246, 261, 396, 419, 440, 463, 551, 656, 757, 1196, 1208, 1243, 1267, 1284, 1289, 1354, 1445, 1565

HABITAT

212, 551, 656, 1208, 1243, 1284, 1289, 1354, 1565

FORAGING BEHAVIOR

162, 246, 440, 463, 1354

BREEDING, NESTING

39, 212, 396, 1196, 1243, 1289, 1354, 1565

NEST AND ROOST TREES

440, 1208, 1289

NEST BOXES AND HOUSES

440

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 551, 757, 1267, 1445

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 261, 396, 419, 551, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1243, 1284, 1289

SAW-WHET OWL, *AEGOLUS ACADICUS*

SUMMARY

38, 39, 112, 162, 201, 212, 223, 261, 400, 439, 463, 474, 479, 486, 508, 551, 588, 598, 605, 617, 695, 731, 757, 928, 945, 999, 1019, 1023, 1038, 1039, 1046, 1047, 1094, 1108, 1136, 1189, 1196, 1206, 1208, 1243, 1267, 1284, 1289, 1332, 1333, 1350, 1351, 1354, 1397, 1420, 1445, 1515, 1520, 1565, 1595

HABITAT MANAGEMENT

201, 400, 439, 486, 598, 1019, 1023, 1046, 1047, 1397, 1515, 1520

HABITAT

201, 212, 400, 486, 551, 598, 605, 695, 731, 945, 1038, 1046, 1047, 1094, 1108, 1116, 1208, 1243, 1284, 1289, 1354, 1397, 1420, 1515, 1520, 1565

FORAGING BEHAVIOR

162, 439, 463, 479, 598, 695, 1039, 1354, 1520

BREEDING, NESTING

39, 201, 212, 598, 605, 617, 695, 731, 928, 999, 1019, 1189, 1196, 1243, 1289, 1332, 1354, 1520, 1565

NEST AND ROOST TREES

439, 1019, 1023, 1208, 1289, 1351, 1520

NEST BOXES AND HOUSES

439, 508, 588, 598, 605, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

38, 112, 223, 551, 757, 928, 945, 1136, 1267, 1350, 1445, 1515, 1520

RELATIONS WITH OTHER FAUNA

479

TERRITORY

474, 1108

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 261, 474, 551, 731, 1094, 1108, 1196, 1284, 1333, 1420, 1595

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1289

CHIMNEY SWIFT, *CHAETURA PELAGICA*

SUMMARY

22, 141, 313, 365, 366, 367, 368, 369, 370, 371, 373, 440, 551, 580, 605, 617, 695, 778, 888, 945, 1136, 1196, 1206, 1208, 1243, 1284, 1354, 1508, 1513, 1565, 1596, 1625, 1701

HABITAT MANAGEMENT

22, 313, 373, 440, 605, 1508, 1513, 1596

HABITAT

373, 551, 695, 945, 1136, 1208, 1243, 1284, 1354, 1508, 1513, 1565, 1625

FORAGING BEHAVIOR

369, 440, 695, 888, 1354

BREEDING, NESTING

141, 366, 367, 368, 369, 370, 580, 605, 617, 695, 888, 1196, 1243, 1354, 1565, 1596

NEST AND ROOST TREES

141, 440, 580, 1208

NEST BOXES AND HOUSES

440, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

366, 367, 371, 551, 778, 888, 945, 1136, 1513

TERRITORY

365, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

551, 778, 1196, 1284, 1701

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284

VAUX'S SWIFT, *CHAETURA VAUXI*

SUMMARY

66, 67, 153, 212, 555, 617, 731, 747, 888, 945, 1046, 1047, 1068, 1111, 1166, 1167, 1180, 1196, 1208, 1284, 1335, 1337, 1354, 1421, 1520, 1529, 1565, 1596

HABITAT MANAGEMENT

1046, 1047, 1520, 1596

HABITAT

153, 212, 731, 747, 945, 1047, 1068, 1111, 1166, 1167, 1180, 1208, 1284, 1354, 1421, 1520, 1565

FORAGING BEHAVIOR

153, 888, 1167, 1354, 1520

BREEDING, NESTING

66, 67, 153, 212, 555, 617, 731, 888, 1196, 1354, 1520, 1529, 1565, 1596

NEST AND ROOST TREES

1208, 1520

NEST BOXES AND HOUSES

1530

BIOLOGY, ECOLOGY, LIFE HISTORY

67, 888, 945, 1520

TERRITORY

1596

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 731, 747, 1196, 1284, 1335, 1337, 1421

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

COPPERY-TAILED TROGON, *TROGON ELEGANS*

SUMMARY

617, 928, 1196, 1208, 1284, 1333, 1334, 1565

HABITAT

1208, 1284, 1333, 1334, 1565

FORAGING BEHAVIOR

1333, 1334

BREEDING, NESTING

617, 928, 1196, 1333, 1334, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

928

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

WOODPECKERS—GENERAL INFORMATION

SUMMARY

25, 32, 60, 63, 90, 113, 138, 139, 142, 152, 221, 245, 254, 274, 311, 330, 338, 353, 359, 362, 453, 540, 577, 612, 614, 645, 697, 699, 818, 834, 836, 837, 854, 855, 877, 911, 923, 930, 1007, 1041, 1056, 1084, 1119, 1122, 1147, 1163, 1171, 1174, 1175, 1195, 1240, 1281, 1307, 1309, 1311, 1312, 1337, 1341, 1358, 1363, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1392, 1401, 1411, 1413, 1427, 1428, 1493, 1551, 1557, 1573, 1592, 1602, 1637, 1679, 1680, 1681

HABITAT MANAGEMENT

577, 699, 1056, 1573, 1637

HABITAT

60, 274, 330, 577, 699, 930, 1084, 1175, 1341, 1384, 1385, 1386, 1388, 1637

FORAGING BEHAVIOR

63, 90, 254, 274, 330, 540, 614, 697, 834, 877, 1041, 1119, 1163, 1171, 1174, 1195, 1240, 1363, 1385, 1386, 1387, 1389, 1428, 1557, 1681

BREEDING, NESTING

818, 838, 854, 855, 923, 1363, 1385, 1386, 1387, 1401, 1411, 1413, 1493, 1551, 1557

NEST AND ROOST TREES

138, 139, 453, 540, 612, 854, 855, 1007, 1147, 1363, 1428

BIOLOGY, ECOLOGY, LIFE HISTORY

113, 221, 330, 359, 362, 911, 1041, 1122, 1281, 1385, 1386, 1387, 1389, 1390, 1392

RELATIONS WITH OTHER FAUNA

453

TERRITORY

142, 353, 1358, 1363, 1428

DISTRIBUTION, POPULATION DENSITY, STATUS

152, 338, 645, 1363, 1602

IDENTIFICATION, TAXONOMY

245, 1195, 1384, 1592

WOODPECKER-CAUSED DAMAGE

353, 1007, 1119, 1309, 1311, 1312, 1679, 1680

COMMON FLICKER, *COLAPTES AURATUS*

SUMMARY

22, 35, 36, 49, 53, 56, 57, 59, 60, 62, 90, 123, 127, 133, 155, 173, 181, 183, 185, 186, 196, 198, 201, 212, 214, 237, 239, 241, 265, 272, 277, 280, 281, 283, 284, 289, 313, 356, 374,

376, 391, 395, 400, 415, 432, 438, 440, 441, 450, 473, 486, 508, 551, 580, 596, 598, 605, 607, 610, 617, 628, 662, 677, 684, 695, 703, 731, 747, 766, 778, 796, 821, 892, 911, 920, 928, 944, 945, 959, 969, 985, 991, 1019, 1022, 1023, 1038, 1046, 1047, 1051, 1056, 1069, 1094, 1111, 1128, 1135, 1138, 1166, 1167, 1180, 1196, 1206, 1208, 1241, 1242, 1243, 1253, 1258, 1283, 1284, 1289, 1326, 1327, 1329, 1333, 1335, 1336, 1337, 1343, 1351, 1352, 1353, 1354, 1369, 1381, 1383, 1397, 1412, 1421, 1439, 1440, 1443, 1448, 1458, 1463, 1475, 1485, 1504, 1508, 1515, 1517, 1520, 1565, 1593, 1594, 1625, 1646, 1663, 1664, 1667, 1670, 1678, 1686, 1690, 1697, 1698, 1703

HABITAT MANAGEMENT

22, 49, 53, 201, 237, 281, 283, 289, 313, 400, 438, 440, 486, 598, 662, 959, 1019, 1022, 1023, 1046, 1047, 1051, 1056, 1253, 1283, 1329, 1352, 1397, 1508, 1515, 1520, 1646, 1663, 1667, 1686

HABITAT

35, 36, 53, 60, 62, 123, 127, 181, 201, 212, 237, 241, 265, 272, 277, 284, 289, 313, 376, 400, 415, 438, 386, 551, 598, 605, 607, 628, 662, 684, 695, 731, 747, 920, 944, 945, 1038, 1046, 1047, 1051, 1094, 1135, 1166, 1167, 1180, 1208, 1243, 1253, 1258, 1283, 1284, 1289, 1326, 1327, 1329, 1353, 1354, 1397, 1421, 1439, 1443, 1475, 1504, 1508, 1515, 1520, 1565, 1594, 1625, 1670, 1698

FORAGING BEHAVIOR

60, 90, 133, 183, 185, 196, 192, 265, 280, 289, 395, 440, 473, 598, 607, 610, 695, 911, 944, 985, 1069, 1167, 1258, 1326, 1327, 1329, 1353, 1354, 1458, 1485, 1520, 1697

BREEDING, NESTING

56, 57, 127, 201, 212, 214, 239, 277, 283, 284, 356, 432, 596, 598, 605, 610, 617, 695, 703, 731, 796, 821, 911, 928, 1019, 1022, 1138, 1196, 1241, 1242, 1243, 1289, 1343, 1353, 1354, 1412, 1448, 1520, 1565, 1593, 1690

NEST AND ROOST TREES

59, 127, 281, 356, 440, 580, 598, 610, 991, 1019, 1022, 1023, 1208, 1283, 1289, 1351, 1463, 1520, 1686

NEST BOXES AND HOUSES

281, 440, 508, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

155, 239, 432, 450, 551, 610, 778, 911, 928, 945, 1135, 1326, 1336, 1381, 1383, 1439, 1515, 1517, 1520, 1678, 1697

RELATIONS WITH OTHER FAUNA

201, 356, 391, 677, 703, 766, 892, 1343, 1458

TERRITORY

173, 214, 1329, 1381, 1458

DISTRIBUTION, POPULATION DENSITY, STATUS

49, 62, 198, 212, 374, 415, 551, 580, 684, 731, 747, 778, 920, 969, 1094, 1196, 1258, 1284, 1333, 1335, 1337, 1421, 1440, 1594, 1664, 1678

