Management of Protected Lands

Grey Hayes
(831) 728-8050
coastalprairie@aol.com

What is this Seminar?

- Purpose, goal, objectives
- Rules
- Introductions
- Schedule
- Logic – integration of science and real-world experience

Goal

Increase participants' knowledge about protected lands stewardship, illustrating the breadth of work necessary to sustain biological diversity on Planet Earth in deep time.

Course Objectives

- Familiarity with ‘protected lands management’ concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction

Rules

- **Complete all assigned reading and writing assignments on time.**
- **Be an active participant in discussions and take an active role in interviewing protected lands management practitioners.**
- **Be punctual. On-time arrival to the course meeting places is very important, as we will often be leaving immediately for the field or launching directly into lecture.**
- **Attend every single class for the full 4-hour time of class, 1-5 pm Wednesdays and Fridays**
- **Arrive at all of our field trips prepared for the out-of-doors, with correct clothing, any necessary food or medical supplies, etc**

Rules

- **Maintain courtesy and respect**
- **Discussion is limited to one-at-a-time comments, by acknowledgement of the moderator**
- **Be as relevant as possible in your comments**
- **Refer as much as possible to the background reading materials**
- **Listen to others**

Introductions

- Name?
- What motivates you the most?
- What do you most want to take from the course?
- How are you feeling?

The Schedule

Day	Date	Where	Subject	Assignment	Grey
Wed	31	Lecture	Policy; design		
Fri	2	Big Basin	Recreation; design	Notecard	
Wed	7	Lecture	Planning		
Fri	9	Sunset SB	Carrying capacity	Notecards	
Mon	12			WA 1	
Wed	14	Lecture	Disturbance regimes Environmental Ed		
Fri	16	Sanc Cent	Env ed	Notecard	WA 1 back
Wed	21	Lecture	Working lands		
Fri	23	Campus Reserve	Squatting; invasives; disturbance	Notecard	
Wed	28	Swa Pac	Working lands	Notecard	
Fri	30	Lecture	Concept unification	WA 2	

