

---

# Nesting observations of Hutton's Vireo in the Greater Victoria area of British Columbia

Anne S. Downton<sup>1</sup> and Kendra S. Harris<sup>2</sup>

<sup>1</sup> 115 Jedburgh Pl., Victoria B.C. V9B 6N7; e-mail: downtona@shaw.ca

<sup>2</sup> 3047 Island View Rd., Saanichton B.C. V8M 1W4

---

**Abstract:** Between February and May 2004, we visited eleven locations in the Greater Victoria area in British Columbia in search of breeding Hutton's Vireos (*Vireo huttoni insularis*). Hutton's Vireos were seen and/or heard at five of these locations, and nesting pairs were located at two of them. During the breeding season, 32 and 33 hours of observations were made at the two nests. One nest successfully fledged three juveniles, while the other nest was destroyed before the young could fledge. The nests were located at heights of 3.1 m and 2.7 m above the ground and had internal dimensions of 4.7 cm and 5.7 cm diameter and 3.2 cm and 4.5 cm depth. Both parents shared in brooding responsibilities. Time to hatch in the successful nest was 16 or 17 days, and subsequent time to fledge was between 16 and 17 days.

**Key Words:** Hutton's Vireo, *Vireo huttoni insularis*, Vancouver Island, nest construction, incubation, brooding, foraging, fledging.

---

## Introduction

Hutton's Vireo (*Vireo huttoni*) is inconspicuous and cryptic in nature and is a bird that has typically been "under represented on breeding bird surveys" (BCCDC 2004; Davis 1995). This may be due, in part, to its early breeding season which is complete by the time that many breeding surveys take place. Of the twelve subspecies of Hutton's Vireos, *V.h. insularis* occurs on Vancouver Island, ranging from Victoria to Cape Scott (Campbell *et al.* 1997). It is considered an "uncommon to fairly common resident" in the southeast of the island, and a "rare migrant" in the west (Campbell *et al.* 1997). While breeding records for the province are scarce, it is believed that Hutton's Vireos breed throughout their range (Campbell *et al.* 1997). To further our understanding of the life history of this small passerine, we conducted a study on the breeding biology of *V. huttoni insularis* in the spring of 2004.

## Methods

We began our study by canvassing local naturalists for information on known locations of these birds in the Greater Victoria area, and by researching and identifying habitat conducive to breeding. Based on the resultant information we surveyed 11 potential sites in Greater Victoria (Francis King,

Thetis Lake, Cuthbert Holmes, Mount Douglas and Cairn municipal parks, the University of Victoria, a portion of the Lockside Regional Trail, Royal Roads University and several locations on private property in Central Saanich).

Surveys commenced on 28 February 2004 and continued through to 21 May 2004. These consisted of transects based on the protocol of the Resource Inventory Standards Committee (BCILMB 2004). This involved walking slowly for 200 m followed by a pause to carry out a point count of 5 minutes. While pausing, the observer listened for and recorded all birds that were encountered along the route. The length of each transect, and the number of point counts per survey was determined by the size and accessibility of the site. If Hutton's Vireos were heard, every reasonable attempt was made to visually locate the individual or pair.

Hutton's Vireos were heard at five of the eleven sites. At these five sites, three pairs were located and by tracking the birds, two nests were discovered. These occurred at Royal Roads University and on private property in Central Saanich, with locations 48° 25' 47.8" N 123° 28' 41.4" W and 48° 36' 26" N 123° 26' 21" W respectively.

When a nest was found, monitoring commenced immediately. Monitoring included regular site visits and note-taking from the time of the discovery to several days after fledging of the young. Site visits were conducted at variable times of the day in order to capture as full a range of breeding activity as possible. Data were collected on standardized

Table 1. Observation-times at two nest sites of Hutton's Vireo.

Location	Visits (n)	Observation time per nest visit		Total time (h)
		Median (min)	Average (min)	
Royal Roads	28	67.5	69.1	32.3
Central Saanich	20	100	99.3	33.0

data sheets during each visit. The nest sites were scoped from vantage points nearby. In addition, a mirror placed at the end of a pole was used to view the contents of the nest while the birds were away.

The nest at Royal Roads was visited and observed 28 times and the nest at Central Saanich 20 times. The average observation times during a visit were 69 and 99 minutes respectively (Table 1).

## Results

Surveys at Royal Roads commenced on 4 March 2004 at which time a single bird was located. On subsequent visits, two birds were often spotted feeding or gathering nesting materials. The nest, which was still under construction, was first observed on 14 March 2004. Both the male and female collected plant materials such as shredded bark and cottonwood seed fluff to construct their nest. The birds would stay at the nest for less than one minute before flying away to collect more materials.

