

Cachuma Lake DISCOVERY BOOK

A Window Into the Watershed



Cachuma Lake Recreation Area
Santa Barbara County Parks, Community Services Department



Cachuma Lake DISCOVERY BOOK

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Dedication

To Linda Taylor for her vision, talents, inexhaustibility, humor, and love,
and to Cachuma Lake for always having something to teach us.

Donors: In-Kind and Financial

Eileen Avery	Linda Hogan	Helen Osenga
Laura Baldwin	Alison Hubbard	David Patterson & BJ's Turnpike Towing
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Cachuma Lake DISCOVERY BOOK

Introduction

Dear Teachers, Parents, and Friends,

Cachuma Lake is a Santa Barbara regional reservoir in the Santa Ynez River watershed. Its amazing beauty, wildlife, natural ecosystems and resources, and recreation draw visitors from near and far. Educational field trips as well as camping and daytime recreational activities are available year-round. Every year over 3000 children from communities and regional schools come for our Cachuma Lake Field Trip adventure. This Cachuma Lake DISCOVERY BOOK helps youth in grades K - 6, and beyond, learn about the ecology and living organisms around Cachuma Lake and in the watershed.

In this DISCOVERY BOOK, seven ecosystems are featured along with four to five subjects within each ecosystem. Each ecosystem is beautifully illustrated, and text is offered at different reading levels. For details, go to the next page, How to Use This Book. This learning resource is available on the web at no cost.

Download the Cachuma Lake DISCOVERY BOOK:

www.countyofsb.org/parks, Programs & Activities, School Field Trips. Each ecosystem section can be downloaded separately. You can also find information on the website about **school field trip activities**, and about visiting and camping at the lake.

Seven ecosystems are described and illustrated:

- Chaparral
- Lake
- Freshwater marsh
- Oak woodland
- Oak savannah
- River watershed
- Human habitat

About this book

The Cachuma Lake DISCOVERY BOOK was made possible by the generous in-kind and monetary donations of the many individuals listed on the previous page. 100% of funds raised was dedicated to producing the artwork for the book. The beautiful, original drawings are by Peter Gaede, and where noted, they are by naturalist Rosey Bishop. They were done expressly for this book.

This book was conceived of, written, and produced by Santa Barbara County Park naturalist Halli Pedersen and me. It was inspired by Nature Center volunteer and teacher Beverly Gunn, who created an earlier Discovery Book. We are grateful for the additional writing or operational contributions made by Neal Taylor Nature Center executive director emerita Linda Taylor and the Board of Directors, naturalist Melissa Kelly, and Nature Center volunteers Jacque Fondren, Alison Hubbard, and Patricia Martin.

We hope this Discovery Book truly helps the children in your life discover Cachuma Lake and spend more time outdoors, as well as inspire a love of nature.

Sincerely,

Liz Gaspar, Park Naturalist, Santa Barbara County Parks
Cachuma Lake Recreation Area, September 2013

Need field trip info? Have suggestions/corrections for this resource? Contact Rosey Bishop at rbishop@co.santa-barbara.ca.us

Curriculum Standards:

Common Core Standards alignment of the Discovery Book is forthcoming. Presently, the Cachuma Lake Field Trip program, as a whole, aligns with the following California State Curriculum Standards and the California Education and the Environment Initiative. The Discovery Book directly supports the standards and EEI units that are underlined.

Science, History & Social Science Standards:

Kindergarten: Life Sciences, 2a, b, c. Earth Sciences, 3a, c. Investigation and Experimentation: 4a,b.

Grade 1: Life Sciences, 2a, b, c, d, e.

Grade 2: Life Sciences, 2a, c, d, e, f. Earth Sciences, 3a, b, d, e.

Grade 3: History & Social Sciences 3.1.1, 3.1.2, 3.2.2, Life Sciences, 3.3a, b, c, d.

Grade 4: Life Sciences, 2a,b,c; 3a,b,c,d. Earth Sciences 4a. 5a,b,c.

Grade 5: Life Sciences, 2f. Earth Sciences 3d, e.

Grade 6: Earth Sciences, 1e. Life Sciences 5a, c, d.

EEI Alignment: K.3ac, 1.2.acd; 2.2acdef; 2.3b; 3.1.2, 3.2.2, 3.3acd; 4.2abc; 5.3d; 6.5cd

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How to Use This Book

In this Cachuma Lake DISCOVERY BOOK, seven ecosystems are described and illustrated. You can download the entire book or individual ecosystems for your students to study. The site is www.countyofsb.org/parks, Programs & Activities, School Field Trips.

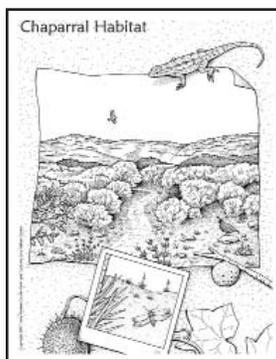
Within each ecosystem:

- Each ecosystem is described in simple language and illustrated.
- Each ecosystem features several subjects that either live in or pertain to the ecosystem.
- Accurate and simple drawings illustrate each subject, and each drawing can be colored using the color codes at the page bottom.
- On each page, a basic introduction to the ecosystem or subject is provided for beginning readers in large font.
- More complex information, for more advanced readers, is provided on each page in a smaller font.
- There is a “Think About It” page at the end of each section.

