REPORT OF THE OOLOGICAL COMMITTEE OF THE WILSON ORNITHOLOGICAL CHAPTER.

It is with no small degree of pleasure and satisfaction that this, the first report of the Oological Committee, is submitted to you. Our course has hardly been more than an experiment, but a very successful one in showing what can be done by the untied efforts of earnest, interested members. What we have done is not great in itself, but it is a germ from which may yet spring a tree whose yearly leaves shall unfold to us what we so earnestly seek.

Much can be done and much will be done under an organized leadership. The members have shown a willingness amounting to eagerness, to do the work, waiting only to be given direction. Next year will bring before us a report which will be preserved as a contribution to American Ornithology.

I wish to heartily thank those upon whom I have called to aid me in this work, for their prompt, earnest, energetic efforts. This report is the united result of the work of Messrs. Frank L. Burns, Berwyn, Chester Co., Pa., Chas. A. Ely, Perrineville, N. J., J. Warren Jacobs, Pittsburg, Pa., Lionel T. Bowers, Columbia, Pa., and Reuben M. Strong, Wauwatosa, Wis.

It was the original plan of the Committee to limit its scope to the Thrushes proper, believing that with a species much more efficient work could be done than with many. The A. O. U. nomenclature was adopted, thus greatly limiting the field, but as each report contains notes on the Brown Thrasher and Catbird, that nomenclature was disregarded in the report in which appear the two species mentioned. About half of the reports contain notes on Bluebird and one or two upon the Warblers. As this report depends upon comparison of notes for its chief value these additional notes will appear in a separate general report, not entering into the report proper.

In working over the notes I have compared our own work on measurements with that of those who are considered authority, considering it of sufficient interest to pay for the trouble and space. I have, also, gone a little beyond the limits of this report in order to show the relation of the arrival of a species to its nesting.

It was the original intention of the Committee to group the topics to be considered under six heads: Topography, Climatic Conditions, Nesting, Eggs in Set, Coloration, Measurements. In working over the notes the main topics have been reduced to three: Topography, Climatic Conditions, Nesting; all others being reduced to sub-topics under Nesting for greater clearness. Other sub-topics have been introduced as necessity gave occasion.

It has not seemed best, nor hardly possible, to group the different species together, but instead the observers have been grouped under "NESTING." I trust they will not feel in the least slighted!

Let us now turn to the systematic report.

TOPOGRAPHY.

Berwyn, Chester Co., Pa.

A succession of hills and narrow valleys; covered in part with timber of a mixed growth, chestnut predominating; all land not wooded is under cultivation. Well watered by small streams.

FRANK L. BURNS.

Perrineville, N. J.

Alternate hills and valleys; valleys covered with a thick growth of small bushes; hills with woods of oak, chestnut and pine. Cultivated portions contain large orchards of pear, apple and peach.

CHAS. A. ELY.

Wauwatosa, Milwaukee Co., Wis.

Hilly and rolling, especially along streams. Many streams, swamps and small lakes. Timber: maple, oak, hickory, willow, elm, ash, beech, tamarack and others. Wild land, 4 per ct.; pasture, 5 per ct.; proportion to cleared, 10 per ct. Thorn trees and bushes in abundance along streams. Nesting sites: grassland 50 per ct.; cultivated, 35 per ct.; timbered, 10 per ct.; orchards, 5 per ct.

REUBEN M. STRONG.

Grinnell, E. Jasper, W. Poweshick Cos., Iowa.

Primarily rolling prairie, sparsely timbered along the streams with hard woods and lindens, poplars, cottonwoods and a few maples, with under brush in abundance. Many isolated patches

of small brush; willow and osage-orange hedges along most roads and in many fields. Few and small streams. Proportional lands: under cultivation, 25 per ct.; pasture, 25 per ct.; meadow, 20 per ct.; woods—also pastured—10 per ct.; isolated brush—also pastured—5 per ct.; wild prairie, 5 per ct.; artificial groves 5 per ct.; hedges, 5 per ct. Equally used for nesting.

LYNDS JONES.

CLIMATIC CONDITIONS.

