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Compiled by Thomas J. Cortese
Barbara A. Groshek



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Special Scientific Report—Wildlife

The *Special Scientific Report—Wildlife* series contains technical reports about various species of wildlife and related topics such as pesticide effects. Typical subjects include advances in knowledge arising as by-products of broader studies; status, progress, or data reports; surveys, description of equipment, gear, and techniques; proceedings of technical conferences; and technical bibliographies. Data are included in tabular and graphic form. Publications are usually typeset and have a standard size of 20 × 26 cm (7 7/8 × 10 1/4 in.); length varies. Intended audiences are research scientists and technically trained management personnel. First issued in 1949, the series merged with the *Technical Paper* series in 1985 and was renamed *Fish and Wildlife Technical Report*.

1. ALDRICH, J. W., ET AL. 1949. Migration of some North American waterfowl: a progress report on an analysis of banding records. 49 pp.
Migration information is presented by species. Maps are included.
2. CRISSEY, W. F., ET AL. 1949. Waterfowl populations and breeding conditions—summer 1949: with notes on woodcock and wilson snipe. 242 pp.
Presents results of waterfowl breeding ground surveys in Canada and the United States. Includes reports on American woodcock (*Scolopax minor*) and common snipe (*Gallinago gallinago*) studies.
3. ADAMS, L. 1950. A punch-card system suitable for use with small samples in wildlife management and research. 7 pp.
Punch card system is described and compared with Hollerith punch card systems.
4. SCHEFFER, V. B. 1950. Experiments in the marking of seals and sea lions. 33 pp.
Reviews marking experiments of seals, sea lions, and fur seals. Discusses results of certain northern fur seal (*Callorhinus ursinus*) studies.
5. SAUNDERS, G. B., A. D. HOLLOWAY, AND C. O. HANDLEY, JR. 1950. A fish and wildlife survey of Guatemala. 162 pp.
Catalogs game birds and shorebirds and provides general comments on hunting, game laws, and geographical regions and their game birds. Reports on stream and lake surveys and makes recommendations for the development of fishery resources. Presents a systematic list of mammals and a key for their identification.
6. AUSTIN, O. L., JR., AND F. WILKE. 1950. Japanese fur sealing. 91 pp.
Assembles available data on distribution, abundance, and ecology of northern fur seals (*Callorhinus ursinus*) in Japanese waters, with special reference to the species' importance in Japanese economy. Attempts to clarify issues involved with fur sealing.
7. STEENIS, J. H. 1950. Waterfowl habitat management in the Tennessee Valley. 14 pp.
Discusses opportunities and limitations of waterfowl habitat management and coordination of management with malaria control operations. Describes developing subimpoundments, controlling erosion, and planting aquatics.
8. WILLIAMS, C. S., ET AL. 1951. Waterfowl populations and breeding conditions—summer 1950, with notes on woodcock and wilson's snipe. 256 pp.
Updates and revises *Special Scientific Report—Wildlife 2* (1949).
9. LINDUSKA, J. P., AND P. F. SPRINGER. 1951. Chronic toxicity of some new insecticides to bobwhite quail. 6 pp.
Presents and discusses results of toxicity studies on northern bobwhite (*Colinus virginianus*). Compounds tested were chlordane, toxaphene, DDT, benzene hexachloride, methoxychlor, TDE (Rhothane), and parathion.
10. SPRINGER, P. F., AND J. R. WEBSTER. 1951. Effects of DDT on saltmarsh wildlife: 1949. 26 pp.
Briefly describes DDT experimental spraying program, wildlife species studied, the marsh, and tidal movements. Discusses resulting effects of DDT on vertebrates and invertebrates.
11. ROBINSON, W. B., AND M. W. CUMMINGS. 1951. Movements of coyotes from and to Yellowstone National Park. 17 pp.

- Presents and discusses results of a 5-year coyote tagging study to determine migratory habits of coyotes in Yellowstone National Park.
12. KENYON, K. W., V. B. SCHEFFER, AND D. G. CHAPMAN. 1954. A population study of the Alaska fur seal herd. 77 pp.
Suggests the present average size of the Pribilof (Alaska) northern fur seal (*Callorhinus ursinus*) herd, briefly traces its fluctuations in the past, and describes the population estimation methods used: 1) tag recovery data, 2) commercial harvest trends, and 3) harem bull count trends.
 13. CRISSEY, W. F., ET AL. 1952. Waterfowl populations and breeding conditions—summer 1951. 240 pp.
Updates and revises *Special Scientific Report—Wildlife* 8 (1949). Excludes studies on American woodcock (*Scolopax minor*) and common snipe (*Gallinago gallinago*).
 14. ALDRICH, J. W., ET AL. 1952. Investigations of woodcock, snipe and rails in 1951. 58 pp.
Discusses studies, including breeding ground surveys, of American woodcock (*Scolopax minor*), common snipe (*Gallinago gallinago*), and rails.
 15. HICKEY, J. J. 1952. Survival studies of banded birds. 177 pp.
Discusses anatomy and basis of life tables, and the characteristics of and difficulties in constructing avian life tables. Presents and discusses results of explorations in population dynamics of representative North American birds: double-crested cormorant (*Phalacrocorax auritus*), black-crowned night-heron (*Nycticorax nycticorax*), mallard (*Anas platyrhynchos*), redhead (*Aythya americana*), northern harrier (*Circus cyaneus*), Caspian tern (*Sterna caspia*), mourning dove (*Zenaida macroura*), common barn-owl (*Tyto alba*), great horned owl (*Bubo virginianus*), and blue jay (*Cyanocitta cristata*). Provides implications of mortality in reference to mallards.
 16. EVANS, C. D., A. S. HAWKINS, AND W. H. MARSHALL. 1952. Movements of waterfowl broods in Manitoba. 65 pp.
Investigates the following questions: 1) brood movements, 2) brood preferences regarding water areas, 3) brood mortality and dispersion, 4) pothole preferences of breeding adults, 5) evaluation of productivity (number of young per pair of breeding adults), and 6) classification of water areas. The study was performed in the pothole region.
 17. FOOTE, L. E., AND H. S. PETERS. 1952. Investigations of methods of appraising the abundance of mourning doves. 53 pp.
Presents and discusses results of five studies: 1) an intensive study of the call count as a census method for mourning doves (*Zenaida macroura*) on the Georgia Piedmont, 2) the call-road count as an index to breeding populations, 3) investigations of methods of determining abundance of breeding mourning doves in certain eastern States, 4) a summary of mourning dove call count investigations in Ohio, and 5) preliminary investigations on mourning dove index and survey methods in Wisconsin.
 18. ALDRICH, J. W., ET AL. 1953. Investigations of woodcock, snipe, and rails in 1952. 55 pp.
Updates and revises *Special Scientific Report—Wildlife* 14 (1952).
 19. ADDY, C. E. 1953. Fall migration of the black duck. 95 pp.
Presents results of the American black duck (*Anas rubripes*) banding throughout North America. Attempts to show where birds of important hunting areas, such as Barnegat Bay and St. Clair Flats, come from. Considers when various groups of birds move and when they may be expected to arrive from the North under present conditions.
 20. MARTIN, A. C., N. HOTCHKISS, F. M. UHLER, AND W. S. BOURN. 1953. Classification of wetlands of the United States. 14 pp.
Outlines value, classification, description, and evaluation of wetlands.
 21. U.S. FISH AND WILDLIFE SERVICE. 1953. Waterfowl populations and breeding conditions—summer 1952. 303 pp.
Updates and revises *Special Scientific Report—Wildlife* 13 (1952).
 22. WILLIAMS, C. S. 1953. 1953 status report of waterfowl. 64 pp.
Includes results of three surveys: 1) nationwide hunting season kill survey, 2) continental wintering population survey, and 3) breeding population-production survey of Canada and the United States.
 23. SCIPLE, G. W. 1953. Avian botulism: information on earlier research. 12 pp.
Summarizes avian botulism studies up to 1950.
 24. ALDRICH, J. W., ET AL. 1954. Investigations of woodcock, snipe, and rails in 1953. 68 pp.
Updates and revises *Special Scientific Report—Wildlife* 18 (1952).
 25. U.S. FISH AND WILDLIFE SERVICE. 1954. Waterfowl populations and breeding conditions—summer 1953. 250 pp.
Updates and revises *Special Scientific Report—Wildlife* 21 (1952).
 26. CRISSEY, W. F. 1954. 1954 Status report of waterfowl. 97 pp.

