

BIRD BANDING NOTES

ISSUED BY THE FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR
FOR THE INFORMATION OF BIRD-BANDING COOPERATORS

Vol. 2

Washington, D. C., November 1940

No. 17

Index

Volume 2 of Bird Banding Notes includes 16 numbers (exclusive of this index) and covers the period from June 1930 to September 1938. The following are the dates of issue:

1--June, 1930	9--September, 1933
2--October, 1930	10--May, 1934
3--April, 1931	11--September, 1934
4--August, 1931	12--June, 1935
5--December, 1931	13--August, 1935
6--May, 1932	14--August, 1936
7--October, 1932	15--December, 1937
8--May, 1933	16--September, 1938

Because of the activity of the Regional Associations in issuing quarterly processed or printed bulletins, which are better able to present new details of banding technique and other items of local interest, "Bird Banding Notes" has been in recent years, issued chiefly as an annual report. In this it appears to serve its most useful purpose and it is probable that this practice will be continued.

As this volume was continuously paged, the complicated system employed in Vol. 1 was not necessary. The code abbreviations also have been discontinued and the words are spelled out in full.

Since the last issue of Bird Banding Notes, the Bureau of Biological Survey, with its original functions continued, has undergone a change of name and of departmental alignment. In accordance with the President's Reorganization Plan No. II the Survey was transferred from the Department of Agriculture to the Department of the Interior on July 1, 1939; and by Reorganization Plan No. III it was merged with the Bureau of Fisheries on June 30, 1940, to form the Fish and Wildlife Service, in the Department of the Interior.

INDEX TO VOLUME II

Albatross: Laysan: Return, 291

Anhinga, See Water-Turkey

Annual report:

Bands purchased (1931), 41; (1932), 88; (1933), 172; (1934), 172

Birds banded (1930), 16; (1931), 41; (1932), 88; (1933), 172; (1934), 172; (1935), 194; (1936), 223; (1937), 249; (1938), 273

Cooperators (1930), 16; (1931), 41; (1932), 88; (1933), 128; (1934), 172; (1935), 194; (1936), 223; (1937), 249; (1938), 273

Returns received (1930), 16; (1931), 41; (1932), 88; (1933), 129; (1934), 172; (1935), 194; (1936), 223; (1937), 250; (1938), 273

Species totals (1932), 89-92; (1933), 130-134; (1934), 172-176; (1935), 194-199; (1936), 224-227; (1937), 251-254; (1938), 274-279

Station totals (1930), 17-20; (1931), 41-44; (1932), 93-97; (1933), 134-139; (1934), 176-180; (1935), 199-203; (1936), 228-231; (1937), 255-259; (1938), 280-284

Avocet: Photograph, 97

Bait:

Apples, 24, 149, 166, 185

Apricots, 36

"Balsam pods", 36

Biscuits, 149

Bread, 68, 104, 149, 243

Butternuts, 68

Catnip oil, 24

Corn patch, 166

Cottage cheese, 185

Cracker crumbs, 55

Cranberries, highbush, 82

Cucumber seeds, 55

Dough, 10

Doughnuts, 36

Elderberries, 10

Goldfish, 51

Growing grain, 36

Hedge apple, 36

Hemp, 185

Honeysuckle berries, 68

June bugs, 9

Manure, 32

Milkweed silk, 10

Millet, 207

Millet seed, 149

Mixed seeds, 104

Nuts, 55

Oatmeal, 55

Bait--Continued

Peanuts, 104, 121
Pomegranates, 166
Poppy seeds, 36
Rice, 61
Rotten apples, 10
Russian olive, 82
Seed heads of grass, 84
Skunk, 232
Soda crackers, 10
Strawberries, 10
Suet, 166
Sunflowers, 120
Sunflower seed, 166, 185
Tomatoes, 104
Water, 23, 82, 166, 207
Water-drip, 111
Water spray, 99
White bread, 121
Wild berries, 121
Wood borers, 55

Band containers: Return of, 7

Band holder, 8 (Drawing)

