

Lecture 08, 22 Sep 2003

Role Playing

Conservation Biology

ECOL 406R/506R

University of Arizona

Fall 2003

Kevin Bonine

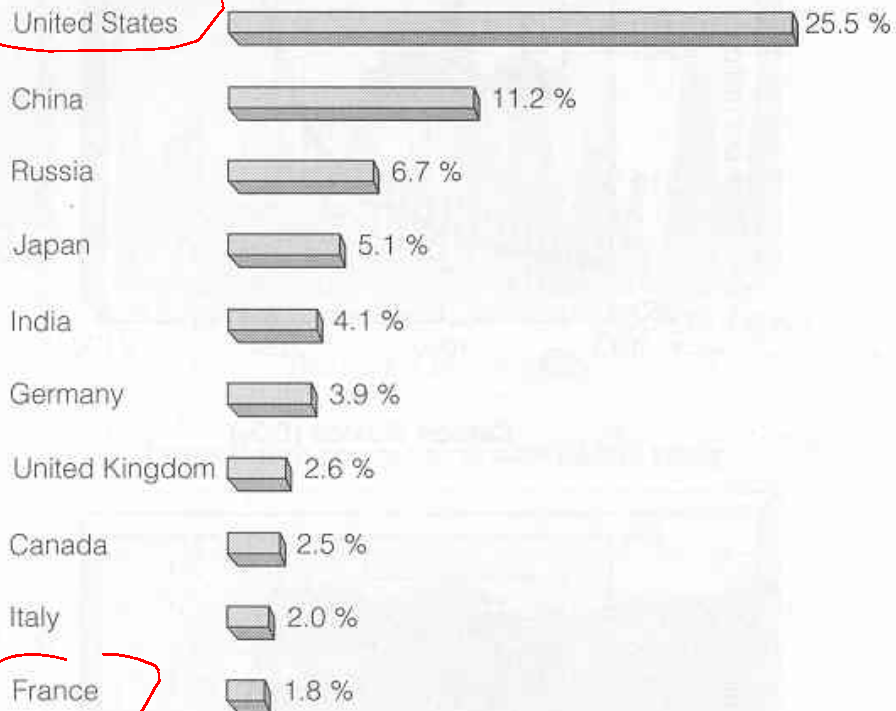
1. Role Playing Exercise

2. Exam Wed

-group portion outside

- ~40 minutes individual, 30 min group

Contribution to Global Total (%)



Per Capita Emissions (metric tons)



Figure 11-9 The top ten nations in terms of total (left) and per capita (right) emissions of CO₂ in 1999. (Data from World Resources Institute)

Exam 1

-75 points

-Mostly from material covered in lecture
through role playing

~one third ~regurgitation in form of short
answer, multiple choice, fill in blank

~two fifths (one sentence answers)

-definitions

-comparison of concepts

-references to readings

~on fifth short essay

-one shorter

-one a bit more involved

506 students with take-home question
(350 words due 7pm Friday?)

SHRIMP



MONTEREY BAY AQUARIUM®

Seafood Watch®



YELLOWFIN TUNA

Choices for Healthy Oceans

Use This Guide to Make Choices for Healthy Oceans

BEST CHOICES

These are your best seafood choices! These fish are abundant, well managed and caught or farmed in environmentally friendly ways.

CAUTION

Think twice before choosing from this list. There are some problems with the way seafood is caught or farmed. However, these are better choices than seafood on the Avoid list.

AVOID

Avoid these products. These fish come from sources that are over-fished or caught or farmed in ways that harm the environment.

For more information visit:

www.montereybayaquarium.org

Click on the Seafood Watch icon to download the latest version of the card, view seafood fact sheets, link to other resources and much, much more...