That the seasons very materially affect nesting no one can fail to see. In the earliest history of bird-life as the seasons grew out of perpetual tropical climate, the birds must have selected the time best suited to the propagation of their kind to build their nests and rear their young. As the seasons emerged, from what cause we do not care to argue, the most fitting time was selected.

Clearly that time could not have been in the full heat of what is now our Summer, nor yet in what now is Winter, since these seasons have nothing of that which gives buoyancy to life, which quickens the pulse and starts anew the flagging powers. For this office, birds as well as all other life, require the time when their life is most full, most vigorous, when there is most life in them. Spring is the awakening, the invigorating, the life-giving season. Certainly their selection of the season is a most natural one.

But early and late seasons, cold and warm, play no unimportant part in their nesting. Let it be observed that it is the old birds, and those which have passed the Winter nearest by, that nest first. They nest as soon as the weather is fit. As cold storms are more frequent early than late in Spring, the earlier birds will be most affected by the weather, as a matter of course. After a cold storm abandoned nests of the Robin have been found, half finished, thus deferring the nesting season days perhaps. Even when the nest is not abandoned the birds partly or entirely suspend work until the weather brightens. It is harder to find food in bad weather as the birds cannot work so long nor so well.

The question has been asked, "Does the time of year or weather effect the composition or workmanship of the nest?" The reports throw no light upon the effect of weather, upon the composition or workmanship, but there is some evidence that the

time of year does so affect the nest. The tendency seems to be to make better and warmer nests early in the season. It is only the early birds that are appreciably affected.

In the following report it will be seen that all of the birds in this group lay daily. It would perhaps be wiser to say that this is the normal condition of things. Bad weather may, often does, cause a longer or shorter suspension in laying. I have seen instances where a Robin had a nest with one or two eggs which a hard storm caused her to abandon. She built another nest and raised her brood. I am not prepared to say that she did not drop another egg, or perhaps two, during the interval, but it seems highly improbable.

Even setting birds and those with young in the nest are sometimes driven to the choice of abandoning their treasures, or perishing with them, in long continued storms. Many instances have been recorded of finding nests with addled eggs and with dead young, the mother having abandoned them or perished.

Late sets are smaller than early ones, especially of Robin and Wood Thrush. This would seem to show that storms affect the number of eggs laid very little, if at all, if it is true, as we have said, that storms are more frequent and more severe early in the season than later.

"Does the time of year affect the color or markings of eggs?" There is no evidence at hand one way or the other. It would seem that late sets would be paler because the powers of the birds are becoming exhausted; assuming that the late sets are the second or third in the case of birds that make more than one brood, and that those which do not, have been robbed or their first set destroyed so that they made a second. But the element of age must, also, be reckoned in. Assuming that the powers of the old birds are waning, and as it is, they, rather than the birds of the year before, which make more than one brood, and it is they which make the first brood, we might suppose that the first and last eggs, or sets, would be palest, the last most. I am not stating anything, let it be understood, but only asking questions for those who shall work the coming season to answer.

I will but state the question, "Do eggs vary in size or shape at different seasons?" The reports furnish no evidence with

which to answer. Let it be further studied.

From the foregoing summary of notes it will be seen that if much that is new is to be learned, eggs and nests must be examined and studied with reference to the seasons and weather. None of the questions are satisfactorily answered in any work on ornithology, nor will they be until a number of pains-taking observers band themselves together in a way like our Committee, and work with a purpose and will. Why may not we solve these problems and carry off whatever honor attaches to the deed.

NESTING.

704—CATBIRD, *Galeoscoptes carolinensis.*

SITUATION OF NEST.

Of the 47 nests examined by Mr. Burns, at Berwyn, Pa., 27 were in briars, 18 in upright fork of a sapling or tree, 2 out on a branch of a tree; 34 were close to water, 13 some distance from water; 43 in thickets, 4 close to dwellings; highest 8 feet, lowest 2 feet; averaging 4 feet.

Mr. Ely, at Perrineville, N. J., has found the largest number in briars and thickets. He mentions one found in the fork of an apple tree as a very unusual situation.

Mr. Bowers, at Columbia, Pa., examined 3 nests, all of which were in blackberry bushes, 4 to 5 feet up.