The first visit to the site in Central Saanich was on 28 February 2004 and the first sighting of a pair was on 8 March

2004. The pair was seen gathering nest materials on 15 March 2004. The precise nest location was not determined until 11 April 2004, after the clutch had been laid and incubation had begun.

### Nest Characteristics and Habitat Type

At Royal Roads, close examination of the nest (after fledging) revealed mosses, lichens and twigs on the outside, and fine grasses and seed fluff on the inside (Table 2 and Figure 1). The nest site was located adjacent to a moist receiving area that was dominated by a mature stand of red alder (*Alnus rubra*) and a dense understory of salmonberry (*Rubus spectabilis*). The surrounding habitat was much drier with a more diverse shrub and herb layer. Conifers dominated the drier landscape and included western redcedar (*Thuja plicata*) and Douglas-fir (*Pseudotsuga menziesii*). The nest itself was located on the edge of a walking path that divided the two habitat types.

Inspection of the nest at Central Saanich revealed exclusively lichen on the outside and grasses and leaves on the inside (Table 2 and Figure 1). This nest site was located within a mosaic of young forest and grassy openings. Western redcedar and bigleaf maple (*Acer macrophyllum*) were the dominant tree species, with red alder co-dominating in lower, wetter portions of the site. Snowberry (*Symphoricarpos albus*), oceanspray (*Holodiscus discolor*) and himalayan blackberry (*Rubus discolor*) made up the shrub layer. The nest was located in a small island of stunted trees and shrubs and surrounded by grass.

Table 2 presents some of the nest characteristics found in this study, and includes observations from nests in other locations (Davis 1995). Both nests in our study were found at similar heights, close to three metres, in their trees. The nest at Saanich was somewhat larger inside (5.7 cm deep and 4.5 cm diameter) than the Royal nest (4.7 and 3.2 cm); outside measurements were similar in the two nests. The dimensions of the California and Oregon nests were similar to those in our study.

Table 2. Characteristics of two Hutton's Vireos nests in southern B.C. in 2004 with a comparison of nests reported in California and Oregon (Davis 1995).

Nest Characteristics	Royal Roads	Central Saanich	One California Nest	One Oregon Nest
Elevation above sea level	20 m	100 m	-	-
Nest Height	3.1 m	2.7 m	-	-
Nest Tree Height	5.5 m	3.6 m	-	-
Species	holly ( <i>Ilex aquifolium</i> )	arbutus ( <i>Arbutus menziesii</i> )	-	-
Inside Diameter	4.7 cm	5.7 cm	4.8 cm	5.1 cm
Inside Depth	3.2 cm	4.5 cm	4.1 cm	4.4 cm
Outside Diameter	9.3 cm	9.1 cm	7.6 cm	8.3 cm
Outside Depth	7.6 cm	7.4 cm	7.0 cm	7.0 cm



Figure 1: Hutton's Vireo nests at Royal Roads (left) and Central Saanich (right), July 2004.

### Incubation and Brooding

While it was beyond the scope of this project to collect detailed data on incubation and brooding, some useful information was gathered. It was consistently observed that at each site, the pair shared incubation duties. There appeared to be no pattern for the amount of time each individual spent on the nest; this ranged from 22 to 45 minutes at Royal Roads and 25 to 45 minutes at Central Saanich.

At Royal Roads, no eggs were present in the nest at 07:00 on 26 March 2004. On 28 March, the adult pair was observed, through a spotting scope, trading places on the nest and from this time on were seen to be sharing incubation duties. The clutch size (3 eggs) was determined at 15:00 on 12 April 2004 using a mirror attached to a pole. On 13 April, the pair was observed carrying whole food to the nest and on 17 April, the heads of three young could be seen using binoculars. The estimated incubation length for this clutch was 16 or 17 days. Adults were first observed leaving the young unattended on 23 April, when the chicks were approximately 10 days old. The three young were last seen at 18:00 on 29 April, and the nest was empty at 06:00 on 30 April. The estimated time to fledge for this clutch was between 16 and 17 days.

At Central Saanich the nest was discovered 11 April 2004, after eggs had been laid and incubation had begun. This was determined by the pair switching places on the nest. The clutch size was never determined for this nest. Based on adult behaviour we estimated the hatch date was

between the evening of 13 April and the early morning of 14 April 2004. On the morning of 14 April the pair were observed returning to the nest with whole food. On 25 April 2004 the nest was discovered hanging vertically from one branch of its host tree. We believe it was destroyed either by strong winds that occurred on 24 April 2004, or by a predator. Curiously, no evidence of the birds, such as feathers, was found.