IDENTIFICATION, TAXONOMY

186, 241, 610, 695, 1196, 1206, 1208, 1243, 1284, 1289, 1336, 1381, 1383

PILEATED WOODPECKER, *DRYCOPIUS PILEATUS*

SUMMARY

22, 35, 39, 59, 90, 94, 122, 152, 153, 155, 191, 193, 198, 200, 201, 202, 204, 205, 212, 236, 237, 239, 273, 276, 277, 280, 281, 283, 284, 286, 290, 313, 340, 358, 363, 373, 374, 387, 405, 438, 440, 450, 551, 580, 586, 598, 605, 607, 610, 617, 662, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 695, 730, 731, 747, 753, 778, 794, 795, 797, 819, 822, 828, 829, 835, 912, 945, 969, 982, 985, 1019, 1020, 1021, 1022, 1023,

1029, 1046, 1047, 1050, 1052, 1068, 1086, 1111, 1136, 1166, 1180, 1196, 1206, 1208, 1215, 1243, 1263, 1283, 1284, 1289, 1308, 1310, 1329, 1333, 1343, 1354, 1397, 1421, 1442, 1491, 1515, 1519, 1520, 1552, 1553, 1565, 1594, 1599, 1646, 1647, 1663, 1664, 1667, 1686, 1696, 1698, 1703

HABITAT MANAGEMENT

22, 122, 201, 236, 237, 277, 281, 283, 286, 313, 340, 373, 438, 440, 586, 598, 662, 1019, 1020, 1022, 1023, 1046, 1047, 1050, 1283, 1329, 1515, 1520, 1647, 1663, 1686

HABITAT

35, 122, 153, 201, 204, 205, 212, 236, 237, 280, 284, 286, 373, 438, 551, 586, 598, 605, 607, 662, 695, 730, 731, 747, 945, 982, 1019, 1020, 1021, 1046, 1047, 1050, 1068, 1111, 1136, 1166, 1180, 1208, 1215, 1243, 1283, 1284, 1289, 1329, 1354, 1397, 1421, 1515, 1520, 1565, 1594, 1696, 1698, 1703

FORAGING BEHAVIOR

90, 122, 153, 191, 200, 204, 205, 277, 280, 286, 387, 440, 598, 607, 610, 676, 678, 679, 695, 829, 985, 1019, 1020, 1021, 1052, 1308, 1329, 1354, 1442, 1491, 1519, 1520

BREEDING, NESTING

39, 59, 122, 153, 200, 201, 204, 205, 212, 239, 273, 277, 283, 284, 340, 580, 598, 605, 610, 617, 674, 675, 676, 677, 695, 731, 797, 819, 822, 835, 912, 1019, 1022, 1029, 1196, 1243, 1289, 1310, 1343, 1354, 1491, 1520, 1552, 1553, 1599

NEST AND ROOST TREES

59, 200, 202, 204, 205, 277, 281, 440, 580, 598, 610, 822, 1019, 1020, 1023, 1208, 1283, 1289, 1520, 1646, 1686

NEST BOXES AND HOUSES

281, 440, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

94, 152, 191, 202, 290, 450, 551, 610, 674, 675, 677, 680, 681, 682, 683, 778, 795, 828, 829, 835, 945, 1019, 1086, 1136, 1215, 1515, 1520

RELATIONS WITH OTHER FAUNA

201, 273, 277, 358, 677, 794, 797, 819, 912, 1019, 1020, 1263, 1343, 1519

TERRITORY

39, 122, 200, 676, 794, 1019, 1329, 1599

DISTRIBUTION, POPULATION DENSITY, STATUS

193, 198, 212, 363, 374, 405, 551, 730, 731, 747, 753, 778, 969, 1019, 1111, 1196, 1284, 1333, 1421, 1594, 1664

IDENTIFICATION, TAXONOMY

610, 695, 1196, 1206, 1208, 1243, 1284, 1289

RED-BELLIED WOODPECKER, *MELANERPES CAROLINUS*

SUMMARY

22, 35, 36, 57, 58, 90, 96, 180, 275, 277, 281, 290, 313, 373, 374, 438, 440, 551, 580, 586, 598, 605, 610, 695, 710, 778, 790, 791, 805, 830, 945, 959, 985, 1031, 1051, 1196, 1206, 1208, 1243, 1272, 1283, 1284, 1289, 1329, 1354, 1359, 1397, 1442, 1463, 1477, 1485, 1515, 1649, 1664, 1672, 1678, 1686, 1696

HABITAT MANAGEMENT

22, 281, 313, 373, 438, 440, 586, 598, 959, 1051, 1283, 1329, 1397, 1515, 1649, 1686, 1696

HABITAT

35, 36, 180, 277, 313, 373, 438, 551, 586, 598, 605, 830, 945, 1051, 1208, 1283, 1284, 1329, 1354, 1359, 1397, 1515, 1672, 1696

FORAGING BEHAVIOR

90, 275, 598, 610, 695, 805, 985, 1031, 1272, 1329, 1354, 1442, 1485

BREEDING, NESTING

57, 277, 580, 598, 605, 610, 695, 710, 790, 791, 830, 1196, 1243, 1272, 1289, 1354, 1477

NEST AND ROOST TREES

281, 440, 580, 598, 610, 830, 1208, 1283, 1289, 1463, 1686

NEST BOXES AND HOUSES

281, 440, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

551, 610, 778, 791, 945, 1515, 1678

RELATIONS WITH OTHER FAUNA

58, 96, 275, 1031, 1359, 1477

TERRITORY

1272, 1329, 1672

DISTRIBUTION, POPULATION DENSITY, STATUS

374, 551, 778, 1196, 1284, 1664, 1678

IDENTIFICATION, TAXONOMY

610, 695, 1196, 1206, 1208, 1243, 1284, 1289

GOLDEN-FRONTED WOODPECKER, *MELANERPES AURIFRONS*

SUMMARY

90, 617, 985, 1196, 1208, 1243, 1284, 1354, 1359, 1361, 1565

HABITAT

1208, 1243, 1284, 1354, 1359, 1361, 1565

FORAGING BEHAVIOR

90, 985, 1354, 1361

BREEDING, NESTING

617, 1196, 1243, 1354, 1565

NEST AND ROOST TREES

1208

RELATIONS WITH OTHER FAUNA

1359

TERRITORY

1361

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1243, 1284

GILA WOODPECKER, *MELANERPES UROPYGIALIS*

SUMMARY

90, 272, 617, 627, 743, 928, 1196, 1208, 1284, 1353, 1354, 1565, 1670

HABITAT

272, 627, 743, 1208, 1284, 1353, 1354, 1565, 1670

FORAGING BEHAVIOR

90, 1353, 1354

BREEDING, NESTING

617, 627, 928, 1196, 1353, 1354, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

928

TERRITORY

627

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

RED-HEADED WOODPECKER, *MELANERPES ERYTHROCEPHALUS*

SUMMARY

57, 59, 90, 96, 150, 172, 173, 212, 277, 278, 281, 284, 287, 374, 440, 441, 458, 502, 546, 551, 598, 605, 610, 617, 695, 710, 778, 792, 793, 798, 830, 832, 853, 928, 945, 969, 985, 1101, 1136, 1196, 1206, 1208, 1243, 1272, 1282, 1284, 1289, 1297, 1308, 1310, 1329, 1353, 1354, 1359, 1397, 1402, 1444, 1463, 1515, 1617, 1672, 1678, 1696

HABITAT MANAGEMENT

281, 440, 502, 598, 1282, 1329, 1397, 1515, 1696

HABITAT

212, 277, 284, 546, 551, 598, 605, 695, 830, 945, 1101, 1208, 1243, 1282, 1284, 1289, 1329, 1353, 1354, 1359, 1397, 1402, 1515, 1617, 1672, 1696

FORAGING BEHAVIOR

90, 440, 598, 610, 695, 792, 985, 1101, 1272, 1308, 1329, 1353, 1354

BREEDING, NESTING

57, 59, 172, 212, 277, 278, 284, 598, 605, 610, 617, 695, 710, 798, 830, 832, 928, 1196, 1243, 1272, 1282, 1289, 1310, 1353, 1354, 1444

NEST AND ROOST TREES

59, 281, 440, 598, 610, 830, 1208, 1282, 1289, 1463

NEST BOXES AND HOUSES

281, 440, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

551, 610, 778, 832, 853, 928, 945, 1136, 1297, 1515, 1678

RELATIONS WITH OTHER FAUNA

96, 150, 853, 1359

TERRITORY

173, 793, 1272, 1329, 1672

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 374, 441, 458, 551, 778, 969, 1196, 1284, 1402, 1678

IDENTIFICATION, TAXONOMY

610, 1196, 1206, 1208, 1243, 1284, 1289

ACORN WOODPECKER, *MELANERPES FORMICIVORUS*

SUMMARY

60, 90, 123, 146, 201, 250, 567, 617, 862, 863, 864, 928, 944, 970, 971, 972, 1038, 1167, 1196, 1208, 1284, 1288, 1326, 1353, 1354, 1452, 1453, 1454, 1496, 1540, 1550, 1565, 1663, 1664, 1697

HABITAT MANAGEMENT

201, 1288, 1663

HABITAT

60, 123, 146, 201, 944, 970, 1038, 1167, 1208, 1284, 1288, 1326, 1353, 1354, 1565

FORAGING BEHAVIOR

60, 90, 250, 944, 970, 971, 1167, 1326, 1353, 1354, 1454, 1697

BREEDING, NESTING

201, 617, 862, 863, 928, 970, 1196, 1353, 1354, 1452, 1496, 1540, 1550, 1697

NEST AND ROOST TREES

567, 1208

BIOLOGY, ECOLOGY, LIFE HISTORY

146, 862, 863, 928, 970, 972, 1326, 1452, 1453, 1454, 1697

RELATIONS WITH OTHER FAUNA

1550

TERRITORY

970, 1496

DISTRIBUTION, POPULATION DENSITY, STATUS

864, 1196, 1284, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

LEWIS' WOODPECKER, *MELANERPES LEWIS*

SUMMARY

90, 123, 145, 161, 201, 296, 312, 395, 400, 450, 574, 617, 731, 747, 753, 921, 928, 985, 991, 1019, 1038, 1128, 1180, 1196, 1208, 1284, 1333, 1353, 1354, 1402, 1438, 1443, 1482, 1520, 1559, 1565, 1617, 1646, 1667, 1668

HABITAT MANAGEMENT

201, 400, 1019, 1520, 1667

HABITAT

123, 201, 400, 731, 747, 921, 1128, 1180, 1208, 1284, 1353, 1354, 1402, 1443, 1482, 1559, 1565, 1617

