Preface

Why does an area smaller than the state of Connecticut merit a bird atlas on a scale as ambitious as the one you're looking at? The people of San Diego County are passionate about the quality of their environment, the factor that brought many thousands of them here in the first place. This bird atlas is an expression of that passion.

Biodiversity is a fundamental element of environmental quality. Coastal or cismontane California, the "California floristic province," is the hotbed of biodiversity in the contiguous United States. San Diego County straddles this hotbed completely. Indeed, it may be considered the core of the southern half of this region, extending along the Pacific coast from Point Conception to El Rosario. This subset, the "San Diegan District" of Miller (1951), is a realm of unique biology, with many plants and animals found nowhere else. Other groups of organisms exemplify this uniqueness more strongly, but at least 23 subspecies of birds are endemic to the region (Table 1). Within the county, conditions are far from uniform. They change radically over short distances. Rugged topography and diverse geology have led to biological diversity on a remarkably fine scale. At no two spots is the biota identical. With the extra boost of a position astride the Pacific Flyway and a long history of birders searching for vagrants, San Diego County boasts the biggest bird list of any county or of any area of equal size in the United States: 492 species as of June 2004 (Appendix 1). On purely biological reasons alone a comprehensive bird atlas for San Diego County is well justified.

Table 1 Endemic birds of the southern part of the California Floristic Province

Southern Mountain Quail, *Oreortyx pictus confinis*
Light-footed Clapper Rail, *Rallus longirostris levipes*
Southern White-headed Woodpecker, *Picoides albolarvatus gravirostris*
Greater Olive-sided Flycatcher, *Contopus cooperi majorinus*
Belding's Western Scrub-Jay, *Aphelocoma californica obscura*
San Pedro Mártir Mountain Chickadee, *Poecile gambeli atratus*
San Diego Oak Titmouse, *Baeolophus inornatus affabilis*
Blackish-tailed Bushtit, *Psaltriparus minimus melanurus*
White-naped Pygmy Nuthatch, *Sitta pygmaea leuconucha*
San Pedro Mártir White-breasted Nuthatch, *Sitta carolinensis alexandrae*
San Diego Cactus Wren, *Campylorhynchus brunneicapillus sandiegensis*
San Diego Bewick's Wren, *Thryomanes bewickii charienturus*
Mary Clark's Marsh Wren, *Cistothorus palustris clarkae*
Coastal California Gnatcatcher, *Polioptila californica californica*
Colonet California Gnatcatcher, *Polioptila californica atwoodi*
San Pedro Mártir Western Bluebird, *Sialia mexicana anabelae*
Grinnell's Loggerhead Shrike, *Lanius ludovicianus grinnelli*
Anthony's California Towhee, *Pipilo crissalis senicula*
Ashy Rufous-crowned Sparrow, *Aimophila ruficeps canescens*
Belding's Savannah Sparrow, *Passerculus sandwichensis beldingi*
Laguna Hanson Dark-eyed Junco, *Junco hyemalis pontilis*
Townsend's Dark-eyed Junco, *Junco hyemalis townsendi*
San Diego Red-winged Blackbird, *Agelaius phoeniceus neutralis*

Though small on a global scale, an area the size of San Diego County can make a major contribution to world biodiversity. Compare San Diego County's 4235 square miles with some other biologically important areas of similar size worldwide:

Yellowstone National Park, 3458 square miles
Jamaica, 4244 square miles
Lebanon, 3927 square miles
Panay Island, Philippines, 4446 square miles
Sumba Island, Indonesia, 4306 square miles
Viti Levu, largest of the Fiji Islands, 4053 square miles
Hawaii (the "Big Island"), 4021 square miles