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- Updates and revises *Special Scientific Report—Wildlife* 22 (1953).
27. U.S. FISH AND WILDLIFE SERVICE. 1955. Waterfowl populations and breeding conditions—summer 1954. 288 pp.
Updates and revises *Special Scientific Report—Wildlife* 25 (1952).
28. U.S. FISH AND WILDLIFE SERVICE. 1955. Investigations of woodcock, snipe, and rails in 1954. 62 pp.
Updates and revises *Special Scientific Report—Wildlife* 24 (1952). Includes wintering-ground studies.
29. CRISSEY, W. F. 1955. 1955 status report of waterfowl. 105 pp.
Updates and revises *Special Scientific Report—Wildlife* 26 (1953).
30. U.S. FISH AND WILDLIFE SERVICE. 1956. Waterfowl populations and breeding conditions—summer 1955. 267 pp.
Updates and revises *Special Scientific Report—Wildlife* 25 (1952).
31. U.S. FISH AND WILDLIFE SERVICE. 1956. Investigations of woodcock, snipe, and rails in 1955. 54 pp.
Revises and updates *Special Scientific Report—Wildlife* 28 (1952).
32. EVANS, C. D., AND K. E. BLACK. 1956. Duck production studies on the prairie potholes of South Dakota. 59 pp.
Presents and discusses results of a study in South Dakota that considers the value of pothole country to ducks, the relative values of various pothole types, and the effect of the pothole drainage program on ducks. Includes data on duck populations, pothole use, breeding season mobility, and habitat use.
33. CRISSEY, W. F. 1956. 1956 Status report of waterfowl. 110 pp.
Updates and revises *Special Scientific Report—Wildlife* 29 (1954).
34. U.S. FISH AND WILDLIFE SERVICE. 1957. Investigations of woodcock, snipe, and rails in 1956. 85 pp.
Updates and revises *Special Scientific Report—Wildlife* 31 (1952).
35. NICHOLSON, A. J. 1957. Summary of sportsmen's expenditures, Missouri River basin. 15 pp.
Summarizes results of previous surveys of the average daily expenditure of fishermen or hunters in specific areas.
36. LOW, S. H. 1957. Waterfowl banding in the Canadian Prairie Provinces. 30 pp.
Presents and discusses results of Canadian bird-banding and recoveries from 1954 to 1956.
37. CRISSEY, W. F. 1957. 1957 Status report of waterfowl. 122 pp.
Updates and revises *Special Scientific Report—Wildlife* 33 (1954).
38. KENYON, K. W., D. W. RICE, C. S. ROBBINS, AND J. W. ALDRICH. 1958. Birds and aircraft on the Midway Islands, November 1956–June 1957 investigations. 51 pp.
Examines bird hazard to aircraft on Midway Islands and investigates population dynamics and habits of species involved. Tests control methods. Primary species discussed are Laysan albatross (*Diomedea immutabilis*), black-footed albatross (*D. nigripes*), and sooty tern (*Sterna fuscata*).
39. BUMP, G. 1958. Red-legged partridges of Spain. 38 pp.
Considers red-legged partridges (*Alectoris rufa hispanica*) and (*A. r. intercedens*) for possible introduction into the United States. Describes partridges, their distribution and abundance in Spain, habitat, food and water, general habits, and precipitation and temperature tolerances. Discusses predation, parasites, diseases, usefulness, relation to agriculture and competition with other game species. Presents handling techniques.
40. CRISSEY, W. F. 1958. 1958 Status report of waterfowl. 133 pp.
Updates and revises *Special Scientific Report—Wildlife* 37 (1954).
41. BUCKLEY, J. L. 1958. The Pacific walrus. 29 pp.
Describes the Pacific walrus (*Odobenus rosmarus divergens*), its migrations, habitat, food habits, population dynamics, population status, age determination, and growth. Discusses value, harvest, waste, and management of walrus. Suggests future research needs.
42. KIEL, W. H., JR. 1959. Mourning dove management units, a progress report. 24 pp.
Tentative mourning dove management units for the United States are outlined on the basis of an analysis of bandings during the 1953–57 period.
43. KLEIN, D. R. 1959. Saint Matthew Island reindeer-range study. 48 pp.
Presents and discusses results of reindeer-range relations on St. Matthew Island in the Bering Sea. Includes data on physical condition of reindeer and winter and summer range use.

44. RICE, D. W. 1959. Birds and aircraft on Midway Islands 1957-1958 investigations. 49 pp.
Describes hazards to aircraft at Midway Atoll in 1957-58 caused by Laysan albatross (*Diomedea immutabilis*), black-footed albatross (*D. nigripes*), and sooty tern (*Sterna fuscata*). Discusses control methods, including destroying birds and their eggs, leveling and clearing land to eliminate updrafts, and shooting and harassing birds. The Midway Islands include a very substantial portion of the world's albatross breeding grounds.
45. CRISSEY, W. F. 1959. 1959 Status report of waterfowl. 169 pp.
Updates and revises *Special Scientific Report—Wildlife* 26 (1954).
46. [Not issued]
47. WARD, A. L., AND R. M. HANSEN. 1960. The burrow-builder and its use for control of pocket gophers. 7 pp.
Describes the "burrow builder"—a piece of equipment which, when attached to a tractor, constructs artificial gopher runways at controlled depths below the surface of the ground and mechanically places bait in the runways. Discusses tests of burrow builders in Colorado for control of Eastern (plains) pocket gophers (*Geomys bursarius*) and Western (mountain) pocket gophers (*Thomomys talpoides*). Presents possible applications.
48. KENYON, K. W., AND D. L. SPENCER. 1960. Sea otter population and transplant studies in Alaska, 1959. 29 pp.
Presents and evaluates results of an aerial survey of sea otters (*Enhydra lutris*) in the western Aleutian Islands in 1959. Estimates sea otter population in Alaska. Discusses past, present, and future sea otter transplants from Amchitka to the Pribilof Islands.
49. KIEL, W. H., JR. 1960. Mourning dove status report—1960. 34 pp.
An index to the 1960 mourning dove breeding population was obtained by a call-count survey conducted throughout the United States. Trends in the breeding-population index are calculated for three management units and for hunting and nonhunting States within management units.
50. ROBBINS, C. S. 1960. Woodcock status report, 1960. 26 pp.
Compares singing ground-counts of American woodcock (*Scolopax minor*) for 1959 and 1960. Information is for areas east of Wisconsin and north of Tennessee and South Carolina.
51. CRISSEY, W. F. 1960. Waterfowl status report, 1960. 192 pp.
Updates and revises *Special Scientific Report—Wildlife* 26 (1954).
52. ATWOOD, E. L., AND C. F. WELLS, JR. 1960. Waterfowl harvest in the United States during the 1959-60 hunting season. 25 pp.
Presents results of a survey of hunters regarding amount of hunting done and number of ducks shot. This information was previously included in annual waterfowl status reports.
53. GREENHALL, A. M., AND G. STELL. 1960. Bionomics and chemical control of free-tailed house bats (*Molossus*) in Trinidad. 20 pp.
Evaluates previous studies on control methods. Discusses distribution, species, and abundance of bats, sex ratios, breeding cycles, and behavioral observations. Describes population assessment methods. Presents and discusses results of chemical control experiment.
54. GEIS, A. D., AND S. M. CARNEY. 1961. Results of duck-wing collection in the Mississippi Flyway, 1959-60. 120 pp.
Presents results of a new (1959) method for collecting information on age, sex, and species composition of waterfowl kill, in which duck hunters mailed in wings of ducks they bagged.
55. ATWOOD, E. L., AND C. F. WELLS, JR., COMPILER. 1961. Waterfowl harvest in the United States during the 1960-61 hunting season. 20 pp.
Updates and revises *Special Scientific Report—Wildlife* 52 (1960).
56. ATWOOD, E. L., AND C. F. WELLS, JR. 1961. Waterfowl harvest in the Mississippi Flyway States during the 1960-61 hunting season. 49 pp.
Updates and revises *Special Scientific Report—Wildlife* 52 (1960) for Mississippi Flyway States only.
57. KIEL, W. H., JR., COMPILER. 1961. Mourning dove status report, 1961. 34 pp.
Updates and revises *Special Scientific Report—Wildlife* 49 (1960).
58. MARTIN, F. W. 1961. Woodcock status report, 1961. 29 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960). Discusses factors affecting reliability of singing ground survey.
59. KACZYNSKI, C. F., AND A. D. GEIS. 1961. Wood duck banding program, progress report, 1959 and 1960. 41 pp.
Discusses uses and limitations of data generated by the wood duck (*Aix sponsa*) banding program initiated in the Mississippi Flyway in 1959. Reports geographical distributions of recoveries. Data are