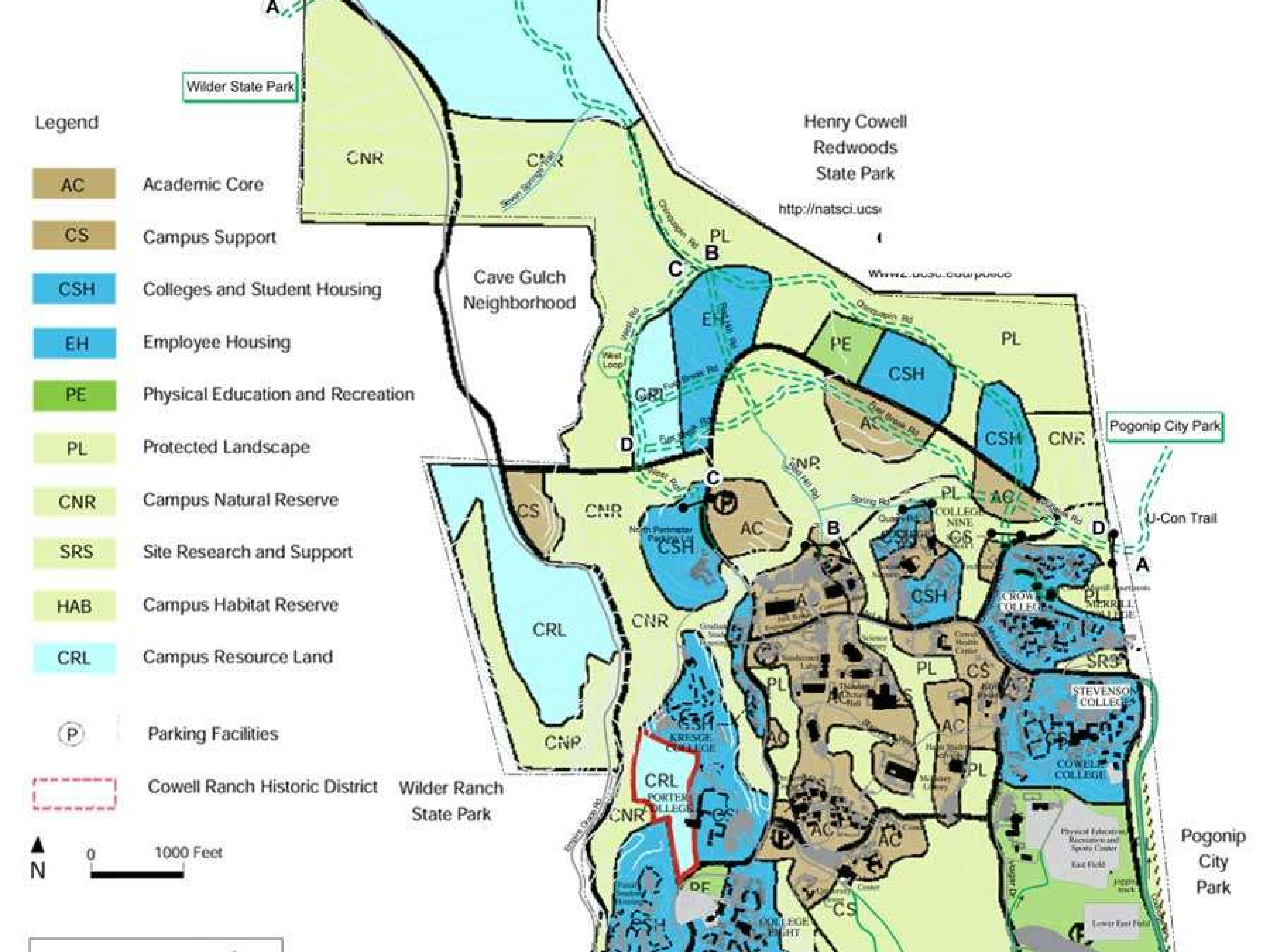
The Logic

Integrating science with
real world experience

WHY?

