

This document is available in digital form, but is not included in the TIC.

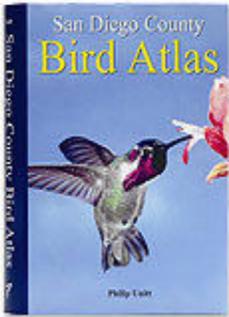
The digital files comprising this document can be obtained on the Internet, using the following URL:

<http://www.sdnhm.org/science/birds-and-mammals/projects/san-diego-county-bird-atlas/>

The following pages (downloaded from [http://www.sdnhm.org/download\\_file/1181/648/](http://www.sdnhm.org/download_file/1181/648/)) explain how to install and navigate the Google Earth version of this document.

For further assistance, please contact [LibraryServices@dudek.com](mailto:LibraryServices@dudek.com)

# The San Diego County Bird Atlas on Google Earth



The complete San Diego County Bird Atlas is now available as a Google Earth application. To access the Atlas, users must have installed Google Earth. Google Earth is available for free. Download from:

<http://www.google.com/earth/index.html>

## Overview

The San Diego County Bird Atlas application consists of three overlays that are downloaded from the web site separately. The first displays the **Atlas Grid**, the grid that covers the county with 479 squares, each about 3 miles on a side. The second is the **Bird List**, which places an icon in the center of each square. Clicking the icon yields the list of bird species observed in that square during the atlas study, from 1997 to 2002. The third is the **Bird Atlas** itself. It includes a folder for each bird family, and each species in the family. Turning on the folder displays a set of icons on the map showing a photo of the bird, each square in which the bird was observed, and the category of observation. Links are also provided to the page of the book that covers that bird as well as the introductory chapters of the book.

## Step by step instructions:

On the web page, below the link to this guide, are three links that when clicked will download each of the three parts of the Bird Atlas. When one of these links is clicked, the Google Earth file for that element will download to your computer. You can save the file and then open it using the **File . . . Open** menu in Google Earth. Or you can open it in Google Earth immediately if you are offered that option in the download dialog box.

## Atlas Grid



Click the link and download the Atlas Grid file. Open it with Google Earth.

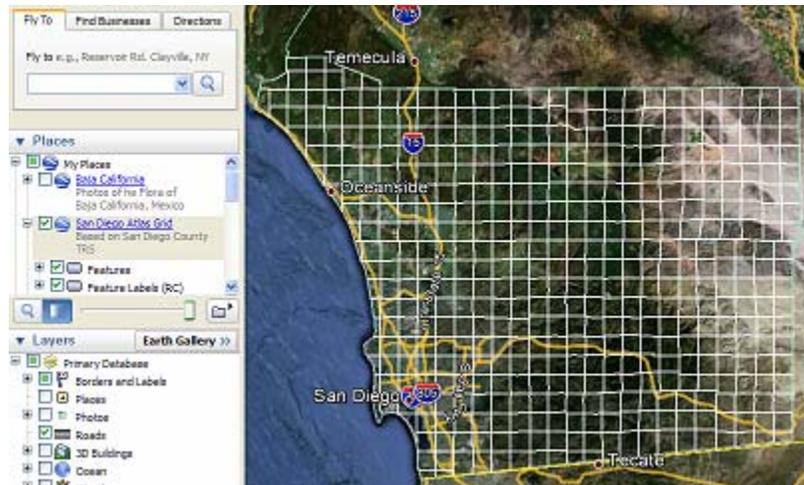
In the Places area on the left side of the screen, the atlas grid folders are shown. There is a main folder, with the title, and two subfolders, one titled Features and one titled Feature Labels.

Checkboxes to the left of a folder turn the display of those items on the globe on or off. The small boxes with a + or – expand or

collapse the folders. To turn off the labels in the grid, uncheck the Feature Labels checkbox. To turn off the grid itself, uncheck the Features checkbox or uncheck the San Diego Atlas Grid checkbox.

*Note that the downloaded item appears in the Temporary Places folder. When you close Google Earth, you will be asked if you want to save the items you downloaded. If you answer “yes” these items will appear in your My Places folder the next time you open Google Earth.*

The slider at the bottom of the Places frame is used to adjust the transparency of any layer on the global map. Depending on your computer, when you click and slide the slider to the left, the selected layer, such as the atlas grid, will become more transparent and you will see the underlying earth. On some computers, sliding the slider may just make the layer disappear.

