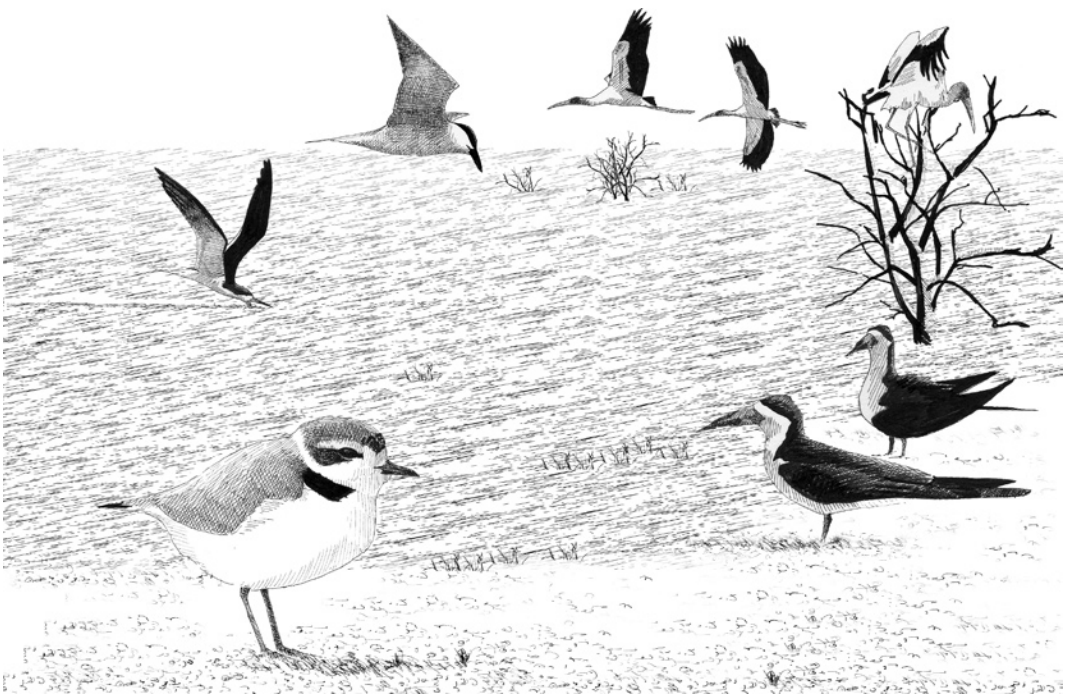


## II

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# SPECIES ACCOUNTS

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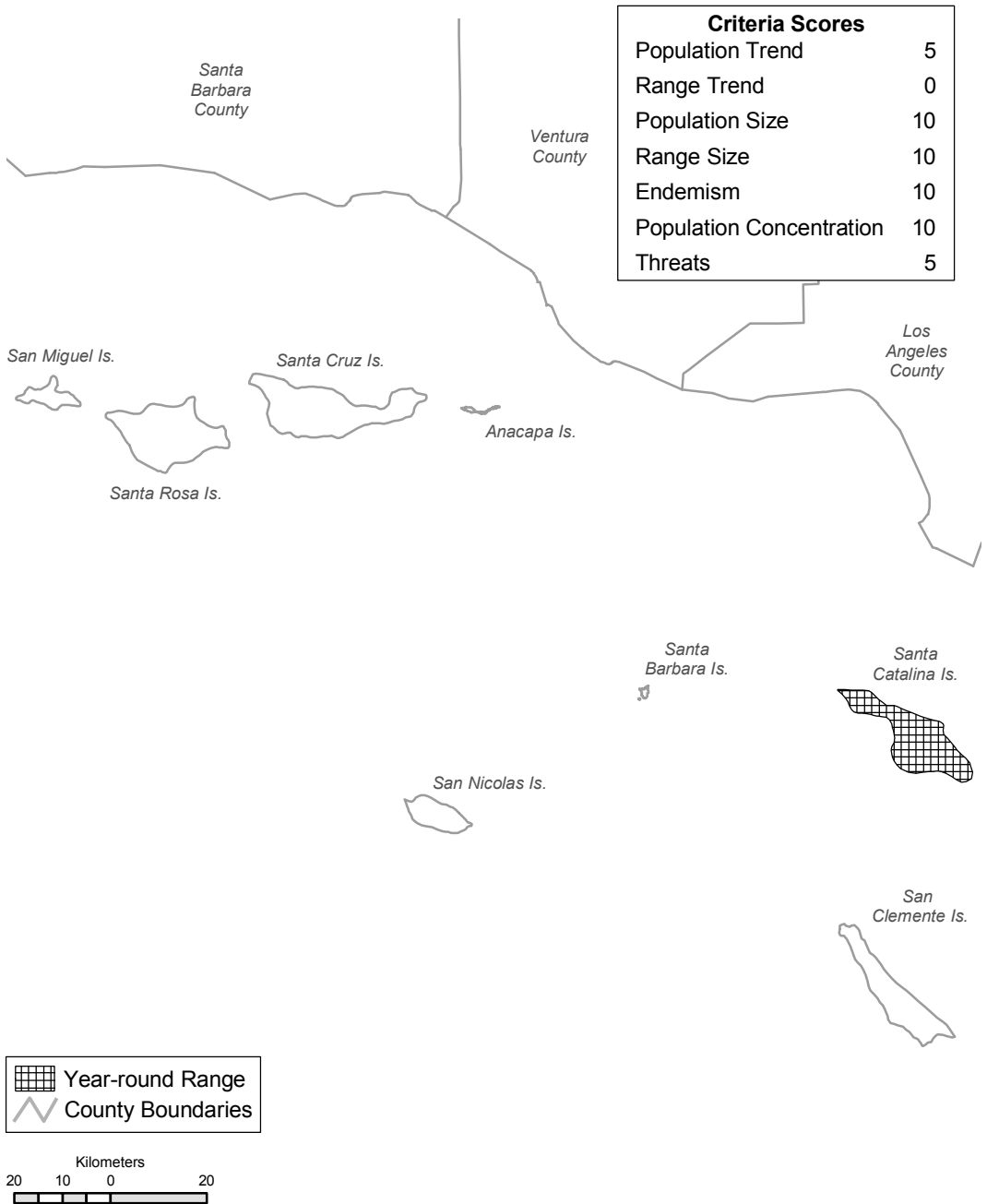
*Andy Birch*

PDF of Catalina Hutton's Vireo account from:

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

# CATALINA HUTTON'S VIREO (*Vireo huttoni unitti*)

PHILIP UNITT



Year-round range of the Catalina Hutton's Vireo, a California endemic. Occurs only on Santa Catalina Island in the Channel Islands; numbers appear to have declined slightly.

**SPECIAL CONCERN PRIORITY**

Currently considered a Bird Species of Special Concern (year round), priority 2. Not included on the previous lists (Remsen 1978, CDFG 1992).

**BREEDING BIRD SURVEY STATISTICS FOR CALIFORNIA**

Data inadequate for trend assessment (Sauer et al. 2005).

**GENERAL RANGE AND ABUNDANCE**

The Hutton's Vireo (*Vireo huttoni*) breeds west of major mountain divides on the Pacific coast from southwestern British Columbia to northern Baja California (and the southern Cape district) and from southeastern Arizona, southwestern New Mexico, and west Texas south interruptedly through the Mexican highlands to Guatemala (AOU 1998). The wintering range is nearly identical, but seasonally small numbers of individuals move slightly outside the breeding range (Davis 1995). The AOU (1957) reported five subspecies within its checklist area, but Phillips (1991) listed nine within the same area, three of them described in that work by A. M. Rea. There are no estimates of overall abundance, and density estimates vary considerably by habitat, region, and season (Davis 1995).