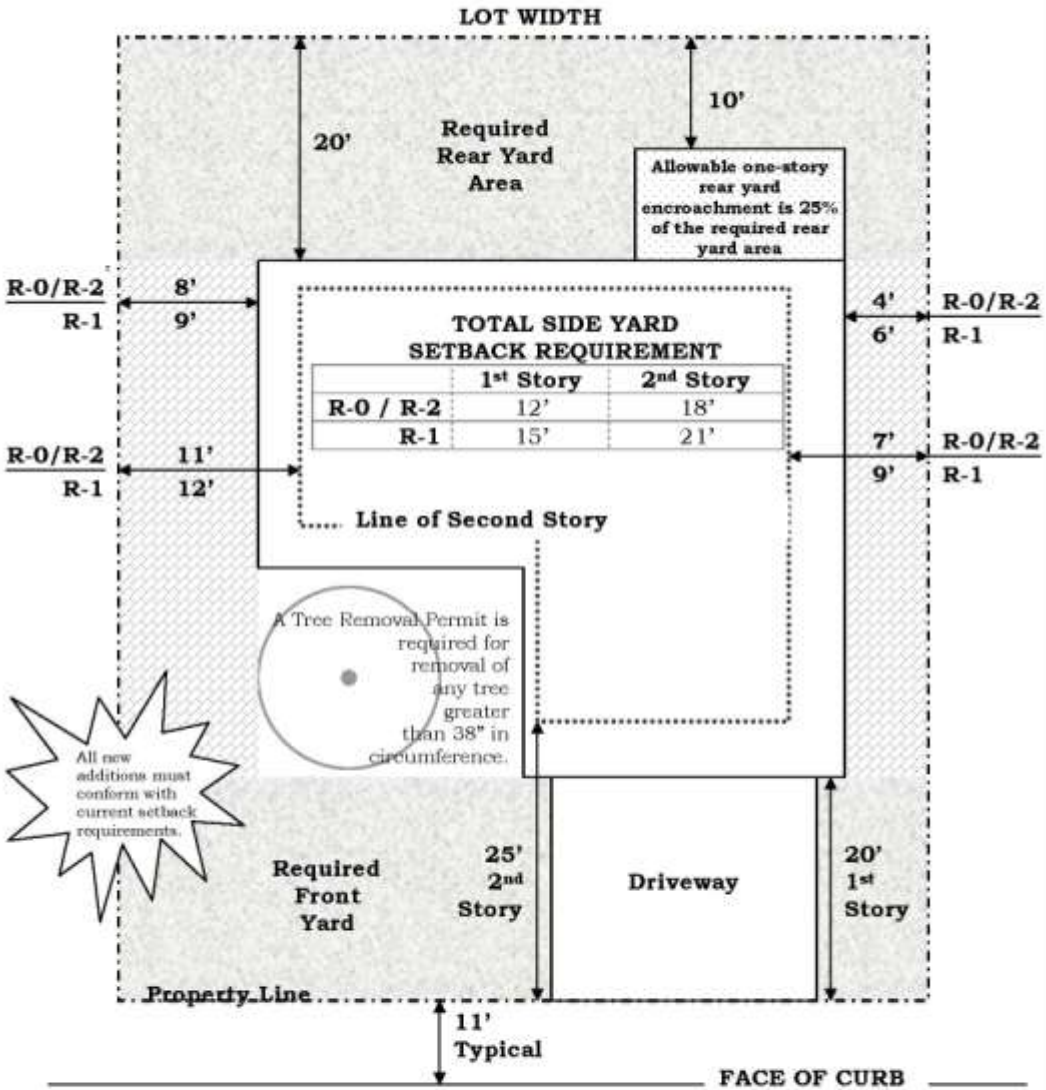
Course Objectives

- Familiarity with 'protected lands management' concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction


Legend
AC Academic Core
CS Campus Support
CSH Colleges and Student Housing
EH Employee Housing
PE Physical Education and Recreation
PL Protected Landscape
CNR Campus Natural Reserve
SRS Site Research and Support
HAB Campus Habitat Reserve
CRL Campus Resource Land
P Parking Facilities
Cowell Ranch Historic District
N
0 1000 Feet
Wilder State Park
Henry Cowell Redwoods State Park
Cave Gulch Neighborhood
Pogonip City Park
U-Con Trail
Wilder Ranch State Park
Pogonip City Park
CNR
PL
CSH
CRL
AC
CS
EH
PE
SRS
A
B
C
D
KRESGE COLLEGE
PORTER COLLEGE
COLLEGE NINE
CROWN COLLEGE
MERRILL COLLEGE
STEVENSON COLLEGE
COWELL COLLEGE
COLLEGE EIGHT
Physical Education, Recreation and Sports Center
East Field
Lower East Field


Pogonip
Open Space
9
17
De Laveaga
Golf Course
and
Park
1
HIGH ST
WATER ST
N. BRANCIFORTE AV
SOQUEL AV
SOQUEL AV
OCEAN ST
SEABRIGHT AV
LAUREL ST
MISSION ST
BAY ST
1
Monterey Bay
National Marine Sanctuary
DELAWARE AV
WESTCLIFF DR
CITY of SANTA CRUZ

SETBACK AND ZONING REQUIREMENTS
FOR THE R-0, R-1 and R-2 Zoning Districts



- **Maximum Lot Coverage** = 45% - 1 story and 40% - 2 story. Lot Coverage includes enclosed and unenclosed roofed patios.
- **Floor Area Ratios (FARs)** above the following percentages and square footage require a Planning Commission Hearing.
  R-0, R-1 and R-2: 45% or 4,050 sq. ft., whichever is less.
  R-2 Duplex or Multi-Unit : 55% or 4,050 sq. ft., whichever is less.
  Floor Area includes both living area and garage area. Basements which are no more than 2 ft. above grade are not included as floor area. FAR is the ratio of the house size to the lot size.


