

1938

A Preliminary Report on the
Nesting Habits of the Red-Eyed Vireo

By Fred R. Cagle

scientific names, etc.

though they were abundant in
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This paper lacks dates!

T. Nelson

No nests were
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est:

A Preliminary Report on the Nesting Habits of the Red-Eyed Vireo

By Fred R. Cagle

This study was carried on in the vicinity of the Biological Station, Douglas Lake, Michigan, during the summer of 1938. In order to facilitate procedure, the work was divided into three parts: a nest survey to determine breeding habitat and possibly territorial demands, nest analysis and observation of adult activities in relation to the nest.

Nesting sites:

Although a rather intensive study was made of the area south and north-west of the Biological Station, only eleven nests were located. All of these were near open areas as in thin woodlands. No nests were found in densely wooded areas. *Rem?*

Of the nests examined, one was in a dogwood tree, one in a chestnut, one in a basswood and seven in red maples.*

No nests were found in aspens, although they were abundant in most of the areas studied. All of the nests were in small saplings. *ly*

Nest:

The typical vireo nest is constructed of a firm cup-shaped framework of coarse bark suspended from the two branches of a forked twig and lined with fine plant materials. The outside is covered with thin wide strips of white birch bark plas-

* A note in Wilson Bulletin, March, 1936, pg. 15 records a nest in an oak tree.

tered to the framework with spider silk. Large patches of silk may adhere to the outside of some nests. Spider silk, bark, and occasionally bits of thread are woven together to form a firm support for the nest. A forked twig near the end of a low branch is usually chosen, the size of the fork controlling the size of the nest. Details of the various nests examined may be seen in Figure 1.

The completed nest of the vireo is a well built, sturdy structure that can weather a violent wind. The young of the Red Eyed Vireo are much crowded in this small nest and it is usually sadly dilapidated after a brood has used it. Roberts stated that it remained in place for several years.

Nest 8 was of particular interest in that the bird had added additional support by carrying a long, tough piece of bark around a twig vertical to the nest (Figure 2). Each end of the bark was firmly woven into opposite sides of the nest. This additional diagonal support helped to hold the nest in place. No such structure was observed in other nests.

Another nest (nest 7) found was either incomplete or a false nest. It consisted of a shallow frame work of bark firmly attached to a forked twig. There was no evidence of lining or covering and the frame work was much too shallow for a true nest (Figure 3).*

Time required in nest-building was then punctured to the eggs:

Each of the three nests studied contained three vireo eggs. Nest 1 contained two cowbird eggs in addition to the vireo eggs.

*A note on pg. 29 of Auk, 1910 states that the vireo, like the marsh wren, seems to build extra nests.

Should be worked with another year!

Dates?

Measurements of the eggs were:

	<u>Length</u>	<u>Diameter</u>
Nest 1	2.0	1.5
	2.2	1.49
	2.5	1.48
Nest 3	1.94	1.4
	1.95	1.37
	1.96	1.35

It is interesting to note that the second set of eggs are uniformly smaller than those of Nest 1.

*Second
smaller perhaps?*

The eggs are light colored with thin mottlings and speckings of brown.

Incubation activities:

There was ample opportunity to study incubation in connection with one nest. The same bird was always incubating and no other bird was ever seen near the nest. Roberts stated that the male ^{takes part in} helps incubate however.

This bird is an ambitious incubator and refuses to move from the nest unless approached very closely. It is a close sitter and sleeps while incubating. In fact Roberts observed a bird "snoring" while on its nest.

The first nest observed contained three vireo eggs and two cowbird eggs. The observer punctured one of the vireo eggs very slightly while measuring it, and the next day this egg was missing. A cowbird egg was then punctured to check on this egg eliminating activity, and parts of the shell were found beneath the nest the next day. The bird continued to incubate the other eggs; but, during the next few days, another of the vireo eggs disappeared leaving one vireo egg and one cowbird egg in the nest. Shortly afterwards the cowbird

*Could bird
have learned
habit?* ↑

hatched and was removed from the nest. At the same time two phoebe eggs containing small embryos were added to the nest. The bird, although evidently noting the new eggs, accepted them and continued to incubate them along with the single vireo egg which was quite evidently addled.