- examined for changes in recovery rates between years, for regional differences in recovery rates associated with opening dates of hunting season, and for differences in recovery rates between age groups.
60. SMITH, R. I., AND A. D. GEIS. 1961. Pre-hunting-season banding of mallards and black ducks progress report, 1959 and 1960. 29 pp.
Summarizes progress made in the pre-hunting season mallard (*Anas platyrhynchos*) and American black duck (*A. rubripes*) banding program and discusses factors influencing effectiveness of pre-season banding. Data from the Mail Questionnaire Survey and the Wing Collection Survey are used to estimate size, age composition, and harvest rate of pre-season mallard populations of the Mississippi Flyway.
61. CRISSEY, W. F. 1961. Waterfowl status report, 1961. 122 pp.
Updates and revises *Special Scientific Report—Wildlife* 51 (1960). Includes wing collection survey data.
62. BUMP, G., AND W. H. BOHL. 1961. Red junglefowl and kalij pheasants. 41 pp.
Considers red junglefowl (*Gallus gallus*) and kalij pheasants (*Lophura leucomelana*) for introduction into the United States. Describes the birds, their taxonomy and distribution, habitat and cover preferences, climatic comparisons, food and water, and general habits. Discusses predation, reproductive capacity, diseases and parasites, bird usefulness, competition, relation to agriculture, and breeding and raising.
63. BOEKER, E. L., AND J. W. ALDRICH. 1961. Study of experimental sandhill crane hunting season in New Mexico during January 1961. 24 pp.
Presents results of first sandhill crane (*Grus canadensis*) open hunting season in January 1961 in New Mexico. Describes pre- and post-season populations. Provides weights, measurements, sex and age ratios, and food eaten of cranes that were through checking stations.
64. HARRIS, V. T., AND F. WEBERT. 1962. Nutria feeding activity and its effect on marsh vegetation in southwestern Louisiana. 53 pp.
The effect of nutrias (*Myocastor coypus*) on marsh vegetation was studied in southwestern Louisiana from 1954 to 1956 by means of plant transects, exclosures, and indices to nutria abundance. Plants studied included saltmeadow cordgrass, Olney's three-square, big cordgrass, reed, and sawgrass.
65. STEWART, R. E. 1962. Waterfowl populations in the Upper Chesapeake region. 208 pp.
Presents information on distribution, ecology, and harvest of waterfowl in the Chesapeake Bay region.
- Provides species accounts of many waterfowl species and discusses waterfowl habitats and biogeographical sections of the Upper Chesapeake region.
66. NELSON, H. K. 1962. Recent approaches to Canada goose management. 25 pp.
Discusses classification, range, and population trends of Canada geese (*Branta canadensis*). Describes management procedures, methods for obtaining cumulative kill, harvest quota system, and a modification of the quota system for the eastern prairie population. Suggests future management and research needs.
67. CRAWFORD, R. D., ET AL. 1962. Some recent findings in the inhibition of avian reproductivity. 97 pp.
Presents six papers on recent findings in the inhibition of: 1) avian sperm sustenance, 2) avian ova sustenance, 3) avian embryogenesis, 4) avian oogenesis, 5) avian spermatogenesis, and 6) avian embryo sustenance.
68. SMITH, J. D. 1962. Waterfowl status report, 1962. 127 pp.
Revises and updates *Special Scientific Report—Wildlife* 61 (1961).
69. MARTIN, F. W. 1962. Woodcock status report, 1962. 36 pp.
Revises and updates *Special Scientific Report—Wildlife* 50 (1960).
70. WIGHT, H. M. 1962. Mourning dove status report, 1962. 33 pp.
Revises and updates *Special Scientific Report—Wildlife* 49 (1960).
71. GREEN, W. E. 1963. Waterfowl utilization and hunting kill 1946 through 1960, Upper Mississippi River Wildlife and Fish Refuge and Mark Twain National Wildlife Refuge. 62 pp.
A 15-year study was made of hunter use of waterfowl on the Upper Mississippi River, and of the effects of management practices, open and closed areas, seasons, and bag limits on waterfowl harvest. Describes hunting conditions, public hunting areas, closed areas, hunting pressure since 1953, species composition of the bag, and comparative hunter success.
72. GREEN, W. E., H. K. NELSON, AND C. W. LEMKE. 1963. Methods for determining cumulative goose kill on special areas. 43 pp.
Describes area ground surveys and mailed questionnaires as methods for determining cumulative goose kill. Suggests adaptation of Horicon kill survey plan for use on other areas.
73. WIGHT, H. M., AND E. B. BAYSINGER. 1963. Mourning dove status report, 1963. 34 pp.

- Updates and revises *Special Scientific Report—Wildlife* 49 (1960). Includes 1962 and 1963 call-count surveys from Canada.
74. DAVEY, S. P. 1963. Effects of chemicals on earthworms: a review of the literature. 20 pp.
75. GLOVER, F. A., AND J. D. SMITH. 1963. Waterfowl status report, 1963. 178 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 to fit specified year.
76. MARTIN, F. W. 1963. Woodcock status report, 1963. 43 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
77. MITCHELL, R. T. 1963. The floodlight trap: a device for capturing large numbers of blackbirds and starlings at roosts. 14 pp.
MITCHELL, R. T. 1963. Assembly and operation of the floodlight trap. 7 pp.
Describes floodlight trap and its development and gives results of experimental trappings.
78. GODIN, A. J. 1964. A review of the literature on the mountain beaver. 52 pp.
Summarizes available knowledge (1964) of mountain beaver (*Aplodontia rufa*). Type localities and ranges of seven races are listed.
79. PHILLIPS, R. C. 1964. Comprehensive bibliography of *Zostera marina*. 35 pp.
A bibliography of eelgrass (*Zostera marina*).
80. BUMP, G., AND W. H. BOHL. 1964. Summary of foreign game bird propagation and liberations, 1960-1963. 48 pp.
State reports covering propagation and trial liberation of foreign game birds are summarized for 1960 through 1963. Details are provided in tabular form.
81. BUMP, G., AND J. W. BUMP. 1964. A study and review of the black francolin and the gray francolin. 86 pp.
Includes descriptions of northern black francolin (*Francolinus francolinus asiæ*) and northern gray francolin (*F. pondicerianus interpositus*). Discusses habitat, climatic requirements, food and water, general habits, effect of predation, reproductive capacity, and diseases and parasites. Analyzes competing interests, breeding, rearing, and trapping.
82. CARNEY, S. M. 1964. Preliminary keys to waterfowl age and sex identification by means of wing plumage. 47 pp.
Each of the most common species of ducks is discussed briefly, and a key outlining a logical order in which to examine age and sex characters is presented.
83. BOHL, W. H. 1964. A study and review of the Japanese green and the Korean ring-necked pheasants. 65 pp.
Presents general review of taxonomy, distribution and descriptions of Japanese green pheasants (*Phasianus colchicus*) and Korean and Manchurian ring-necked pheasants (*P. c. karpowi* and *P. c. pallasi*). Discusses their habitat and cover preferences, climatic and food and water requirements, general habits, and reproductive capacity. Considers their relation to agriculture and to other game birds within their native range, evaluates their potential for trial introduction into the United States, and suggests methods for game farm propagation.
84. CHRISTENSEN, G. C., W. H. BOHL, AND G. BUMP. 1964. A study and review of the common Indian sandgrouse and the imperial sandgrouse. 71 pp.
Includes taxonomy and distribution (Europe, Asia, Africa) of the sandgrouse family and, in particular, common Indian sandgrouse (*Pterocles exustus hindustan*) and imperial or black-bellied sandgrouse (*P. orientalis*). Topics covered include descriptions, habitats, climatic requirements, food and water, general habits, effect of predation, reproductive capacity, and diseases and parasites. Also considered are their relation to agriculture and to other game species, with notes on breeding, rearing, and trapping.
85. ROBBINS, C. S. 1966. Birds and aircraft on Midway Islands, 1959-63 investigations. 63 pp.
Provides population estimates of laysan (*Diomedea immutabilis*) and black-footed albatrosses (*D. nigripes*), and gives data on bird strikes and damage to aircraft. Summarizes experimental control methods tested. Discusses in detail studies on terrain modification, nesting, and habitat management.
86. HANSEN, H. A. 1964. Waterfowl status report, 1964. 142 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
87. WIGHT, H. M., E. B. BAYSINGER, AND R. E. TOMLINSON. 1964. Mourning dove status report, 1964. 38 pp.
Updates and revises *Special Scientific Report—Wildlife* 73 (1963).
88. MARTIN, F. W. 1964. Woodcock status report, 1964. 43 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
89. LENSINK, C. J. 1964. Distribution of recoveries from bandings of ducklings. 146 pp.
Presents recovery distributions of 10 species of game ducks banded as flightless young on the breeding grounds. Mallard recoveries from bandings grouped by geographical region are presented