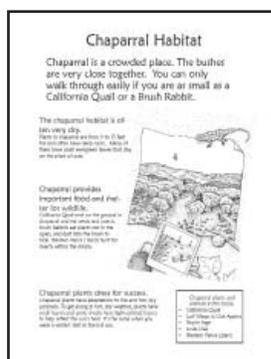
Pick From Seven Ecosystems

- Chaparral
- Freshwater Lake
- Freshwater Marsh
- Oak Savannah
- Oak Woodland
- River Watershed
- Human Habitat

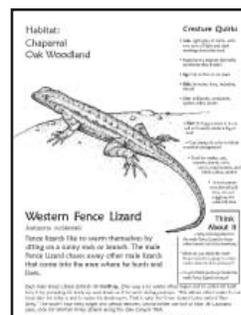
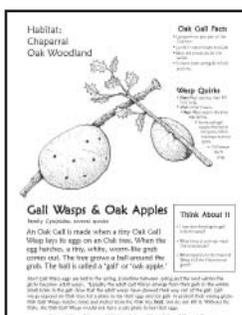
Ecosystem Illustration



Ecosystem Description



Ecosystem Subjects



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What is a HABITAT?

A habitat is like a neighborhood.

In your neighborhood, there may be other homes, a market nearby to buy food, a gas station, and a park full of trees. When you go out, you might meet your next-door-neighbor, a kid from school, family members, and other people you haven't met.

Your habitat is the homes, buildings, cars and roads, parks, and people you live among.

A natural habitat is a community of living things that interact with each other and with the physical world they live in.

In nature, a habitat is a place with certain kinds of plants, animals, soil, water, and even weather.

Every living thing in a habitat has everything it needs in order to survive. It has food, shelter, living space, a chance to find a mate, and a place to raise young. Different living things can share the same habitat, but they may not eat the same foods or have the same kind of shelter.

Some living things can only live in one kind of habitat.

For example, a rainbow trout can only live in the lake habitat. A live oak tree can only live in a woodland habitat. Imagine what would happen if the rainbow trout and the oak tree switched places!

Other living things use more than one kind of habitat.

For example, mule deer can live in oak woodland habitat and around the river habitat.

The Cachuma Lake watershed has many different kinds of habitats.

We want to show you a few of them, and many of the animals and plants that live here.

Welcome to Cachuma Lake!

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References

Text references:

- Barbour M.G. and Billings, W.D. eds. 1988. *North American Terrestrial Vegetation*. Cambridge: Cambridge University Press.
- Behler, J.L., and King, F.W. 1997. *The Audubon Society Field Guide to North American Reptiles and Amphibians*. New York: Alfred A. Knopf.
- Davis, J.T., Lock, J.T. 1997. *Largemouth Bass Biology and Life History*. Southern Regional Aquaculture Center, Publication No. 200.
- Eaton, E.R. and Kaufman, K.K. 2007. *Kaufman Field Guide to Insects of North America*. New York: Houghton Mifflin.
- Ehrlich, P.R., Dobkin, D.S., and Wheye, D. 1988. *The Birder's Handbook*. New York: Simon and Schuster.
- Hogue, C.L. 1993. *Insects of the Los Angeles Basin*. Los Angeles: Natural History Museum of Los Angeles County.
- Jameson, E.W., and Peeters, H.J. 1988. *California Mammals*. Berkeley: University of California Press.
- Jennings, M.R., and Hayes, M.P. 1994. *Amphibian and Reptile Species of Special Concern in California*. Final report submitted to the California Department of Fish and Game, Inland Fisheries Division.
- Kavanagh, J. 1994. *The Nature of California*. San Francisco: Waterford Press.
- Kricher, J.C. and Morrison, G. 1993. *A Field Guide to the Ecology of Western Forests*. Boston: Houghton Mifflin Company.
- Milne, L., and Milne, M. 1980. *The Audubon Society Field Guide to North American Insects and Spiders*. New York: Alfred A. Knopf.
- Pavlik, B.M., Muick, P.C., Johnson, S.G., Popper, M. 1992. *Oaks of California*. Cachuma Press.
- Quinn, R.D. and Keeley, S.C. 2006. *Introduction to California Chaparral*. Berkeley: University of California Press.
- Russo, R. 2006. *Field Guide to Plant Galls*. Berkeley: University of California Press.
- Santa Barbara County Water Agency. 1949. *A Water History and The Cachuma Project*. Santa Barbara. Santa Ynez River Technical Advisory Committee. 2000. Lower Santa Ynez River Fish Management Plan. Executive Summary. Prepared for Santa Ynez River Consensus Committee.
- Schoenherr, A.A. 1992. *A Natural History of California*. Berkeley: University of California Press
- Sibley, D.A. 2000. *National Audubon Society: The Sibley Guide to Birds*. New York: Alfred A. Knopf.
- Sibley, D.A. 2001. *National Audubon Society: The Sibley Guide to Bird Life and Behavior*. New York: Alfred A. Knopf.
- Timbrook, J. 2007. *Chumash Ethnobotany*. Santa Barbara Museum of Natural History. Berkeley: Heyday Books.
- Whitaker, J.O., Jr. 1980. *The Audubon Society Field Guide to North American Mammals*. New York: Alfred A. Knopf.

Web references:

- <http://en.wikipedia.org/wiki/Tule>
<http://www.absoluteastronomy.com/topics/Tule>
<http://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=401>
<http://www.nhptv.org/natureworks/nwep6d.htm>
www.nhptv.org/natureworks/nwep6d.htm
www.waterontheweb.org
www.waterwisesb.org
www.wikipedia.com