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Seafood WATCH®



YELLOWFIN TUNA

West Coast Seafood Guide

Spring/Summer 2003

BEST CHOICES

Abalone (*farmed*)
 Catfish (*U.S. farmed*)
 Caviar (*farmed*)
 Clams (*farmed*)
 Crab, Dungeness
 Halibut (*Pacific*)
 Lobster, Rock/Spiny (*CA, Australia*)
 Mussels (*farmed*)
 Oysters (*farmed*)
 Sablefish/Black Cod (*AK, BC*)
 Salmon (*CA, AK; wild-caught*)
 Salmon, canned
 Sardines
 Sea Bass, White
 Shrimp/Prawns (*trap-caught*)
 Squid (*CA market squid*)
 Striped Bass (*farmed*)
 Sturgeon (*farmed*)
 Tilapia (*farmed*)
 Trout, Rainbow (*farmed*)
 Tuna, Albacore/Bigeye/Yellowfin (*troll/pole-caught*)

CAUTION

Clams (*wild-caught*)
 Cod, Pacific
 Crab, Imitation/Surimi
 Crab, King (*AK*)
 Crab, Snow
 Lobster, American
 Mahi-Mahi
 Mussels (*wild-caught*)
 Oysters (*wild-caught*)
 Pollock
 Sablefish/Black Cod (*CA, WA, OR*)
 Salmon (*OR, WA; wild-caught*)
 Sanddabs, Pacific
 Scallops, Bay/Sea
 Shark, Thresher (*U.S. West Coast*)
 Shrimp (*U.S. farmed or wild-caught*)
 Sole, English/Dover/Petrale/Rex
 Swordfish (*U.S. West Coast*)
 Tuna, Albacore/Bigeye/Yellowfin (*longline or purse seine-caught*)
 Tuna, canned

AVOID

Caviar, Beluga/Osetra/Sevruga
 Chilean Sea Bass
 Cod, Atlantic/Icelandic
 Crab, King (*imported*)
 Lingcod
 Monkfish
 Orange Roughy
 Rockfish/Rock Cod/Pacific Snapper
 Salmon (*farmed/Atlantic*)
 Sharks (*except U.S. West Coast Thresher*)
 Shrimp (*imported*)
 Sturgeon (*wild-caught*)
 Swordfish (*Atlantic*)
 Tuna, Bluefin

AK = Alaska
 BC = British Columbia
 CA = California
 OR = Oregon
 U.S. = United States
 WA = Washington

Choices for Healthy Oceans

You Have the Power

Your consumer choices make a difference. Choose seafood from the **Best Choices** list to support those fisheries and fish farms that are healthier for ocean wildlife and the environment.

How to Use This Guide

It's OK to ask questions when shopping or eating out. Ask staff where their seafood is from. Is it farmed or wild-caught? How is it caught? If they're not sure, choose something else.

We update this pocket guide at least twice a year. Visit our web site to obtain the latest version and learn more about seafood.

www.montereybayaquarium.org

Mangroves of Florida

Estuarine mangrove systems are second only to the tropics in **primary productivity**. Estimates of 8.8 dry tons/hectare/year of organic material have been recorded.



- birds
- fish
- turtles
- etc.

25% of mangrove destruction
is result of shrimp farming



Marine Environments

71% earth's surface is ocean

coastal vs. open sea



10% area, 90% species
high **NPP**

- nutrients
- sunlight

- Role of **sunlight**
- Not very productive **per unit area**
- Lots **total NPP**

1. **Estuaries**

2. **Coastal Wetlands**

- mangroves
- salt marshes

3. **Coral Reefs**



Amblyrhynchus cristatus

Quite a few people asked me for this list, so here it is:

This is information compiled from FDA and EPA data. Most of your dietary risk from pesticides is concentrated in these 12 crops -- in order of 'badness'

12 Fruits and Vegetables to Avoid unless you buy Organic:

- 1 strawberries
- 2 (tie) bell pepper; green, red
- 3 (tie) spinach
- 4 cherries (u.s.)
- 5 peaches (non organic nectarines also a good substitute)
- 6 cantaloupe (mexican)
- 7 celery
- 8 apples
- 9 apricots
- 10 green beans
11. grapes (chilean)
- 12 cucumbers

I should add that, many foods are questionable to buy if they are not organic for enviro/socio reasons that aren't listed here -- like bananas. This is a list for YOUR health, not a community's. There are also foods that it matters very little whether you buy organic (according to my more knowledgeable ag friends) -- like blueberries.

that's all that I have. cheers.
danielle

Danielle Wood
Executive Director
Dane County Natural Heritage Foundation
www.dcnhf.org
303 S. Paterson Suite 6
Madison, WI 53703
(608) 258-9797 phone
(608) 258-8184 fax

Role Playing...

