

## A new initiative to describe and protect California grasslands

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The California Native Plant Society (CNPS) has launched a new initiative to categorize, map, and conserve California's grassland vegetation. Momentum is building for grassland protection in California towards numerous goals. Our vision for this project is highly collaborative, and we are working closely with a variety of agencies and organizations including the California Department of Fish and Game, California Native Grasslands Association, California Rangeland Conservation Coalition, The Nature Conservancy and the University of California

This research and conservation focused initiative is especially timely for several reasons:

- We know less about upland grassland vegetation than any other major California ecosystem. As a result, most upland grasslands are carelessly termed "non-native grasslands" due to the abundance of exotic plants; however, these grasslands typically have high occurrence and sometimes high abundance of native plant and animal species.
- Grasslands need stronger protections because little remains of their historical extent. Conservative estimates place the loss of California's Mediterranean grasslands at more than 90%, and they continue to disappear at an alarming rate.
- We need to better understand the potential effects of global climate change in California. Grasslands provide easily accessible indicators of climatic change.
- Due to recent advances in research methodologies, especially GIS techniques and genetic analyses, we now have tools to advance our knowledge of these natural plant and animal communities. These tools provide better means to identify, protect, and restore a broader range of native species and ecological interactions than ever before.

Our initial area of focus includes upland and mesic grassland habitats of the Central Valley, the surrounding foothills, and southern coastal California. Together these grasslands are part of a large and complex ecosystem in California, containing a diversity of annual and perennial herbaceous vegetation. The major goals of the CNPS Grassland Initiative are to:

1. Clarify the role and function of grasslands and associated herbaceous vegetation within the natural landscape of California
2. Inventory and map grasslands, including an assessment and analysis of their natural range of variability
3. Develop a strong framework for conservation and restoration of California grasslands
4. Discuss our findings and educate the public on the values of grasslands

To achieve these goals, we will use a four-step, integrated approach over the next five years.

**The first step** has been to amass and analyze the current body of existing literature, data, and research on California grassland systems. At present, we are writing an overview paper to evaluate the elements of "native" versus "non-native" grasslands and are working towards a basic definition of California annual and perennial grasslands which highlights the importance of native species diversity in addition to measures of species abundance. Interactively with Step 2, we hope to build upon the existing classification system for grasslands using standardized nomenclature for known grassland types. Another important result of this step is the identification of areas that lack sampling or representation.

**The second step** is to conduct additional inventories to categorize the variation and complexity of grassland types throughout the state. In concert, the first two steps will help us identify key biodiversity centers, threats facing those areas, and -- most importantly -- opportunities for conservation of upland grasslands that are rich in native plant species and wildlife. We believe it is important to collect data across different years and seasons to capture both temporal and climatic variation. We plan to start data analysis early in the process to derive a baseline classification in accordance with state and national standards. It will be imperative to translate a grassland classification into vegetation units that can be mapped using available aerial or satellite imagery and to correlate grassland types with geologic substrates, climatic zones, or other environmental factors. This step will allow us to better evaluate the rarity of grassland species and plant communities.

**The third step** is to investigate the current and potential changes in grasslands since the European colonization of California. With great urgency, we will work towards understanding the consequences of global climate change to this vegetation in California. Understanding floristic changes in light of history and climate change will allow us to develop a framework to conserve and restore a broad representation of California grasslands over a changing landscape. We will analyze data (using GIS) in this step to look specifically at a number of factors including the identification of key areas containing target wildlife species (e.g., birds, pronghorn antelope, kangaroo rats, kit fox) based on key floristic and structural elements. Other focused analyses may include identifying restoration potential in impacted grassland areas, and modeling of current and potential habitat for target (rare) species.

**The final step** will be to publicize our findings to local, regional, and state-wide decision makers, stressing positive proposals for grassland conservation and restoration in different regions of the state. We will draw attention to the value of grasslands and the importance of grassland conservation through conferences and other educational approaches. We envision the development of interpretative booklets and reports which describe grassland resources at local and regional scales, as well as a broad illustrative guide to the major California grassland vegetation types.

We appreciate the importance of collaborating with organizations and individuals who have valuable knowledge of this topic. Hopefully, you share our interest in improving the understanding of California's grassland diversity. We invite you to collaborate with us in this effort whether you have baseline or monitoring data to share or contact information for others who have data. Another way to contribute is to help us gain access to grasslands in our focus area for sampling. We are currently seeking grants from foundations and private donations, as well as formal partnerships with organizations that can match funds or provide in-kind contributions. As we develop this project, we value any information or guidance that you can share, as your knowledge and experience will assist us in shaping this project to better define, categorize, manage, and conserve California's grassland resources.

**CONTACT:**

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