

Forest Service

Pacific Southwest Research Station

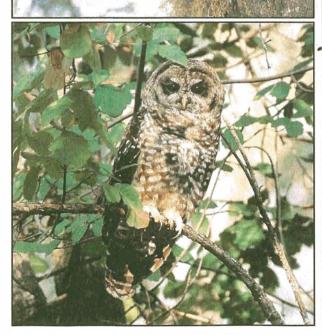
General **Technical** Report PSW-GTR-133

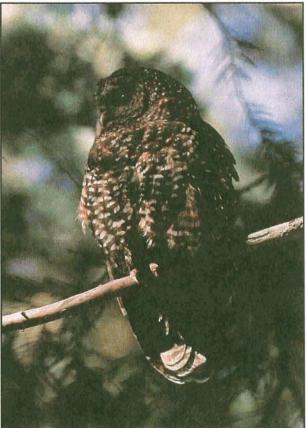


The California Spotted Owl:

A Technical Assessment of Its Current Status







Verner, Jared; McKelvey, Kevin S.; Noon, Barry R.; Gutiérrez, R. J.; Gould, Gordon I., Jr.; Beck, Thomas W., Technical Coordinators. 1992. The California spotted owl: a technical assessment of its current status. Gen. Tech. Rep. PSW-GTR-133. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 285 p.

This report is based on the Final Report submitted on May 8, 1992 by the Technical Assessment Team to the Interagency Steering Committee for the California Spotted Owl Assessment. The 13 chapters cover the assessment of the current status of the California spotted owl, its biology and habitat use, and forests where the subspecies occurs in the Sierra Nevada and southern California. The report suggests the direction of future inventories and research, identifies 'projected trends in habitat, and offers guidelines and recommendations for management of the California spotted owl.

Retrieval Terms: Strix occidentalis occidentalis, habitat attributes, old-growth, resource management, Sierra Nevada, southern California

Technical Coordinators:

Jared Verner, a research wildlife biologist, is Project Leader—Wildlife Monitoring and Range Research, Pacific Southwest Research Station, USDA Forest Service, Fresno, California, and the Technical Assessment Team Leader. Kevin S. McKelvey is a wildlife biologist with the Station, and stationed in Arcata, Calif. Barry R. Noon, a research wildlife biologist with the Station, is Project Leader—Timber/Wildlife Interactions Research, Arcata. R. J. Gutiérrez is professor of wildlife, Humboldt State University, Arcata. Gordon I. Gould, Jr., is a nongame wildlife biologist with the California Department of Fish and Game, Sacramento. Thomas W. Beck is a forest biologist with the Stanislaus National Forest, USDA Forest Service, Sonora, Calif.

100

Cover: Photographs by John S. Senser, Stanislaus National Forest, Mi-Wuk Village, Calif.

Publisher:

Pacific Southwest Research Station Albany, California

(Mailing address: P.O. Box 245, Berkeley, California 94701-0245

Telephone: 510-559-6300)

July 1992

The California Spotted Owl:

A Technical Assessment of Its Current Status

Technical Coordinators:

Jared Verner Kevin S. McKelvey Barry R. Noon R. J. Gutiérrez Gordon I. Gould, Jr. Thomas W. Beck

Contents

Acronyms	iii
Preface	v
Part I: Where We Are Now, and Where We Should Go Ne	ext
Chapter 1. Assessment of the current status of the California spotted owl, we for management	3
Chapter 2. Future directions for the California spotted owl effort Jared Verner and Robert J. Taylor	27
Part II: About the Owl	
Chapter 3. Background and the current management situation for the Calif Thomas W. Beck and Gordon I. Gould, Jr.	ornia spotted owl37
Chapter 4. The California spotted owl: general biology and ecological rela Jared Verner, R. J. Gutiérrez, and Gordon I. Gould, Jr.	tions55
Chapter 5. Habitat relations of the California spotted owl R. J. Gutiérrez, Jared Verner, Kevin S. McKelvey, Barry R Call, William S. LaHaye, Bruce B. Bingham, and John S. S	R. Noon,George N. Steger, Douglas K
Color Photograph Section	99

Contents

Chapter 6.	
Home-range size and habitat-use patterns of California spotted owls in the Sierra Nevada Cynthia J. Zabel, George N. Steger, Kevin S. McKelvey, Gary P. Eberlein, Barry R. Noon, and Jared Verner	149
Chapter 7. Patterns of habitat use by California spotted owls in logged forests of the northern Sierra Nevada	165
Cynthia J. Zabel, Kevin S. McKelvey, and James D. Johnston	
Chapter 8. Estimates of demographic parameters and rates of population change	175
Chapter 9. Stability properties of the spotted owl metapopulation in southern California Barry R. Noon and Kevin S. McKelvey	187
Chapter 10. General biology of major prey species of the California spotted owl Daniel F. Williams, Jared Verner, Howard F. Sakai, and Jeffrey R. Waters	207
Part III: About Forests and Forest Management	
Chapter 11. Historical perspectives on forests of the Sierra Nevada and the Transverse Ranges of southerr California: forest conditions at the turn of the century	า 225
Chapter 12. Fire and fuels management in relation to owl habitat in forests of the Sierra Nevada and southern California	247
Chapter 13. Projected trends in owl habitat	261
Appendices	
Marlene B. Verner, Compiler	
Appendix A—Technical Assessment Team and Chronology of Activities	277
Appendix B—Glossary	279
Appendix C—Species List	283
Appendix D.—Authors and Their Chanters	285



The Forest Service, U.S. Department of Agriculture, is responsible for Federal leadership in forestry. It carries out this role through four main activities:

- Protection and management of resources on 191 million acres of National Forest System lands
- Cooperation with State and local governments, forest industries, and private landowners to help protect and manage non-Federal forest and associated range and watershed lands
- Participation with other agencies in human resource and community assistance programs to improve living conditions in rural areas
- · Research on all aspects of forestry, rangeland management, and forest resources utilization.

The Pacific Southwest Research Station

 Represents the research branch of the Forest Service in California, Hawaii, American Samoa and the western Pacific.

Persons of any race, color, national origin, sex, age, religion, or with any handicapping conditions are welcome to use and enjoy all facilities, programs, and services of the U.S. Department of Agriculture. Discrimination in any form is strictly against agency policy, and should be reported to the Secretary of Agriculture, Washington, DC 20250.

Forest Service

Pacific Southwest Research Station General Technical Report PSW-GTR-133

The California Spotted Owl: A Technical Assessment of Its Current Status