Mr. Jacobs, at Pittsburgh, Pa., finds a large majority of nests in clumps of briars in neglected fields. He also speaks of one "placed among the overhanging roots on the bank of a stream and another in the top of a water elm, fifteen feet up." This is very unusual. Normal height 3 feet.

Mr. Strong, at Wauwatosa, Wis., says, "Nests are in low bushes, etc., near the ground, in thickets and secluded places."

At Grinnell, Iowa, upwards of a hundred nests have been examined; one was in a lilac bush 20 rods from a dwelling, all the rest in briars, thorn-trees or thick brush. Occasionally nests are found in shade trees in town, but never in evergreen or any such tree. It is almost true that "where there is a gooseberry bush there you may find a Catbird's nest." Thorn trees come in next in preference. Here where there is so little water, nests are indifferently near or remote from water. The highest nest was 6 feet, lowest 1 1-2 feet, average 3 feet.

COMPOSITION OF NEST.

All agree in most points, respecting the composition of the Catbird's nest. First there is a layer of sticks through which protrude—usually below—some light colored fine grass, covered above with bark, then leaves and weeds and lined with dark colored rootlets. At Berwyn, Pa., grape-vine or cedar bark is used. There, "nests differ only in the quantity of certain of the above named materials used." Mr. Burns found one nest, in a yard, with about 3 feet of white satin ribbon festooned about it. In Iowa, where there is no cedar, the bark of the American linden is used.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight
Berwyn, Pa.,	4.00 to 6.00	2.50 to 3.00	2.00 to 3.00	1.00 to 1.50	.50 to 1.50 oz.
Columbia, Pa.,	6.00	2.75	5.50	2.75	
Grinnell, Iowa,	3.75 to 7.00	2.30 to 2.90	3.00 to 6.00	1.50 to 2.00	

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Av.	Time Building.	First	Common.
Berwyn, Pa..	5-25	6-26	6-6		5-9	
Columbia, Pa.,	5-18	6-10		5-6 days		
Perrineville, N. J.	6-2 (?)		6-10	5-6 days		
Pittsburgh, Pa.,	5-13	7-15	5-30		5-1	5-10
Wauwatosa, Wis.	5-15	8-1				
Grinnell, Iowa.	5-20	7-8	6-1	5-10 days	5-3	5-4

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest	Smallest.	Average.
Berwyn, Pa.,	5	2	4	.68x1.05	.68x.60	.64x.72
Columbia, Pa.,						
Perrineville, N. J.,			4			.69x.98
Pittsburgh, Pa.,	5	2	4			
Wauwatosa, Wis.,	5	3	4	.79x.96	.65x.84	.68x.90
Grinnell, Iowa.,	5	3	4	.71x.96	.62x.85	.67x.88

In form, eggs of Catbird range from elliptical ovate, through ovate to pyriform; the last form is rare. The variation in size and shape is very marked.

COLORATION.

The reports show a remarkable agreement in giving the color of eggs. The universal report is, "A uniform bluish-green, frequently fading to a greenish-blue." In notes on a large series of sets I have described them as a uniform dark nile-blue. Fresh eggs usuall have a limy deposit tending to appear in streaks; this is easily washed off.

PERIOD OF INCUBATION, ETC.

Berwyn, Pa.	Lays each day.	14 days hatching.	Young left in 12 days
Perrineville, N. J.	" "	" 12 to 13 "	" " " " "
Grinnell, Iowa.	" "	14 "	" " " " 14 "

We have learned that the Catbird is a seclusive bird, preferring underbrush and thickets to places near human habitations. That he places his nest about 3 or 4 feet from the ground, building it into the twigs and stems of the bush or tree, or rarely piling his brush into the forks. That he prefers to be where he can easily and quickly "wet his whistle and awake the woodland echoes." We might have said, too, that he is a sturdy warrior when his home is assailed by squirrel, or mouse, or snake, or man. Very rarely is he imposed upon by any parasite; Mr. Burns being the only one who reports such a thing; he found an egg of Cardinal in one nest.