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- to show distribution variations attributable to region, year of banding, sex, first year versus later years of recovery, and weather. Discusses recovery rates of mallards banded as flightless young, and affects of various factors on recovery rates.
90. HANSEN, H. A., AND M. R. HUDGINS. 1965. Waterfowl status report, 1965. 110 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
91. TOMLINSON, R. E. 1965. Mourning dove status report, 1965. 37 pp.
Updates and revises *Special Scientific Report—Wildlife* 73 (1963).
92. GOUDY, W. H., AND F. W. MARTIN. 1966. Woodcock status report, 1965. 43 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
93. CHAMBERLAIN, E. B., AND C. F. KACZYNSKI. 1965. Problems in aerial surveys of waterfowl in eastern Canada. 21 pp.
Reviews in detail American black duck (*Anas rubripes*) breeding population surveys. Presents a new method that takes phenological variations into account.
94. KREFTING, L. W., L. B. FOREST, P. C. SHELTON, AND K. T. GILBERT. 1966. Birds of Isle Royale in Lake Superior. 56 pp.
Lists 197 bird species of Isle Royale National Park Michigan and describes bird distribution and habitats, geography, and vegetation.
95. MARTINSON, R. K., ET AL. 1966. 1965 Experimental September hunting season on teal. 36 pp.
Presents and discusses data from 9-day teal hunting season in 20 States of Central and Mississippi Flyways. Mentions species and estimates numbers killed illegally. Suggests number of recreation days provided without adversely affecting continental population of any waterfowl species.
96. MENZIE, C. M. 1966. Metabolism of pesticides. 274 pp.
Describes and discusses metabolism and decomposition of pesticides, listed alphabetically.
97. MEANLEY, B., AND R. T. MITCHELL. 1966. Selected bibliography on the red-winged blackbird. 12 pp.
Lists alphabetically, by author, 128 informative references on the life history, biology, economic status, and control of the red-winged blackbird (*Agelaius phoeniceus*). A brief description is given for those reference titles that do not clearly indicate the content of the paper.
98. TALBOT, L. M. 1966. Wild animals as a source of food. 16 pp.
Discusses the possibility of animal production under adverse climatic conditions using indigenous wild animals as livestock. Primarily concerned with semiarid tropics of East and Central Africa.
99. HANSEN, H. A., AND M. R. HUDGINS. 1966. Waterfowl status report, 1966. 96 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
100. MOISAN, G., R. I. SMITH, AND R. K. MARTINSON. 1967. The green-winged teal: its distribution, migration, and population dynamics. 248 pp.
Includes information on distribution, migration, hunting kill, survival, and status of the green-winged teal (*Anas crecca*) in the Western Hemisphere.
101. GOUDY, W. H. 1967. Woodcock research and management, 1966. 40 pp.
Summarizes survey results to evaluate changes in continental breeding populations, production, and annual harvest of American woodcock (*Scolopax minor*). Discusses singing-ground surveys, banding operations, and specifically, banding and recoveries in Moosehorn National Wildlife Refuge.
102. ROBBINS, C. S., AND W. T. VAN VELZEN. 1967. The breeding bird survey, 1966. 43 pp.
Presents results of a breeding bird survey in 26 eastern States and four Canadian Provinces in 1966, and describes techniques used in the survey. Average number of birds per route is tabulated by State, along with total number of each species and percent of routes and stops on which they were recorded. Maps are presented showing range and abundance of selected species. Year-to-year comparison is made of populations of selected species on Maryland routes in 1965 and 1966.
103. HOUT, J. L. 1967. Contribution toward a bibliography on brant. 15 pp.
Emphasizes references to Pacific coast populations of brant (*Branta bernicla nigricans*) but includes some references to Atlantic coast brant (*B. b. horta*) populations.
104. GUARINO, J. L., AND E. W. SCHAFER. 1967. Magpie reduction in an urban roost. 5 pp.
Presents and discusses results of two instances of black-billed magpie (*Pica pica*) control. Poultry pellets treated with 2% 4-aminopyridine, a chemical frightening agent, were used in one instance, and pellets treated with 1% DRC (3-chloro-*p*-toluidine hydrochloride), a lethal agent, were used in the second instance. Hazards to mammals and number of treatments needed are considered.
105. MARTINSON, R. K., AND C. F. KACZYNSKI. 1967. Factors influencing waterfowl counts on aerial surveys, 1961-66. 78 pp.

- Describes aerial survey assumptions, reviews necessity for air-ground correction, and evaluates the procedure as solution to aerial index biases. Discusses problems with the technique and recommends improvements to air-ground technique.
106. WILBUR, S. R. 1967. Live-trapping North American upland game birds. 37 pp.
Presents methods used to trap upland species, emphasizing a list of pertinent literature rather than discussing each technique in detail. Covers North American gallinaceous birds of the sub families Tetraoninae, Phasianinae, and Meleagridinae, and members of Rallidae, Scolopacidae, and Columbidae that are classified as game species.
107. GODIN, A. J. 1967. Test of grit types in alleviating lead poisoning in mallards. 9 pp.
Presents and discusses results of a study of mallards (*Anas platyrhynchos*) given 0, 2, or 4 No. 6 lead shot in combination with four grit treatments: 1) no grit, 2) coarse sand, 3) mica granite, and 4) crushed oystershell.
108. MARTINSON, R. K., AND C. J. HENNY. 1967. Retention of extra-wide, lock-on, and regular bands on waterfowl. 19 pp.
Presents test results of retention of the three types of bands.
109. STIEGLITZ, W. O., AND R. L. THOMPSON. 1967. Status and life history of the everglade kite in the United States. 21 pp.
Describes the snail (Florida everglade) kite (*Rostrhamus sociabilis*), its distribution, populations, habitat, and life history. Discusses problems and limiting factors.
110. KALMBACH, E. R. 1968. Type C botulism among wild birds—a historical sketch. 8 pp.
111. HANSEN, H. A., EDITOR. 1967. Waterfowl status report 1967. 144 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
112. HOSLEY, N. W. 1968. Selected references on management of white-tailed deer 1910–1966. 46 pp.
Updates and includes references previously cited for white-tailed deer (*Odocoileus virginianus*). Excludes general accounts with no apparent new contribution to management, regional population data, annual kill reports, articles on diseases and parasites, and taxonomic and physiologic studies.
113. BULLER, R. J. 1967. Sandhill crane study in the Central Flyway. 17 pp.
Summarizes results of 4-year (1962–65) study designed to determine feasibility of extending the hunting of lesser sandhill cranes (*Grus canadensis*) in New Mexico and Texas to other Central Flyway States.
114. MCROY, C. P., AND R. C. PHILLIPS. 1968. Supplementary bibliography on eelgrass, *Zostera marina*. 14 pp.
Supplements earlier list, *Special Scientific Report—Wildlife* 79 (1964).
115. RUOS, J. L., AND R. E. TOMLINSON. 1968. Mourning dove status report, 1966. 49 pp.
Revises and updates *Special Scientific Report—Wildlife* 73 (1963). Presents "quality-check" study of field data.
116. BLANKENSHIP, L. H., AND R. E. TOMLINSON. 1967. Arizona dove wing survey, 1964. 34 pp.
Reports results of mourning dove (*Zenaida macroura*) and white-winged dove (*Z. asiatica*) wing survey. Presents information on age ratios in harvest, chronologic and geographic distribution of kill within Arizona, and feasibility of using wing surveys to obtain reliable age ratios and kill data.
117. REEVES, H. M., AND A. D. GEIS. 1968. Mourning dove capture and banding. 63 pp.
Consolidates information on techniques by which doves can be captured, especially during pre-season and post-season banding periods. Methods include nestling capture, bait trapping, nest trapping, mist netting, cannon and rocket projection netting, and oral anesthetics. Construction plans are for the most commonly used types of bait and nest traps. Conditions under which the various capture techniques may be used are discussed. Sex and age criteria are reviewed and the new banding codes of the Bird Banding Laboratory are explained as they relate to mourning doves. A selected bibliography includes references to capture methods, banding, and sex and age determination.
118. KACZYNSKI, C. F., AND E. B. CHAMBERLAIN. 1968. Aerial surveys of Canada geese and black ducks in eastern Canada. 29 pp.
Summarizes results from aerial surveys of Canada geese (*Branta canadensis*) and American black ducks (*Anas rubripes*) in eastern Canada. Information presented is based on data obtained during the summer of 1956 and 1962–66 for Canada geese and during the spring of 1955, 1956, and 1963–66 for American black ducks.
119. STICKEL, L. F. 1968. Organochlorine pesticides in the environment. 32 pp.
Constitutes a selective review of the literature concerning the occurrence, distribution, and effects of organochlorines in the environment.
120. BUMP, G., AND J. W. BUMP. 1969. A study of the spotted tinamous and the pale spotted tinamous of Argentina. 160 pp.
Tinamous are the principal upland game birds of South America. Presents in detail the characteristics, habitat and climatic requirements, life history,

