screamed overhead and suddenly there was no Grouse at all, but only a spot in the road that was nothing but a pile of leaves and dust. When the Hawk had sailed over the pile of leaves took wings and flew into the woods.

I had heard for years a clear, far-reaching cry and wondered over it, before I made the discovery that it was the clan-cry of the Quail. At sunset from some fence corner a clear single-syllabled whistle goes forth, and is answered from far and near by the separated Bob-whites. If there has been no unusual scattering in the covey that day there is no curfew. It is to be heard every evening during the rabbit hunting season and I have wondered if the covey dispersed voluntarily for safety or whether it was frightened apart. The latter is the more probable conclusion.

The casual visitor to Oakside Farm I have not mentioned. Those observers who can go far afield can furnish larger and more interesting lists. My object was merely to tell of the birds to be seen from a farmhouse porch. It is a curious fact that my friend in the village sometimes feeds as many as five male Cardinals at once, while I never have more than one. This seems to me to indicate that we farmer folk who have excellent advantages for bird study, neglect them, and carelessly leave both the study and feeding of birds to the villagers. How shall we best serve our small friends?

_Columbiana, Ohio._

**COMPARATIVE PERIODS OF DEPOSITION AND INCUBATION OF SOME NORTH AMERICAN BIRDS.**

**BY FRANK L. BURNS**

Very little seems to be known regarding the exact periods of incubation of our birds. Captain Bendire's observations appear the most extensive until recently when some attention has been given the subject by various observers, mostly incidental to the intensive study of a single nest or perhaps a colony of one species or another.
My conclusions are based upon the statements of authors, the manuscript notes of Messrs. T. A. Elliot, Jr., North East Harbor, Me.; John F. Ferry, Chicago, Ill.; Henry Link, Waterloo, Ind.; Angus McKennon, Defuniak Springs, Fla.; Leonard S. Pierson, Wayne, Pa.; Alfred C. Redfield, Cambridge, Mass.; A. C. Read, Isle of Pines, Cuba; Charles H. Rogers, Princeton, N. J.; Ernest W. Vickers, Ellsworth, Ohio; Miss Farida Wiley, Sidney, Ohio, and my own observations.

The duties of incubation are usually performed by the female, often with the assistance of the male, or the male may not participate in the actual brooding process but may carry food to the female and later assist in caring for the young.

Exact knowledge of the amount of assistance given the female by her mate during the incubating season does not appear to be of much importance in consideration of the comparative periods. When one sex forages and incubates unaided, however, the period is usually prolonged beyond that of the normal of the species accustomed to the advantage of an assisting mate; or possibly in rare instances like that of the Trochilidae, Hummingbirds, of species of an entirely different group of similar size. Clark (Cf. Auk, xx, 162) gives an instance of a male Bob-white incubating a late clutch of eggs for 28 days before hatching, apparently several days over the regular period; while the female was leading her first brood about the vicinity.

Apparently most colonial species are doubly monogamous; birds breeding in colonies can seldom conceal their eggs from enemies, therefore have the greatest need of constant protection by either sex.

Most hole-nesting species are doubly monogamous, though there are some notable exceptions; one would naturally seek the reason for this in the greater need of animal heat in lieu of the direct rays of the sun to further the rate of incubation; rather than that of protection from enemies, of which there is less need than in the instance of the colonial birds.

In many species and groups where one sex is much more
conspicuously or highly-colored than the other, the more plainly-garbed sex frequently assumes all the duties of incubation and not infrequently, of the young, also.

Double monogamy occurs in many instances in every group producing precocial young, but it is probably more common in the Altrices; double monogamy, however, as generally defined, is not characteristic of the highest type, since of the Turdidae and Corvida (except the subfamily Corvinae) the two Passerine families most in dispute for first rank; the male does not appear to render any assistance in incubation.