Two hundred years ago, San Diego was a tiny mission settlement, at the farthest edge of the world's consciousness. Today, it is the crucible of social and environmental change. Immigration, multiculturalism, economic globalization, air and water pollution, water importation, fire management, automobile traffic, affordable housing, urban sprawl, habitat conservation … the list of contentious issues of which San Diego is at the forefront seems endless. The gate at San Ysidro is the busiest international border crossing in the world. Clandestine immigration and drug smuggling tear at both the fabric of society and the natural environment. Virtually all food, energy, and water are imported. The people clamor for quality of life while buying homes in the suburbs and clogging the roads. The population increases at third-world rates while consuming resources at first-world rates (Figure 1). The San Diego Association of Governments projects that in 2020 San Diego County will be home to over one million more people than in 2000, an annual rate of increase of 1.6%, the same as that of Indonesia, Kenya, India, and Bangladesh, and slightly greater than that of Mexico. Can

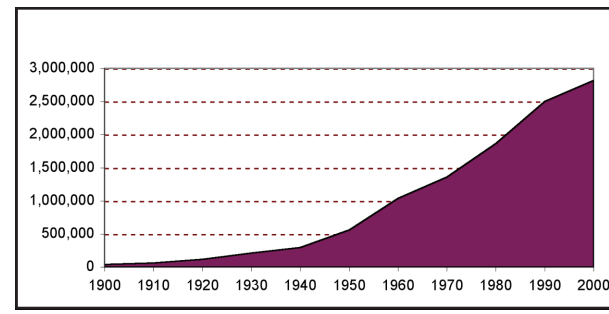

Figure 1. San Diego County population growth 1900–2000, based on U.S. census data.

the region's natural heritage sustain such an onslaught? San Diego County already has more threatened species, plants and animals combined, than in any area of similar size in the conterminous United States. Coastal wetlands, native grasslands, and vernal pools have already been reduced to a small percentage of their former extent.

Though much has been lost, much still remains. San Diego is fortunate in that a substantial fraction of its hinterland has already been conserved in state and local parks, national forest, and even military bases. But these areas miss many critical habitats, and society has realized that many more will be lost without an aggressive effort toward further conservation. Yet the economic forces consuming these habitats—these nonrenewable resources—are relentless, and time is short. Thus the advent of the multiple-species conservation plan for metropolitan San Diego and similar projects elsewhere in the county, which seek to accommodate this conflict. What will be the outcome of these gigantic experiments? Evaluating an experiment requires a control group. The San Diego County Bird Atlas, representing conditions at the time the plans were adopted, is a standard against which future generations will gauge these efforts' success or failure. Quick to respond, rich in species, diverse in ecology, near the top of the food chain, and readily accessible to human eyes, birds are with good reason the organisms ordinarily used in ecological and environmental monitoring.

What are the San Diego County Bird Atlas' goals? To describe and depict each species' distribution and relative abundance, in both the breeding season and winter, as it stood during our five-year data-recording period, 1997–2002. To put our atlas results in the context of each species' biology. To put each species into its historical context, to identify trends in ranges and numbers, and to search for the factors responsible for these trends.

Why is the San Diego County Bird Atlas necessary, when my *Birds of San Diego County* was published just 20 years earlier, in 1984? Between 1980 and 2000 the county's human population increased by over 51%, adding almost one million people—to bring the 2000 figure to 2.814 million. The status of at least 50% of the county's bird species has changed. The atlas incorporates data from many areas simply unexplored in the early 1980s. And the atlas reaches a level of detail impossible 20 years ago, a level far more relevant to conservation planning. Twenty percent of the county's surface burned in 2002 or 2003, making the atlas a basis for assessing the effects of these firestorms without precedent in recorded history. It is my hope that the San Diego County Bird Atlas will be useful to the policy makers who are making irrevocable decisions about our future. I hope it will be useful to birders at all levels familiarizing themselves with this remarkable area. I hope that it will be useful to scientists attempting to understand and predict the effects of urbanization on birds. And I hope it will be useful to the people of San Diego County, who need to understand their natural heritage if that heritage is to have any future.