Ironwood Forest National Monument, AZ

1906 Antiquities Act

2001 Bill Clinton (21 Monuments created)

Gale Norton asked for input for management plan

-Actual plan should be available October 2003

Brief Description

This [129,000-acre](#) national monument contains a significant system of cultural and historical sites covering a 5,000 year period. Possessing one of the richest stands of [Ironwood trees](#) in the Sonoran Desert, the monument also encompasses several desert mountain ranges including the Silver Bell, Waterman and Sawtooth, with desert valleys in between. Elevation ranges from 1,800 to 4,261 feet. Three areas within the monument, the [Los Robles Archeological District](#), the [Mission of Santa Ana del Chiquiburitac](#) and the [Cocoraque Butte Archeological District](#) are listed on the [National Register of Historic Places](#).

Access

There are two main points of entry - Interstate 10 at Avra Valley Road, and Interstate 10 from the Red Rock exit, southwest on Sasco Road to Silverbell Road.

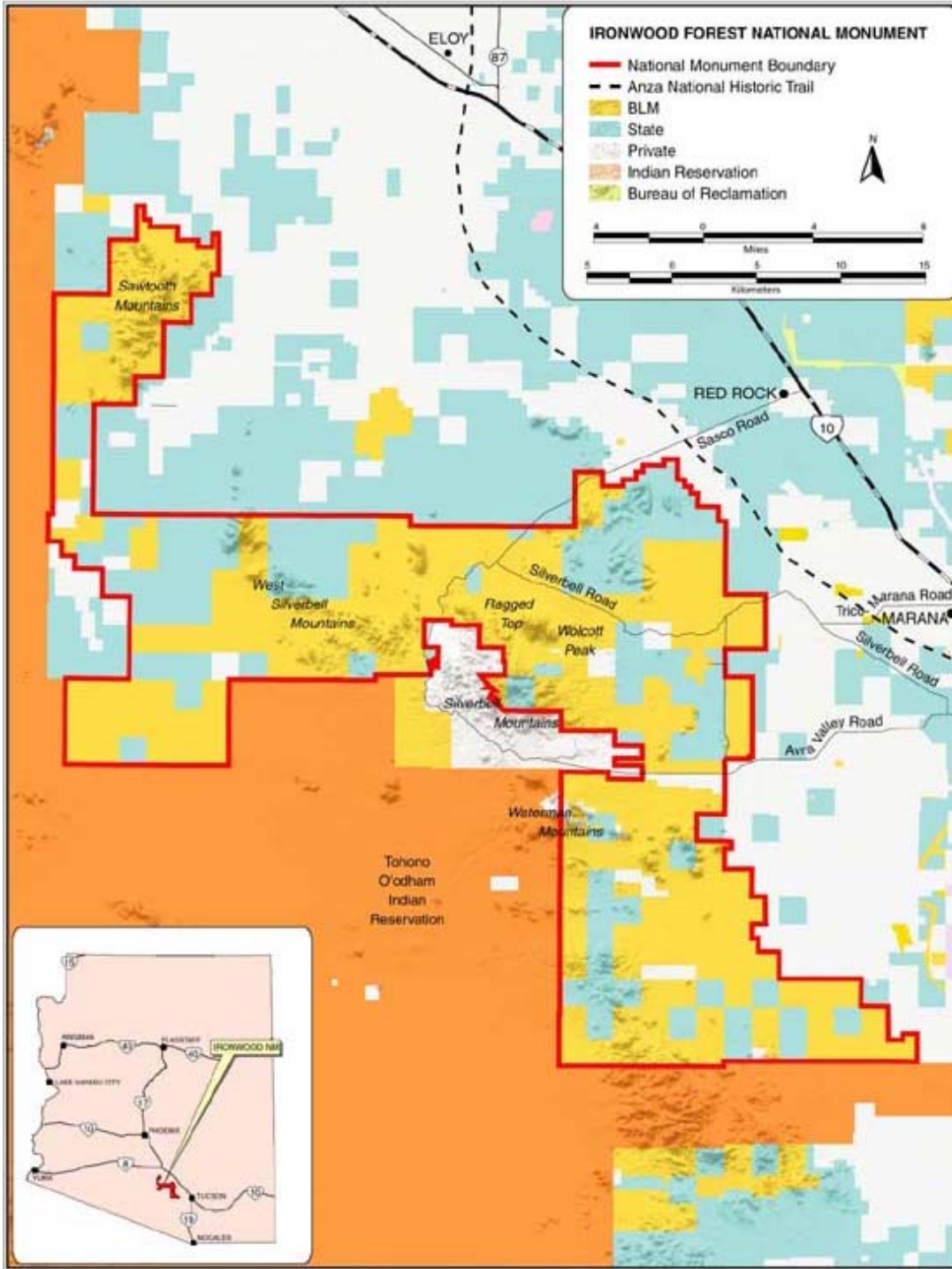
Permits Required

[Activities that were permitted on these public lands before the designation are still permitted, except for new mining claims and geothermal leasing. Commercial activities require a permit. The BLM processes new permits for special activities mostly involving recreation, such as mountain biking events.](#)