Boony Dean
Ecological
Preserve
(Fall Creek unit)
Felton
Mt. Herman
N
W
E
S
Wilder
Ranch
SP
Henry
Cowell
Redwoods
State
Park
Loop Trail Mileages
Wilder
Ranch
State
Park
University
of
California
Santa Cruz
Pogonip
Wilder
Ranch
SP

Course Objectives

- Familiarity with ‘protected lands management’ concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction

Course Objectives

- Familiarity with ‘protected lands management’ concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction

What is a Critique?

- critique: “ an act of criticizing”

- criticize: “to consider the merits and demerits of and judge accordingly”

(Mirriam-Webster, 2012)

Your critique should state

What is being well or correctly done?

What is not being well or correctly done?

How could things be improved?

To support your critique…

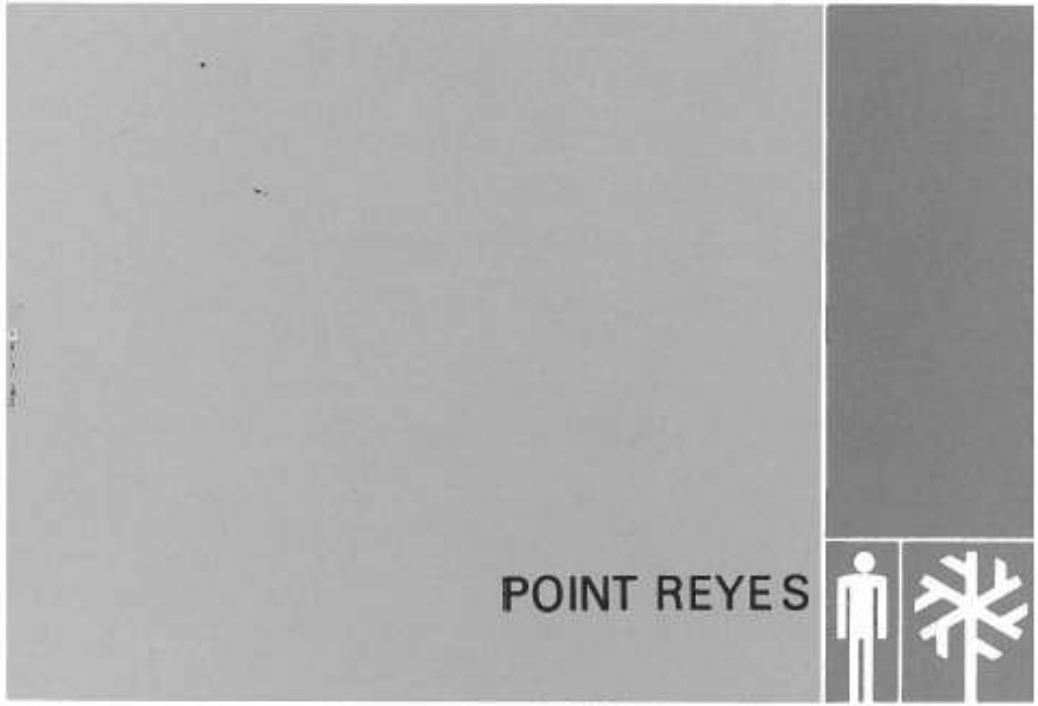
Policy: Give the policy framework, including all relevant policies. Normally, this entails at least state or federal policies AND a more specific local plan (i.e., the protected land's management plan).