FORAGING BEHAVIOR

90, 395, 985, 1353, 1354, 1520

BREEDING, NESTING

145, 201, 312, 400, 731, 928, 1019, 1195, 1353, 1354, 1520, 1559, 1565

NEST AND ROOST TREES

991, 1019, 1208, 1520, 1559, 1646

BIOLOGY, ECOLOGY, LIFE HISTORY

145, 450, 574, 928, 1438, 1520

RELATIONS WITH OTHER FAUNA

161

TERRITORY

145

DISTRIBUTION, POPULATION DENSITY, STATUS

731, 747, 753, 921, 1196, 1284, 1333, 1402, 1668

IDENTIFICATION, TAXONOMY

296, 1196, 1208, 1284

YELLOW-BELLIED SAPSUCKER, *SPHYRAPICUS VARIUS*

SUMMARY

49, 53, 86, 90, 107, 123, 153, 160, 198, 201, 212, 237, 265, 268, 272, 277, 281, 287, 304, 322, 328, 358, 374, 376, 400, 407, 415, 420, 431, 438, 440, 481, 486, 487, 517, 551, 580, 605, 607, 610, 617, 670, 671, 684, 692, 695, 731, 738, 746, 747, 778, 787, 788, 789, 791, 802, 804, 806, 814, 831, 833, 881, 909, 911, 920, 928, 945, 969, 985, 991, 1019, 1021, 1022, 1023, 1031, 1046, 1047, 1069, 1094, 1111, 1133, 1135, 1136, 1159, 1160, 1169, 1180, 1196, 1206, 1208, 1210, 1211, 1264, 1284, 1289, 1315, 1316, 1327, 1329, 1333, 1353, 1354, 1372, 1373, 1397, 1402, 1421, 1426, 1440, 1443, 1449, 1458, 1478, 1485, 1502, 1503, 1504, 1515, 1520, 1565, 1594, 1617, 1646, 1663, 1664, 1667, 1672, 1679, 1711

HABITAT MANAGEMENT

49, 53, 201, 237, 281, 304, 400, 438, 440, 486, 1019, 1021, 1022, 1023, 1046, 1047, 1329, 1397, 1515, 1520, 1663, 1667

HABITAT

53, 90, 123, 153, 201, 212, 237, 265, 272, 276, 304, 376, 400, 415, 438, 486, 551, 605, 607, 684, 695, 731, 738, 747, 920, 945, 1021, 1046, 1047, 1094, 1111, 1136, 1180, 1208, 1284, 1289, 1327, 1329, 1353, 1354, 1397, 1402, 1421, 1443, 1504, 1515, 1520, 1694, 1617, 1672

FORAGING BEHAVIOR

86, 153, 265, 287, 322, 407, 420, 440, 517, 607, 610, 695, 787, 788, 789, 791, 881, 909, 911, 985, 1069, 1159, 1160, 1169, 1327, 1329, 1353, 1354, 1372, 1373, 1449, 1458, 1478, 1485, 1502, 1503, 1520, 1711

BREEDING, NESTING

107, 153, 160, 201, 212, 277, 328, 487, 517, 580, 605, 610, 617, 670, 695, 731, 738, 802, 804, 806, 814, 831, 833, 911, 928, 1019, 1022, 1196, 1289, 1316, 1353, 1354, 1520, 1565

NEST AND ROOST TREES

107, 277, 281, 431, 440, 580, 610, 806, 814, 991, 1019, 1022, 1023, 1169, 1208, 1289, 1373, 1520, 1646

NEST BOXES AND HOUSES

281, 440, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

551, 610, 738, 778, 831, 911, 928, 945, 1136, 1264, 1327, 1449, 1515, 1520

RELATIONS WITH OTHER FAUNA

86, 160, 358, 431, 481, 487, 787, 788, 791, 814, 1031, 1133, 1135, 1210, 1426, 1478

TERRITORY

671, 1316, 1329, 1458, 1672

DISTRIBUTION, POPULATION DENSITY, STATUS

49, 198, 212, 374, 551, 684, 692, 731, 747, 778, 920, 969, 1094, 1196, 1284, 1333, 1402, 1421, 1440, 1664

IDENTIFICATION, TAXONOMY

610, 695, 1196, 1206, 1208, 1264, 1284, 1289

SAPSUCKER DAMAGE

407, 420, 746, 881, 909, 969, 1159, 1169, 1315, 1372, 1679, 1711

WILLIAMSON'S SAPSUCKER, *SPHYRAPICUS THYROIDEUS*

SUMMARY

90, 107, 123, 150, 153, 201, 212, 307, 308, 395, 400, 486, 551, 617, 684, 731, 738, 921, 928, 985, 1019, 1023, 1038, 1053, 1055, 1094, 1159, 1160, 1166, 1196, 1208, 1258, 1284, 1318, 1333, 1351, 1353, 1354, 1372, 1393, 1420, 1439, 1458, 1478, 1504, 1520, 1565, 1595, 1646, 1664, 1667, 1711

HABITAT MANAGEMENT

201, 400, 486, 1019, 1023, 1520, 1667

HABITAT

123, 153, 201, 212, 307, 400, 486, 551, 684, 731, 738, 921, 1038, 1094, 1166, 1208, 1258, 1284, 1353, 1354, 1420, 1439, 1504, 1520, 1565

FORAGING BEHAVIOR

90, 153, 395, 985, 1053, 1159, 1160, 1258, 1353, 1354, 1372, 1458, 1478, 1520, 1711

BREEDING, NESTING

107, 153, 201, 212, 307, 308, 617, 731, 928, 1019, 1055, 1196, 1353, 1354, 1393, 1520, 1565

NEST AND ROOST TREES

107, 307, 1019, 1023, 1208, 1351, 1520, 1646

BIOLOGY, ECOLOGY, LIFE HISTORY

551, 928, 1393, 1439, 1520

RELATIONS WITH OTHER FAUNA

1318, 1393, 1458, 1478

TERRITORY

1458

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 551, 684, 731, 921, 1094, 1196, 1258, 1284, 1333, 1420, 1595, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284, 1393

SAPSUCKER DAMAGE

1159, 1372, 1711

HAIRY WOODPECKER, *PICOIDES VILLOSUS*

SUMMARY

22, 36, 49, 53, 62, 64, 65, 90, 123, 137, 153, 155, 181, 193, 198, 201, 212, 237, 259, 277, 279, 281, 283, 284, 286, 293, 313, 347, 374, 376, 395, 400, 438, 440, 441, 450, 486, 508, 515, 551, 579, 586, 598, 605, 607, 610, 617, 628, 662, 684, 693, 695, 702, 704, 730, 731, 738, 747, 807, 808, 811, 812, 824, 844, 846, 856, 861, 872, 873, 874, 875, 911, 920, 928, 944, 945, 967, 968, 969, 982, 985, 1019, 1022, 1023, 1038, 1046, 1047, 1062, 1069, 1094, 1111, 1128, 1136, 1166, 1167, 1180, 1196, 1106, 1108, 1143, 1153, 1158, 1183, 1184, 1189, 1126, 1327, 1329, 1333, 1351, 1353, 1354, 1360, 1365, 1368, 1379, 1397, 1402, 1414, 1421, 1439, 1440, 1442, 1443, 1449, 1455, 1458, 1459, 1463, 1477, 1504, 1511, 1515, 1520, 1565, 1594, 1617, 1646, 1647, 1664, 1668, 1686, 1696, 1697, 1698, 1703

HABITAT MANAGEMENT

22, 49, 53, 201, 237, 281, 283, 286, 313, 400, 438, 440, 486, 586, 598, 662, 1019, 1022, 1023, 1046, 1047, 1253, 1329, 1333, 1515, 1520, 1647, 1668, 1686, 1696

HABITAT

36, 53, 62, 123, 137, 153, 181, 201, 212, 237, 259, 277, 286, 376, 400, 438, 486, 551, 586, 598, 605, 607, 628, 662, 684, 695, 730, 731, 738, 747, 811, 920, 945, 982, 1038, 1046, 1047, 1094, 1111, 1128, 1136, 1166, 1167, 1180, 1196, 1208, 1243, 1253, 1258, 1283, 1284, 1289, 1326, 1327, 1329, 1353, 1354, 1397, 1402, 1439, 1443, 1504, 1515, 1520, 1565, 1594, 1617, 1696, 1698, 1703

FORAGING BEHAVIOR

64, 65, 90, 137, 153, 279, 286, 293, 395, 440, 598, 607, 610, 693, 695, 704, 807, 844, 846, 856, 872, 873, 874, 875, 911, 944, 967, 968, 969, 985, 1069, 1167, 1258, 1329, 1353, 1354, 1360, 1365, 1368, 1379, 1442, 1449, 1458, 1459, 1520, 1697

BREEDING, NESTING

153, 201, 212, 277, 283, 284, 598, 605, 610, 617, 595, 704, 731, 808, 811, 812, 844, 911, 928, 1019, 1022, 1353, 1354, 1414, 1477, 1511, 1520, 1565

NEST AND ROOST TREES

277, 281, 440, 598, 610, 1019, 1022, 1023, 1208, 1283, 1289, 1351, 1463, 1511, 1520, 1646, 1686

NEST BOXES AND HOUSES

281, 440, 508, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

155, 450, 515, 551, 610, 704, 808, 824, 846, 872, 911, 928, 945, 1062, 1136, 1326, 1327, 1360, 1439, 1449, 1455, 1515, 1520, 1697

RELATIONS WITH OTHER FAUNA

279, 1062, 1458, 1477

TERRITORY

259, 579, 812, 844, 1329, 1414, 1458

DISTRIBUTION, POPULATION DENSITY, STATUS

49, 62, 193, 198, 212, 259, 374, 441, 551, 684, 730, 731, 747, 861, 920, 982, 1094, 1196, 1258, 1333, 1402, 1421, 1440, 1594, 1664

IDENTIFICATION, TAXONOMY

347, 610, 695, 1062, 1196, 1206, 1243, 1284, 1289

DOWNY WOODPECKER, *PICOIDES PUBESCENS*

SUMMARY

11, 22, 34, 36, 53, 64, 65, 90, 127, 173, 181, 193, 198, 201, 212, 270, 277, 281, 283, 284, 286, 293, 313, 339, 340, 373, 374, 376, 395, 397, 406, 438, 440, 450, 486, 487, 508, 515, 524, 551, 580, 586, 598, 605, 610, 617, 662, 684, 693, 695, 702, 705, 708, 730, 731, 738, 747, 778, 800, 803, 813, 823, 824, 826, 846, 856, 861, 872, 873, 874, 906, 911, 928, 945, 959, 967, 968, 969, 982, 985, 1019, 1023, 1046, 1047, 1051, 1094, 1111, 1136, 1166, 1167, 1180, 1196, 1206, 1208, 1243, 1253, 1284, 1289, 1326, 1320, 1333, 1353, 1354, 1365, 1397, 1402, 1421, 1429, 1443, 1455, 1458, 1463, 1485, 1504, 1508, 1515, 1520, 1544, 1565, 1647, 1664, 1668, 1672, 1678, 1686, 1696, 1698, 1703

HABITAT MANAGEMENT

22, 34, 53, 201, 281, 283, 286, 313, 340, 373, 406, 438, 440, 486, 524, 586, 598, 662, 959, 1019, 1023, 1046, 1047, 1051, 1253, 1329, 1379, 1508, 1515, 1520, 1647, 1668, 1686, 1696,

HABITAT

34, 36, 53, 127, 181, 201, 212, 277, 284, 286, 313, 373, 376, 438, 486, 551, 586, 598, 605, 662, 684, 695, 730, 731, 738, 747, 945, 982, 1046, 1047, 1051, 1094, 1111, 1136, 1166, 1167, 1180, 1208, 1243, 1253, 1284, 1289, 1326, 1329, 1353, 1354, 1397, 1402, 1421, 1504, 1508, 1515, 1520, 1565, 1672, 1698, 1703