According to present information, both sexes take regular turns at incubating in at least some species of the Podicipidae, Gaviidae, Alcidae, Laridae (not including Anous stolidus, Noddy), Diomedeidae, Procellariidae, Phaethontidae, Pelecanidae, Anserinae, Cygninae, Phaenicopteridae, Ibidiidae, Ardeidae, some of the Scopacidae, (Philohela minor Woodcock, Gallinago delicata Wilson’s Snipe, Pelidna alpina sakhalina, Red-backed Sandpiper), Charadridae (Oxytus vociferous Killdeer), the genus Colinus only of the Gallinaceous birds, Columbidae, Buteonidae, (except Aquila chrysaetos Golden Eagle), Stringes (except the genus Otus), the genus Coccyzus, Alcedinidae, Piciidae, Caprimulgidae, and of the Passerines; Corvinae, Zanthocephalus santocephalus Yellow-headed Blackbird, Sturnella magna Meadowlark, the genus Quiscalus, most of the Fringillidae (the most notable exceptions being of genera, including nearly all of the most brilliant and conspicuously plumaged males, not including Zamelodia ludivicana Rose-breasted Grosbeak), Hirundinidae (not including Progne subis Purple Martin), Bombycilla cedrorum Cedar Waxwing, Protonotaria citrea Prothonotary Warbler, Dendroica athis athis Yellow Warbler, D. pensylvania Chestnut-sided Warbler, Setopaga ruticilla Redstart, Vireonidae (not including V. philadelphia and L. solitarius solitarius), Anthus pratensis Meadow Pipit, the genera Toxostoma, Troglodytes, and Sitta canadensis Red-breasted Nuthatch.

Incubation is performed solely by the female in Anous stolidus Noddy, the Anatidae (except Anserinae and Cygninae)
some of the Rallidae, Scolapacidae (Bartramia longicauda Upland Plover, Actitis macularia Spotted Sandpiper), Charadriidae, Gallinae (genera Bonasa, Centrocerus and Meleagris), the genus Otus, Trochilidae (at least A. colubris and S. rufus), Tyrannidae (perhaps not including E. wrighti and P. rubinus mexicanus), Corvida (except Corvinae), Dolichonyx oryzivorus Bobolink, Agelaius phoeniceus Red-winged Blackbird, subgenus Icterus, Hesperiphona vespertina vespertina Evening Grosbeak, Carpodacus purpureus purpureus Purple Finch, Astragalinus tristis tristis Goldfinch, A. t. salicamans Willow Goldfinch, Plectrophenax nivalis nivalis Snow Bunting, Passerina cyanea Indigo Bunting, P. c. Painted Bunting, Piranga erythromelas Scarlet Tanager, genus Lanius, Mniotiltae (with some exceptions), Mimus polyglottos Mockingbird, Dumelele carolinensis Catbird, Thryothorus ludovicianus miannensis Florida Wren, Certhia familiaris americana Brown Creeper, Penthestes atricapillus atricapillus Chickadee, and the Turdinae.

Incubation receives the attention of the male only, in the Phalaropodidae, and some of the Scolopacidae (Eunynorhynchus pygmeus Spoon-billed Sandpiper).

The Passerine genera Molothrus and Tangavius are parasitic and of course do not incubate at all.

The period of deposition of a species seems to depend mostly upon the general productiveness of the group to which it is most nearly related; and to a lesser extent, upon the relative size of the species and its egg to that of the group, the maximum sometimes requires a longer period to recuperate.

A species belonging to a group capable of and most commonly producing the maximum number of eggs in a set or in a season, ordinarily deposit an egg daily. This includes the Colympbi, Anatidae, Rallidae, Scolapacidae, Pici, Cucullidae and Passeres (there are instances of the deposition of two eggs in one day by the prolific Colaptes auratus luteus Northern Flicker, Sayornis phoebe Phoebe, Passer domesticus European House Sparrow, and Spizella passerina passerina Chipping Sparrow.)
Our largest Passerine, *Corvus corax principalis* Northern Raven, may occasionally deposit its eggs at intervals of every other day.