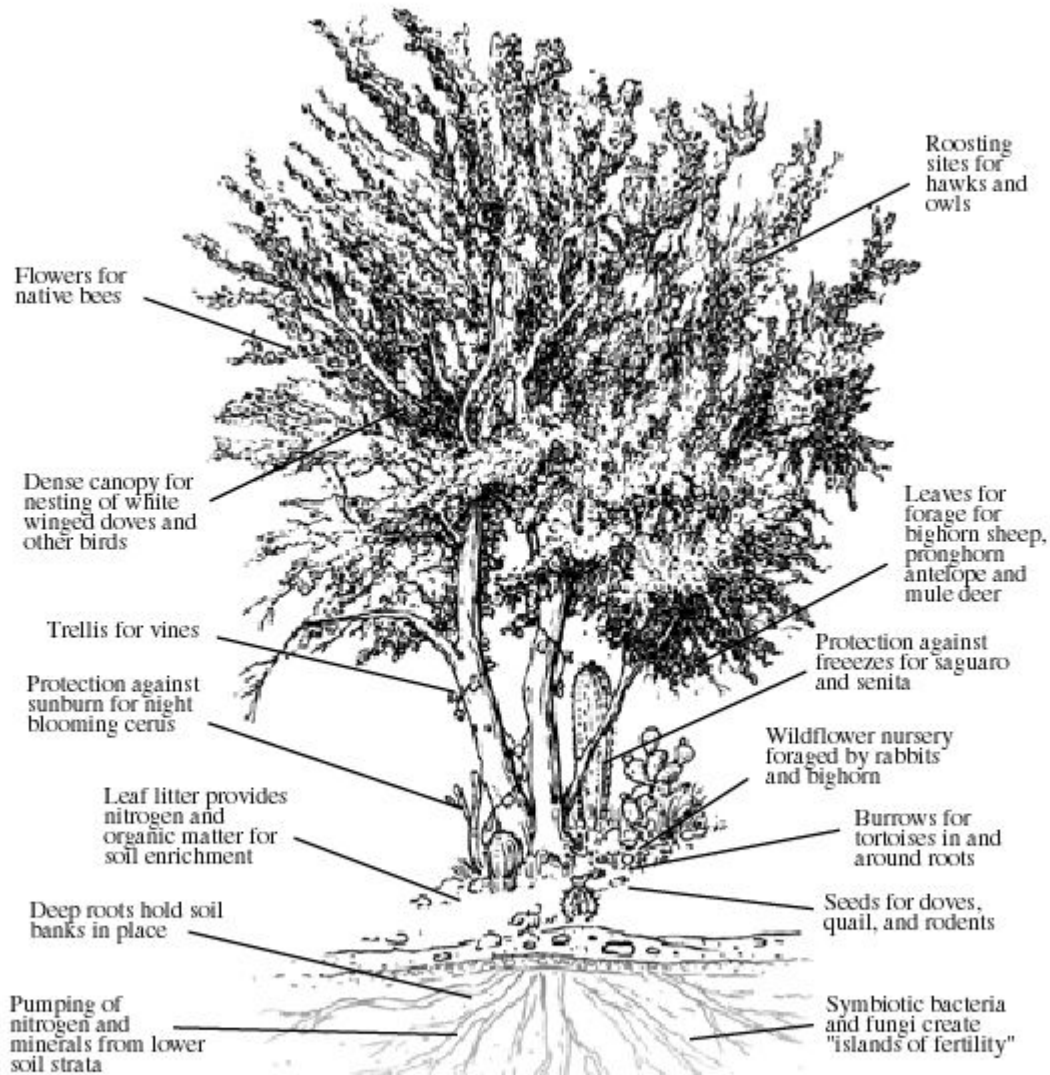
Recreational Opportunities

With a stunning diversity of bird and animal life, the monument offers visitors many opportunities for viewing wildlife. A dazzling display of spring wildflowers result from abundant winter rains. There are no facilities. Camping is allowed up to 14 days. [Taking your vehicle off roads or trails is prohibited.](#)





ECOLOGICAL VALUE OF IRONWOOD



IRONWOOD

Olneya tesota

Potential Issues

1. On/Off Road Vehicular Traffic
2. Mining
3. Grazing
4. Boundary alteration
5. Tourist visitation
6. Use fees
7. Biodiversity
8. E/T species
9. Archaeological sites
10. Several Land-ownership types
11. Undocumented immigrants
12. Urban growth

1. Arizona Cattlemen's Association

2. ASARCO Mining Company

3. Bureau of Land Management

4. Pima County SDCP

5. Center for Biological Diversity

6. Panel to Report to Secretary of the Interior

1. Arizona Cattlemen's Association

Unnecessary land grabs by the federal gov't are an attempt to eliminate grazing on public lands.

Support reevaluation of monument boundaries and changing monument size to 20k acres to protect only densest stands of ironwoods.

2. ASARCO Mining Company

Mining has occurred in the area for decades if not centuries. We have claims nearby and would like to continue to extract from this copper-rich area.

We support boundary reevaluation and continued mining access. We will implement mitigation programs to reduce effects of mining operations.