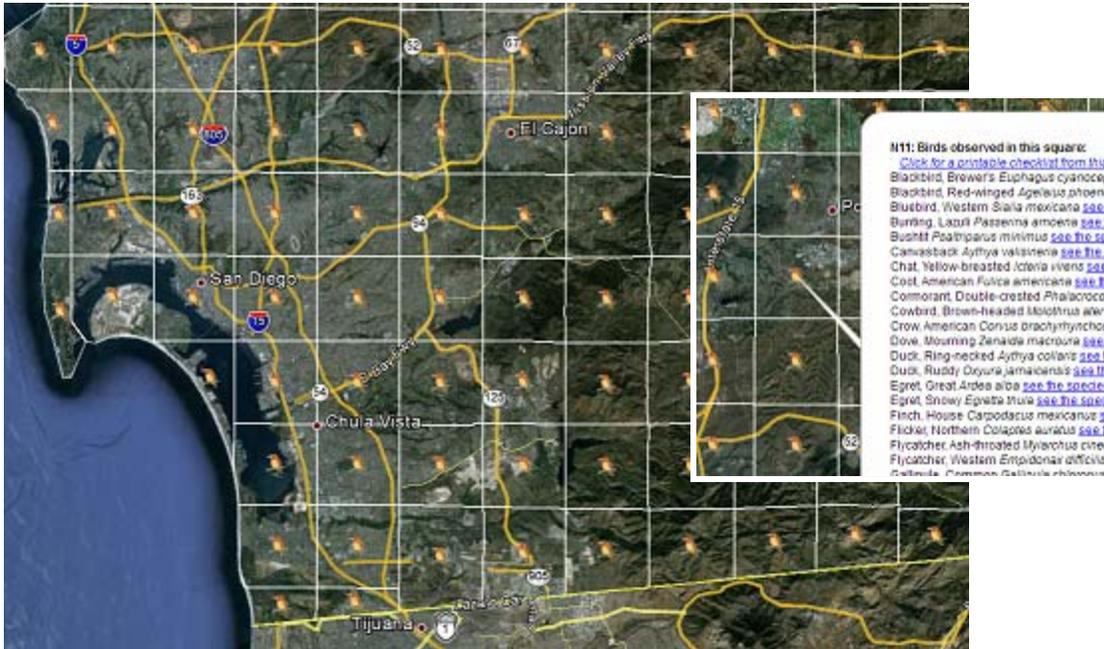


## Bird Atlas List

Click the link and download the Bird Atlas List file. Open it with Google Earth.



In the left panel, the folder for the bird atlas list appears. If you check the checkbox, a set of icons appears on the screen, one in the center of each grid square. These icons will appear only when the screen is zoomed in to some degree.



Clicking on any icon will produce a list of all the birds observed in that square during the atlas study period, 1997–2002, encompassing breeding species, winter visitors, and spring migrants. (The atlas study did not address fall migration)

SAN DIEGO NATURAL HISTORY MUSEUM

Biodiversity Research Center of the California San Diego County Bird Atlas

**Checklist of the birds of Atlas Square R13, Casa de Oro**  
List is ordered by bird family

English Name	Scientific Name	Note
Grebe, Pied-billed	Podilymbus podiceps	
Egret, Snowy	Egretta thula	
Heron, Great Blue	Ardea herodias	
Egret, Great	Ardea alba	
Egret, Cattle	Butorides ibis	
Heron, Green	Butorides virescens	
Heron, Black-crowned Night	Nycticorax nycticorax	
Vulture, Turkey	Cathartes aura	
Duck, Ruddy	Oxyura jamaicensis	

At the top of the list is a link to a web page that provides a printable list that can be used as a field checklist.

## Bird Atlas



Click the link and download the Bird Atlas file. Open it with Google Earth.

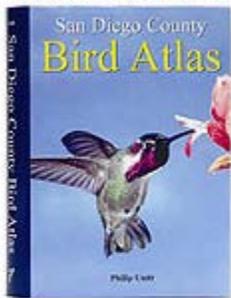
Expanding the folders for the Bird Atlas layer, you see the first item titled "Legend". The Legend, shown below, can be turned on and off with the checkbox.

“Winter” is defined as December–February; “Observed as a migrant or nonbreeding visitor” means March–September. In a few species spring migration begins before 1 March; in these cases the map may suggest a species is wintering where it is actually occurring as a spring migrant. See the map in the species account for proper interpretation.



**San Diego County Bird Atlas**  
**SD Natural History Museum**  
**11/26/2007**

The San Diego County Bird Atlas



Clicking on the main folder, *San Diego County Bird Atlas*, produces a box on the screen that displays a set of links to the book's introductory, methodology, and scope material.

[Read more about the book](#)

### **Introductory material:**

- [Acknowledgements](#)
- [Dedication](#)
- [Preface](#)
- [Plan of the Species Accounts](#)
- [Methods](#)
- [Results](#)
- [Conservation Concerns](#)
- [San Diego County as Habitat for Birds](#)
- [Wildfire](#)
- [Change History](#)

Below the checkbox for the legend are folders for each bird family and within those are subfolders for each species in that family. As shown on the right, the folder of the New World Quail family (Odontophoridae) is open, and it contains three species, the California, Gambel's, and Mountain Quail.



If you open the Cardinal, Grosbeak, and Bunting family (Cardinalidae), for example, and check the checkbox of the Indigo Bunting, letters will appear on the map in the squares in which that species was observed. The letters code for the species' status in the square, as specified in the legend. The letters may not appear until you zoom in somewhat on the map.