*Coccyzus americanus* Yellow-billed Cuckoo, and *C. erythropthalmus* Black-billed Cuckoo, are subject to variation according to locality; individuals inhabiting the Atlantic slope occasionally seem to require an interval of from two to eight days, but as both species have been known to drop their eggs in other birds' nests and the average number in a set falls away below that of the same species in the West, probably the most satisfactory explanation of the apparent departure from the normal daily deposition, may be found in the parasitic tendencies of the eastern individual. Not impertinent to the subject, it may be stated that the parasitic nature of the European Cuckoo has been erroneously attributed to its irregular deposition and consequent inability to assemble a clutch of eggs: however this may be, our parasitic Cowbird has been known to drop four or five eggs in as many days, though like the Bobolink, it may now and then depart from the normal.

Members of a group normally or commonly producing two eggs, deposit at less frequent periods, the *Columbidae, Caprimulgidae* and *Trochilidae* lay on alternate days. The larger *Gaviidae* two or three days apart, and a week or ten days may elapse before the *Cathartidae* deposit the second egg. The *Raptorese* require from one to three or four days interval generally, depending upon size, the genera *Aquila, Haliaeetus* and *Bubo*, which include some of the largest species and frequently deposit two eggs only, the interval is the maximum.

Birds laying daily, ordinarily but not invariably, begin incubation after the set is completed. The occasional irregularities in incubation are often traceable to exceptional conditions; cold or stormy weather at the time of deposition may induce the parent to cover the nest for a time sufficient to affect the first laid eggs.

Birds ordinarily exhibiting irregular deposition usually begin incubation with the first (sometimes the second or third)
egg laid: this naturally results in irregularities in hatching and maturing of nestlings; far more frequent in the Altrices for the obvious reason that belated embryos of \textit{Præcocials} usually perish in the shell after the parents desert the nest with the first hatched young.

The period of incubation seems to depend almost altogether upon mere size or bulk; conditions being equal, the larger the egg generally the longer the period of incubation. This rule would seem to be good, with some exceptions; but more truly applicable to the various members of the several groups, in some instances possibly not higher than families.

The assertion that the length of incubation depends upon the state of perfection in which the young issues from the shell, i.e. chicks able to leave the nest almost immediately after hatching (præcocial) require a much longer time than those hatched in a helpless state (altricial), appears unreliable when applied generally, even though the former averages larger eggs. The absence of data on comparative sizes, weights or other means of equalization render it somewhat difficult to prove, but for some of the many probable exceptions compare in size and period of incubation the Petrels with the smaller Terns, the Tropic Birds with the Gulls, the larger \textit{Raptore}es with the \textit{Anatidae}, the Woodpecker with the Coot, the smaller \textit{Raptore}es with the smaller \textit{Gallinae}, the Kingfisher with the Bob-white, or even the Chat with the Spotted Sandpiper. The Noddy, departing from the typical \textit{Sternina} in its habit of nesting in bushes and there rearing its young for upwards of two months (therefore not typical præcocial) is said to incubate for 35-36 days, which seems a much longer period than that of any other of its præcocial family.

Birds nesting in snug rock crevices, tree cavities, or in covered nests of any descriptions capable of keeping out the weather and conserving the heat from the birds' body, doubtless are at no great disadvantage over the loss of the direct rays of the sun; but species nesting deep in earthy burrows (Puffins, Petrels and Kingfishers) or in draughty flues
(Chimney Swifts) with little or no protective lining, appear at every disadvantage in hastening the development of the embryo; and the comparatively longer periods of incubation would seem to foster this hypothesis.

There are little data available leading to the effects of climate and season on the period of incubation of individuals of the same species. It is quite probable that the most variable periods occur in cool rather than warm climates, and more especially in a season of violent changes. Knight (Cf. Birds of Maine) in considering the period of incubation of some of the Fringillidae (Lanius ludovicianus migrans and Geothlypis trichas trichas) recognized a variation of from two to four days, due to weather conditions, closeness with which the bird brooded and other correlating circumstances. It is well known that up to a certain stage of development of the embryo, the eggs may be subjected to a cooling process by exposure to the weather for some time without endangering the embryo beyond retarding the growth temporarily and lengthening the period somewhat beyond the normal time; and also, that the sun may relieve the parent bird of part of her task unless the temperature is driven too high and the germ destroyed.