National Park Service Organic Act, 1916

Sec. 3. That the Secretary of the Interior shall make and publish such rules and regulations as he may deem necessary or proper for the use and management of the parks, monuments, and reservations under the jurisdiction of the National Park Service, and any violations of any of the rules and regulations authorized by this Act shall be punished as provided for in section fifty of the Act entitled "An Act to codify and amend the penal laws of the United States," approved March fourth, nineteen hundred and nine, as amended by section six of the Act of June twenty-fifth, nineteen hundred and ten (Thirty-sixth United States Statues at Large, page eight hundred and fifty-seven). He may also, upon terms and conditions to be fixed by him, sell or dispose of timber in those cases where in his judgment the cutting of such timber is required in order to control the attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects in any such park, monument, or reservation. He may also provide in his discretion for the destruction of such animals and of such plant life as may be detrimental to the use of any of said parks, monuments, or reservations. He may also grant privileges, leases, and permits for the use of land for the accommodation of visitors in the various parks, monuments, or other reservations herein provided for, but for periods not exceeding twenty years; and no natural curiosities, wonders, or objects of interest shall be leased, rented, or granted to anyone on such terms as to interfere with free access to them by the public: Provided, however, That the Secretary of the Interior may, under such rules and regulations and on such terms as he may prescribe, grant the privilege to graze live stock within any national park, monument, or reservation herein referred to when in his judgment such use is not detrimental to the primary purpose for which such park, monument, or reservation was created, except that this provision shall not apply to the Yellowstone National Park.

general management plan

september 1980



NATIONAL SEASHORE / CALIFORNIA

Public Law 87-657
87th Congress, S. 476
September 13, 1962

An Act

76 STAT. 538.

To establish the Point Reyes National Seashore in the State of California, and for other purposes.

California.
Point Reyes National Seashore.
Establishment.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to save and preserve, for purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped, the Secretary of the Interior (hereinafter referred to as the "Secretary") is hereby authorized to take appropriate action in the public interest toward the establishment of the national seashore set forth in section 2 of this Act.

SEC. 2. (a) The area comprising that portion of the land and waters located on Point Reyes Peninsula, Marin County, California, which shall be known as the Point Reyes National Seashore, is described as follows by reference to that certain boundary map, designated NS-PR-7001, dated June 1, 1960, on file with the Director, National Park Service, Washington, District of Columbia.

Beginning at a point, not monumented, where the boundary line common to Rancho Punta de los Reyes (Sobrante) and Rancho Las Baulines meets the average high tide line of the Pacific Ocean as shown on said boundary map;

Thence southwesterly from said point 1,320 feet offshore on a prolongation of said boundary line common to Rancho Punta de los Reyes (Sobrante) and Rancho Las Baulines;

Thence in a northerly and westerly direction paralleling the average high tide line of the shore of the Pacific Ocean; along Drakes Bay, and around Point Reyes;

Thence generally northerly and around Tomales Point, offshore a distance of 1,320 feet from average high tide line;

Thence southeasterly along a line 1,320 feet offshore and parallel to the average high tide line along the west shore of Bodega Bay and Tomales Bay to the intersection of this line with a prolongation of the most northerly tangent of the boundary of Tomales Bay State Park;

To support your critique…

Goals: What specific ecological goals are they trying to reach in the case study?

To support your critique…

Who: The name of the individual, the title of their position, the organization they work with, and anything you can add including their employment history, education, training, expertise, and experiential background – and how specifically these qualifications relate to your critique.


PARK RANGER

To support your critique…

Monitored: How specifically did they (or do they plan to) monitor the success of their work? If there are no monitoring guidelines written in policy, then you must document this and include the answer to the following question as an aspect of your critique- how is success possible without monitoring?.

Public Law 87-657
87th Congress, S. 476
September 13, 1962

An Act

76 STAT. 538.

To establish the Point Reyes National Seashore in the State of California, and for other purposes.

California.
Point Reyes National Seashore.
Establishment.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to save and preserve, for purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped, the Secretary of the Interior (hereinafter referred to as the "Secretary") is hereby authorized to take appropriate action in the public interest toward the establishment of the national seashore set forth in section 2 of this Act.

SEC. 2. (a) The area comprising that portion of the land and waters located on Point Reyes Peninsula, Marin County, California, which shall be known as the Point Reyes National Seashore, is described as follows by reference to that certain boundary map, designated NS-PR-7001, dated June 1, 1960, on file with the Director, National Park Service, Washington, District of Columbia.