Banding:

Birds at night, 74
Either foot, 208
Fledglings, 192
Hawks and Owls, 193
In Bird Colonies, 128

Banding methods: Flashlight, 98, 110

Banding permits:

Endorsement of applications, 58
Issuance of, 171
Limitation of, 106

Bands:

Attaching of, 34, 50, 80

Celluloid:

Attachment of, 80

Use of, 49

Changing of, 127

Check numbers, 126

Check shipments, 192

Colored celluloid, 64, 80; use of, 241, 289

Coloring legend, 102

Correct sizes, 49, 65, 80, 102, 117, 162, 242-243 (table)

Cutting down, 208

Defective, 65, 79

Duplicated numbers, 23, 35

Durability of, 147

Bands—Continued

- Issue of, 24, 35
 - Large orders, 289
 - Lost numbers, 107, 152, 188, 249
 - Measurements, 171
 - New size of No. 1, 65
 - One per bird, 127
 - Private, 107
 - Reissue of, 34
 - Removal of, 162, 242
 - Series designation, 8, 117, 126, 153, 171, 249, 289
 - Shipment by airmail, 65
 - Size 0, 241
 - Size 1 for Chimney Swifts, 147
 - Size 8, use of, 241
 - Size specifications, 208
 - Sizes, 79, 87, 162, 189
 - Transfer of, 248
 - Use in sequence, 23, 128
- Bees: Honey, 63
- Biological Survey:
- Appropriations (1935), 151
 - Darling succeeds Redington, 151
 - Division of Wildlife Research, 191
 - Gabrielson succeeds Darling, 219
 - Moves to new quarters, 171
 - Officials, 16
 - Reorganization of, 169
- Bird banding: Early work in America, 39
- Bird banding data: Publication rights, 152
- "Bird-Banding": Journal, 2
- Bird-Banding Manual, 88
- Bird Banding Notes: Back numbers, 221
- Bird houses, 45
- Gourds: Photograph, 76, 77
 - Nest box: Photograph, 109, 259
- Birds:
- Not to be banded, 222
 - Birds of prey banded, 156
 - Banding of, 289
 - Relative abundance studies, 237
- Birds banded:
- A. O. U. species numbers, 221
 - Identification of, 270
 - What species, 271
 - Yearly totals, see Annual report

Bittern:

American: Photograph, 21, 29, 76, 109
Least: Photograph, 45, 97, 154, 204, 260

Blackbird:

Brewer's, 6
Red-winged, 5, 40, 145
 Photograph, 45, 97, 155
 Return, 124
Rusty, 5, 46
Yellow-headed: Return, 214

Bluebird, 62

Geographic distribution, 30
Parasites, 233
Return, 71, 124, 150, 206, 268

Boardman, C. E., death of, 171

Bob-white: Photograph, 77

Booby, 59

Books, See Publications

Bunting:

Indigo:

Bait, 207
Return, 85, 267

Lazuli, 183

Snow, 7, 31, 47, 160
 Photograph, 29
 Return, 13, 29, 85
 Trap, 29, 155

Canada: Banding in, 192

Canadian postage, 101

Caracara: Audubon's, 111

Cardinal, 31, 64

 Photograph, 109, 140
 Return, 13, 143

Carp: Photograph, 233

Casualties to be reported, 28

Catbird, 100, 234

 Return, 13, 268

Cats, 3, 5, 29, 31, 32, 45, 114, 205, 232

Cel-o-glass, 82

Chat: Long-tailed: Bait, 36

Chickadee:

Bait, 36
Photograph, 232, 260
Plumage, 160

Chickadee--Continued

- Black-capped, 49, 145
- Bait, 36, 232
- Photograph, 181, 204
- Return, 13, 121, 294