The number of days of incubation of the species in the list appended has been compiled from various sources, and in many instances from single records, some of which may be inaccurate and are questioned; others may be subject to revision; but none are included without good authority.

*Podilymbus podiceps*. Pied-billed Grebe.—21 (?) days.
*Gavia immer*. Loon.—29 days.
*Cepphus grylle*. Black Guillemot.—21 days.
*Larus argentatus*. Herring Gull.—26 or 27 days.
*Larus franklini*. Franklin’s Gull.—18 or 20 days.
*Sterna hirundo*. Common Tern.—21 days.
*Sterna unda*. Roseate Tern.—21 days.
*Sterna fuscata*. Sooty Tern.—26-29 days.
*Hydrochelidon niger surinamensis*. Black Tern.—17 days.
*Anous stolidus*. Noddy.—35-36 days.
*Oceanodroma leucorhoa*. Leach’s Petrel.—30 (?) days.
Phaethon americanus. Yellow-billed Tropic Bird.—28 days.
Sula bassana. Gannet.—39 days.
Phalacrocorax urile. Red-faced Cormorant.—21 days.
Pelecanus erythrorhynchos. White Pelican.—29-30 days.
Pelecanus occidentalis. Brown Pelican.—28 days.
Mergus americanus. Merganser.—28 days.
Mergus serrator. Red-breasted Merganser.—26-29 days.
Anas platyrhynchos. Mallard.—26-28 days.
Anas rubripes. Black Duck.—26-28 days.
Somateria mollissima borealis. Northern Eider.—36 (?) days.
Branta canadensis canadensis. Canada Goose.—28-30 days.
Olor cygnus. Whooping Swan.—35-40 days.
Phoenicopterus ruber. Flamingo.—28 days.
Gavia alba. White Ibises.—21 days.
Plegadis falcinellus. Glossy Ibises.—21 days.
Botaurus lentiginosus. Bittern.—28 days.
Ardea herodias herodias. Great Blue Heron.—28 days.
Butorides virescens virescens. Green Heron.—17 days.
Nycticorax nycticorax navio. Black-crowned Night Heron.—24 (?) days.
Prozana carolina. Sora Rail.—14 (?) days.
Fulica americana. Coot.—14 days.
Philohela minor. Woodcock.—20-21 days.
Bartramia longicauda. Bartram's Sandpiper.—17 (?) days.
Actitis macularia. Spotted Sandpiper.—15-16 days.
Hamatopus palliatus. Oyster-catcher.—14 (?) days.
Colinus virginianus. Bob-white.—24 days.
Lophortyx californica californica. California Quail.—24 (?) days.
Lophortyx californica californica. Valley Quail.—24 (?) days.
Lophortyx californica gambeli. Gambel's Quail.—24 days.
Dendragapus obscurus obscurus. Dusky Grouse.—24 days.
Dendragapus obscurus fuliginosus. Sooty Grouse.—24 days.
Bonasa umbellus umbellus. Ruffed Grouse.—21 days.
Bonasa umbellus togata. Canada Ruffed Grouse.—21 days.
Lagopus lagopus lagopus. Willow Ptarmigan.—18 (?) days.
Tympanuchus americanus americanus. Prairie Chicken.—21 days.
Pedioecetes phasianellus columbianus. Columbian Sharp-tailed Grouse.—21 days.
Pedioecetes phasianellus campestris. Prairie Sharp-tailed Grouse.—21 days.
Centrocercus urophasianus. Sage Grouse.—22 days.
Meleagris gallopavo silvestris. Wild Turkey.—28 days.
Phasianus colchicus. English Pheasant.—23-24 days.
Columba fasciata fasciata. Band-tailed Pigeon.—18-20 days.
<table>
<thead>
<tr>
<th>Species</th>
<th>Incubation Period</th>
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<tbody>
<tr>
<td>Columba livia</td>
<td>14 days</td>
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<tr>
<td>Ectopistes migratorius</td>
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<tr>
<td>Zenaidura macroura carolinensis</td>
<td>12-14 days</td>
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<tr>
<td>Melopelia asiatica</td>
<td>18 days</td>
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<td>Chlamerpes passerina terrestris</td>
<td>12 days</td>
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<tr>
<td>Cathartes aura septentrionalis</td>
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<tr>
<td>Cathartes uruba</td>
<td>30 days</td>
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<tr>
<td>Circus hudsonius</td>
<td>26-28 days</td>
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<tr>
<td>Accipiter velox</td>
<td>21 days</td>
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<tr>
<td>Accipiter cooperi</td>
<td>21 days</td>
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<td>Buteo borealis borealis</td>
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<tr>