3. Bureau of Land Management

We administer other monuments in the SW, allowing mountain biking, hiking, hunting, etc. We do not support off-road vehicles and are leaning away from continued mining.

We may be interested in revenues from visitation fees and may even move to reduce grazing if that is what the public prefers (our revenues from grazing are minimal at best).

4. Pima County SDCP

Ironwood Forest National Monument is an important component of the SDCP. This area can serve as critical habitat for the endangered cactus ferruginous pygmy owl providing appropriate mitigation for lands developed elsewhere in Pima County.

5. Center for Biological Diversity

The ironwood tree is a keystone species in this diverse area of the Sonoran Desert. The cactus ferruginous pygmy owl and the desert bighorn sheep are found in the monument.

6. Panel to Report to Secretary of the Interior

Hear 5 minutes of input from each group, followed by two minutes of questions from the panel.

Will report summary and recommendations to the Federal level.

Selected References

<http://arizona.sierraclub.org/rincon/>

<http://azwww.az.blm.gov/ironwood/ironwood.htm>

<http://www.cowboysandcattlecountry.0catch.com/>

<http://www.sw-center.org/swcbd/>

<http://www.house.gov/kolbe/>

Thanks to Guy McPherson and Nina Simone
(RAM 546 April 2002)

Role Playing...

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END