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- and propagation of the several species and subspecies of spotted and pale spotted tinamous for evaluating the desirability of and potential for a successful trial introduction into the United States.
121. RUOS, J. L., AND D. MACDONALD. 1968. Mourning dove status report, 1967. 23 pp.
Revises and updates *Special Scientific Report—Wildlife* 115 (1968).
122. MARTINSON, R. K., J. F. VOELZER, AND M. R. HUDGINS. 1968. Waterfowl status report, 1968. 158 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
123. GOUDY, W. H. 1969. Woodcock research and management programs 1967 and 1968. 32 pp.
Updates and revises *Special Scientific Report—Wildlife* 101 (1967).
124. ROBBINS, C. S., AND W. T. VAN VELZEN. 1969. The breeding bird survey 1967 and 1968. 107 pp.
Updates and revises *Special Scientific Report—Wildlife* 102 (1967).
125. MCDONALD, M. E. 1969. Annotated bibliography of helminths of waterfowl (Anatidae). 333 pp.
Attempts to list all the publications dealing with helminths of waterfowl (Anatidae)—reports of their occurrence, descriptions, classification, life history, and pathological effects. It updates and revises a work published in 1965 (*Wildlife Diseases* 45). Does not include studies on prophylaxis and treatment, physiology, and general reports on poultry diseases. Publications issued before 1890 (about 120) are also omitted.
126. MCDONALD, M. E. 1969. Catalogue of helminths of waterfowl (Anatidae). 692 pp.
Revision of a catalogue published in 1965 (McDonald 1965, *Wildlife Diseases* 46, 7 microfiche, 392 pp.). Includes new material and corrections. Summarizes information available on each helminth reported as a parasite of waterfowl (Anatidae only): the names applied to it, its life history, hosts, location in the host, geographical distribution, frequency of record in waterfowl, and significance as a cause of disease.
127. MENZIE, C. M. 1969. Metabolism of pesticides. 487 pp.
Describes and discusses metabolism and decomposition of pesticides; listed alphabetically.
128. MARTINSON, R. K., J. F. VOELZER, AND S. L. MELLER. 1969. Waterfowl status report, 1969. 153 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
129. RUOS, J. L., AND D. MACDONALD. 1970. Mourning dove status report, 1968. 38 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
130. BOHL, W. H., AND G. BUMP. 1970. Summary of foreign game bird liberations 1960 to 1968 and propagation 1966 to 1968. 61 pp.
131. BOHL, W. H. 1970. A study of the crested tinamou of Argentina. 101 pp.
Detailed discussions of crested tinamou, *Eudromia elegans elegans* and *E. e. albida*, and less detailed information about *E. e. patagonica*, include habitat preferences, climate, food and water uses, general habits and behavior, reproduction, predation, and diseases and parasites. Competition with other wildlife and economic relations of crested tinamou in their native range are analyzed and projected to conditions in regions of possible liberation in the United States. Propagation techniques and trapping methods are discussed. Considerations and recommendations for introduction of the crested tinamou as a game bird into the western United States are discussed.
132. RUOS, J. L. 1970. Mourning dove status report, 1969. 35 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
133. CLARK, E. R. 1970. Woodcock status report, 1969. 35 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
134. MORROW, T. L., AND F. A. GLOVER. [1970]. Experimental studies on post-mortem changes in mallards. 25 pp.
Post-mortem changes in mallards (*Anas platyrhynchos*) were studied to develop techniques for estimating time since death in birds killed by hunters. Body temperature, eye appearance, muscle rigor, and tracheal ciliary activity were studied.
135. BLANKENSHIP, L. H., AND H. M. REEVES. 1970. Mourning dove recoveries from Mexico. 25 pp.
Provides results of mourning dove (*Zenaida macroura*) recoveries in Mexico. Possible explanations of the heterogeneous distribution of recoveries throughout Mexico are discussed. Factors influencing band reporting rates (the proportion of banded birds taken by hunters that are reported) must be resolved before Mexico's importance as a harvest area can be accurately determined.
136. BANKS, R. C. 1970. Birds imported into the United States in 1968. 64 pp.
137. JONES, C. 1970. Mammals imported into the United States in 1968. 29 pp.

138. CHAMBERLAIN, E. B., R. K. MARTINSON, AND S. L. CLARK. 1971. Waterfowl status report, 1970. 157 pp. Updates and revises *Special Scientific Report—Wildlife* 61 (1961). Includes a report of hybridization between the red wolf (*Canis rufus*) and the coyote (*C. latrans*) in Texas in 1915.
139. GEIS, A. D., R. I. SMITH, AND J. P. ROGERS. 1971. Black duck distribution, harvest characteristics, and survival. 241 pp. Presents sources of information and procedures of analysis. Discusses American black duck (*Anas rubripes*) summer and winter reference areas of banding, hunting regulations, rate of hunting kill, geographic and chronologic distribution of kill, source of kill in harvest areas, mortality and production rates, sex ratios, and population estimates. Suggests management implications and future research needs.
140. CLARK, E. R. 1971. Woodcock status report, 1970. 38 pp. Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
141. RUOS, J. L. 1971. Mourning dove status report, 1970. 36 pp. Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
142. MACDONALD, D., AND E. MARTIN. 1971. Trends in harvest of migratory game birds other than waterfowl 1964-65 to 1968-69. 29 pp. Responses to questions pertaining to harvest of migratory game birds (other than waterfowl and coots) contained in the annual mail questionnaire survey of waterfowl hunters are summarized for the hunting seasons 1964-65 through 1968-69. Analyses of these data demonstrate the weaknesses inherent in using a sampling frame based on duck stamp buyers to assess harvest and hunting of other migratory game birds.
143. PAN, H. P. 1971. Literature survey on general and comparative enzyme biochemistry of birds. 70 pp.
144. GEIS, A. D. 1971. Breeding and wintering areas of mallards harvested in various States and Provinces. 59 pp. Band recoveries from mallards were used to estimate relative contribution of various breeding and wintering areas to harvest in each State and Province, and are presented in tables. Other sources of population data, in addition to conventional waterfowl breeding population surveys, were used resulting in larger continentwide population estimates than those previously published. Patterns of similarity or dissimilarity among States in the source of harvest are mentioned.
145. PARADISO, J. L., AND R. M. NEWAK. 1971. A report on the taxonomic status and distribution of the red wolf. 36 pp.
146. ATZERT, S. P. 1971. A review of sodium monofluoroacetate (compound 1080), its properties, toxicology, and use in predator and rodent control. 34 pp.
147. JONES, C., AND J. L. PARADISO. 1971. Mammals imported into the United States in 1969. 33 pp.
148. BANKS, R. C., AND R. B. CLAPP. 1972. Birds imported into the United States in 1969. 99 pp.
149. TODD, E. I., AND K. W. KENYON. 1972. Selected bibliography on the sea otter. 40 pp. Emphasizes recent (1972) literature on the biology of the sea otter (*Enhydra lutris*).
150. SCHAFER, E. W., JR., AND D. J. CUNNINGHAM. 1972. An evaluation of 148 compounds as avian immobilizing agents. 30 pp. From 1961 to 1969, 148 compounds were tested for immobilization of red-winged blackbirds (*Agelaius phoeniceus*) and European starlings (*Sturnus vulgaris*). Of these, 25 showed enough promise to warrant advanced testing on seven additional species of wild birds: the common grackle (*Quiscalus quiscula*), rock dove, or domestic pigeon (*Columba livia*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), mallard (*Anas platyrhynchos*), ring-necked pheasant (*Phasianus colchicus*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*). Results are presented and discussed.
151. GEIS, A. D., AND F. G. COOCH. 1972. Distribution of the duck harvest in Canada and the United States. 11 pp. Comparison between Canada and the United States is made on the basis of data from mail questionnaire and wing collection surveys.
152. HEATH, R. G., J. W. SPANA, E. F. HILL, AND J. F. KREITZER. 1972. Comparative dietary toxicities of pesticides to birds. 57 pp. Presents measurements of the lethal dietary toxicity of 89 pesticidal chemicals to young northern bobwhites (*Colinus virginianus*), Japanese quail (*Coturnix japonica*), ring-necked pheasants (*Phasianus colchicus*), and mallards (*Anas platyrhynchos*).
153. CLARK, E. R. 1972. Woodcock status report, 1971. 47 pp. Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
154. GEIS, A. D. 1972. Use of banding data in migratory game bird research and management. 47 pp.