<td>Buteo borealis chalybeus</td>
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<td>Buteo lineatus lineatus</td>
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<td>Buteo swainsoni</td>
<td>25-28 days</td>
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<td>Buteo platypterus</td>
<td>23-25 days</td>
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<td>Uralaetus anthracina</td>
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<td>Archibuteo lagopus sancti-johannis</td>
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<td>Archibuteo feroxines</td>
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<tr>
<td>Aquila chrysaetus</td>
<td>25 days</td>
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<td>Haliaetus leucocephalus</td>
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<tr>
<td>Falco peregrinus</td>
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<tr>
<td>Falco columbarius columbarius</td>
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<td>Falco sparverius sparverius</td>
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<td>Pandion haliaetus carolinensis</td>
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<tr>
<td>Aplomatus california</td>
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<td>Asio otus otus</td>
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<tr>
<td>Cryptopogon calidris calidris</td>
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<tr>
<td>Otus asio asio</td>
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<td>Bubo virginianus virginianus</td>
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<td>Bubo virginianus pallescens</td>
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<tr>
<td>Spoctyto cucullata hypogaea</td>
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<tr>
<td>Micropithecus whitneyi</td>
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<tr>
<td>Geococcyx californicus</td>
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<td>Coccyzus americanus americanus</td>
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<tr>
<td>Coccyzus erythrophthalmus</td>
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<tr>
<td>Ceryle alcyon</td>
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<td>Dryobates villosus villosus</td>
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<td>Dryobates villosus hyloleotus</td>
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<td>Dryobates pubescens medius</td>
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<tr>
<td>Dryobates scalaris bairdi</td>
<td>13 days</td>
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<tr>
<td>Xenopius albolarvatus</td>
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</table>
Picoides americanus americanus. Three-toed Woodpecker.—14 days.  
Sphyrapicus varius nuchalis. Red-naped Sapsucker.—14 days.  
Sphyrapicus ruber ruber.—Red-breasted Sapsucker.—12-14 days.  
Picoides pilatus pilatus. Pileated Woodpecker.—18 days.  
Melanerpes erythrocephalus. Red-headed Woodpecker.—14 days.  
Asyndesmus lewisi. Lewis’s Woodpecker.—14 days.  
Centurus carolinus. Red-bellied Woodpecker.—14 days.  
Centurus aurifrons. Golden-fronted Woodpecker.—14 days.  
Centurus uropygialis. Gila Woodpecker.—14 days.  
Colaptes auratus luteus. Flicker.—11-14 days.  
Antrostomus vociferus. Whip-poor-will.—17 days.  
Chordeiles virginianus. Nighthawk.—16-18 days.  
Chastura pelagica. Chimney Swift.—18 days.  
Archilochus colubris. Ruby-throated Hummingbird.—14 days.  
Archilochus alexandri. Black-chinned Hummingbird.—13 days.  
Calypte costae. Costa’s Hummingbird.—14 days.  
Calypte anna. Anna’s Hummingbird.—14 days.  
Selasphorus rufus. Rufus Hummingbird.—12 days.  
Muscicora forficata. Scissor-tailed Flycatcher.—12-13 days.  
Tyrannus tyrannus. Kingbird.—12-13 days.  
Tyrannus verticalis. Arkansas Kingbird.—12-13 days.  
Tyrannus vociferans. Cassin’s Kingbird.—12-14 days.  
Myiarchus crinitus. Crested Flycatcher.—13-15 days.  
Myiarchus cinerascens cinerascens. Ash-throated Flycatcher.—15 days.  
Sayornis phoebe. Phoebe.—12-14 days.  