Colored bands: Use of, 117

Commons, Frank W., death of, 33

Cooperation: Value of, 129

Cooperators: Number of, See Annual report

Coot, 40

- Migration, 149
- Photograph, 97
- Return, 37, 71, 187, 266

Cormorant: Double-crested, 64

- Photograph, 59, 76, 97
- Return, 264

Cowbird, 5, 100

- Homing instinct, 237
- Return, 12, 293

Crane: Sandhill, 262

Creeper: Brown, 205

- Trap, 115

Crosby, Maunsell S., death of, 33

Crossbill: American: Return, 187

Crow, 48, 115

- Photograph, 260
- Return, 56, 167, 245, 293

Curlew: Long-billed:

- Photograph, 259
- Return, 38, 85

Darling, Jay N., becomes Chief of Biological Survey, 151; resigns, 219

Decoys in trap, 288

Dickcissel, 144, 216

Dipper: Photograph, 204

Disease:

- Bird diphtheria, 235
- Birdpox, 6

Disease investigations, 74

"Don'ts", 7, 222

Dove:

- Ground, 114
- Inca: Photograph, 98
- Mourning, 98, 114, 221
- Bait, 36
- Photograph, 139, 154, 204
- Return, 12, 71, 84, 186, 216, 245, 266
- Trap, 97

Dovekie, 60

 Photograph, 77, 109

Drought, 193

Duck:

 Baldpate:

 Photograph, 232

 Return, 56, 187, 216, 264

 Black:

 Photograph, 154, 180

 Return, 11, 37, 38, 70, 186, 187, 244, 264, 291

 Blue-winged Teal: Return, 70, 167, 187, 244, 291

 Cinnamon Teal, 237

 Eider: Photograph, 204

 European Widgeon, 206

 Return, 37, 185, 214

 Greater Scaup: Return, 291

 Green-winged Teal: Photograph, 45, 180

 Hybrid: Photograph, 260

 Laysan Teal, 236

 Lesser Scaup, 183

 Return, 105, 150

 Mallard, 149, 232

 Photograph, 154, 204, 233, 259

 Return, 11, 37, 70, 167, 186, 216, 244, 264, 291

 Pintail:

 Photograph, 97, 180, 204

 Return, 11, 12, 38, 70, 122, 186, 216, 244, 245, 264, 266

 Redhead: Return, 70, 123, 167, 214, 215, 265

 Ring-necked: Return, 214

 Ruddy: Return, 70

 Wood:

 Photograph, 29, 98, 204

 Return, 291

Ducks:

 Banded, 158

 Homing instinct, 213

Eagle:

 Bald, 205

 Photograph, 154, 232, 260

 Return, 266

 Golden: Photograph, 231

Early bird marking, 59

Eastern Bird Banding Association: Officers, 75

Egret:

American:

Photograph, 233, 260

Return, 245, 265

Reddish, 23, 79

Snowy, 23, 146

Photograph, 260

Falcon: Prairie: Photograph, 140, 292

Feeding shelter: Photograph, 155

Feeding tree, 261

Finch:

House, 6

Purple, 5, 31, 232

Bait, 98

Photograph, 29, 204

Return, 12, 13, 55, 56, 84, 104, 124, 150, 168, 182, 267

Fledglings: Banding of, 192

Flicker:

Photograph, 59, 232

Return, 12, 37, 38, 123, 216

Flycatcher:

Alder: Photograph, 97

Crested, 100

Return, 144

Flyway biologists: Appointment of, 247

Summer work (1937), 269; (1938), 270

Winter work (1937), 269

Foreign returns: Reporting, 11

Forest reserves: Trapping in, 234

Gabrielson, Ira N., becomes Chief of Biological Survey, 219

Gallinule:

Florida: Photograph, 204

Purple: Photograph, 260

Gannet: Return, 122, 167

Gathering cage, 165

Celluloid, 103

Glass jar, 102

Milk bottle, 147

Photograph, 180

Goldfinch, 47, 113, 205, 286
 Bait, 10, 36, 120, 166

Goose:

- Blue, 157, 262
 - Photograph, 45, 181
 - Return, 215, 265, 291
- Canada, 184
 - Photograph, 45
 - Return, 84, 265
 - Trap, 45
- Hutchin's: Photograph, 76, 204
- Hybrid: Photograph, 260