We have also learned that though his nest is rough and brushy outside, it is snug and neat within. That the eggs are of a nearly uniform color the country through, and about four in number, very rarely six. That his nest is soon made and that no time is lost after his arrival.

BROWN THRASHER, *Harporhynchus rufus.*

SITUATION OF NEST.

We do not seem to agree on the nest of this Thrasher so well as we did on that of Catbird. It is the bird's fault.
At Berwyn, Pa., Brown Thrasher builds in almost any kind of shrubbery, without a preference for any. 4 nests were close to water, 3 remote from it; 5 were in thickets, 2 in cultivated fields; lowest 2 feet, highest 8 feet, average 4 feet. It is the same at Columbia, Pa. and Perrineville, N. J.

At Pittsburgh, Pa., "nests are placed in briars, bushes, shrubbery, trees, bush-heaps and on the ground in fence corners, along the borders of woods and in neglected fields." Highest 8 feet, average 3 feet.

At Wauwatosa, Wis., nests may be found in out of the way places, in bushes and shrubbery, thickets being preferred; often on the ground; highest 20 feet, average 3 feet.

At Grinnell, Iowa, nests in the woods are in the shrubbery and bushes, preferably thorn trees. The great majority of nests are in the osage-orange hedges along roads and in fields; here nests are made in old loppings, 2 to 3 1-2 feet up. The proportion of nests in hedges and in woods is 20 to 1. Nests are rarely placed on the ground, never out of the woods. Highest 6 feet, average 3 1-2 feet; usually remote from water.

COMPOSITION OF NEST.

The nest is made outwardly of twigs, usually forming a broad bristling platform, upon which weeds, strips of bark, dead leaves and grass are arranged; the lining is of black rootlets. Nests are frequently without twigs or bark.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Pittsburgh, Pa.					
Wauwatosa, Wis.		4.00		2.50	
Grinnell, Iowa.	5.00 to 9.00	2.75 to 3.50	3.00 to 3.50	1.25 to 2.00	
Berwyn, Pa.	5.00 to 6.00	2.75 to 3.50	2.50 to 3.00	1.50 to 1.25	.75 to 2.00 oz

Nests are very variable in external measurements according to situation, sometimes sprawling, sometimes compact.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Average.	Time Building.	First.	Common
Berwyn, Pa.	5-25	6-18	6 3		5-9	
Columbia, Pa.	5-14		2-25			
Perrineville, N. J.	"Nesting begins last of May"			4-5 days	5-1	
Pittsburgh, Pa.	4-25	6-15	5-10			
Wauwatosa, Wis.	5-5	July				
Grinnell, Iowa.	5-10	6-20	5-20	6 to 8 days	4-12	4-28

In six years' work Mr. Burns says that the earliest date of nesting was May 13, latest June 26, average June 10.

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest.	Smallest.	Average.
Berwyn, Pa.	4	3	4	1.10x.80	1.05x.75	1.06x.79
Pittsburgh, Pa.	4	3	4			1.10x.98
Perrineville, N. J.	5	3	4			1.07x.81
Wauwatosa, Wis.	6	3	4	1.13x.81	.96x.75	1.04x.78
Grinnell, Iowa.	5	3	4	1.08x.84	1.02x.74	1.05x.80

It is unnecessary to say that 6 eggs is a rare set; even 5 is by no means common. The average is uniform throughout. The measurements are too irregular to be of value. Evidently the "personal equation" has largely entered into the computation. In this connection I am constrained to give the average measurements of a few of our authorities for a comparison; I will not give the names: 1.00x.75; 1.05x.78; 1.06x.78; 1.05x.80; 1.05x .81; 1.05x.82; 1.08x.80. After all we do not disagree more than our professional brethren.

In form, eggs vary from ovate to elongate ovate.

COLORATION.

All agree that the eggs of the Thrasher are of a plain light-gray, often with a slight greenish tinge, thickly spotted and dotted and sparingly blotched with wood-brown and lavender shell markings; these markings are often thickest on the larger end, where they frequently congregate in a ring or become confluent in a great blotch. Sometimes the eggs are sparingly marked with no aggregation or local clouding. Mr. Strong says: "Some eggs lack the markings and are a plain brownish-gray."