Beginning at a point, not monumented, where the boundary line common to Rancho Punta de los Reyes (Sobrante) and Rancho Las Baulines meets the average high tide line of the Pacific Ocean as shown on said boundary map;

Thence southwesterly from said point 1,320 feet offshore on a prolongation of said boundary line common to Rancho Punta de los Reyes (Sobrante) and Rancho Las Baulines;

Thence in a northerly and westerly direction paralleling the average high tide line of the shore of the Pacific Ocean; along Drakes Bay, and around Point Reyes;

Thence generally northerly and around Tomales Point, offshore a distance of 1,320 feet from average high tide line;

Thence southeasterly along a line 1,320 feet offshore and parallel to the average high tide line along the west shore of Bodega Bay and Tomales Bay to the intersection of this line with a prolongation of the most northerly tangent of the boundary of Tomales Bay State Park;

Appendix 6: Water quality guidelines for 'human use' environmental values

Table A4: Water quality guidelines for physico-chemical indicators for each 'human use' environmental value

Environmental values		Water type*	Guidelines for physico-chemical indicators for each EV							
			TSS	EC	SO_4	Total N	Total P	pH	pH	NO_3
			mg/L	µS/cm	mg/L	µg/L	µg/L	Low	High	mg/L(NO_3)
Primary industries	Irrigation		ng	600–4200[3]	ng	5000[3]	50[3]	6[3]	8.5[3]	ng
	Farm use		ng	ng	ng	ng	ng	6[3]	8.5[3]	400[3]
	Stock water		ng	0–7500[3]	1000[3]	ng	ng	ng	ng	4003
	Aquaculture	Freshwater	40[3]	4480[3]	ng	ng	ng	5.0[3]	9.0[3]	100[1]
		Saltwater	10[3]	49250–55250[3]	ng	ng	ng	6.0[3]	9.0[3]	1.0[1]
Recreation and aesthetics	Primary recreation		ng	ng	ng	ng	ng	6.5[5]	8.5[5]	ng
	Secondary recreation		ng	ng	ng	ng	ng	ng	ng	ng
	Visual appreciation		ng	ng	ng	ng	ng	ng	ng	ng
Drinking water	Treated water		ng	1000[4]	250[4]	ng	ng	6.5[4]	8.5[4]	50[4]
Industrial uses	Industrial uses		ng	ng	ng	ng	ng	ng	ng	ng
Cultural and spiritual	Cultural and spiritual values		ng	ng	ng	ng	ng	ng	ng	ng

Best management practices are standards demonstrated through extensive research to be effective. Hollister Hills SVRA does implement many Best Management Practices (BMPs) , which the scientific literature recommends along with the 2008 Soil Conservation Standards. In the first place settling ponds, sediment basins or sediment traps are "an effective way to settle suspended solids out of the water column" and let the water percolate through to creeks and ground water "without large soil transport or gulling" (BMP Standards, 1999)(Swank, 1988). Hollister Hills has two such sediment basins, Turtle Lake and Lodge Lake, that are emptied each year, the sediment is then returned to the trails in which it came from, up slope (Allen, 2011). Trails are maintained yearly. Second, Hollister Hills has constructed multiple water bars or rolling dips (have a mound on the downhill side, they are reverse sloped and move water off roads) along its trails and roads (Swift, 1999). As well as water bars, which are easier to construct. Third, it looks as though trails are reconstructed to be all outsloping, so that water runs off the trail into forested areas where it slows, instead of collecting and gaining velocity on trail which increases water erosion (Marion, 2004)(Swift, 1999). And so, there is little to no erosion at Hollister Hills SVRA.

Course Objectives

- Familiarity with ‘protected lands management’ concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction

Applied Health Sciences LIBRARY

146 Library, 1408 West Gregory Drive Urbana, IL 61801
217/333-3615, FAX 217/333-8384

Q: What is a peer-reviewed journal?