Goshawk: Photograph, 204, 207

Grackle: Bronzed (including Purple), 5, 46, 63, 193

- Bait, 166
- Description, 15, 31, 112, 115
- Geographic distribution, 15
- Parasites, 31
- Photograph, 231
- Return, 22, 55, 168, 245, 267, 293
- Trap, 24

Grebe:

- Horned: Photograph, 140
- Pied-billed:
 - Photograph, 232
 - Return, 290
- Western: Photograph, 76

Grosbeak:

- Black-headed, 6
 - Bait, 36
 - Photograph, 97
 - Return, 294
- Evening, 5, 156, 234
 - Bait, 84
 - Photograph, 285
 - Return, 12, 168, 186, 215, 267, 293
- Pine, 156
 - Photograph, 204
- Rose-breasted, 32, 144, 145
 - Bait, 185

Grouse:

- Ruffed: Trap, 209
- Sharp-tailed: Photograph, 232

Growth of banding work, 73

Gull:

- California, 146
 - Return, 263
- Franklin's, 287
 - Return, 290
- Glaucous-winged: Return, 122, 263
- Great Black-backed, 146
- Herring, 22, 32, 146, 234, 286
 - Photograph, 97, 154
 - Return, 38, 71, 105, 150, 186, 215, 244, 263, 290
- Laughing:
 - Photograph, 21
 - Return, 37, 123
- Ring-billed: Photograph, 76, 140, 205
- Gull survey, 272

Hawk:

- Albino: Photograph, 285
- Cooper's, 156
 - Photograph, 59
 - Return, 38, 56, 292
- Duck: Return, 12, 150
- Ferruginous Rough-leg: Return, 71, 266
- Fish, See Osprey
- Harlan's: Return, 292
- Marsh, 99, 156
 - Photograph, 155
 - Return, 56, 85, 123, 266, 292
- Red-shouldered:
 - Photograph, 285
 - Return, 292
- Red-tailed:
 - Photograph, 21, 45, 60, 139
 - Return, 37, 71, 214, 266, 292
- Sparrow, 160, 261
 - Food, 261
 - Photograph, 98, 155, 180
- Hawks: Banding of, 233, 261
- Heath Hen: Last one banded, 40
- Heligoland: Banding station at: Photograph, 76

Heron:

- Black-crowned Night, 70, 146
 - Photograph, 260
 - Return, 122, 215
- Green, 146
 - Photograph, 59
- Great Blue, 23, 146, 236
 - Bait, 51
 - Band, 242
 - Photograph, 97, 109, 260
 - Return, 85, 245, 265
 - Trap, 51
- Little Blue, 24, 146
 - Photograph, 21, 29, 204
 - Return, 85
- Louisiana, 23, 146
 - Photograph, 21
 - Return, 70, 85, 186, 265
- Snowy, See Egret

Homing instinct, 145, 213

Hummingbird:

- Black-chinned: Photograph, 232
- Ruby-throated, 63
 - Photograph, 21, 204
 - Return, 204

Ibis: White-faced Glossy: Return, 214

Identification of birds, 15

Inland Bird Banding Association:

Meeting, 57

Officers, 58

Interstation contacts, 88

Italy: Banding work in, 29

Jay:

- Blue, 6, 31
 - Bait, 104
 - Photograph, 21, 30, 59, 75, 140, 204
 - Return, 38, 55, 123, 166, 167, 216, 245, 263, 286, 293
 - Trap, 24
- Canada: Bait, 232

Junco:

- Slate-colored, 31, 32, 157, 160
 - Photograph, 140
 - Plumage, 78
 - Return, 13, 125, 168, 216, 263, 294
- Pink-sided: Return, 267
- Red-backed, 62

Killdeer:

Photograph, 109, 139
Return, 187

Kingfisher: Photograph, 60, 97, 260
Belted, 208

Return, 292

Kinglet: Golden-crowned: Return, 124

Kite: Everglade, 111

Lark:

Desert Horned, 61

Horned:

Plumage, 22

Trap, 22

Prairie Horned, 32

Bait, 32

Trap, 32

Longevity, 11, 112, 150, 166, 167, 168, 186

Longspur:

Lapland:

Bait, 32

Trap, 32

Smith's, 143

Lyon, William I., death of, 269

Manual, Birdbanding, 2

Proposed revision of, 189

Manufacturers:

Catnip oil, 24

Pliers, 9

Traps, 9

Verball trap, 213

Wire netting, 35, 50, 66

Martin: Purple:

Photograph, 60

Return, 294

Meadowlark:

Return, 124, 214

Trap, 240

Merlin: Richardson's: Return, 150

Mice, 67

Michigan bird banders, 153

Mockingbird, 31

Photograph, 154

Murre:

- Atlantic, 21
- California, 21
 - Photograph, 20
- European: Photograph, 233

Muskrat, 31

Nest box, See Bird houses

Nesting shelter: Flanders Club: Photograph, 154, 180

Netting: Wire, 35, 50, 66

Nets, 1

Nighthawk, 110

- Return, 292

Northeastern Bird Banding Association: Meeting, 58

Nuthatch:

- Red-breasted, 145

- White-breasted:

- Photograph, 154, 180

- Return, 11

Opossum: Photograph, 154, 260

Order cards, 74

Oriole:

- Arizona Hooded, 6

- Baltimore: Plumage, 184

- Bullock's:

- Photograph, 97

- Return, 167

- Orchard: Trap, 23

Osprey, 143, 158

- Photograph, 59, 154

- Return, 105, 123, 214, 292

- Trap, 165

Ovenbird, 235

Owl: Barn, 33, 49

- Photograph, 45, 59, 97, 109, 155, 259

- Return, 157, 266

- Barred: Photograph, 259

- Burrowing, 155

- Return, 105, 266

- Trap, 22

- Great Horned, 114

- Photograph, 29, 97, 154, 204

Owl--Continued

Long-eared, 214

Return, 216

Saw-whet: Photograph, 77, 139, 154, 259

Screech, 144

Photograph, 60, 154, 180

Return, 85, 123, 213

Snowy:

Photograph, 45, 77

Return, 266

Trap, 51

"Papers reprinted", 38

Parasites, 23, 64

Paper on, 108

Sulphur for nest, 128

Partridge, Hungarian, 87

Pelican:

Brown:

Photograph, 181

Return, 85, 244, 264

White, 99, 146, 286

Return, 264

Permits:

Iowa, 88

Restriction of, 220

State, 271

Petrel: Leach's, 62

Petrels, 49

Phalarope:

Red, 262

Wilson's: Photograph, 232

Pheasant, 87

Phoebe:

Photograph, 60

Return, 187

Photographs:

Received, 4, 20, 29-30, 45, 75, 97, 109, 139, 180, 203,

231, 259, 285

Titles on, 153

Pigeon: Racing, 182

Pliers, 9, 50, 80, 147

Kennard banding, 35

Plover: Piping: Photograph, 155

Posters, 58, 75

Predators, 33

At station, 31

Publication, Interesting records, 271

Publications:

A. O. U. memorial volume, 153

Archaeopteryx (mimeo), 205

Publications--Continued

- Bird Migration, 273
- Birds of America, 273
- Book of Birds, 272
- Der Vogelzug, 2
- European Banding Atlas, 2
- Life Histories of North American Birds of Prey, 272
- Life History of the Gambel Quail in Arizona, 171
- Log of Tanager Hill, 272
- Program of Waterfowl Restoration, 189
- Portraits of New England Birds, 109
- Riddle of Migration, The, 79
- Status of Waterfowl in 1934, 189
- Waterfowl Flyways of North America, 189
- Publicity on bird banding, 222

Quail:

- Bob-white: Bait, 149
- California, 112
- Photograph, 154

Rabbit: Cotton-tail, 97

Rail: Sora: Photograph, 259

Rat, 33, 101

- Brown, 31

Raven: White-necked:

- Trap, 5

Rebanded birds: Record, 10

Record keeping, 55

Records, 3

- Exact dates, 192

- Proper method of reports, 87

- System of keeping, 36, 69, 237

Redington, Paul G., resigns as Chief of Biological Survey, 151

Redpoll, 31

Redstart: Photograph, 30

Regional associations, 2 (See individual names)

Report: Annual, See Annual report

Reports:

- Duplication of records, 270

- From inactive stations, 39

- Of cooperative work, 271

- Proper preparation of, 152

- To Biological Survey, 15

- When to send, 220

- Work in colonies, 271

Research:

- Bank Swallow, 48

- Black-capped Chickadee, 183

Research--Continued

Bluebird, 168
Catbird, 234
Causes of mortality, 40
Chimney Swift: Nesting, 183
Crow, 48
Dynamics of migration, 79
Field Sparrow, 143

Golden-crowned Sparrow, 78
Grackles, 31
Harris's Sparrow, 48
Herring Gull, 249
Homing instinct of Cowbird, 237
House Finch, 111
Junco, Red-backed, 78
Loggerhead Shrike, 7
Mockingbird, 182, 235
Mourning Dove, 221
Parasites, 233
Purple Finch, 5
Sex determination, 78, 160
Song Sparrow, 48
Starling, 156
Weights, 32

Return: Definition of, 69, 121

Return cards, 7, 69, 104

Age at banding, 127
Care in handling, 11, 28, 271
Proper method of filling in, 248
Preparation of, 128
Station returns only, 220

Return records, 10

Code designations, 107
Correct number, 271
Reports, 192
Resident birds, 69

Returns:

Dead birds, 127
Foreign, 11
How to report, 74
Local, 221
Of resident species, 37
Only one per card, 127
Read numbers carefully, 127
Received, See Annual report
Tabulation cards for, 16
Yearly total, See Annual report

Robin, 31, 33, 39, 47, 159, 161, 181, 182, 205, 235
Bait, 10, 24, 166
Photograph, 20, 59, 97, 98, 232
Plumage, 47, 55
Return, 13, 55, 84, 105, 122, 123, 150, 294
Trap, 24, 111
Romania: Bird banding in, 271
Russia: Bird banding in, 2, 39

Sandpiper:

Semipalmated:
Photograph, 21
Return, 167, 291

Spotted:
Photograph, 154
Return, 12, 187

Schedules:

Address on, 271
One species only, 220, 270
Original data only, 220
Place of banding, 271
Preparation of, 128
Proper use of, 248

Scientific names: Use of, 270

Sex: Determination of, 113

Sex signs, 128

Shrike:

Loggerhead, 7
Return, 168
Northern, 28
Return, 268

Siskin: Pine, 236

Skimmer: Black, 22

Photograph, 181
Return, 104

Skunk, 101

Smithsonian Expedition to Haiti, 27

Snares: For Gulls, 53

Snowflake, See Bunting, Snow

Sparrow:

Chipping, 32, 205
Bait, 84
Photograph, 232
Return, 71

Clay-colored, 157
Photograph, 204
Return, 216

Field, 99, 183
Bait, 243
Return, 267

Sparrow--Continued

Fox:

- Albino, 205
- Return, 13, 125, 150, 168, 215
- Gambel's, 100, 159
 - Photograph, 181
 - Return, 71, 124
- Golden-crowned, 61
 - Age, 33
 - Return, 150, 166, 267
- Harris's, 6, 32, 48, 110, 113, 143, 144, 145, 157, 159, 181
 - Return, 85, 124, 150, 267
- Lincoln's, 62, 160, 205
 - Return, 214
- Nuttall's: Return, 293
- Savannah, 23, 100, 160
 - Return, 124, 235
- Song, 30, 31, 100, 135
 - Description, 23
 - Photograph, 259
 - Plumage, 113
 - Return, 85, 125, 187, 213
- Swamp, 160
 - Return, 294
- Tree, 113, 160, 232
 - Return, 13, 33, 37, 56, 168, 267
- Vesper: Return, 122, 150
- White-crowned, 115
 - Return, 7, 13, 38, 124, 215, 267, 293
- White-throated, 30, 31, 32, 33, 47, 64, 100, 160, 184, 237
 - Bait, 10
 - Plumage, 114
 - Return, 13, 56, 105, 122, 125, 144, 168, 187, 267, 294
- Spoonbill: Roseate, 79
 - Return, 122
- Squirrel, 33, 101, 239
- Starling, 6, 31, 206
 - Albino, 140
 - Bait, 166
 - Photograph, 30, 232
 - Return, 11, 150, 215, 266
- Studies, See Research
- Subspecies, 40, 59
 - Under species, 111
- Supplies: Requests for, 248
- Swallow:
 - Bank, 144
 - Parasites, 23
 - Photograph, 21, 29, 97
 - Return, 245
 - Trap, 9, 148

Swallow--Continued

Barn:

Parasites, 64
Return, 71, 85, 294
Trap, 147

Cliff: Return, 394

Rough-winged: Photograph, 59

Tree:

Parasites, 233
Photograph, 21

Swan: Whistling: Photograph, 30

Swift: Chimney, 7, 98, 101, 144, 183, 261, 286, 287

Band, 289

Photograph, 30, 59

Return, 12, 56, 167, 187, 245, 266, 293

Tanager:

Scarlet, 234

Trap, 23

Summer, 182

Western, 6

Bait, 36

Teal, See Duck

Tern:

Black, 146

Photograph, 60, 97, 139, 154

Common, 22, 101, 146

Photograph, 29, 76, 154, 155

Return, 46, 71, 105, 216, 264, 290

Forster's: Photograph, 232

Least:

Photograph, 154, 155

Return, 150

Roseate, 22, 146

Return, 244, 264, 290

Royal, 23, 146

Return, 71, 244, 264

Sooty, 286

Thrasher:

Brown, 31, 181

Bait, 24

Description, 99

Return, 123, 150

California: Photograph, 154

Thrush:

Gray-cheeked, 31

Thrush--Continued

- Hermit, 6, 31, 33, 235
 - Bait, 104, 121
 - Photograph, 60
- Olive-backed, 31, 33
 - Photograph, 30
 - Return, 294
- Wood, 31
 - Photograph, 154, 232

Titmouse:

- Plain, 6
- Tufted, 181

Towhee:

- Red-eyed:
 - Photograph, 30
 - Return, 216
- San Francisco, 61, 112

Trapping methods: Gathering cage, 51

Traps:

- Attention to, 75
- Australian crow, 163
- Automatic hawk, 239, 263
- Baldwin woodpecker, 51, 118
- Bank swallow, 165
 - Photograph, 233
- Barn swallow: Photograph, 97
- Beginners flat: Photograph, 232
- Brenckle warbler, 210
 - Drawing, 67, 185
- Brenckle: Modified, 238
- Broken perch, 210
- Burlap used, 209
 - Photograph, 203
- "Burlington": Drawing, 82
- Butterfly net, 66, 147
- Canary cage, 32
- Cat, 240
- Catching funnel, 204
- Celluloid, 66
- Chardonneret, 5, 35, 240, 263, 288
 - Photograph, 285
 - Trigger, 119
- Chimney Swift, 66, 81, 263
 - Photograph, 76, 140, 181, 285
- Clap-net, 103
- Clary flat, 35 (See also Tunnel)
- Cloverleaf: Modified, 148
- Cohasset warbler (modification), 159, 183