FORAGING BEHAVIOR

64, 65, 90, 286, 293, 395, 397, 440, 598, 610, 693, 695, 702, 708, 800, 813, 846, 856, 872, 873, 874, 906, 911, 967, 968, 969, 985, 1167, 1326, 1329, 1353, 1354, 1365, 1458, 1485, 1520, 1544

BREEDING, NESTING

127, 201, 210, 277, 283, 284, 339, 580, 598, 605, 610, 617, 695, 731, 803, 823, 826, 911, 928, 1019, 1196, 1243, 1289, 1353, 1354, 1520, 1703

NEST AND ROOST TREES

127, 281, 406, 440, 580, 610, 1019, 1023, 1208, 1289, 1520, 1686

NEST BOXES AND HOUSES

281, 440, 508, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

450, 515, 551, 610, 705, 708, 778, 803, 824, 826, 846, 872, 911, 928, 945, 1136, 1326, 1455, 1515, 1520, 1678

RELATIONS WITH OTHER FAUNA

11, 1458

TERRITORY

173, 1329, 1429, 1458, 1672

DISTRIBUTION, POPULATION DENSITY, STATUS

193, 198, 212, 374, 486, 684, 731, 747, 778, 861, 982, 1196, 1284, 1333, 1402, 1421, 1429, 1664, 1678

IDENTIFICATION, TAXONOMY

610, 1196, 1206, 1208, 1243, 1284, 1289

LADDER-BACKED WOODPECKER, *PICOIDES SCALARIS*

SUMMARY

50, 90, 265, 272, 415, 617, 928, 1061, 1148, 1196, 1208, 1284, 1354, 1382, 1383, 1504, 1565

HABITAT

265, 272, 415, 1208, 1284, 1354, 1504, 1565

FORAGING BEHAVIOR

50, 90, 265, 1354

BREEDING, NESTING

617, 928, 1196, 1354, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

50, 928, 1061, 1383

RELATIONS WITH OTHER FAUNA

1061

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1061, 1148, 1196, 1208, 1284, 1382, 1383

NUTTALL'S WOODPECKER, *PICOIDES NUTTALLII*

SUMMARY

90, 462, 617, 729, 985, 1062, 1196, 1284, 1326, 1354, 1383, 1565, 1697

HABITAT

1284, 1326, 1354, 1565

FORAGING BEHAVIOR

90, 729, 985, 1326, 1354, 1697

BREEDING, NESTING

617, 1196, 1354, 1565

BIOLOGY, ECOLOGY, LIFE HISTORY

1062, 1326, 1383, 1697

DISTRIBUTION, POPULATION DENSITY, STATUS

462, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1284, 1383

ARIZONA WOODPECKER, *PICOIDES ARIZONAE*

SUMMARY

90, 617, 924, 928, 1196, 1208, 1284, 1353, 1354, 1565, 1670

HABITAT

1208, 1284, 1353, 1354, 1565, 1670

FORAGING BEHAVIOR

90, 924, 1353, 1354

BREEDING, NESTING

617, 928, 1196, 1353, 1354, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

928

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

RED-COCKADED WOODPECKER, *PICOIDES BOREALIS*

SUMMARY

5, 57, 58, 59, 90, 96, 277, 281, 309, 310, 315, 355, 357, 358, 377, 533, 586, 605, 610, 665, 695, 705, 706, 707, 711, 712, 713, 714, 715, 718, 821, 822, 913, 914, 915, 919, 924, 925, 926, 945, 985, 1036, 1040, 1051, 1095, 1097, 1123, 1196, 1200, 1206, 1243, 1284, 1340, 1354, 1364, 1383, 1410, 1468, 1474, 1531, 1532, 1533, 1582, 1583, 1615, 1685

HABITAT MANAGEMENT

96, 281, 315, 586, 713, 718, 913, 926, 1051, 1123, 1200, 1340, 1364, 1531

HABITAT

695, 713, 718, 915, 1051, 1095, 1243, 1284, 1354, 1533

FORAGING BEHAVIOR

57, 58, 90, 96, 377, 610, 695, 924, 925, 926, 985, 1095, 1354, 1410, 1531, 1615

BREEDING, NESTING

57, 96, 277, 309, 357, 605, 610, 665, 695, 707, 714, 718, 915, 919, 925, 926, 1036, 1097, 1196, 1243, 1354, 1468, 1474, 1531, 1533

NEST AND ROOST TREES

5, 59, 96, 281, 357, 358, 610, 665, 706, 711, 714, 718, 914, 925, 926, 1468, 1533

NEST BOXES AND HOUSES

281, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

57, 309, 355, 610, 705, 712, 715, 821, 822, 945, 1040, 1383

RELATIONS WITH OTHER FAUNA

57, 58, 96, 357, 358, 707

TERRITORY

57, 96, 310, 914, 915, 925, 926, 1531

DISTRIBUTION, POPULATION DENSITY, STATUS

713, 821, 822, 1196, 1284, 1364, 1532, 1582, 1583, 1685

IDENTIFICATION, TAXONOMY

610, 695, 1040, 1196, 1206, 1243, 1284, 1384

WHITE-HEAD WOODPECKER, *PICOIDES ALBOLARVATUS*

SUMMARY

90, 153, 193, 201, 212, 395, 400, 607, 617, 731, 860, 927, 982, 985, 1068, 1196, 1208, 1284, 1326, 1354, 1421, 1520, 1565, 1595, 1664, 1667

HABITAT MANAGEMENT

201, 400, 1520, 1667

HABITAT

153, 201, 212, 400, 607, 731, 982, 1068, 1208, 1285, 1326, 1354, 1421, 1520, 1565

FORAGING BEHAVIOR

90, 153, 395, 607, 860, 927, 985, 1326, 1354, 1520

BREEDING, NESTING

153, 201, 212, 400, 731, 1196, 1354, 1520, 1565

NEST AND ROOST TREES

1208, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

1326, 1520

DISTRIBUTION, POPULATION DENSITY, STATUS

193, 212, 731, 982, 1196, 1284, 1421, 1595, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

BLACK-BELLIED THREE-TOED WOODPECKER, *PICOIDES ARCTICUS*

SUMMARY

1, 34, 53, 74, 90, 137, 147, 153, 193, 201, 212, 351, 416, 440, 470, 551, 605, 610, 617, 628, 731, 747, 769, 809, 982, 1019, 1023, 1111, 1136, 1180, 1196, 1206, 1208, 1243, 1284, 1289, 1327, 1333, 1354, 1391, 1439, 1449, 1475, 1511, 1515, 1520, 1562, 1565, 1590, 1594, 1635, 1646, 1655, 1660, 1664, 1667, 1696

HABITAT MANAGEMENT

34, 53, 201, 440, 1019, 1023, 1515, 1520, 1667, 1696

HABITAT

34, 53, 137, 147, 153, 201, 212, 551, 605, 628, 731, 747, 982, 1111, 1136, 1180, 1208, 1243, 1284, 1289, 1327, 1354, 1439, 1475, 1515, 1520, 1565, 1594, 1696

FORAGING BEHAVIOR

90, 137, 147, 153, 610, 1327, 1354, 1391, 1449, 1520, 1635, 1660

BREEDING, NESTING

1, 153, 201, 212, 416, 605, 610, 617, 731, 769, 809, 1019, 1196, 1243, 1289, 1354, 1391, 1511, 1520, 1565, 1655

NEST AND ROOST TREES

440, 610, 1019, 1023, 1208, 1289, 1511, 1520, 1646

NEST BOXES AND HOUSES

440, 610

BIOLOGY, ECOLOGY, LIFE HISTORY

351, 551, 610, 1136, 1327, 1439, 1449, 1515, 1520, 1635

RELATIONS WITH OTHER FAUNA

1391

TERRITORY

147, 1562, 1590

DISTRIBUTION, POPULATION DENSITY, STATUS

193, 212, 470, 551, 731, 747, 982, 1196, 1284, 1333, 1562, 1590, 1594, 1664

IDENTIFICATION, TAXONOMY

74, 610, 1196, 1206, 1208, 1243, 1284, 1289

NORTHERN THREE-TOED WOODPECKER, *PICOIDES TRIDACTYLUS*

SUMMARY

64, 65, 74, 90, 137, 147, 155, 201, 212, 236, 239, 351, 376, 440, 470, 486, 516, 551, 605, 617, 658, 659, 684, 693, 702, 731, 856, 872, 873, 874, 875, 928, 929, 1019, 1022, 1023, 1038, 1046, 1047, 1094, 1147, 1166, 1180, 1196, 1208, 1243, 1284, 1289, 1306, 1333, 1351, 1353, 1354, 1365, 1379, 1391, 1421, 1458, 1504, 1511, 1515, 1520, 1565, 1617, 1635, 1646, 1655, 1664, 1667, 1696

HABITAT MANAGEMENT

201, 236, 440, 486, 1019, 1022, 1046, 1047, 1515, 1520, 1667, 1696

HABITAT

137, 147, 201, 212, 236, 376, 486, 551, 605, 684, 731, 1038, 1046, 1047, 1094, 1166, 1180, 1208, 1243, 1284, 1289, 1353, 1354, 1421, 1504, 1515, 1520, 1565, 1617, 1696

FORAGING BEHAVIOR

64, 65, 90, 137, 147, 440, 658, 693, 856, 872, 873, 874, 875, 1353, 1354, 1365, 1379, 1391, 1458, 1520, 1635

BREEDING, NESTING

201, 212, 239, 516, 605, 617, 731, 928, 929, 1019, 1022, 1147, 1353, 1354, 1391, 1511, 1520, 1565, 1655

NEST AND ROOST TREES

440, 1019, 1022, 1023, 1147, 1208, 1290, 1351, 1511, 1520, 1646

NEST BOXES AND HOUSES

440

BIOLOGY, ECOLOGY, LIFE HISTORY

155, 239, 351, 551, 659, 872, 928, 1306, 1515, 1520, 1635

RELATIONS WITH OTHER FAUNA

929, 1391, 1458

TERRITORY

147, 658, 1458

DISTRIBUTION, POPULATION DENSITY, STATUS
212, 470, 551, 684, 731, 1094, 1196, 1284, 1333, 1421, 1664
IDENTIFICATION, TAXONOMY
74, 1196, 1208, 1243, 1284, 1289

IVORY-BILLED WOODPECKER, *CAMPEPHILUS PRINCIPALIS*

SUMMARY
14, 90, 155, 354, 552, 586, 695, 945, 1196, 1243, 1284, 1354, 1500, 1582, 1583
HABITAT MANAGEMENT
354, 586
HABITAT
586, 695, 945, 1243, 1284, 1354
FORAGING BEHAVIOR
14, 90, 354, 695, 1354
BREEDING, NESTING
10, 695, 1196, 1243, 1354
NEST BOXES AND HOUSES
695
BIOLOGY, ECOLOGY, LIFE HISTORY
945, 1500
DISTRIBUTION, POPULATION DENSITY, STATUS
552, 1196, 1284, 1582, 1583
IDENTIFICATION, TAXONOMY
695, 1196, 1243, 1284