- Discusses use of banding data to: 1) determine distribution and derivation of hunting kill, 2) measure rate of kill, and 3) estimate percent mortality.
155. BARNES, V. G., JR. 1973. Pocket gophers and reforestation in the Pacific Northwest: a problem analysis. 18 pp.
Reviews pocket gopher problems in the northwestern United States, summarizes present knowledge of pocket gopher biology, outlines current control methods, and suggests future research needs.
156. ANDERSON, D. R. 1972. Bibliography on methods of analyzing bird banding data with special reference to the estimation of population size and survival. 13 pp.
157. PARADISO, J. L. 1972. Status report on cats (Felidae) of the world 1971. 43 pp.
Presents evidence that the cheetah (*Acinonyx jubatus*), leopard (*Panthera pardus*), tiger (*P. tigris*), snow leopard (*P. uncia*), jaguar (*P. onca*), ocelot (*Felis pardalis*), margay (*F. wiedii*), and little spotted cat (*F. tigrinus*) are endangered. Provides annotated list of species considered not endangered.
158. RUOS, J. L. 1972. Mourning dove status report, 1971. 40 pp.
Revises and updates *Special Scientific Report—Wildlife* 115 (1968).
159. HALVORSON, C. H. 1972. Device and technique for handling red squirrels. 10 pp.
Rapid and efficient weighing, examination, and marking of red squirrels (*Tamiasciurus hudsonicus*) resulted from use of a semiflexible wire-rod handling cone and a cloth weighing bag with a plastic window. Construction details are given.
160. HENNY, C. J., D. R. ANDERSON, AND R. S. POSPAHALA. 1972. Aerial surveys of waterfowl production in North America, 1955-71. 48 pp.
Summarizes July waterfowl production survey data collected by personnel of the Bureau of Sport Fisheries and Wildlife and other cooperating agencies during 1955-71.
161. PARADISO, J. L., AND R. D. FISHER. 1972. Mammals imported into the United States in 1970. 62 pp.
162. RILEY, G. A., AND R. T. MCBRIDE. 1972. A survey of the red wolf (*Canis rufus*). 15 pp.
Discusses the red wolf's (*Canis rufus*) status, distribution, and ecology; describes and differentiates the red wolf from other closely related canids.
163. KOLZ, A. L., G. W. CORNER, AND R. E. JOHNSON. 1973. A multiple-use wildlife transmitter. 11 pp.
Describes the transmitter and its ability to monitor temperature, activity, mortality, and location.
164. CLAPP, R. B., AND R. C. BANKS. 1973. Birds imported into the United States in 1970. 102 pp.
Birds imported into the United States in 1970 are tabulated by species, and the numbers are compared with those for 1968 and 1969. Tables list imported birds by country of origin.
165. TARSHIS, B. 1973. Studies on the collection, rearing, and biology of the blackfly (*Cnephia ornithophilia*). 16 pp.
Presents and discusses results of a 5-year study (1968-72) on *Cnephia ornithophilia* at the Patuxent Wildlife Research Center, Maryland. Includes biology, ecology, collection, and rearing data.
166. CHAMBERLAIN, E. B., D. S. BENNING, E. L. FERGUSON, M. M. SMITH, AND J. L. HALL, EDITORS. 1972. Waterfowl status report, 1972. 146 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
167. DIETER, M. P. 1973. Sex determination of eagles, owls, and herons by analyzing plasma steroid hormones. 13 pp.
Steroid hormone components from plasma of several avian species, including bald eagles (*Haliaeetus leucocephalus*), common barn-owls (*Tyto alba*), and black-crowned night-herons (*Nycticorax nycticorax*), were separated by centrifugal chromatography on silica gel columns. Sex was determined by staining steroid hormone bands with iodine, charring with sulfuric acid, and observing fluorescence under ultraviolet light.
168. COWARDIN, L. M., AND D. H. JOHNSON. 1973. A preliminary classification of wetland plant communities in north-central Minnesota. 33 pp.
A classification of wetland plant communities was developed for a study area in north-central Minnesota to analyze data on waterfowl use of habitat that were gathered by radiotelemetry. Brief descriptions are given for each community, and important plant species are listed. Discriminant function analysis was used for 40 plant species.
169. CLARK, E. R. 1973. Woodcock status report, 1972. 50 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
170. CLAPP, R. B., AND R. C. BANKS. 1973. Birds imported into the United States in 1971. 99 pp.
Updates and revises *Special Scientific Report—Wildlife* 164 (1973).
171. CLAPP, R. B., AND J. L. PARADISO. 1973. Mammals imported into the United States in 1971. 52 pp.
Mammals imported into the United States in 1971 are tabulated by species and country of origin. Total numbers imported from 1968 through 1971 are given for higher taxa and for species most frequently imported. Lists of rare and endangered

- species imported and of mammals whose importation is restricted are given.
172. MOTT, D. F., AND C. P. STONE. 1973. Bird damage to blueberries in the United States. 15 pp.
Presents results of a 1972 questionnaire on bird damage to highbush blueberries. Includes data on severity of damage, bird species involved, and crop protection.
173. STONE, C. P., AND D. F. MOTT. 1973. Bird damage to sprouting corn in the United States. 28 pp.
Presents results of a questionnaire on bird damage to sprouting corn. Includes information on damage severity, bird species involved, and crop protection.
174. PANK, L. F. 1974. A bibliography on seed-eating mammals and birds that affect forest regeneration. 28 pp.
Includes references on: 1) identification of birds and mammals that consume forest-tree seed, 2) methods for reducing seed-eating animal populations, 3) methods for deterring and repelling seed-eating animals, and 4) effects of control measures on non-target species and seed viability.
175. WILBUR, S. R. 1974. The literature of the California least tern. 18 pp.
Summarizes information contained in about 100 references to the California least tern (*Sterna antillarum*) and related subspecies. Additional records of past distribution derived from several museum collections are included.
176. RUOS, J. L. 1974. Mourning dove status report, 1972. 35 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
177. MALECKI, R. A., S. H. ALLEN, J. O. ELLISTON, K. C. SADLER, W. R. GOFORTH, AND T. S. BASKETT. 1974. Cottontail reproduction related to dieldrin exposure. 61 pp.
Wild-trapped young-of-the-year eastern cottontails (*Sylvilagus floridanus*), confined in 1-acre pens, were exposed to annual ground applications of 0.5 and 2.0 pounds of granular dieldrin per acre. Reproductive data from rabbits in treated pens were compared with control groups during six breeding seasons, 1966-1971.
178. CLARK, E. R. 1974. Woodcock status report, 1973. 43 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
179. WILBUR, S. R. 1974. The literature of the California black rail. 17 pp.
Lists and summarizes 84 papers and notes on black rail (*Laterallus jamaicensis coturniculus*), including its life history and distribution; mentions the closely related eastern black rail (*L. j. jamaicensis*).
180. SCHROEDER, L. D., S. M. CARNEY, AND E. M. MARTIN. 1974. Distribution of duck stamp sales within States during fiscal years 1962-71. 46 pp.
Summarizes duck stamp sales by county, State, flyway, and the United States.
181. CLAPP, R. B. 1974. Mammals imported into the United States in 1972. 46 pp.
Updates and revises *Special Scientific Report—Wildlife* 171 (1973).
182. LONGCORE, J. R., L. N. LOCKE, G. E. BAGLEY, AND R. ANDREWS. 1974. Significance of lead residues in mallard tissues. 24 pp.
Tissues of adult, lead-dosed mallards (*Anas platyrhynchos*) that died naturally or were sacrificed were analyzed for lead. Tissues analyzed were brain, tibia, breast muscle, heart, lung, blood, liver, and kidney.
183. LONGCORE, J. R., ET AL. 1974. Toxicity of lead and proposed substitute shot to mallards. 23 pp.
Proposed substitutes for lead shot were evaluated in a series of acute toxicity tests with pen-reared mallards (*Anas platyrhynchos*) of different ages and sexes. Mortality was compared with wild adult mallards and male American black ducks (*A. rubripes*). Effects of the presence of different types of grit in the gizzard were noted.
184. MENZIE, C. M. 1974. Metabolism of pesticides. An update. 486 pp.
Updates and supplements *Special Scientific Report—Wildlife* 127 (1969).
185. GEIS, A. D. 1974. Breeding and wintering areas of canvasbacks harvested in various States and Provinces. 78 pp.
Relations among canvasback (*Aythya valisineria*) breeding, wintering, and harvest areas were examined by analyzing banding data.
186. RUOS, J. L. 1974. Mourning dove status report, 1973. 36 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
187. CARNEY, S. M., M. F. SORENSEN, AND E. M. MARTIN. 1975. Distribution in States and counties of waterfowl species harvested during 1961-70 hunting seasons. 132 pp.
Average numbers of waterfowl harvested during 1961-70 wintering seasons are estimated, by species, for each county in the continental United States.
188. BENNING, D. S., M. M. SMITH, AND S. L. RHOADES. 1975. Waterfowl status report, 1973. 105 pp.

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- Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
189. ARTMANN, J. W. 1975. Woodcock status report, 1974. 39 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
190. DOUGLASS, J. F. 1975. Bibliography of the North American land tortoises (genus *Gopherus*). 60 pp.
Contains references on land tortoise behavior and ecology.
191. HILL, E. F., R. G. HEATH, J. W. SPAWN, AND J. D. WILLIAMS. 1975. Lethal dietary toxicities of environmental pollutants to birds. 61 pp.
Compiles and analyzes results of nearly 10 years of testing lethal dietary toxicities of pesticidal and industrial chemicals to young northern bobwhites (*Colinus virginianus*), Japanese quail (*Coturnix japonica*), ring-necked pheasants (*Phasianus colchicus*), and mallards (*Anas platyrhynchos*).
192. CRASE, F. T., AND R. W. DEHAVEN. 1975. Selected bibliography on the food habits of North American blackbirds. 20 pp.
Lists 261 references on the food habits of nine North American blackbird species and on such related subjects as examination techniques, seed dispersal, and sources of bias. Most references are briefly annotated.
193. CLAPP, R. B. 1975. Birds imported into the United States in 1972. 81 pp.
Updates and revises *Special Scientific Report—Wildlife* 164 (1973).
194. WILBUR, S. R., AND R. E. TOMLINSON. 1976. The literature of the western clapper rails. 31 pp.
Describes the California clapper rail (*Rallus longirostris obsoletus*), light-footed clapper rail (*R. l. levipes*), and Yuma clapper rail (*R. l. yunranensis*). Discusses discovery and nomenclature, distribution, life history and habitat, reasons for decline, and current (1976) status.
195. TIETJEN, H. P. 1976. Zinc phosphide—its development as a control agent for black-tailed prairie dogs. 14 pp.
Laboratory grain acceptance tests, LD50 determinations, and bioassays were used to test zinc phosphide as a control agent for black-tailed prairie dogs (*Cynomys ludovicianus*). Environmental contamination was measured and primary and secondary intoxication of nontarget vertebrates was considered.
196. ENGEL, J. M. 1976. The Indiana bat, *Myotis sodalis*: a bibliography. 11 pp.
Topics included are: behavior, collecting, banding and trapping, conservation, distribution and status, ecology, habitat and habitat selection, hibernation, homing, migration and seasonal movements, longevity, population decline and its causes, reproduction, and taxonomy.
197. CRASE, F. T., C. P. STONE, R. W. DEHAVEN, AND D. F. MOTT. 1976. Bird damage to grapes in the United States with emphasis on California. 18 pp.
Presents the results of a questionnaire dealing with severity of damage, species of birds involved, and methods of control.
198. COWARDIN, L. M. 1977. Analysis and machine mapping of the distribution of band recoveries. 8 pp.
Presents a method for calculating distance and bearing from banding site to recovery location on the basis of the solution of a spherical triangle. Discusses the advantages and disadvantages of tables of recoveries by State or degree block, axial lines, and distance of recovery from banding site for presentation and comparison of spatial distribution of band recoveries. Comparison of distributions by means of a chi-square contingency test is illustrated.
199. DAVENPORT, D. A. 1977. Computerized tabulation and display of band recovery data. 7 pp.
A data editing routine and five programs to tabulate band recovery data for analysis are presented with examples of each program's application.
200. BANKS, R. C. 1976. Wildlife importation into the United States, 1900-1972. 18 pp.
Data for birds and mammals are compiled for 1900-72. Information on reptiles and amphibians is only available for 1970 and 1971.
201. ARTMANN, J. W. 1977. Woodcock status report, 1975. 36 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
202. RUOS, J. L. 1977. Mourning dove status report, 1974. 26 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
203. JOHNSON, D. H. 1977. Some Bayesian statistical techniques useful in estimating frequency and density. 10 pp.
Presents some elementary applications of Bayesian statistics to problems faced by wildlife biologists. Conditions are described under which Bayesian confidence limits are superior to those calculated with classical methods; examples of how prior knowledge of population density can be used to sharpen inferences drawn from a new sample are given.
204. ALLEN, J. P., AND S. S. WILSON. 1977. A bibliography of references to avian botulism. 6 pp.