### Foraging and Feeding behaviour

Prior to and during incubation, the adults were observed feeding on seeds from red alder catkins, western redcedar cones and oceanspray, and on an earthworm and moths. At both sites, the young were seen to be fed with green worm-shaped invertebrates, winged insects and grubs. Observing at a distance, we could not identify further details of the food items, nor could we be certain of their sources. The number of times that the adults returned to the nests with food varied from 6 to 19 times in one hour.

### Discussion

In many respects our findings are similar to those outlined in *The Birds of British Columbia* (Campbell *et al.* 1997). The habitats within which the nests in this study were found were similar to those documented for other nests of

the species on Vancouver Island. In fact, the use of 'edge' habitat for nesting by Hutton's Vireos, and the use of dense, shrubby understories in mixed conifer forests for nest building is characteristic, according to Campbell *et al.* (1997).

The nest characteristics in our study are similar to those documented for other nests on Vancouver Island (Campbell *et al.* 1997). The only notable difference mentioned by Campbell *et al.* (1997) is the use of moth cocoons and spider webs in the construction of nests. A detailed account of a pair of Hutton's Vireos building their nest in San Francisco revealed that spider webs were used to secure twigs (Allen 1930). As well, Ehrlich *et al.* (1998:193-194) note that spider webs are commonly used in nest construction, though we did not observe this material being collected.

Van Fleet (1919) indicates that Hutton's Vireos rarely gather nest materials from "the immediate vicinity of the site and never from the same tree". However, at Royal Roads, materials were gathered within three metres of the nest and at Central Saanich materials were occasionally collected from the nest tree itself.

In our study at the Royal Roads site, we found that incubation, from egg-laying to hatch date, took between 16 and 17 days and fledging took place 16 or 17 days after the hatch. This falls outside of the previously documented range as Campbell *et al.* (1997) indicate that for nests in British Columbia the incubation period ranges from 14-16 days and 14 days (for one nest) to fledge. The clutch size for the surviving nest was three young. This brood size was average in comparison to other broods, which have been documented to range from 1 to 5 nestlings (Campbell *et al.* 1997).

While Hutton's Vireo is inconspicuous, its unique call and use of various habitat types makes this species fairly easy to locate allowing interested birders to document similar findings and add to the scientific data. As we did not band either of the studied pairs, many unanswered questions remain with regard to behaviour of this species, such as the possibility of polygamy or the possibility of nesting more than once a year. Future studies might include investigation into the expansion of this species as a result of urban or rural development which would increase the disturbed habitat so successfully utilized by this small passerine.

## Acknowledgements

Thank you to John Dewis for participation in the gathering of these data, past Camosun College instructor Warren Drinnan and to Paul Levesque for leading us to this project and their continuing guidance through it and to property owners for allowing us entrance. Specifically we would like to recognize Sheila Mosher, Rick Shortinghuis, Jeremy Taten, David Allinson, Jessica Murray, Jeremy Gatten, Bruce Whittington, Ian Robertson, Colin Jennings, Bob Tanner and all contributors to the VNHS Rare Bird Alert on our behalf. A special thanks to Andy Stewart for his encouragement, guidance, and feedback in preparing this manuscript.

## Literature Cited

- Allen, A.S. 1930. The construction of a Hutton Vireo's nest. *Condor* 32:240-241.
- BCCDC [B.C. Conservation Data Centre] 2004. Species and ecosystems explorer. B.C. Ministry of Environment, Victoria. <http://srmapps.gov.bc.ca/apps/eswp/> (Accessed 18 February 2004).
- BCILMB [B.C. Integrated Land and Management Bureau] 2004. Inventory methods for forest and grassland. BCILMB, Victoria, B.C. <http://ilmbwww.gov.bc.ca/risc/pubs/tebiodiv/songbird/index.htm> (Accessed February 2004).
- Campbell, R.W., N.K. Dawe, I. McTaggart-Cowan, J.M. Cooper, G.W. Kaiser, C.E. McNall, and G.E.J. Smith 1997. The birds of British Columbia. Vol.3: Flycatchers through vireos. University of British Columbia Press, Vancouver.
- Davis, J.N. 1995. Hutton's Vireo (*Vireo Huttoni*). No. 189 in A. Poole and F. Gill (eds). The birds of North America. Academy of Natural Science, Philadelphia, and American Ornithologists' Union, Washington.
- Ehrlich, P.R., D.S. Dobkin, and D. Wheye 1998. The birder's handbook: a field guide to the natural history of North American birds. Simon and Shuster, Inc., New York.
- Van Fleet, C.C. 1919. A short paper on the Hutton Vireo. *Condor* 21:162-165.