SULPHUR-BELLIED FLYCATCHER, *MYIODYNASTES LUTEIVENTRIS*

SUMMARY
115, 256, 617, 628, 1196, 1208, 1284, 1354, 1565
HABITAT
628, 1208, 1284, 1354, 1565
FORAGING BEHAVIOR
256, 1354
BREEDING, NESTING
617, 1196, 1354, 1565
NEST AND ROOST TREES
1208
BIOLOGY, ECOLOGY, LIFE HISTORY
115
DISTRIBUTION, POPULATION DENSITY, STATUS
1196, 1284
IDENTIFICATION, TAXONOMY
1196, 1208, 1284

GREAT CRESTED FLYCATCHER, *MYIARCHUS CRINITUS*

SUMMARY
34, 36, 53, 57, 96, 115, 127, 181, 237, 256, 281, 313, 373, 374, 406, 438, 440, 524, 525, 551, 598, 605, 617, 642, 661, 743, 778, 859, 928, 945, 959, 985, 1051, 1059, 1102, 1136, 1196, 1208, 1243, 1252, 1253, 1283, 1284, 1289, 1290, 1329, 1345, 1354, 1397, 1463, 1485, 1515, 1545, 1596, 1625, 1647, 1664, 1678, 1686, 1708
HABITAT MANAGEMENT
34, 53, 237, 281, 313, 373, 406, 438, 440, 524, 598, 661, 1051, 1253, 1329, 1397, 1515, 1596, 1686

HABITAT
34, 36, 127, 181, 237, 373, 438, 551, 598, 605, 642, 743, 945, 1051, 1136, 1208, 1243, 1253, 1283, 1284, 1290, 1329, 1345, 1354, 1397, 1515, 1625
FORAGING BEHAVIOR
256, 440, 598, 985, 1329, 1354, 1485
BREEDING, NESTING
57, 127, 525, 598, 605, 617, 859, 928, 1059, 1102, 1196, 1243, 1290, 1354, 1545, 1596, 1708
NEST AND ROOST TREES
127, 281, 406, 440, 598, 1033, 1283, 1290, 1463, 1686
NEST BOXES AND HOUSES
281, 440
BIOLOGY, ECOLOGY, LIFE HISTORY
115, 551, 778, 928, 945, 1136, 1515, 1545, 1678
RELATIONS WITH OTHER FAUNA
96, 1708
TERRITORY
1329, 1596
DISTRIBUTION, POPULATION DENSITY, STATUS
374, 551, 778, 1196, 1289, 1664, 1678
IDENTIFICATION, TAXONOMY
1196, 1208, 1243, 1289, 1290

WIED'S CRESTED FLYCATCHER, *MYIARCHUS TYRANNULUS*

SUMMARY
115, 265, 272, 928, 1196, 1208, 1243, 1284, 1354, 1565, 1708
HABITAT
265, 272, 1208, 1243, 1284, 1354, 1565
FORAGING BEHAVIOR
265, 1354
BREEDING, NESTING
928, 1196, 1243, 1354, 1565, 1708
NEST AND ROOST TREES
1208
BIOLOGY, ECOLOGY, LIFE HISTORY
115, 928
RELATIONS WITH OTHER FAUNA
1708
DISTRIBUTION, POPULATION DENSITY, STATUS
1196, 1284
IDENTIFICATION, TAXONOMY
1196, 1208, 1243, 1284

ASH-THROATED FLYCATCHER, *MYIARCHUS CINERASCENS*

SUMMARY
60, 93, 115, 149, 212, 265, 272, 400, 415, 503, 506, 512, 617, 627, 656, 695, 731, 921, 928, 945, 981, 991, 1167, 1196, 1208, 1243, 1284, 1326, 1353, 1354, 1504, 1520, 1565, 1654, 1670, 1697, 1708
HABITAT MANAGEMENT
400, 1520
HABITAT
60, 149, 212, 265, 272, 400, 415, 627, 695, 731, 921, 945, 981, 1167, 1208, 1243, 1284, 1326, 1353, 1354, 1504, 1520, 1565, 1654, 1670
FORAGING BEHAVIOR
60, 93, 149, 265, 695, 1167, 1326, 1353, 1354, 1520, 1565

BREEDING, NESTING

212, 503, 512, 617, 627, 695, 731, 928, 1196, 1243, 1353,
1354, 1520, 1565, 1708

NEST AND ROOST TREES

991, 1208, 1520

NEST BOXES AND HOUSES

695

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 928, 945, 1326, 1520, 1697

RELATIONS WITH OTHER FAUNA

506, 1708

TERRITORY

627

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 731, 921, 1196, 1284

IDENTIFICATION, TAXONOMY

695, 1196, 1208, 1243, 1284

OLIVACEOUS FLYCATCHER, *MYIARCHUS TUBERCULIFER***SUMMARY**

115, 400, 607, 617, 928, 1196, 1208, 1284, 1353, 1354, 1565,
1708

HABITAT MANAGEMENT

400

HABITAT

400, 607, 1208, 1284, 1353, 1354, 1565

FORAGING BEHAVIOR

607, 1353, 1354

BREEDING, NESTING

617, 928, 1196, 1353, 1354, 1565, 1708

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 928

RELATIONS WITH OTHER FAUNA

1708

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

WESTERN FLYCATCHER, *EMPIDONAX DIFFICILIS***SUMMARY**

50, 62, 93, 115, 212, 331, 376, 486, 617, 627, 684, 731, 738,
747, 843, 917, 928, 1038, 1094, 1116, 1167, 1196, 1208, 1284,
1326, 1354, 1504, 1565, 1654, 1663, 1664, 1697

HABITAT MANAGEMENT

50, 1663

HABITAT

62, 212, 376, 486, 627, 684, 731, 738, 747, 1038, 1094, 1167,
1208, 1284, 1326, 1354, 1504, 1565, 1654

FORAGING BEHAVIOR

93, 1167, 1326, 1354, 1697

BREEDING, NESTING

212, 331, 617, 627, 731, 843, 917, 928, 1116, 1196, 1354,
1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 928, 1326, 1697

TERRITORY

627

DISTRIBUTION, POPULATION DENSITY, STATUS

62, 212, 684, 731, 747, 1094, 1196, 1284, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

VIOLET-GREEN SWALLOW, *TACHYCINETA THALASSINA***SUMMARY**

62, 91, 115, 201, 212, 269, 346, 376, 400, 401, 484, 486, 508,
551, 563, 617, 627, 684, 731, 747, 768, 920, 928, 944, 981,
1038, 1094, 1128, 1180, 1196, 1208, 1284, 1326, 1333, 1335,
1337, 1351, 1352, 1353, 1354, 1443, 1504, 1520, 1563, 1565,
1594, 1595, 1617, 1624, 1663, 1664, 1698

HABITAT MANAGEMENT

201, 400, 486, 1352, 1354, 1520, 1663

HABITAT

62, 201, 212, 346, 376, 400, 486, 551, 627, 684, 731, 747,
920, 944, 981, 1038, 1094, 1128, 1180, 1208, 1284, 1326,
1353, 1354, 1443, 1504, 1520, 1565, 1594, 1617, 1624, 1698

FORAGING BEHAVIOR

91, 944, 1326, 1353, 1354, 1520

BREEDING, NESTING

201, 212, 269, 401, 484, 563, 617, 627, 731, 768, 928, 1196,
1353, 1354, 1520, 1565, 1624

NEST AND ROOST TREES

1208, 1351, 1520

NEST BOXES AND HOUSES

508

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 551, 928, 1326, 1520

RELATIONS WITH OTHER FAUNA

484

TERRITORY

627

DISTRIBUTION, POPULATION DENSITY, STATUS

62, 212, 346, 551, 684, 731, 747, 920, 1094, 1196, 1284, 1333,
1335, 1337, 1563, 1595, 1596, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

TREE SWALLOW, *IRIDOPROCNE BIOCOLOR***SUMMARY**

34, 49, 51, 91, 115, 199, 201, 212, 222, 244, 251, 252, 253,
281, 376, 426, 432, 440, 451, 508, 551, 563, 598, 601, 602,
605, 617, 627, 641, 660, 695, 731, 738, 778, 869, 884, 920,
928, 938, 940, 945, 985, 991, 995, 996, 1019, 1022, 1023,
1046, 1047, 1070, 1094, 1111, 1127, 1128, 1136, 1144, 1166,
1167, 1180, 1189, 1196, 1206, 1208, 1221, 1243, 1284, 1290,
1292, 1322, 1325, 1327, 1329, 1333, 1337, 1353, 1354, 1402,
1443, 1479, 1495, 1510, 1515, 1520, 1563, 1565, 1596, 1639,
1642, 1643, 1644, 1656, 1663, 1664, 1667, 1698, 1700

HABITAT MANAGEMENT

34, 49, 201, 281, 440, 598, 1019, 1022, 1023, 1045, 1096,
1329, 1495, 1515, 1520, 1596, 1663, 1667

HABITAT

34, 201, 212, 376, 551, 598, 605, 627, 695, 731, 738, 920,
945, 1046, 1047, 1094, 1111, 1128, 1136, 1166, 1167, 1180,
1208, 1243, 1290, 1327, 1329, 1353, 1354, 1402, 1443, 1495,
1515, 1520, 1565, 1698

FORAGING BEHAVIOR

91, 440, 598, 695, 869, 985, 1167, 1327, 1329, 1353, 1354, 1479, 1510, 1520, 1700

BREEDING, NESTING

51, 201, 212, 222, 244, 251, 252, 253, 426, 432, 451, 563, 598, 601, 605, 617, 627, 641, 660, 695, 731, 928, 938, 940, 995, 996, 1019, 1022, 1070, 1127, 1144, 1189, 1196, 1221, 1243, 1290, 1322, 1353, 59, 172, 180, 275, 580, 598, 605, 695, 1154, 1196, 1243, 1290, 1354 1354, 1479, 1510, 1520, 1596, 1639, 1642, 1643

NEST AND ROOST TREES

281, 440, 508, 991, 1019, 1022, 1023, 1144, 1208, 1290, 1520

NEST BOXES AND HOUSES

281, 440, 695, 995, 1221

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 251, 252, 432, 551, 601, 602, 660, 778, 884, 928, 945, 1136, 1292, 1327, 1479, 1520

RELATIONS WITH OTHER FAUNA

251, 252, 426, 1221, 1510

TERRITORY

601, 627, 940, 1329, 1596, 1700

DISTRIBUTION, POPULATION DENSITY, STATUS

49, 199, 212, 551, 731, 778, 920, 1094, 1196, 1284, 1333, 1337, 1402, 1563, 1643, 1664

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1290

ROUGH-WINGED SWALLOW, *STELGIDOPTERYX RUFICOLLIS*

SUMMARY

91, 115, 212, 265, 551, 605, 695, 731, 747, 869, 920, 928, 945, 952, 1128, 1136, 1166, 1167, 1180, 1196, 1206, 1208, 1243, 1284, 1290, 1508, 1520, 1563, 1565, 1594, 1595, 1698