The period of incubation is about 14 days and the eggs are laid daily if the weather is fair.

We find Brown Thrasher more sociable, as often seeking the society of man as secluding himself in the woods; he can hardly be called a deep woods bird, seldom being seen there. He does not altogether waste the sweetness of his beautiful song on the desert air, but pours forth the liquid, bubbling notes where all who choose may hear.

There is no bird of his size who will more vehemently attack an intruder, or sit so closely when disturbed. Like the Catbird, his nest is soon made, but always neatly within.

Wood Thrush, *Hylocichla mustelina.*

SIUATION OF NEST.

In Pennsylvania and New Jersey the Wood Thrush prefers chestnut, beech, dogwood, maple, cedar, laurel and spice-wood in the order given, though small shrubs and bushes are sometimes used. In Wisconsin and Iowa, oaks are decidedly the preference, shrubs and bushes are not commonly used.

All agree that the upright crotch is the usual place for a nest: Mr. Burns says that of 58 nests examined, 53 were placed in upright forks of saplings, 3 out on branches of trees, 2 in briar tangles; nest always in a thicket. In Iowa a larger proportion are on horizontal branches. I have found nests saddled on a drooping grape-vine which the wind rocked almost constantly.

There is much variation in height of Wood Thrush's nest. At Berwyn, Pa., the highest was 12 feet, lowest 1 foot, average 6 feet; at Columbia, Pa., highest 17 feet, lowest 3 feet, average 8 feet; at Pittsburgh, Pa., highest 15 feet, lowest 3 feet, average 6 feet; at Grinnell, Iowa, highest 20 feet, lowest 2 feet, average 6 feet; at Wauwatosa, Wis., highest 30 feet.

At Berwyn, Pa., 40 nests were on hill sides, 18 close to water; at Perrineville, N. J., "the nest is in thickly wooded tracts;" at Pittsburgh, Pa., "Wood Thrush is found in damp woodlands and sparingly distributed over groves and dry leafy woods;" at Grinnell, Iowa, the dark deep woods are preferred without reference to nearness to water; nests are the most common on dark, shady uplands. Wood Thrush also nests not uncommonly in deep shady places in city, often very near occupied houses.

COMPOSITION OF NEST.

In Pennsylvania and New Jersey the nest is made of "dead chestnut and oak leaves appearing as if placed together in a humid condition; upon these are arranged weeds, grass and mud, all thickly lined with black rootlets, with rarely a few dead twigs in the outer structure, and a little grass on the inside.

Mr. Burns found a nest containing much tissue paper and circulars hanging from the nest in strips.

In Iowa the nests are universally made outwardly of dead oak and hickory leaves, with some fine, almost white, dry grass hanging down; weed stalks and long coarse grass show through the leaves, within them there is a thick layer of punk formed into a welt, almost like felt, inside of this there is a thin layer of black rootlets, rarely thick enough to conceal the punk, with never any grass. I have never found a Wood Thrush's nest with mud in it. Either punk of a greyish color, or old horse droppings are used, rarely the latter. I am aware that I may call

down a storm of dissent by insisting that the Wood Thrush in Iowa, at least central Iowa, never use mud in making their nests. Brewer, Baird, Coues, Ridgway, Davie and all the rest find Wood Thrushes which use mud, but I cannot. They must dissent with my birds, not with me. The question arises, "is this difference local or is it a western characteristic?" There seems to be no logical reason why the Wood Thrush in Iowa should use punk and not mud, when its eastern brothers and sisters use only mud. Here is a nut for our workers to crack.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Berwyn, Pa.	4.00 to 4.50	2.75 to 3.25	2.50 to 3.50	1.75 to 2.25	2.00 to 5.00 oz
Columbia, Pa.	3.50	2.75	4.00	2.50	½ lb
Wauwatosa, Wis.	5.00	3.50	3.00	2.50	
Grinnell, Iowa.	4.00 to 4.75	2.75 to 3.25	2.50 to 3.75	1.75 to 2.15	