Traps--Continued

- Combination, 240
- Coyote, covered, 51
- Crow, 163
- Door and trigger: Drawing, 119
- Double wing, 209
- Drop, 9
 - Automatic, 239
 - Photograph, 285
- Duck, See Waterfowl
- Electrical control, 50
- Elevated, 118
- "Elevator", 262
- False bottom, 9, 24, 164
- "Figure 4", 240
- Flat:
 - Photograph, 29
 - With drip, 103
 - With funnel, 210
- Foot-hold, 193; See also Verball
- For roosting swallows: Photograph, 204
- Funnel: Photograph, 204, 260
- Glass, 239
 - Photograph, 232
- Glass sided, 262
- Glenhaven:
 - Modified, 239
 - Tree, 206
- Government sparrow, 53
- Hanging, 262
- Hawk: Photograph, 260
- Horse-hair snare: Drawing, 53-54
- House: Photograph, 204
- Kellogg, 140
- Kingfisher, 103
- Manufacturers of, See Manufacturers
- Michener water, 288
- Modesto, 238
- Modified Brenckle, 118
- Modified funnel, 67
- Mourning Dove, 103
- Net, 24
 - Photograph, 98
- Over bird bath, 36
- Pettibone snare, 164
- Placing of, 160

Traps--Continued

- Potter, 9, 103, 159
 - 4 cell, 210
 - Pull string, 53, 81
 - Rat trap mechanism: Photograph, 203
 - Rat trap spring, 209
 - Shorebird, 61, 263
 - Simplex, 209
 - Six-cell hexagon (Potter type), 241
 - Sliding door, 210
 - Snare, 165
 - Sparrow:
 - Photograph, 285
 - With runways (or Mason Sparrow), 239
 - Squirrel safety valve, 239
 - Steel, 51, 148, 164
 - Suspended flat, 81
 - Top entrance, 165
 - Drawing, 51-52
 - On stand: Photograph, 259
 - Water drip, 288
 - Trap door and trigger, 210
 - Tree, 210
 - Photograph, 260
 - Trigger, 148
 - For Potter, 162
 - Release, 81
 - Tub, 81, 102
 - Tunnel, 51, 60
 - Verball, 234, 241
 - Description, 211
 - Drawing, 217
 - Vulture: Photograph, 233
 - Water, 164, 206
 - Photograph, 154
 - Water drip, 68, 234, 262
 - Waterfowl, 66, 187, 211
 - Funnel, 241
 - Photograph, 29, 30, 97, 140, 180, 231, 232, 260
 - Wire basket, 240
 - Wire crook, 288
 - Wire hook, 183
 - Woodpecker: Electrical, 82
 - York. 104
- Turkey: Merriam, 62
- Turnstone: Ruddy: Return, 12

Value of cooperation, 41
Veery, 31
Violations: Migratory Bird Treaty Act, 222
Vireo: Red-eyed: Photograph, 139
Vulture:
 Black, 182, 287
 Photograph, 233
 Turkey, 206
 Photograph, 60, 155, 203
 Return, 123

Warbler:
 Black-throated Green: Return, 187, 215, 245
 Cape May: Return, 294
 Cerulean, 182
 Golden Pileolated, 6
 Kentucky: Trap, 23
 Myrtle, 113
 Return, 124, 294
 Yellow Palm: Return, 124
Warblers: Bait for, 10
Waterfowl:
 Banded, 115
 Banded and shipped, 158
 Retrapped, 160, 235
 Stations, 34, 161
Water-thrush, Northern: Photograph, 30
Water-turkey, 236
 Photograph, 260
 Return, 291
Waxwing:
 Bohemian, 78
 Bait, 82
 Photograph, 76
 Cedar, 207, 236
 Bait, 185
 Photograph, 109
 Return, 267, 294
Weights of birds, 98
Wildlife preserves: Privately owned, 188
Witherby, H. F., Photograph, 20
Woodchuck, 7, 101

Woodcock:

Band, 285

Photograph, 109, 204, 232, 233

Return, 123, 167

Woodpecker:

Downy, 187

Bait, 36, 232

Photograph, 155, 285

Hairy: Bait, 232

Red-headed:

Photograph, 76

Return, 214

Wren:

Carolina: Photograph, 20

House: Photograph, 97

Long-billed Marsh: Photograph, 139

Wren-tit: Return, 123, 166

Yellowlegs: Photograph, 21

Greater: Return, 292

Lesser: Return, 215