HABITAT

212, 265, 551, 605, 695, 731, 747, 920, 945, 1128, 1136, 1166, 1167, 1180, 1208, 1243, 1284, 1290, 1508, 1520, 1559, 1594, 1698

FORAGING BEHAVIOR

91, 265, 695, 869, 1167, 1520

BREEDING, NESTING

212, 605, 695, 731, 928, 952, 1196, 1243, 1290, 1520, 1565

NEST AND ROOST TREES

1290, 1520

NEST BOXES AND HOUSES

695

BIOLOGY, ECOLOGY, LIFE HISTORY

115, 551, 928, 945, 952, 1136, 1520

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 551, 731, 747, 920, 1196, 1284, 1563, 1594, 1595

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1290

PURPLE MARTIN, *PROGNE SUBIS*

SUMMARY

19, 110, 201, 207, 212, 248, 325, 332, 361, 440, 486, 551, 598, 605, 617, 653, 684, 695, 731, 750, 751, 754, 778, 851, 928, 944, 945, 981, 1003, 1046, 1047, 1124, 1136, 1150, 1167, 1196, 1206, 1208, 1231, 1243, 1284, 1290, 1353, 1354, 1402, 1443, 1507, 1508, 1548, 1549, 1565, 1596, 1623, 1668, 1670, 1671

HABITAT MANAGEMENT

201, 440, 486, 598, 1046, 1047, 1509, 1597

HABITAT

201, 212, 486, 551, 598, 605, 684, 695, 731, 944, 945, 981, 1046, 1047, 1136, 1167, 1208, 1243, 1284, 1290, 1353, 1354, 1402, 1508, 1565, 1670

FORAGING BEHAVIOR

440, 598, 695, 750, 754, 944, 1150, 1167, 1353, 1354, 1443, 1549

BREEDING, NESTING

19, 110, 201, 207, 212, 248, 325, 332, 598, 605, 617, 653, 695, 731, 751, 928, 1124, 1150, 1196, 1231, 1243, 1290, 1353, 1354, 1443, 1507, 1548, 1549, 1565, 1596, 1623, 1671

NEST AND ROOST TREES

440, 1208, 1290

NEST BOXES AND HOUSES

440, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

361, 551, 778, 851, 928, 945, 1136

TERRITORY

19, 361, 751, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 551, 684, 754, 778, 1003, 1196, 1284, 1402, 1668

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1290

BLACK-CAPPED CHICKADEE, *PARUS ATRICAPILLUS*

SUMMARY

10, 32, 53, 62, 77, 127, 156, 180, 181, 198, 201, 212, 229, 230, 237, 281, 293, 304, 336, 376, 382, 383, 395, 438, 440, 441, 460, 475, 482, 524, 525, 539, 551, 587, 598, 605, 609, 617, 628, 662, 731, 738, 747, 778, 827, 850, 910, 921, 928, 934, 985, 991, 1015, 1019, 1023, 1044, 1046, 1047, 1049, 1073, 1094, 1096, 1128, 1134, 1136, 1151, 1152, 1153, 1166, 1180, 1196, 1206, 1208, 1243, 1250, 1253, 1258, 1280, 1284, 1290, 1301, 1329, 1353, 1354, 1397, 1421, 1430, 1432, 1439, 1443, 1461, 1463, 1466, 1475, 1488, 1489, 1500, 1515, 1520, 1523, 1534, 1535, 1565, 1594, 1596, 1621, 1625, 1632, 1663, 1664, 1667, 1678, 1698, 1708

HABITAT MANAGEMENT

53, 201, 237, 281, 304, 438, 440, 524, 598, 662, 1019, 1023, 1046, 1047, 1253, 1329, 1397, 1515, 1520, 1523, 1596, 1663, 1667

HABITAT

53, 127, 181, 201, 212, 237, 304, 376, 438, 551, 598, 605, 628, 662, 731, 738, 747, 850, 921, 1044, 1046, 1047, 1094, 1128, 1136, 1166, 1180, 1208, 1243, 1253, 1258, 1284, 1290, 1329, 1353, 1354, 1397, 1421, 1439, 1443, 1475, 1515, 1520, 1523, 1565, 1594, 1625, 1698

FORAGING BEHAVIOR

10, 156, 180, 229, 230, 293, 395, 440, 598, 827, 850, 934, 985, 1096, 1153, 1258, 1329, 1353, 1354, 1461, 1489, 1520

BREEDING, NESTING

10, 127, 156, 181, 201, 212, 229, 230, 336, 382, 383, 460, 475, 539, 598, 605, 617, 731, 850, 928, 1019, 1096, 1134, 1151, 1152, 1153, 1196, 1243, 1250, 1290, 1353, 1354, 1430, 1432, 1461, 1466, 1488, 1489, 1520, 1534, 1535, 1565, 1596, 1621, 1708

NEST AND ROOST TREES

10, 127, 181, 281, 440, 598, 991, 1019, 1023, 1208, 1290, 1463, 1520

NEST BOXES AND HOUSES

10, 281, 440

BIOLOGY, ECOLOGY, LIFE HISTORY

10, 77, 475, 482, 525, 551, 778, 910, 928, 1015, 1049, 1136, 1151, 1153, 1280, 1430, 1439, 1500, 1515, 1520, 1632, 1678

RELATIONS WITH OTHER FAUNA

539, 827, 934, 1073, 1708

TERRITORY

77, 180, 587, 609, 910, 1151, 1329, 1466, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 62, 198, 212, 441, 551, 731, 747, 778, 910, 921, 1044, 1094, 1196, 1258, 1284, 1421, 1594, 1664, 1678

IDENTIFICATION, TAXONOMY

1196, 1206, 1208, 1243, 1284, 1290

CAROLINA CHICKADEE, *PARUS CAROLINENSIS*

SUMMARY

22, 35, 36, 59, 96, 172, 179, 180, 275, 281, 313, 373, 374, 430, 580, 586, 598, 605, 662, 695, 778, 945, 959, 985, 1001, 1051, 1154, 1196, 1206, 1243, 1284, 1290, 1328, 1329, 1354, 1397, 1433, 1472, 1485, 1501, 1515, 1647, 1664, 1678, 1686

HABITAT MANAGEMENT

22, 281, 313, 373, 438, 586, 598, 662, 959, 1051, 1329, 1397, 1515, 1647, 1686

HABITAT

35, 36, 313, 373, 438, 586, 598, 605, 662, 695, 945, 1051, 1243, 1284, 1329, 1354, 1397, 1515

FORAGING BEHAVIOR

180, 598, 695, 985, 1001, 1328, 1354, 1485

BREEDING, NESTING

59, 172, 180, 275, 580, 598, 605, 695, 1154, 1196, 1243, 1290, 1354

NEST AND ROOST TREES

59, 180, 281, 580, 598, 1686

NEST BOXES AND HOUSES

281, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

179, 778, 945, 1433, 1501, 1515, 1678

RELATIONS WITH OTHER FAUNA

96, 275, 1472

TERRITORY

180, 1329

DISTRIBUTION, POPULATION DENSITY, STATUS

374, 778, 1196, 1284, 1664, 1678

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1243, 1284

MEXICAN CHICKADEE, *PARUS SCLATERI*

SUMMARY

62, 617, 928, 1208, 1284, 1353, 1354, 1565

HABITAT

1208, 1284, 1353, 1354, 1565

FORAGING BEHAVIOR

1353, 1354

BREEDING, NESTING

617, 928, 1353, 1354, 1565

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

928

DISTRIBUTION, POPULATION DENSITY, STATUS

62, 1284

IDENTIFICATION, TAXONOMY

1208, 1284

MOUNTAIN CHICKADEE, *PARUS GAMBELI*

SUMMARY

32, 49, 62, 65, 123, 144, 153, 193, 201, 212, 269, 316, 317, 339, 383, 395, 400, 484, 508, 607, 619, 684, 731, 747, 778, 848, 921, 928, 944, 982, 985, 991, 1019, 1023, 1044, 1073, 1094, 1166, 1180, 1208, 1258, 1284, 1318, 1326, 1327, 1333, 1351, 1353, 1354, 1402, 1421, 1439, 1443, 1504, 1513, 1520, 1565, 1617, 1664, 1667

HABITAT MANAGEMENT

49, 201, 400, 1019, 1023, 1520, 1667

HABITAT

62, 123, 153, 201, 212, 400, 607, 684, 731, 747, 848, 921, 944, 982, 1044, 1094, 1166, 1180, 1208, 1258, 1284, 1326, 1327, 1353, 1354, 1402, 1421, 1439, 1443, 1504, 1520, 1565, 1617

FORAGING BEHAVIOR

65, 144, 153, 269, 316, 317, 395, 607, 944, 985, 1258, 1318, 1326, 1327, 1353, 1354, 1513, 1520

BREEDING, NESTING

153, 201, 212, 339, 383, 484, 619, 731, 928, 1019, 1353, 1354, 1520, 1565

NEST AND ROOST TREES

991, 1019, 1023, 1208, 1351, 1520

NEST BOXES AND HOUSES

508

BIOLOGY, ECOLOGY, LIFE HISTORY

778, 928, 1326, 1327, 1439, 1520

RELATIONS WITH OTHER FAUNA

484, 1073, 1318

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 49, 62, 193, 212, 684, 731, 747, 778, 921, 982, 1044, 1094, 1258, 1284, 1333, 1402, 1421, 1664

IDENTIFICATION, TAXONOMY

1208, 1284

GRAY-HEADED CHICKADEE, *PARUS CINCTUS*

SUMMARY

1208, 1284, 1314, 1354, 1565

HABITAT

1208

FORAGING BEHAVIOR

1354

BREEDING, NESTING

1314, 1565

NEST AND ROOST TREES

1208

DISTRIBUTION, POPULATION DENSITY, STATUS

1284

IDENTIFICATION, TAXONOMY

1208, 1284

BOREAL CHICKADEE, *PARUS HUDSONICUS*

SUMMARY

52, 304, 440, 551, 605, 731, 935, 1034, 1136, 1180, 1196, 1208, 1243, 1284, 1290, 1354, 1515, 1565, 1664

HABITAT MANAGEMENT

304, 440

HABITAT

304, 551, 605, 731, 1136, 1180, 1208, 1243, 1284, 1290, 1354, 1515, 1565

FORAGING BEHAVIOR

440, 1354

BREEDING, NESTING

605, 731, 935, 1034, 1196, 1243, 1290, 1354, 1565

NEST AND ROOST TREES

440, 1208, 1290

NEST BOXES AND HOUSES

440

BIOLOGY, ECOLOGY, LIFE HISTORY

52, 551, 1136, 1515

DISTRIBUTION, POPULATION DENSITY, STATUS

551, 731, 1196, 1284, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1243, 1284, 1290

CHESTNUT-BACKED CHICKADEE, *PARUS RUFESCENS*

SUMMARY

32, 201, 212, 556, 617, 731, 747, 985, 1017, 1019, 1023, 1044, 1046, 1047, 1069, 1167, 1180, 1208, 1284, 1298, 1354, 1439, 1488, 1489, 1520, 1565, 1594, 1596, 1663, 1664, 1667