- In general, only articles dealing primarily with avian disease are included, as opposed to those concerned with various aspects of the biology of *Clostridium botulinum*, either type C or type E.
205. GASHWILER, J. S. 1977. Bird populations in four vegetational types in central Oregon. 20 pp.
A long-term study of birds to obtain baseline population data in relatively undisturbed major plant types was started in Deschutes County, Oregon, in 1971. The four vegetational types studied were: 1) big sagebrush (*Artemisia tridentata*), 2) western juniper (*Juniperus occidentalis*), 3) ponderosa pine (*Pinus ponderosa*), and 4) lodgepole pine (*P. contorta*).
206. CUSTER, T. W., AND R. G. OSBORN. 1977. Wading birds as biological indicators: 1975 colony survey. 28 pp.
Wading bird colonies were located and censused along the Atlantic coast from Maine to Florida. The reproductive biology of 9 species in 13 colonies was studied; further studies are suggested.
207. RUOS, J. L., AND D. D. DOLTON. 1977. Mourning dove status report, 1975. 27 pp.
Revises and updates *Special Scientific Report—Wildlife* 115 (1968).
208. DOLTON, D. D. 1977. Mourning dove status report, 1976. 27 pp.
Updates and revises *Special Scientific Report—Wildlife* 115 (1968).
209. ARTMANN, J. W. 1977. Woodcock status report, 1976. 21 pp.
Updates and revises *Special Scientific Report—Wildlife* 50 (1960).
210. CARNEY, S. M., M. F. SORENSEN, AND E. M. MARTIN. 1978. Duck stamps sold within States and counties during sales years 1966-67 through 1975-75. 46 pp.
Summarizes duck stamp sales by county, State, flyway, and the United States.
211. BENNING, D. S., S. L. RHOADES, L. D. SCHROEDER, AND M. M. SMITH. 1978. Waterfowl status report, 1974. 98 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
212. MENZIE, C. M. 1978. Metabolism of pesticides: update II. 381 pp.
Updates and supplements *Special Scientific Report—Wildlife* 127 and 184 (1969 and 1974, respectively).
213. DWYER, T. J., R. A. COON, AND P. H. GEISSLER. 1979. The technical literature on the American woodcock 1927-1978. 44 pp.
214. DOLBEER, R. A., AND R. A. STEHN. 1979. Population trends of blackbirds and starlings in North America, 1966-76. 99 pp.
A North American breeding bird survey was conducted to estimate population trends of red-winged blackbirds (*Agelaius phoeniceus*), common grackles (*Quiscalus quiscula*), brown-headed cowbirds (*Molothrus ater*), and starlings (*Sturnus vulgaris*) for 1966-76 in the United States and Canada.
215. BANKS, R. C. 1979. Human related mortality of birds in the United States. 16 pp.
Discusses hunting, damage control, research and propagation, collision, pollution, and poisoning as aspects of human-related mortality in birds.
216. OHLENDORF, H. M., E. E. KLAAS, AND T. E. KAISER. 1979. Environmental pollutants and egg-shell thickness: anhingas and wading birds in the eastern United States. 94 pp.
Eggs of anhingas (*Anhinga anhinga*) and 17 species of wading birds (herons, egrets, bitterns, ibises, and storks) were analyzed for organochlorine residues. Shell thicknesses were compared with those of eggs collected before widespread use of organochlorine pesticides. Results were compared between different regions of the United States.
217. WILSON, S. S. 1979. A bibliography of references to avian cholera. 18 pp.
Does not include papers dealing primarily with the biology of *Pasteurella multocida* rather than its disease-inducing effects in birds.
218. MARTIN, E. M. 1979. Hunting and harvest trends for migratory game birds other than waterfowl: 1964-76. 37 pp.
Presents hunting activity and harvest estimates for 10 species or groups of migratory game birds other than waterfowl, based on data collected for 13 seasons (1964-76) in the Service's Annual Questionnaire Survey of U.S. Waterfowl Hunters. These data are discussed in terms of their usefulness as index values for detecting short-term changes and long-term trends and demonstrating regional differences. Species or groups for which estimates were obtained include the white-winged dove (*Zenaida asiatica*), band-tailed pigeon (*Columba fasciata*), mourning dove (*Zenaida macroura*), American woodcock (*Scolopax minor*), common snipe (*Gallinago gallinago*), sandhill crane (*Grus canadensis*), sora (*Porzana carolina*), other rails, and gallinules, and the American coot (*Fulica americana*).
219. BURY, R. B. 1979. Review of the ecology and conservation of the bog turtle, *Clemmys muhlenbergii*. 9 pp.
Describes the bog turtle (*Clemmys muhlenbergii*) and discusses its distribution, behavior, ecology, habitat, and management.

220. REID, V. H., AND P. D. GOODRUM. 1979. Winter feeding habits of quail in longleaf-slash pine habitat. 39 pp.
Crops of northern bobwhite (*Colinus virginianus*) collected during 11 years (7,147 in winter and 92 in other seasons) in the longleaf-slash pine (*Pinus palustris*-*P. elliotii*) forest type were examined for food content. Habitat management suggestions are given.
221. BULLER, R. J. 1979. Lesser and Canadian sandhill crane populations, age structure, and harvest. 10 pp.
Lesser (*Grus canadensis canadensis*) and Canadian (*G. c. rowani*) sandhill cranes were studied from 1974-77 in portions of the Central Flyway and Saskatchewan, Canada. Estimates were made of fall and spring populations, percent juveniles in population, hunting pressure, harvest, and crippling loss. Methods used were visual estimates, hunter contacts, questionnaires, and flyway-wide survey results.
222. JOHNSON, D. H. 1979. Modeling sandhill crane population dynamics. 10 pp.
Incorporates information, including data from a recent study (Buller 1979), into a mathematical model for assessing the long-range effect of hunting on the Central Flyway population of sandhill cranes (*Grus canadensis*). The model is a simple deterministic system that embodies density-dependent rates of survival and recruitment.
223. STENDELL, R. C., R. I. SMITH, K. P. BURNHAM, AND R. E. CHRISTENSEN. 1979. Exposure of waterfowl to lead: a nationwide survey of residues in wing bones of seven species, 1972-73. 12 pp.
Wing bones of 4,190 ducks of seven species collected in 1972 and 1973 were analyzed for lead to provide a baseline for lead burdens and to determine geographic patterns of lead exposure in these species. Species studied were: the mottled duck (*Anas fulvigula*), lesser scaup (*Aythya affinis*), redhead (*Aythya americana*), American black duck (*Anas rubripes*), mallard (*Anas platyrhynchos*), canvasback (*Aythya valisineria*), and northern pintail (*Anas acuta*).
224. DEWEESE, L. R., C. J. HENNY, R. L. FLOYD, K. A. BOBAL, AND A. W. SHULTZ. 1979. Response of breeding birds to aerial sprays of trichlorfon (Dylox) and carbaryl (Sevin-4-Oil) in Montana forests. 29 pp.
Breeding density, food, nesting success, and mortality of 20 bird species were monitored at Beaverhead National Forest, Montana, in 1975 in conjunction with experimental applications of trichlorfon (Dylox) and carbaryl (Sevin-4-Oil) in western budworms (*Choristoneura occidentalis*).
225. ROSS, C. A., AND C. D. ROBERTS. 1979. Scalation of the American alligator. 8 pp.
Examination of scalation of American alligators (*Alligator mississippiensis*) from populations in the eastern and western parts of the species range revealed several scale characteristics that varied between populations, and significant variation in the number of transverse ventral rows, number of nuchal and anterior nuchal scales, number of scales in the anterior dorsal scale row, number of scales in the posterior transverse dorsal scale rows, and occurrence of caudal irregularity.
226. GOLDSBERRY, J. R., S. L. RHOADES, L. D. SCHROEDER, AND M. M. SMITH. 1980. Waterfowl status report, 1975. 86 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
227. LARNED, W. W., S. L. RHOADES, AND K. D. NORMAN. 1980. Waterfowl status report, 1976. 88 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
228. HALL, R. J. 1980. Effects of environmental contaminants on reptiles: a review. 12 pp.
The literature relating to the effects of environmental contaminants on reptiles is reviewed and certain generalizations based on studies of other kinds of vertebrates are presented. Needs for future research are discussed.
229. KROHN, W. B., AND E. G. BIZEAU. 1980. The Rocky Mountain population of the western Canada goose: its distribution, habitats, and management. 93 pp.
The western Canada goose (*Branta canadensis moffitti*) was divided into a Rocky Mountain population (RMP) and a Pacific population on the basis of band recovery patterns examined in this study and recovery data from other investigators. Habitat information obtained from nine cooperating wildlife agencies within the RMP's range provided a baseline for evaluating future changes in nesting, molting, and wintering areas.
230. BLUS, L. J., AND C. J. STAFFORD. 1980. Breeding biology and relation of pollutants to black skimmers and gull-billed terns in South Carolina. 18 pp.
The breeding biology and relation of pollutants to black skimmers (*Rynchops niger*) and gull-billed terns (*Sterna nilotica*) were investigated in South Carolina from 1969 through 1975.
231. CRAVEN, S. R. 1981. The Canada goose (*Branta canadensis*)—an annotated bibliography. 66 pp.
All aspects of Canada goose (*Branta canadensis*) biology, research, management, and taxonomy are included.