The Catalina Hutton's Vireo (*V. h. unitti*) is endemic to Santa Catalina Island (see map). The subspecies was not recognized until after the collection of specimens in 1989 and 1990 because of the paucity and poor condition of earlier specimens (Rea 1991).

**SEASONAL STATUS IN CALIFORNIA**

Occurs year round; breeding season currently unknown. However, M. Alexander (pers. comm.) observed two adults with three fledglings on 17 May during the 2003 Santa Catalina Land Bird Monitoring effort. Breeding on the mainland of southern California in San Diego County is mainly from late March to mid-July (Unitt 2004).

**HISTORIC RANGE AND ABUNDANCE IN CALIFORNIA**

Howell (1917) identified the Hutton's Vireo only as "present" on Santa Catalina and cited only one specimen, collected by F. Stephens in August 1886. A. M. Rea (pers. comm.) was able to locate in museums only four specimens collected before 1989. The scarcity of early specimens from the island implies that the Hutton's Vireo was never

common there, perhaps never more numerous in historic times than currently. Goats (*Capra aegagrus hircus*) had been on the island since the early 19th century (Coblentz 1977), however, degrading it well before it was investigated biologically.

**RECENT RANGE AND ABUNDANCE IN CALIFORNIA**

Jones and Gay (1989) called the Hutton's Vireo "fairly common" on Santa Catalina, but results of Breeding Bird Surveys suggest the numbers of this vireo on Santa Catalina Island are lower than those of all other Channel Islands endemics except Loggerhead Shrikes (*Lanius ludovicianus anthonyi*). Between 1988 and 1998, the median number of Hutton's Vireos was 2 (range = 0–5,  $n = 7$  yrs) on the single Breeding Bird Survey route on Santa Catalina (Sauer et al. 2005). Likewise, the median number of Hutton's Vireos was 2 (range = 0–10) on the island's 16 Christmas Bird Counts conducted from 1988 to 2004 ([www.audubon.org/bird/cbc/hr/](http://www.audubon.org/bird/cbc/hr/)).

The 1975 vegetation map (available from Catalina Island Conservancy) suggests that no more than 25% of the island's 197 sq km are covered with woodland and chaparral habitats suitable for the Hutton's Vireo—most of the island is sage scrub and grassland. Population densities of the Hutton's Vireo in chaparral in the Santa Monica Mountains and on Santa Cruz Island have been reported as 2.4 and 8.8 pairs per 40 ha, respectively (Davis 1995). If these densities are extrapolated to 25% of the area of Santa Catalina Island, the population of *Vireo huttoni unitti* is 292 to 1070 pairs. Davis (1995) suggested that the population density in woodlands is higher (14 pairs per 40 ha in riparian woodland along the Kern River; 15.6 pairs per 40 ha in live oak woodland in Sonoma County), and comparable habitats exist on Santa Catalina: Island Oak (*Quercus tomentella*) forms "an almost continuous forest of large trees to 60 and 70 ft. tall and 2 ft. DBH [diameter at breast height] along one of the main forks of Gallagher Canyon" and "an open woodland of groves of *Quercus chrysolepis* [Canyon Live Oak] and *Q. tomentella*" exists on the south and west slopes of Mt. Orizaba (Thorne 1967).

**ECOLOGICAL REQUIREMENTS**

Jones and Gay (1989) identified both chaparral and oak woodland as habitat for the Hutton's Vireo on Santa Catalina. Rea (1991) specified "in or around oaks in mixed woodlands." Because the Island

Scrub Oak (*Quercus pacifica*) is “the most abundant shrub or small tree” in the island’s chaparral (Thorne 1967), the distinction between chaparral and oak woodland on Santa Catalina is not sharp. On the island, Hutton’s Vireos may be seen in semiopen stands of oaks no more than 1.8 m high as well as in denser, taller woodlands (pers. obs.).