HABITAT MANAGEMENT

201, 1019, 1023, 1046, 1047, 1520, 1596, 1663, 1667

HABITAT

201, 212, 731, 747, 1044, 1047, 1167, 1180, 1208, 1284, 1298, 1354, 1439, 1520, 1565, 1594

FORAGING BEHAVIOR

985, 1069, 1167, 1298, 1354, 1489, 1520

BREEDING, NESTING

201, 212, 617, 731, 1017, 1019, 1354, 1488, 1489, 1520, 1565, 1596

NEST AND ROOST TREES

1019, 1033, 1208, 1520

BIOLOGY, ECOLOGY, LIFE HISTORY

1439, 1520

TERRITORY

1596

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 212, 556, 731, 747, 1017, 1044, 1284, 1594, 1664

IDENTIFICATION, TAXONOMY

1208, 1284

TUFTED TITMOUSE, *PARUS BICOLOR*

SUMMARY

22, 35, 36, 57, 59, 116, 128, 174, 181, 237, 271, 281, 313, 373, 374, 381, 398, 434, 438, 440, 524, 526, 551, 580, 586, 598, 605, 662, 695, 723, 738, 778, 905, 945, 959, 985, 1051, 1058, 1196, 1206, 1218, 1243, 1244, 1253, 1268, 1284, 1285, 1290, 1329, 1354, 1397, 1415, 1463, 1485, 1515, 1591, 1619, 1647, 1650, 1664, 1678, 1686, 1708

HABITAT MANAGEMENT

22, 237, 281, 313, 373, 438, 440, 524, 586, 598, 662, 959, 1051, 1253, 1329, 1397, 1515, 1647, 1686

HABITAT

35, 36, 181, 237, 313, 373, 438, 551, 586, 598, 605, 662, 695, 738, 945, 1051, 1243, 1253, 1284, 1285, 1290, 1329, 1354, 1397, 1515

FORAGING BEHAVIOR

128, 440, 598, 695, 985, 1329, 1354, 1485, 1650

BREEDING, NESTING

57, 59, 174, 381, 398, 580, 598, 605, 695, 905, 1058, 1196, 1243, 1268, 1290, 1354, 1619, 1708

NEST AND ROOST TREES

59, 281, 440, 580, 598, 1285, 1290, 1463, 1686

NEST BOXES AND HOUSES

281, 440, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

116, 551, 723, 778, 905, 945, 1218, 1415, 1515, 1591, 1678

RELATIONS WITH OTHER FAUNA

434, 1708

TERRITORY

271, 1329

DISTRIBUTION, POPULATION DENSITY, STATUS

374, 524, 551, 778, 1196, 1244, 1284, 1664, 1678

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1243, 1285, 1290

PLAIN TITMOUSE, *PARUS INORNATUS*

SUMMARY

60, 116, 212, 380, 617, 921, 928, 985, 1196, 1208, 1249, 1284, 1326, 1353, 1354, 1379, 1380, 1504, 1565, 1596, 1697, 1708

HABITAT MANAGEMENT

1379, 1596

HABITAT

60, 212, 921, 1208, 1284, 1326, 1353, 1354, 1504, 1565

FORAGING BEHAVIOR

60, 380, 985, 1326, 1353, 1354, 1697

BREEDING, NESTING

212, 380, 617, 928, 1196, 1249, 1353, 1354, 1565, 1596, 1708

NEST AND ROOST TREES

1208, 1379

BIOLOGY, ECOLOGY, LIFE HISTORY

116, 928, 1326, 1697

RELATIONS WITH OTHER FAUNA

1708

TERRITORY

380, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 921, 1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

BRIDLED TITMOUSE, *PARUS WOLLWEBERI*

SUMMARY

60, 116, 123, 617, 928, 1196, 1208, 1284, 1353, 1354, 1565, 1708

HABITAT

60, 123, 1208, 1284, 1353, 1354, 1565

FORAGING BEHAVIOR

60, 1353, 1354

BREEDING, NESTING

617, 928, 1196, 1353, 1354, 1565, 1708

NEST AND ROOST TREES

1208

BIOLOGY, ECOLOGY, LIFE HISTORY

116, 928

RELATIONS WITH OTHER FAUNA

1708

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

WHITE-BREASTED NUTHATCH, *SITTA CAROLINENSIS*

SUMMARY

11, 16, 17, 18, 22, 32, 33, 34, 36, 40, 57, 60, 62, 117, 144, 153, 181, 193, 199, 201, 212, 229, 230, 237, 265, 281, 313, 372, 373, 376, 395, 400, 438, 440, 471, 486, 508, 524, 551, 598, 605, 607, 610, 617, 624, 662, 684, 695, 728, 730, 731, 747, 778, 810, 815, 816, 825, 898, 928, 944, 945, 960, 962, 982, 985, 1026, 1044, 1046, 1047, 1051, 1067, 1094, 1136, 1166, 1196, 1206, 1208, 1243, 1253, 1255, 1258, 1260, 1274, 1283, 1284, 1289, 1326, 1329, 1353, 1354, 1397, 1402, 1421, 1428, 1431, 1458, 1463, 1504, 1515, 1520, 1560, 1565, 1598, 1647, 1657, 1664, 1667, 1678, 1686, 1708

HABITAT MANAGEMENT

22, 34, 201, 237, 281, 313, 373, 400, 438, 440, 486, 524, 598, 662, 962, 1046, 1047, 1051, 1253, 1329, 1397, 1515, 1520, 1647, 1667, 1686

HABITAT

34, 36, 60, 62, 153, 181, 201, 212, 237, 265, 313, 373, 376, 400, 438, 486, 551, 598, 605, 662, 684, 695, 730, 731, 747, 944, 945, 982, 1044, 1046, 1047, 1051, 1094, 1136, 1166, 1208, 1243, 1253, 1258, 1283, 1284, 1289, 1326, 1329, 1353, 1354, 1397, 1402, 1421, 1431, 1504, 1520, 1565

FORAGING BEHAVIOR

11, 16, 33, 60, 144, 153, 229, 230, 265, 395, 440, 598, 610, 695, 825, 944, 985, 1258, 1329, 1353, 1354, 1458, 1520, 1560

BREEDING, NESTING

11, 16, 17, 18, 40, 57, 153, 201, 212, 229, 230, 372, 598, 605, 610, 617, 624, 695, 728, 731, 810, 815, 816, 928, 960, 1067, 1196, 1243, 1255, 1260, 1274, 1289, 1353, 1354, 1520, 1560, 1565, 1598, 1708

NEST AND ROOST TREES

11, 281, 440, 610, 815, 1208, 1260, 1283, 1289, 1463, 1520, 1686

NEST BOXES AND HOUSES

11, 281, 440, 508, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

11, 117, 471, 551, 610, 778, 928, 945, 1026, 1136, 1326, 1428, 1431, 1515, 1520, 1657, 1678

RELATIONS WITH OTHER FAUNA

11, 1458, 1708

TERRITORY

16, 898, 1329, 1458

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 62, 193, 199, 212, 551, 525, 730, 731, 747, 778, 982, 1044, 1196, 1258, 1284, 1402, 1421, 1678

IDENTIFICATION, TAXONOMY

610, 695, 1196, 1206, 1208, 1243, 1284, 1289

RED-BREASTED NUTHATCH, *SITTA CANADENSIS*

SUMMARY

16, 32, 33, 34, 49, 53, 75, 117, 123, 151, 153, 178, 201, 211, 212, 237, 281, 304, 346, 348, 350, 358, 376, 395, 438, 440,

455, 486, 508, 551, 564, 598, 605, 607, 610, 617, 628, 662, 684, 695, 730, 731, 747, 778, 817, 820, 825, 827, 921, 928, 945, 982, 985, 991, 1019, 1022, 1023, 1026, 1038, 1044, 1046, 1047, 1051, 1054, 1069, 1089, 1090, 1093, 1094, 1111, 1136, 1166, 1167, 1180, 1196, 1206, 1208, 1243, 1258, 1259, 1260, 1284, 1289, 1326, 1327, 1329, 1333, 1351, 1353, 1354, 1366, 1397, 1402, 1421, 1428, 1431, 1440, 1443, 1458, 1475, 1504, 1515, 1520, 1565, 1594, 1624, 1663, 1664, 1667, 1669, 1686, 1697, 1698, 1708

HABITAT MANAGEMENT

34, 49, 53, 201, 237, 281, 304, 438, 440, 486, 598, 662, 1019, 1022, 1023, 1046, 1047, 1051, 1329, 1397, 1515, 1520, 1663, 1667, 1686

HABITAT

34, 53, 123, 151, 201, 237, 307, 346, 376, 438, 486, 551, 598, 605, 607, 628, 662, 684, 695, 730, 731, 747, 921, 945, 982, 1038, 1044, 1046, 1051, 1094, 1111, 1136, 1166, 1167, 1180, 1208, 1243, 1258, 1284, 1289, 1326, 1327, 1329, 1353, 1354, 1397, 1402, 1421, 1431, 1443, 1475, 1504, 1515, 1520, 1565, 1594, 1624, 1698

FORAGING BEHAVIOR

16, 33, 151, 395, 440, 598, 607, 610, 695, 825, 827, 985, 1069, 1167, 1258, 1326, 1327, 1329, 1353, 1354, 1458, 1520, 1697

BREEDING, NESTING

16, 151, 211, 212, 350, 455, 564, 598, 605, 610, 617, 695, 731, 817, 820, 928, 991, 1022, 1054, 1089, 1090, 1093, 1196, 1243, 1259, 1260, 1289, 1353, 1354, 1366, 1520, 1565, 1624, 1669, 1708

NEST AND ROOST TREES

281, 440, 610, 817, 991, 1019, 1022, 1208, 1260, 1289, 1351, 1520, 1686

NEST BOXES AND HOUSES

281, 440, 508, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

75, 117, 551, 610, 778, 928, 945, 1026, 1136, 1259, 1326, 1327, 1428, 1431, 1515, 1520, 1697

RELATIONS WITH OTHER FAUNA

358, 827, 1458, 1708

TERRITORY

16, 1329, 1458

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 49, 212, 551, 684, 730, 731, 747, 778, 921, 982, 1044, 1094, 1196, 1258, 1284, 1333, 1402, 1421, 1440, 1594

IDENTIFICATION, TAXONOMY

75, 211, 348, 610, 695, 1196, 1206, 1208, 1243, 1284, 1289

BROWN-HEADED NUTHATCH, *SITTA PUSILLA*

SUMMARY

59, 117, 281, 395, 406, 438, 504, 586, 605, 668, 695, 778, 945, 985, 1051, 1142, 1145, 1158, 1196, 1206, 1243, 1260, 1284, 1354, 1618, 1664, 1686, 1708