It is interesting to note that this bird readily removed the slightly punctured egg but failed to detect the strange cowbird and phoebe eggs or the addled vireo egg.

Why?

The incubating bird in another nest tolerated a broken egg for two days before removing it. Herrick witnessed this egg removing activity of the vireo but stated that there was much difference between individuals in this respect.

No complete incubation records were obtained. Herrick states fourteen days; Bergtold twelve to fourteen.

Development of young: The young are quite immature when they leave the nest. They are unable to fly but can run and climb quite well. The young of two nests were studied through their

complete development and phoebes hatched in one nest were studied until their death. Data as to their weight increase is presented in tables 1 and 2.

These figures give considerable information of value. These facts are indicated in table 1. Nestlings 1 and 2 gained weight very slowly during the first three days after hatching due apparently to the delayed hatching of the third egg. This indicates that the bird incubated the third egg and did not actively supply food to the new nestlings. Once feeding started all three nestlings grew at an almost equal rate and left the nest at the same time. Thus nestlings 1 and 2 left the nest in thirteen days while nestling 3 left the nest in ten

May be new data - good if true

days time.

These weights illustrate well the fact that the nestlings decrease in weight before leaving the nest.

The two phoebe eggs added to Nest 1 hatched in a few days time, one egg two days after the other. Both birds developed rapidly for a few days and were then found dead in the nest. One of them had evidently been severely pecked about the head; the other had no signs of injury. Both birds had full stomachs so starvation could not have been a factor.

Nestlings in Nest 3 were not weighed regularly or disturbed in order that a normal nest life might be observed. These birds left the nest in twelve days and were almost identical in weights and development with the nestlings of Nest 2 when they left the nest at the end of thirteen days.

The young are quite immature when they leave the nest. They are unable to fly but can run and climb quite well. In both nests young birds were observed within fifty feet of the nest two days after they had left the nest. Adults were observed feeding young birds well able to fly and as large as themselves.

The nestlings, although unable to fly, are well protected by their plain olive-green color and their habit of remaining very quiet until actually touched. Nestlings having just left the nest are exceedingly difficult to locate and were found only through observation of the female bird.

Feeding habits:

The vireo feeds mainly on insect forms but it occasionally eats various berries. The young are fed small larvae for the most part but sometimes beetles, spiders and large

larvae are presented to the nestlings.

The adults secure their food from the trees and underbrush in the immediate vicinity of the nest. They are expert insect hunters and are able to capture those larvae that are best protectively colored. They do not hesitate to attack large insects. In several instances they were observed beating large larvae over the limbs and then tearing them into eatable pieces. Miss Drum observed a bird killing a large luna moth by beating it violently against a limb. In one instance the male brought a large larvae to the nest and the female aided him in tearing it into pieces small enough for the nestlings.

*Notes on Sparrow
specific forms*

The vireo feeds most actively in the morning, at noon, and during the late afternoon. Both the male and female feed the young. They may feed as many as one hundred times in the nine hours from eight P.M. to five A.M. and energetic

Evidence?

Stomachs of the two phoebes fed by the Red Eyed Vireo contained an abundance of portions of cephalothorax and legs of spiders, numerous beetle remains and many horny mandibles of leaf eating insect larvae. One contained an abundance of insect eggs undoubtedly digested from the adult insect.

Study to determine, how many...

Summary:

The following facts of interest are pointed out in this paper:

1. The vireo prefers thin woodlands for a nesting area. They definitely prefer the small maple saplings found in such an area.

Reason?

2. The nest is a well built protectively colored structure.

3. The vireo readily detects and removes injured eggs from the nest but incubates addled or strange eggs.

limited / tubercles should be looked out

4. Usually three eggs are laid. They hatch in ten to fourteen days and the young leave the nest in ten to thirteen days. They are unable to fly but well protected by their coloration and instinctive urge to remain very quiet when danger threatens.

Remarkable variation in color authority?