The variation in size is small compared to either of the foregoing species; the nest is much more compactly made.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Average.	Time Building.	First.	Common
Berwyn, Pa.	5-25	7-9	6-10		4-11	
Columbia, Pa.	5-27	7-10				
Pittsburgh, Pa.	5-11	6-17			4-6	4-25
Perrineville, N. J.	5-10	7-1		6-7 days		
Grinnell, Iowa.	5-22	7-17	6-1	10 days	5-1	5-10

	EGGS IN SET			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest.	Smallest.	Average.
Berwyn, Pa.	4	1	3	1.11x.77	.95x.67	1.01x.74
Pittsburgh, Pa.	4	2	3			1.02x.76
Wauwatosa, Wis.	5	2	4			
Grinnell, Iowa.	4	2	3	1.11x.75	.96x.72	1.01x.74
Perrineville, N. J.						1.00x.75

In the average measurements we very closely agree, much more so than the professionals whose records are as follows: 1.00 to 1.10x.70; .95x.65; 1.04x.72; 1.00x.75; 1.02x.74; 1.08 x.70. They show a very great diversity in form as well as size. One author—.95x.65—gives the average even smaller than the smallest in the table above. In their reckoning compare the long egg—1.10x.70—with the shortest—1.00x.75—and then ask how can authors differ so widely in average measurements. In form, eggs are very diversified; from short ovate they run through ovate pyriform, ovate, elliptical ovate to elongate ovate.

COLORATION.

Mr. Burns describes the eggs as "greenish-blue with very little variation;" one in a set of three is light blue. Mr. Ely says: "they are of a uniform deep blue." Mr. Jacobs describes them as "a very light blue with greenish tinge." I have described a large number of eggs as "a uniform light nile-blue." Fully half of the Iowa eggs have a limy deposit when fresh.

PERIOD OF INCUBATION.

At Berwyn, Pa. and Grinnell, Iowa the bird lays each day and is fourteen days setting. In fair weather, the young leave the nest in about ten days, sometimes not for fourteen.

Were our report not restricted to the department of Oology, and should we not infringe upon the rights of the Melological Committee, we would be delighted to pause here to speak in words of highest praise of Wood Thrush's song. Of all the birds in the deep forest-land, he has no peer. His song is suited

to the dusky solitude, awaking the softened echoes which speak and speak again to the leaves, the trees, the brooks and rills, finding their way even to the listening ear of him who wanders by. His is a "gush of molten melody" not too timid, yet not bold. He stands not on a house-top, inviting all to look and see, but sits in retirement, singing only to his mate, because he cannot help but sing.

Stay with us now and thy music impart,
Touching the tenderest chords of the heart.
Send us thy clear, bell-like music again
Out from the depths of the dark wooded glen.
Cheer us when dreary or gloomy the day,
For then is the time of thy happiest lay.

American Robin, *Merula migratoria.*

SITUATION OF NEST.

Robin nests anywhere above ground beneath the Sun. I have sometimes diligently scanned the horns of the Moon with a field glass, thinking some enterprising Robin might have built his nest within. He has preferences, however, and they are for large trees and buildings. In the city, shade trees along streets are the favorite ones; in the country, shade trees along the roads are most often used, but many nests are built in the trees around the houses In Iowa the osage-orange hedges are much resorted to in company with Brown Thrasher.

Mr. Burns found one nest on the ground half way up a railroad bank. Mr. Jacobs has found nests on ledges of rocks. Mr. Ely says they are never on the ground and Mr. Strong and myself have never found them there. I have found nests under bridges, in pump-stocks, on rafters in barns, in ornamental vines within a foot of a window and even in eave troughs.

Mr. Burns says, "out of 49 nests, 30 were placed close to the main stem, 8 out on branches, 10 in buildings and one on the ground; only 2 were in thickets. All concur in this proportion.

Robin makes his nest anywhere from on the ground to 50 or even 60 feet up, commonly about 10 or 12 feet.

COMPOSITION OF NEST.