Clicking on any icon opens a bubble with the bird's identification. If you have checked the checkboxes for more than one species, the icon for only one species will be displayed. But when you click the icon, it will split and an icon for each checked species will appear. Then each icon can be clicked to determine which species are being displayed in that square. If you want to look at multiple species in succession, not simultaneously, be sure to uncheck the box for one species before moving on to the next.

The category of observation codes appear in the legend. If no observations of the bird were made during the study, no icons will appear on the map and the statement "No observations during study" appears under the bird's name.

Clicking on a species' name in the list under a family produces a box on the screen with a picture of the bird and a link "See the species account." That link will bring up, in your default web

### Bunting, Indigo

Bunting, Indigo  
*Passerina cyanea*



Photo by: Anthony Mercieca  
[See the species account.](#)

browser, the full page or pages in the book that cover the bird. If any updates have been created to update the account or other information about the bird, a link to that update also appears.

**Harris' Hawk** *Panlatro amiceinctus*

Through recorded history, Harris' Hawk has been irregular in southeastern California, the northwestern corner of its range. It died out in the mid 1960s, and efforts to reintroduce it failed, as almost no native riparian woodland is left along the lower Colorado River. Then, in 1994, an incursion, apparently from Baja California, brought nearly 50 individuals north of the border, many of them to San Diego County. Over the next few years the numbers in the county dropped to about five, but one pair in McCain Valley nested repeatedly, achieving success in 2000, 2001, and 2002—the first known successful nesting of wild Harris' Hawks in California for over 40 years. By 2003, however, the birds had disappeared.



Photo by Anthony Morrison

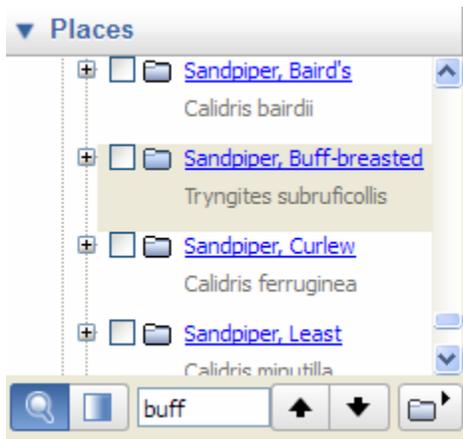
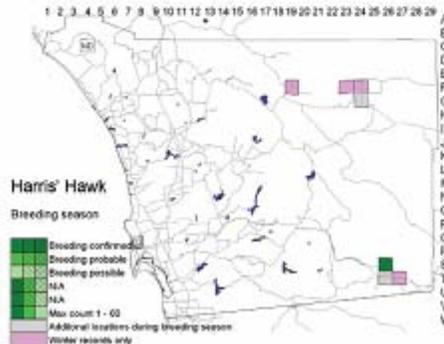
**Breeding distribution:** The incursion of 1994 brought nine Harris' Hawks to McCain Valley (526) just north of Boulevard. Some arrived even earlier, according to local resident Randy West. In December 1994 another local resident, Leslie Murray, showed me a photo of six banded together on a phone line and a nest the birds had built earlier that year. Over the next few years four of the birds were killed in various mishaps—three electrocuted on one pole in 1996—but one pair attempted to nest annually, with no success until 2000, when it fledged three young from a nest about 2 miles from that of 1994.

The nest was successful again in 2001 and 2002, but one bird was found dead and mummified 11 September 2001 (R. West; SDNHM 50578). While nesting, the birds in McCain Valley moved little; we had only one sighting during the breeding season in an adjacent urban square, of two near the fire station in Boulevard (T26) 11 May 2000 (J. L. Urnaack).

In the Borrego Valley three Harris' Hawks arrived 15 April 1994 and increased to eight by 13 September (J. Raddley, R. Thirskuhl). Two were

carrying sticks in the valley's mesquite bosque (G25) 8 May 1994, and a pair was copulating in a trailer park in Borrego Springs (G24) 1 March 1995 (J. D. Jorgensen). No further nesting activity was seen, however, and the last report of all eight birds was near Borrego Palm Canyon campground (F23) 12 March 1997 (R. Zuehl). From 1998 on there were no more than two, and by the end of the atlas period in February 2002 only one remained.

**Nesting:** The nests in McCain Valley in 1994 and 2000 were in the crowns of coast live oaks. Harris' Hawk's breeding season is notably flexible; if prey is abundant, the birds nest earlier and lay repeated clutches (Bednarz



How to find a specific bird: If you want to find a specific bird and don't know the family name, use the Google Earth Find function. At the top of the screen, click Edit, then Find. At the bottom of the Places frame, you will see the Find feature with up and down arrows that allow you to search through the list of names.

Enter the name you are seeking in the box. If the bird you are seeking is on the list, it will appear in the frame with the folder. You don't need the complete name; you can search on

any string of letters. If the desired species doesn't appear in the frame, click the up and down arrows to the right of the "find" box to search up or down through the list.