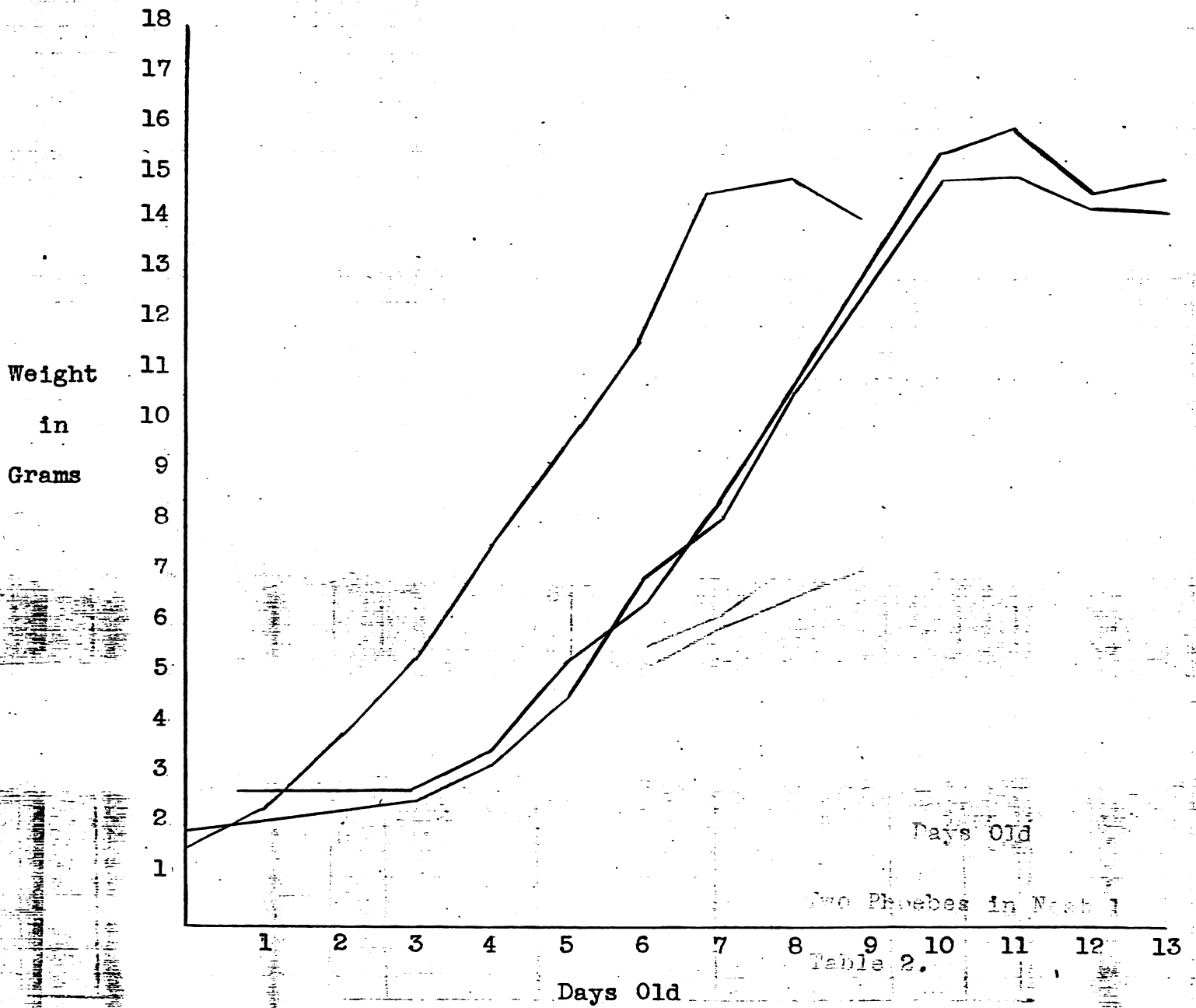
5. The vireos feed principally on insects, large and small. Larger insect forms are torn into pieces of eatable size. Spiders and beetles form a portion of their diet.

6. The male is an excellent and energetic songster. He sings while hunting and while feeding the young.

Does female sing?