The nest is made of dead grass plastered together with mud, always lined with dry grass of a light color; the grass very rarely hides the mud. Weed stalks, rags, rootlets, paper, corn-husks, or even small twigs may find their way into exterior of nest occasionally. Mr. Ely has found nests with a few horse hairs for lining. Robin's nests may be distinguished by the absence of rootlets and the presence of grass in the lining. In Iowa, where Wood Thrush uses punk instead of mud, the mud also distinguishes the nest of Robin.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Berwyn, Pa.	5.00 to 6.00	3.50 to 4.00	3.00 to 4.00	2.00 to 2.50	5-8 oz
Columbia, Pa.	3.50	2.75	4.00	2.50	1 lb.
Grinnell, Iowa.	5.00 to 6.50	3.50 to 4.25	3.00 to 4.25	2.00 to 2.40	

The nest is too compactly made to vary much in size.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Av.	Time Building.	First.	Common.
Berwyn, Pa.	5-1	6-26	5-24		2-12	
Columbia, Pa.	4-26	7-10				
Perrineville, N. J.	3-28	8-20	4-10	5 days	3-1	
Wauwatosa, Wis.	4-15	7-15				
Grinnell, Iowa.	4-26	7-3	May	6 days	2-12	3-20

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest	Smallest.	Average.
Berwyn, Pa.	5	2	4	1.10x.83	1.06x.76	1.08x.79
Perrineville, N. J.			4			1.18x.81
Pittsburgh, Pa.	5	3	4	1.12x.84	1.08x.80	1.10x.82
Wauwatosa, Wis.	6	3	4	1.20x.84	1.07x.80	1.13x.82
Grinnell, Iowa.	5	2	4	1.19x.90	1.07x.80	1.13x.82

The variation in average dimensions is very great—.10x.2—this time. Our professional fathers show a variation of but .3x.3, which is pretty close. We ought to do better next time.

COLORATION.

Eggs of Robin are subject to but very slight variation in color. They are usually plain greenish, blue, or light nile blue, sometimes greenish-gray; not rarely spotted sparingly with warm-brown. Eggs vary from simple ovate to elongate-ovate.

PERIOD OF INCUBATION.

Robin lays each day unless hindered by storm and sets 14 days; in 12 to 14 days the young leave the nest.

Of Robin we can say nothing new. He is everywhere and known to everyone. His voice is the sweetest when it is the first in Spring, to awaken slumbering nature. With it we associate the silent voice of the starting sap, the melting snows and the return of the gaities of the new, fresh Spring. His voice is seldom heard after nesting begins.

The Committee had in mind many questions to be answered respecting nidification and oology, among which are the following:

1. Do eggs of the same species differ in any way in different localities, or at different seasons or in different sorts of weather?

2. Does the time occupied in laying or the period of incubation differ in different localities, or at different seasons?

3. Does the time occupied in building, or the material used, differ at different seasons or in different localities?

4. Does the time of year affect the position of the nest with respect to the Sun?

The question arises: How many of those questions are answered in the foregoing report? With regard to the first question I would say that it might easily be answered by a little painstaking labor. Mr. Burns is the only one whose notes are full enough to warrant me in taking his average of the size of eggs as the average of his own locality, the others are too general to be of use in this report. It will be seen by comparing Mr. Burns's work with my own that there is no constancy of variation; one species may show a larger average for Iowa and another a larger for Pennsylvania; hence no rule can be established. It is true, however, even though the reports throw no light upon the subject that the smallest eggs come from the south, gradually growing larger with every advance northward, with the most northern the largest. That there should be some variation east and west is, to my mind, highly probable, though the variations would be less. In working upon this line of investigation, notes east and west, should be studied and compared with the isothermal always in mind. North and south are not in nearness or remoteness to the poles, but in temperature, where the birds are concerned.

There is one thing more which may and probably does effect the size of eggs in a set: the size of the set. Where only a few are laid we would expect them to be larger and *vice versa* in larger sets. Thus, in future reports, full notes should be sent in, giving each set with its measurements by itself, with the date and number of eggs in the set.

The third question is answered affirmatively. Nests do differ, both in materials used and in time in building, in different localities, if not at different seasons. This is seen in case of Wood Thrush and Catbird especially; it is true in a less measure of the others.

The second and fourth questions are still open as before. On general principles we would say that the period of incubation would probably differ somewhat at different seasons. The cold causing a greater length of time for the development of the chick than the warmer air of later Spring.