232. MENZIE, C. M. 1980. Metabolism of pesticides: update III. 709 pp.
Updates and supplements *Special Scientific Report—Wildlife* 127, 184, and 212 (1969, 1974, and 1978, respectively).
233. GEIS, A. D. 1980. Relative attractiveness of different foods at wild bird feeders. 11 pp.
Data on the relative attractiveness of various seeds, consumption rates, and costs provide a basis for determining the most beneficial feeds for use in residential bird feeders.
234. DUEBBERT, H. F., E. T. JACOBSON, K. E. HIGGINS, AND E. B. PODOLL. 1981. Establishment of seeded grasslands for wildlife habitat in the prairie pothole region. 21 pp.
Techniques are described for establishment of seeded grasslands on cultivated soils to provide wildlife habitat within the glaciated prairie pothole region in the north-central United States. The following seeded grassland types are described: 1) introduced cool-season grasses and legumes; 2) tall, warm-season native grasses; and 3) mixed-grass prairie grasses.
235. CLARK, D. R., JR. 1981. Bats and environmental contaminants: a review. 27 pp.
Discusses effects of organochlorine insecticides, mercury, and lead on bats.
236. SMITH, C. S., S. L. RHOADES, AND K. D. NORMAN. 1981. Waterfowl status report, 1977. 88 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
237. NOVARA, A. N., S. L. RHOADES, B. I. HODGES, AND K. D. NORMAN. 1981. Waterfowl status report, 1978. 96 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
238. EVANS, D. L. 1982. Status reports on twelve raptors. 68 pp.
Presents the distribution, ecology, management, status, and a bibliography of the following species: 1) bald eagle (*Haliaeetus leucocephalus*), 2) Cooper's hawk (*Accipiter cooperii*), 3) merlin (*Falco columbarius*), 4) osprey (*Pandion haliaetus*), 5) peregrine falcon (*Falco peregrinus*), 6) sharp-skinned hawk (*Accipiter striatus*), 7) crested caracara (*Polyborus cheriway*), 8) burrowing owl (*Athene cunicularia*), 9) northern aplomado falcon (*Falco femoralis*), 10) ferruginous hawk (*Buteo regalis*), 11) northern harrier (*Circus cyaneus*), and 12) prairie falcon (*Falco mexicanus*).
239. BANKS, R. C. 1981. Summary of foreign game bird liberations, 1969-78. 23 pp.
240. COULING, L. M., A. R. SEN, AND E. M. MARTIN. 1982. Reliability of kill and activity estimates in the U.S. Waterfowl Hunter Survey. 14 pp.
Data from 1971-73 mail questionnaire surveys of waterfowl hunters were used to determine the effectiveness of present United States sampling and estimation techniques. Modifications in sampling and analyzing are recommended.
241. GISH, C. D., AND D. L. HUGHES. 1982. Residues of DDT, dieldrin, and heptachlor in earthworms during two years following application. 15 pp.
242. HIGGINS, K. F., AND W. T. BARKER. 1982. Changes in vegetation structure in seeded nesting cover in the prairie pothole region. 26 pp.
Species composition, canopy cover, plant height, and visual obstruction were studied in 365 stands of seeded nesting cover during 1977-79. Guidelines for stand quality and longevity in management of seeded nesting cover are suggested.
243. WILSON, S. S., AND L. N. LOCKE. 1982. Bibliography of references to avian botulism: update. 10 pp.
Updates and revises *Special Scientific Report—Wildlife* 204 (1977).
244. SHORT, H. L., AND K. P. BURNHAM. 1982. Technique for structuring wildlife guilds to evaluate impacts on wildlife communities. 34 pp.
Describes a technique for ordering wildlife information according to physical strata and vegetative structure so that a variety of statistical analyses can be accomplished.
245. OHLENDORF, H. M., ET AL. 1982. Organochlorine residues in eggs of Alaskan seabirds. 41 pp.
One egg from each of 440 clutches of eggs of 19 species of Alaskan seabirds collected in 1973-76 was analyzed for organochlorine residues. Frequency of occurrence and concentration of residues were evaluated geographically and by species.
246. VOELZER, J. F., ET AL., EDITORS. 1982. Waterfowl status report, 1979. 96 pp.
Updates and revises *Special Scientific Report—Wildlife* 61 (1961).
247. GRIFFIN, C. R., T. S. BASKETT, AND R. D. SPARROWE. 1982. Ecology of bald eagles wintering near a waterfowl concentration. 12 pp.
Reports on a study of the ecology of bald eagles (*Haliaeetus leucocephalus*) wintering in the vicinity of Swan Lake National Wildlife Refuge in north-central Missouri and, specifically, examines the association of the eagles with waterfowl during the winters of 1975-76, 1976-77, and 1977-78.
248. STOUTT, J. H. 1982. Habitat use and productivity of canvasbacks in southwestern Manitoba, 1961-72. 31 pp.

A study of canvasback (*Aythya valisineria*) breeding populations, nest success, productivity, and habitat requirements was conducted from 1961 to 1972 on a 181.3-km² area south of Minnedosa, Manitoba. Additional survey work was conducted in an area northwest of Minnedosa.

249. DUNKS, J. H., ET AL. 1982. Migration, harvest, and population dynamics of mourning doves banded in the central management unit, 1967-77. 128 pp.

Presents information on mourning dove (*Zenaida macroura*) habitat, hunting regulations, and harvest in the central management unit (CMU); distribution and derivation of band recoveries in and from the CMU; distribution of mourning dove harvest in Mexico and Central America; chronology of migration; survival and recovery rates; effects of hunting on CMU mourning dove populations; and indirect nationwide mourning dove population estimates.

250. ATKINSON, R. D., T. S. BASKETT, AND K. C. SADLER. 1982. Population dynamics of mourning doves banded in Missouri. 20 pp.

Discusses Missouri mourning dove (*Zenaida macroura*) banding and recoveries. Describes survival rates and percent mortality.

251. CARNEY, S. M., M. F. SORENSON, AND E. M. MARTIN. 1983. Duck stamps sold within States and

counties during sales years 1971-72 through 1980-81. 44 pp.

Summarizes duck stamp sales by county, State, flyway, and the United States.

252. BOYLE, S. A., AND F. B. SAMSON. 1983. Non-consumptive outdoor recreation: an annotated bibliography of human-wildlife interactions. 113 pp.

The 536 citations consist of books, articles, government publications, organization reports, theses and dissertations, and selected Federal Aid reports written since 1950 that primarily concern terrestrial vertebrates of North America.

253. BYRD, G. V., AND D. W. WOOLINGTON. 1983. Ecology of Aleutian Canada geese at Buldir Island, Alaska. 18 pp.

254. CARNEY, S. M., M. F. SORENSON, AND E. M. MARTIN. 1983. Distribution of waterfowl species harvested in States and counties during 1971-80 hunting seasons. 114 pp.

Average numbers of waterfowl harvested during the 1971-80 hunting seasons are estimated by species for each county in the continental United States. A brief account of the estimating procedure is included.