HABITAT MANAGEMENT

281, 406, 438, 586, 1051, 1686

HABITAT

438, 586, 605, 695, 945, 1051, 1284, 1354

FORAGING BEHAVIOR

395, 695, 985, 1354

BREEDING, NESTING

59, 504, 605, 668, 695, 1145, 1158, 1196, 1243, 1260, 1354, 1708

NEST AND ROOST TREES

59, 281, 406, 1260, 1686

NEST BOXES AND HOUSES

281, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

117, 778, 945, 1142

RELATIONS WITH OTHER FAUNA

1708

DISTRIBUTION, POPULATION DENSITY, STATUS

778, 1196, 1284, 1664

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1243, 1284

PYGMY NUTHATCH, *SITTA PYGMAEA*

SUMMARY

32, 33, 60, 62, 117, 123, 143, 144, 153, 193, 201, 212, 376, 395, 400, 486, 508, 520, 617, 684, 731, 747, 778, 857, 928, 944, 985, 991, 1026, 1038, 1044, 1094, 1142, 1167, 1196, 1208, 1260, 1284, 1326, 1335, 1337, 1351, 1352, 1353, 1354, 1402, 1421, 1439, 1504, 1520, 1565, 1617, 1663, 1664, 1667, 1697, 1708

HABITAT MANAGEMENT

201, 400, 486, 1352, 1520, 1663, 1667

HABITAT

60, 62, 123, 153, 201, 212, 376, 400, 486, 684, 731, 747, 944, 1038, 1044, 1094, 1167, 1208, 1284, 1326, 1353, 1354, 1402, 1421, 1439, 1504, 1520, 1565, 1617

FORAGING BEHAVIOR

33, 60, 144, 153, 395, 944, 985, 1167, 1326, 1353, 1354, 1520, 1697

BREEDING, NESTING

143, 153, 201, 212, 520, 617, 731, 857, 928, 1196, 1260, 1353, 1354, 1520, 1565, 1708

NEST AND ROOST TREES

991, 1208, 1260, 1351, 1520

NEST BOXES AND HOUSES 508 BIOLOGY, ECOLOGY, LIFE HISTORY

117, 778, 928, 1026, 1142, 1326, 1439, 1520, 1697

RELATIONS TO OTHER FAUNA

1708

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 62, 193, 212, 684, 731, 747, 778, 1044, 1093, 1196, 1284, 1335, 1337, 1402, 1421, 1664

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

BROWN CREEPER, *CERTHIA FAMILIARIS*

SUMMARY

32, 46, 53, 60, 123, 129, 131, 153, 161, 175, 182, 198, 212, 249, 250, 265, 272, 282, 304, 326, 327, 340, 376, 400, 415, 438, 440, 486, 551, 580, 582, 605, 607, 610, 617, 662, 684, 695, 731, 747, 777, 778, 916, 928, 944, 945, 982, 985, 991, 1016, 1019, 1022, 1023, 1038, 1046, 1047, 1048, 1094, 1106, 1111, 1136, 1166, 1167, 1180, 1194, 1196, 1206, 1208, 1243, 1267, 1271, 1284, 1290, 1326, 1327, 1329, 1333, 1351, 1352, 1353, 1354, 1397, 1402, 1407, 1421, 1439, 1443, 1504, 1515, 1520, 1561, 1565, 1594, 1606, 1612, 1663, 1664, 1667, 1678, 1697, 1698

HABITAT MANAGEMENT

53, 282, 304, 400, 438, 440, 486, 662, 1019, 1022, 1023, 1046, 1047, 1327, 1352, 1397, 1515, 1520, 1663, 1667

HABITAT

53, 60, 123, 153, 212, 265, 272, 304, 376, 400, 415, 438, 486, 605, 607, 662, 684, 695, 731, 747, 944, 945, 982, 1038, 1046, 1047, 1094, 1111, 1136, 1166, 1167, 1180, 1194, 1208, 1243, 1267, 1284, 1290, 1326, 1327, 1329, 1353, 1354, 1397, 1402, 1421, 1439, 1443, 1504, 1515, 1520, 1565, 1554, 1698

FORAGING BEHAVIOR

46, 153, 265, 326, 440, 607, 610, 695, 944, 985, 1167, 1194, 1267, 1326, 1327, 1329, 1353, 1354, 1520, 1697

BREEDING, NESTING

129, 131, 153, 161, 175, 182, 212, 249, 250, 326, 327, 340, 580, 582, 605, 610, 617, 695, 731, 777, 916, 928, 1016, 1019, 1022, 1048, 1194, 1196, 1243, 1271, 1290, 1353, 1354, 1407, 1520, 1561, 1565, 1606, 1612

NEST AND ROOST TREES

282, 326, 440, 610, 991, 1019, 1022, 1023, 1208, 1351, 1520

NEST BOXES AND HOUSES

282, 440, 610, 695

BIOLOGY, ECOLOGY, LIFE HISTORY

326, 551, 610, 778, 928, 945, 1016, 1136, 1326, 1327, 1439, 1515, 1520, 1678, 1697

DISTRIBUTION, POPULATION DENSITY, STATUS

198, 212, 551, 684, 731, 747, 778, 982, 1094, 1106, 1196, 1267, 1284, 1333, 1402, 1421, 1594, 1664, 1678

IDENTIFICATION, TAXONOMY

610, 695, 1196, 1206, 1208, 1243, 1284, 1290

HOUSE WREN, *TROGLODYTES AEDON*

SUMMARY

32, 53, 60, 62, 68, 69, 80, 117, 127, 153, 181, 197, 190, 201, 212, 237, 265, 268, 272, 292, 319, 346, 360, 376, 395, 400, 440, 472, 486, 506, 508, 545, 551, 598, 605, 611, 617, 623, 655, 661, 684, 695, 731, 738, 747, 772, 773, 778, 920, 928, 945, 987, 995, 1010, 1011, 1019, 1023, 1024, 1038, 1044, 1045, 1087, 1094, 1136, 1156, 1166, 1196, 1206, 1208, 1217, 1243, 1258, 1282, 1284, 1286, 1290, 1326, 1327, 1329, 1351, 1352, 1353, 1354, 1356, 1370, 1371, 1397, 1443, 1463, 1492, 1504, 1508, 1515, 1516, 1520, 1523, 1524, 1565, 1566, 1594, 1596, 1616, 1617, 1625, 1654, 1660, 1663, 1664, 1667, 1678, 1698, 1707

HABITAT MANAGEMENT

53, 80, 201, 237, 400, 440, 486, 598, 1019, 1023, 1024, 1258, 1329, 1352, 1397, 1508, 1515, 1520, 1523, 1596, 1663, 1667

HABITAT

53, 60, 62, 127, 153, 181, 201, 212, 237, 265, 272, 346, 376, 400, 486, 551, 598, 605, 684, 695, 731, 738, 747, 920, 945, 1038, 1044, 1094, 1136, 1156, 1208, 1243, 1282, 1284, 1290, 1326, 1327, 1329, 1353, 1354, 1397, 1565, 1504, 1508, 1515, 1520, 1523, 1565, 1594, 1617, 1625, 1654, 1698, 1707

FORAGING BEHAVIOR

60, 153, 265, 360, 395, 440, 598, 695, 1258, 1326, 1327, 1329, 1353, 1354, 1520

BREEDING, NESTING

68, 69, 127, 153, 197, 201, 212, 268, 292, 319, 472, 506, 545, 598, 605, 611, 617, 623, 655, 661, 695, 731, 772, 773, 928, 995, 1010, 1011, 1019, 1024, 1045, 1156, 1196, 1217, 1243, 1286, 1290, 1353, 1354, 1356, 1371, 1492, 1516, 1520, 1524, 1565, 1596, 1616, 1707

NEST AND ROOST TREES

127, 440, 1019, 1023, 1208, 1282, 1290, 1351, 1463, 1520, 1707

NEST BOXES AND HOUSES

440, 508, 695, 995, 1010, 1707

BIOLOGY, ECOLOGY, LIFE HISTORY

117, 551, 778, 928, 945, 987, 1087, 1136, 1326, 1327, 1370, 1515, 1520, 1566, 1678

RELATIONS WITH OTHER FAUNA

197, 268, 319, 506, 1616, 1707

TERRITORY

1156, 1329, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

32, 62, 190, 212, 346, 551, 684, 731, 747, 778, 920, 1044, 1094, 1196, 1258, 1284, 1594, 1664, 1678

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1243, 1284, 1290

BROWN-THROATED WREN, *TROGLODYTES BRUNNEICOLLIS*

SUMMARY

117, 1196, 1208, 1284, 1353, 1354

HABITAT

1208, 1284, 1353, 1354

FORAGING BEHAVIOR

1353, 1354

BREEDING, NESTING

1196, 1353, 1354

NEST AND ROOST TREES

1353, 1354

BIOLOGY, ECOLOGY, LIFE HISTORY

117

DISTRIBUTION, POPULATION DENSITY, STATUS

1196, 1284

IDENTIFICATION, TAXONOMY

1196, 1208, 1284

WINTER WREN, *TROGLODYTES TROGLODYTES*

SUMMARY

43, 53, 117, 167, 201, 212, 264, 304, 395, 456, 507, 551, 577, 580, 605, 607, 617, 628, 662, 695, 731, 747, 763, 764, 928, 945, 982, 987, 1030, 1046, 1047, 1069, 1087, 1136, 1166, 1167, 1180, 1196, 1206, 1208, 1284, 1285, 1329, 1353, 1354, 1439, 1475, 1515, 1565, 1594, 1596, 1634, 1663, 1664

HABITAT MANAGEMENT

53, 201, 304, 577, 662, 1046, 1047, 1329, 1515, 1596, 1663

HABITAT

53, 201, 212, 304, 456, 551, 577, 605, 607, 628, 662, 695, 731, 747, 945, 982, 1046, 1047, 1136, 1166, 1167, 1180, 1208, 1284, 1329, 1353, 1354, 1439, 1475, 1515, 1565

FORAGING BEHAVIOR

264, 395, 607, 695, 1069, 1167, 1329, 1353, 1354

BREEDING, NESTING

201, 212, 264, 580, 605, 617, 695, 731, 763, 764, 928, 1030, 1196, 1285, 1353, 1354, 1565, 1596, 1634

NEST AND ROOST TREES

580, 1208

NEST BOXES AND HOUSES

695

BIOLOGY, ECOLOGY, LIFE HISTORY

43, 117, 507, 551, 928, 245, 987, 1087, 1136, 1439, 1515

TERRITORY

264, 1329, 1596

DISTRIBUTION, POPULATION DENSITY, STATUS

212, 456, 551, 731, 747, 982, 1196, 1203, 1284, 1594, 1664

IDENTIFICATION, TAXONOMY

695, 1196, 1206, 1208, 1284

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United States Regions

Fischer, William C., and B. Riley McClelland.

1983. A cavity-nesting bird bibliography—including related titles on forest snags, fire, insects, disease, and decay. USDA For. Serv. Gen. Tech. Rep. INT-140, 79 p. Intermt. For. and Range Exp. Stn., Ogden, Utah 84401.

Provides subject matter and geographic keyword indexes to more than 1,700 titles containing information about 86 species of cavity-nesting birds that inhabit North American forests. Related titles containing information about forest snags, fire, insects, disease, and decay are included.

KEYWORDS: cavity-nesting birds, forest snags, fire effects, insects, disease, decay

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