

Fire Ecology
Exam 2

Name _____
April 5, 1991

(10) 1. During what kind of climatic regimes would you expect perennial broomweed to get established? Following establishment, why is it able to compete successfully with warm season grasses?

(10) 2. Why was fire thought to have been successful in controlling velvet mesquite in Arizona in the early 1900's? What other factors were associated with fire?

- (5) 3. Why are leafy bunchgrasses generally less fire resistant than stemmy bunchgrasses?
- (5) 4. How does Basin big sagebrush differ from Wyoming big sagebrush?
- (5) 5. Of the low sage species, which one is the most palatable?
- (5) 6. List 4 dominant bunchgrasses for the sagebrush-bunchgrass region.
- 1.
 - 2.
 - 3.
 - 4.
- (5) 7. The literature says that antelope bitterbrush is severely harmed by fire and that it resprouts vigorously. How do you explain this dichotomy?

(5) 8. What are 2 common annual grasses in the sagebrush-grass region?

1.

2.

(10) 9. Historically, how did fire, drought, and competition interact to suppress juniper in the pinyon-juniper zone?

(5) 10. Why is pinyon pine considered to be more valuable than juniper?

(5) 11. Up to what height are juniper trees easily killed?

- (10) 12. How would you attempt to manage a closed stand (no grass in understory) of juniper in northern Arizona?
- (5) 13. What is the recurrence interval of fire in California chaparral for (a) southern California, (b) central California, and (c) northern California?
- (5) 14. What is meant by autogenic succession and how does it apply to California chaparral?

(5) 15. What are the dominant species in Arizona chaparral?

(5) 16. What climatic variables separate Gambel Oak from the growth of Shrub Live Oak?