Sayornis saya. Say’s Phoebe.—12 days.  
Nuttalorhyncus borealis. Olive-sided Flycatcher.—14 days.  
Myiobius virens. Wood Pewee.—12-13 days.  
Empidonax difficilis difficilis. Western Flycatcher.—12 days.  
Empidonax trailli trailli. Traill’s Flycatcher.—12 days.  
Empidonax trailli alnorum. Alder Flycatcher.—12 days.  
Empidonax minimus. Least Flycatcher.—12 days.  
Empidonax wrightii. Wright’s Flycatcher.—12 days.  
Pyrocephalus rubinus mexicanus. Vermillion Flycatcher.—12 days.  
Pica pica hudsonia. Magpie.—16-18 days.  
Cyanocitta cristata cristata. Blue Jay.—15-17 days.  
Cyanocitta stelleri stelleri. Steller’s Jay.—16 days.  
Cyanocitta stelleri frontalis. Blue-fronted Jay.—16 days.  
Aphelocoma woodhousei. Woodhouse’s Jay.—16 days.  
Aphelocoma californica californica. California Jay.—16 days.  
Aphelocoma sierei arizonae. Arizona Jay.—16 days.  
Perisoreus canadensis canadensis. Canada Jay.—16-18 days.  
Corvus corax principalis. Northern Raven.—20-21 days.
*Corvus cryptoleucus.* White-necked Raven.—21 days.
*Corvus brachyrhynchos.* Crow.—18 days.
*Corvus ossifragus.* Fish Crow.—16-18 days.
*Nucifraga columbiana.* Clark’s Nutcracker.—16-17 days.
*Cyanocorahus cyanocruralus.* Pinion Jay.—16 days.
*Sturnus vulgaris.* Starling.—11-14 days.
*Dolichonyx oryzivorus.* Bobolink.—10 days.
*Molothrus ater ater.* Cowbird.—10 days.
*Cyanocorahus xantocorahus.* Yellow-headed Blackbird.—10 days.
*Aygalatus phoeniceus phoeniceus.* Red-winged Blackbird.—10-14 days.
*Sturnella magna magna.* Meadowlark.—15-17 days.
*Sturnella neglecta.* Western Meadowlark.—15 days.
*Icterus eculatus nelsoni.* Arizona Hooded Oriole.—12-14 days.
*Icterus spurius.* Orchard Oriole.—12 days.
*Icterus galbula.* Baltimore Oriole.—14 days.
*Icterus bullocki.* Bullock’s Oriole.—14 days.
*Euphagus carolinus.* Rusty Blackbird.—14 days.
*Euphagus cyanocruralus.* Brewer’s Blackbird.—14 days.
*Quiscalus quiscula quiscula.* Purple Grackle.—14 days.
*Quiscalus quiscula cyanus.* Bronzed Grackle.—13-16 days.
*Megalquiscalus major major.* Boat-tailed Grackle.—15 days.
*Megalquiscalus major macrorhynus.* Great-tailed Grackle.—15 days.
*Hesperiphona vespertina vespertina.* Evening Grosbeak.—13-14 days.
*Carpodacus purpureus.* Purple Finch.—13 days.
*Carpodacus mexicanus frontalis.* House Finch.—13 days.
*Astragalinus tristis tristis.* Goldfinch.—12-14 days.
*Plectrophenax nivalis nivalis.* Snow Bunting.—21 (?) days.
*Passer domesticus.* European House Sparrow.—12-14 days.
*Perccetes gramineus gramineus.* Vesper Sparrow.—11-13 days.
*Passerculus sandwichensis sandwichensis.* Savannah Sparrow.—12 days.
*Chondestes grammacus striatus.* Western Lark Sparrow.—12 days.
*Zonotrichia albicollis.* White-throated Sparrow.—12-14 days.
*Spizella passerina passerina.* Chipping Sparrow.—10-12 days.
*Spizella pusilla pusilla.* Field Sparrow.—13 days.
*Junco hortulanus.* Slate-colored Junco.—11-12 days.
*Melospiza melodia melodia.* Song Sparrow.—10-14 days.
*Melospiza georgiana.* Swamp Sparrow.—13 days.
*Passerella iliaca schistacea.* Slate-colored Sparrow.—12-14 days.
*Pipilo erythrophthalmus erythrophthalmus.* Towhee.—12-13 days.
*Cardinalis cardinalis cardinalis.* Cardinal.—12 days.
*Zamudioa ludovicana.* Rose-breasted Grosbeak.—14 days.
*Passerina cyanea.* Indigo Bunting.—12 days.
*Passerina amarna.* Lazuli Bunting.—12 days.
*Progne subis subis.* Purple Martin.—12-15 days.
Petrorhynchus unifrons. Cliff Swallow.—12-14 days.
Hirundo rustica. Barn Swallow.—11 days.
Iridoprocne bicolor. Tree Swallow.—14 days.
Bombycilla cedrorum. Cedar Waxwing.—10-12 days.
Phainopepla nitens. Phainopepla.—16 days.
Lanius ludovicianus ludovicianus. Loggerhead Shrike.—12-13 days.
Lanius ludovicianus migrans. Migrant Shrike.—13-16 days.
Vireo aestivalis. Red-eyed Vireo.—12-14 days.
Lanius solitarius solitarius. Blue-headed Vireo.—10-11 days.
Protonotaria citrea. Prothonotary Warbler.—14 days.
Helminthochroa vermicularis. Worm-eating Warbler.—13 days.
Vermivora pinus. Blue-winged Warbler.—10 days.
Vermivora chrysoptera. Golden-winged Warbler.—10 days.
Vermivora rubicapillus rubicapillus. Nashville Warbler.—11-12 days.