A: A scholarly periodical which requires that each article submitted for publication be judged by an independent panel of experts (scholarly or scientific peers). Articles not approved by a majority of these peers are not accepted for publication by the journal.

Peer-reviewed journals can be identified by their editorial statements or instructions to authors (usually in first few pages of the journal or at the end), and also by consulting *Ulrich's International Periodicals Directory,* available online at: **http://www.library.uiuc.edu /orr/get.php?instid=258215**

When searching full-text databases such as InfoTrac and EBSCO, a search can be limited to peer-reviewed or refereed sources simply by checking a box on the search screen.

Other common characteristics of scholarly, peer-reviewed, or refereed journal

- Formal in format
- Sources are cited with footnotes or a bibliography at the end of the article
- Authors are scholars and researchers in the field and are identified as such
- Purpose of the article is to publish the results of research
- Publisher may be a professional organization, research institution; usually not-for-profit
- Very little advertising
- Graphics are usually statistical illustrations, in black-and-white

Examples:

American Journal of Public Health
Annals of Tourism Research
British Journal of Audiology
European Physical Education Review
Journal of Aging Studies
Sport Marketing Quarterly etc. etc.

Most of the journals in the ALS Library are peer-reviewed. When in doubt, consult *Ulrich's* at the url above.

10/25/04

From: http://www.library.uiuc.edu/alx/peer.htm

Ecology, 85(2), 2004, pp. 1273–1283

COMPETITION BETWEEN NATIVE PERENNIAL AND EXOTIC ANNUAL GRASSES: IMPLICATIONS FOR AN HISTORICAL INVASION

JEFFREY D. CORBIN[1,3] AND CARLA M. D'ANTONIO[1,2]

[1]*Department of Integrative Biology, University of California, Berkeley, California 94720-3140 USA*
[2]*USDA-ARS, Exotic-Invasive Weeds Research Unit, 920 Valley Road, Reno, Nevada 89512 USA*

Abstract. Though established populations of invasive species can exert substantial competitive effects on native populations, exotic propagules may require disturbances that decrease competitive interference by resident species in order to become established. We compared the relative competitiveness of native perennial and exotic annual grasses in a California coastal prairie grassland to test whether the introduction of exotic propagules to coastal grasslands in the 19th century was likely to have been sufficient to shift community composition from native perennial to exotic annual grasses. Under experimental field conditions, we compared the aboveground productivity of native species alone to native species competing with exotics, and exotic species alone to exotic species competing with natives. Over the course of the four-year experiment, native grasses became increasingly dominant in the mixed-assemblage plots containing natives and exotics. Although the competitive interactions in the first growing season favored the exotics, over time the native grasses significantly reduced the productivity of exotic grasses. The number of exotic seedlings emerging and the biomass of dicot seedlings removed during weeding were also significantly lower in plots containing natives as compared to plots that did not contain natives. We found evidence that the ability of established native perennial species to limit space available for exotic annual seeds to germinate and to limit the light available to exotic seedlings reduced exotic productivity and shifted competitive interactions in favor of the natives. If interactions between native perennial and exotic annual grasses follow a similar pattern in other coastal grassland habitats, then the introduction of exotic grass propagules alone without changes in land use or climate, or both, was likely insufficient to convert the region's grasslands.

Key words: California grassland; coastal prairie grassland; exotic annual grasses; grass competition; invasive species; native perennial grasses; priority effects.

INTRODUCTION

Biotic invasions have been recognized as a major component of human-caused global change (Williamson 1996, Vitousek et al. 1997*a*), particularly in cases where invasions have resulted in the disruption of entire ecosystems by altering community composition, nutrient cycling rates, or disturbance regimes (Vitousek et al. 1987, 1997*b*, D'Antonio and Vitousek 1992). Considerable theoretical and experimental effort has been dedicated to identifying the factors that contribute to the success of exotic species in habitats where they have been introduced or are spreading (Reichard and Hamilton 1997, Lonsdale 1999, Mack et al. 2000). Though generalized principles that govern the probability of invasion success across habitat types remain elusive, understanding interactions between invaders and residents is essential to the management and restoration of native-dominated habitats.