In central California, Hutton’s Vireos forage primarily in the foliage zone (65%) but also in the subcanopy (33.3%) and, infrequently, the herb layer (1.7%;  $n = 60$  observations; Root 1967). Their foraging niche is broader on Santa Cruz Island than on the mainland in the Santa Monica Mountains (Yeaton 1974); they forage in oaks, chaparral, and pine forests in both areas. The main foods taken include insects and some spiders (Chapin 1925), with lesser amounts of insect galls and fruits of species such as elderberry (*Sambucus* spp.), Western Poison Oak (*Toxicodendron diversilobum*), and California Coffeeberry (*Rhamnus californica*; Beal 1907, Davis 1995).

Hutton’s Vireos build open-cup nests that are usually well concealed and typically suspended from a fork near the end of a horizontal branch. In California, Coast Live Oaks (*Quercus agrifolia*) are the most commonly used substrate, but a wide variety of plant species suffice (Davis 1995). As with nest substrates, nest height is variable but averages 4.9 m (range = 0.9–3.7,  $n = 102$  nests; Davis 1995). Hutton’s Vireos re-nest following nest failure, and indirect evidence suggests that pairs can raise two broods (Davis 1995).

Studies of population-limiting factors of the Catalina Hutton’s Vireo are lacking, and data are insufficient to determine what primarily regulates populations for Hutton’s Vireos in general (Davis 1995).

## THREATS

The primary threat to *Vireo huttoni unitti*, as it is for many of the Channel Islands’ endemic birds, is habitat degradation by introduced herbivores: goats, Bison (*Bison bison*), Mule Deer (*Odocoileus hermionus*), and feral pigs (*Sus scrofa*; e.g., see Laughrin et al. 1994). Browsing and soil disturbance inhibit regeneration of trees and shrubs. Soil erosion follows, precluding natural regeneration. Fortunately, the Catalina Conservancy’s efforts to remove goats and pigs from Santa Catalina Island are nearing completion, and elimination of these animals should lead to substantial recovery and spread of woodland. As of November 2001, 300 Bison remained on the island (J. Floberg in litt.).

Fires on Santa Catalina could consume oak

woodland quickly and may become more likely as vegetation recovers, following the removal of feral ungulates. Increased incidence of fire is among the greatest threats to native plant communities on the Channel Islands, as exemplified by experience on San Clemente Island, where fires are unnaturally frequent because of bombing by the U.S. Navy (Sullivan and Kershner 2005).

A slow dying off of *Quercus pacifica*, first noticed in 1995 (Knapp 2002) and caused by the Honey Mushroom fungus (*Armillaria mellea*), could pose a threat to the Hutton’s Vireo on Santa Catalina.

Although Hutton’s Vireos are known hosts of the Brown-headed Cowbird (*Molothrus ater*) in California (Lehman 1994, Davis 1995, T. Gardali, P. Unitt pers. obs.), these cowbirds are not known to breed on any of the Channel Islands (P. Collins pers. comm.) and hence are not likely to affect the reproductive success of these vireos on Santa Catalina.

## MANAGEMENT AND RESEARCH RECOMMENDATIONS

- Support the Catalina Conservancy’s efforts to eradicate feral mammals, monitor and investigate the health of oaks, and halt and reverse soil erosion (such as its program of placing discarded Christmas trees in eroded gullies) on Santa Catalina Island.
- Investigate the habitat use of the Hutton’s Vireo on Santa Catalina to distinguish preferences for various types and densities of woodlands.
- Identify areas where the subspecies’ population is concentrated.
- Conduct studies of the subspecies’ biology and ecology to identify limiting factors, knowledge of which might enable implementation of management actions to benefit these vireos.

## MONITORING NEEDS

Although the Hutton’s Vireo is usually detected during the spring and fall Land Bird Monitoring efforts and Christmas Bird Counts currently run on Santa Catalina Island, the low numbers recorded suggest the species is not being surveyed adequately or efficiently by these means. Counts, transects, or spot mapping that entail surveys on foot through various types of oak woodland on the island are needed if the population’s size and trends are to be known with any level of accuracy.

## ACKNOWLEDGMENTS

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