Dendroica aestiva aestiva. Yellow Warbler.—10-11 days.
Dendroica coronata. Myrtle Warbler.—12-13 days.
Dendroica magnolia. Magnolia Warbler.—12 days.
Dendroica penicillata. Chestnut-sided Warbler.—10-11 days.
Dendroica virens. Black-throated Green Warbler.—12 days.
Dendroica palmarum hyperborea. Yellow-Palmetto Warbler.—12 days.
Dendroica discolor. Prairie Warbler.—14 (?) days.
Seirus auricapillus. Ovenbird.—12 days.
Geothlypis trichas trichas. Maryland Yellowthroat.—12 days.
Icteria virens virens. Yellow-breasted Chat.—15 days.
Setophaga ruticilla. Redstart.—12 days.
Mimus polyglottos polyglottos. Mockingbird.—10 days.
Dumetella carolinensis. Catbird.—12-14 days.
Toxostoma rufum. Brown Thrasher.—11-14 days.
Toxostoma curvirostre curvirostre. Curve-billed Thrasher.—13 days.
Thryothorus ludovicianus ludovicianus. Carolina Wren.—12 days.
Thryothorus ludovicianus mimensis. Florida Wren.—14 days.
Thryomanes bewickii. Bewick’s Wren.—10-15 days.
Troglodytes aedon aedon. House Wren.—11-13 days.
Telmatodytes palustris palustris. Long-billed Marsh Wren. 10-13 days.
Sitta canadensis. Red-breasted Nuthatch.—12 days.
Pantostes atricapillus atricapillus. Chickadee.—11-14 days.
Hylocichla mustelina. Wood Thrush.—14 days.
Hylocichla ustulata ustulata. Russet-backed Thrush.—14 days.
Hylocichla ustulata wrightsoni. Olive-backed Thrush.—10-13 days.
Hylocichla guttata pallasii. Hermit Thrush.—12 days.
Planesticus migratorius migratorius. Robin.—11-14 days.
Sialia sialis sialis. Bluebird.—12 days.