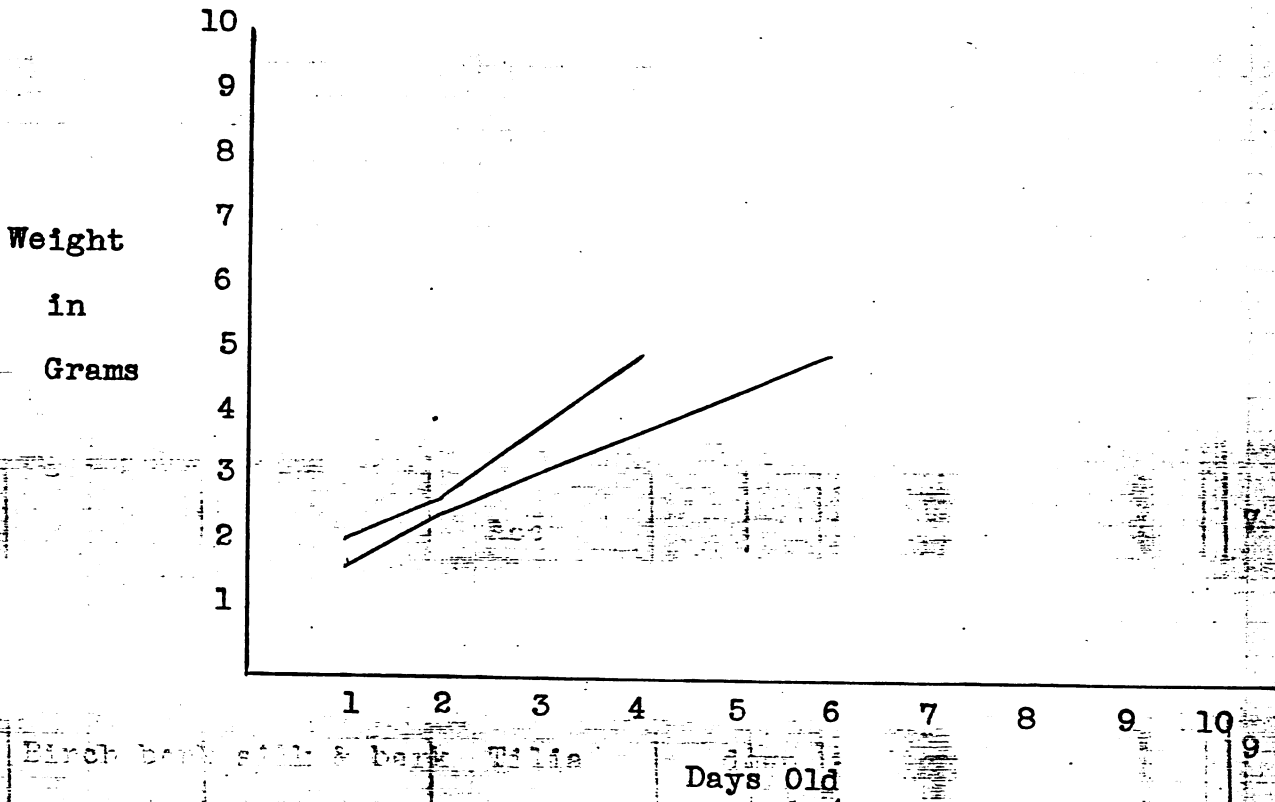
2/ study is continued, securing a series of photographs

This is old



Nestlings in Nest 2

Table 1.



Birch bark still & bark Tillie

Days Old

Two Phoebes in Nest 1

Table 2.