A recent review of competitive interactions between native and exotic plants suggested that the ability of the exotic species to establish and spread is related to their ability to competitively suppress resident species (Levine et al. 2003). Invasions, however, are also known to be facilitated by disturbances that create gaps in vegetation cover such as grazing, gopher activity, or fires (Crawley 1987, Hobbs 1989, Hobbs and Huenneke 1992, Burke and Grime 1996). In these cases, exotic species may successfully establish only when disturbances decrease the competitive interference or priority effects (sensu Paine 1977) of resident vegetation. The degree to which the success of an invasion is explained by competitive superiority on the part of the exotic species vs. disturbances that allow exotics to become established is important to the design of strategies to control invaders.

The conversion of California grasslands from ecosystems dominated by indigenous perennial grass and annual and perennial dicot species to ecosystems dominated by Eurasian annual species is one of the best-known examples of large-scale community change occurring in North America over the past two centuries (Mack 1989), yet little is known about what factors contributed to the success of the Eurasian invaders. The introduction of Eurasian species to California grasslands coincided with other dramatic changes in the en-

Manuscript received 26 November 2002; revised 20 August 2003; accepted 26 September 2003. Corresponding Editor: W. K. Lauenroth.

[3] E-mail: corbin@socrates.berkeley.edu

STATE OF CALIFORNIA - RESOURCES AGENCY GRAY DAVIS, Governor

DEPARTMENT OF PARKS AND RECREATION

STATE PARK AND RECREATION COMMISSION

P.O. BOX 942896, SACRAMENTO, CA 94296-0001

Resolution 5-00
adopted by the
CALIFORNIA STATE PARK AND RECREATION COMMISSION
at its regular meeting in San Jose on
March 8, 2000

WHEREAS, the Director of the Department of Parks and Recreation has presented to this Commission for approval the proposed General Plan for Castle Rock State Park; and

WHEREAS, this document reflects long-range development plans to provide for optimum use and enjoyment of the unit as well as the protection of its quality, resources and diversity; and

WHEREAS, it is the Commission's view that added walk-in camping is desirable at Castle Rock State Park, therefore the Commission directs the staff to re-evaluate the issue of camping in this Plan and, if appropriate, to prepare an amendment to the Plan addressing this subject at a Commission meeting no later than six months from today;

NOW, THEREFORE, BE IT RESOLVED that the California State Park and Recreation Commission hereby approves the Department of Parks and Recreation's Castle Rock State Park Preliminary General Plan, dated February 1999, subject to such environmental changes as the Director of Parks and Recreation shall determine advisable and necessary to implement the provisions of said plan.


CALIFORNIA
STATE PARKS


U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Hollister
FIELD OFFICE

Course Objectives

- Familiarity with ‘protected lands management’ concepts
  - Scientific basis
  - Examples from CA central coast
- Occupations in protected lands management
- Navigate the literature, critique the concepts
  - Science and policy
- Communicate intelligently
  - Verbal and written
  - Scientific basis
- Increase familiarity with regional flora/fauna
  - Roadmap to avoid their extinction


HIDDEN
LAKE
.2 MILES
Dog
On
Leash


GPS
GPSmap 60CSx
MIKE


5510 - IRON MULE

How Much Do You Want?

Items

- Housing (30%)
- Food (15%)
- Transportation (10%)
- Utilities (6%)
- Health care (7%)
- Misc (32%)

Items – No Kids

- Housing (30%) - $1,500....$3,000
- Food (15%) - $700….$1400
- Transportation (10%) - $150…$300
- Utilities (6%) $50…$100
- Health care (7%) - $60…$500
- Misc (32%) - $1600…$3200

- TOTAL: $4060 - $8500

- Year: $60,000 – $125,000

Sacramento Bee
State Salary Search

Converse Intelligently

Roadmap