9	5.4	4.5
	5.4	4.5
	5.4	4.5

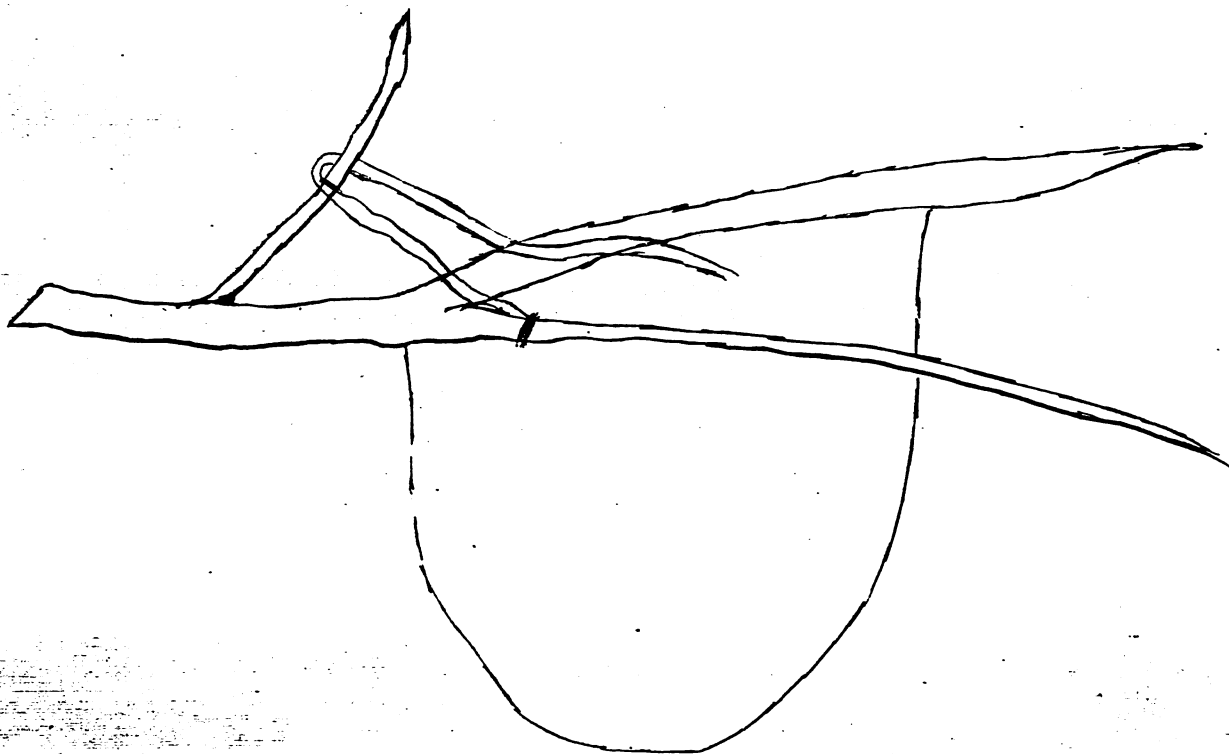
Red Eyed Vireo Nests Examined

The birds species around here T.N.

No.	Gr. Dia.	Dpt.	Ht. Abv. Gnd.	Lining	Framework	Covering	Suspension	Situation	Dia. of Sup. Twig	Evid. of Occu.
1	7.5	6.5	122cm.	Grass, small twigs	Coarse bark	Birch bark Spider silk	silk & bark	✓ Cornus florida	6mm.	fth. sheath
2	6.6	8.7	183cm.	Pine twigs	Coarse bark	Birch bark	silk	Acer rubrum	4mm.	feces
3	6.0	6.1	180cm.	weed fibers	Coarse bark	Birch bark Spider silk	silk & bark	Acer rubrum	8cm.	
4	7.2	5.5	456cm.	Grass grape vine	Coarse bark	Birch bark Spider silk	silk & bark	Acer rubrum	5mm.	
5	5.8	5.5		Pine twigs grass, fine bark	Coarse bark	Birch bark Spider egg cases	silk & bark	Acer rubrum	5mm.	fth. sheath
6	6.9	5.7		Pine twigs	Coarse bark weed stalks	Birch bark, egg cases	silk, dead leaf, bark strips			fth. sheath
7	5.5	2.8						Acer rubrum		
8	6.0	6.6	120cm.	Grass	Coarse bark	Birch bark, egg cocoon silk	silk & bark	Acer rubrum		
9	5.8	4.5		fine twigs & grass	Coarse bark	Birch bark	silk & bark	Tilia		down fth

Figure 1.

Good idea



Nest 8 in open, windswept area.

Figure 2.