

# Environmental Values, Ethics, and Depreciative Behavior in Wildland Settings<sup>1</sup>

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**Abstract:** Preliminary results were examined from a self-administered questionnaire regarding the relationships between personal values, individual characteristics, and depreciative behaviors. Respondents were queried about socio-demographics, reasons for visiting forest recreation areas, reasons for liking and disliking the forest, activities witnessed while visiting the forest, activities and occurrences that bothered the respondent, depreciative behaviors engaged in, and suggested penalties. Interesting racial variations were revealed in several areas of inquiry. Findings are useful to resource managers and researchers seeking insight into depreciative behaviors.

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In recent decades, the Nation's forests have been pressured by mining, logging, real estate, and recreational interests to develop forest lands in a variety of ways. The USDA Forest Service has had to work towards meeting and balancing the needs of the various interest groups while continuing to keep the organization's goals and mission on track.

Although many areas have been set aside for human use, including recreation, the impact of uses, particularly in urban proximate areas has been tremendous. These sites are accessible to large numbers of diverse people and have become quite popular because of their unusual beauty, and unique features and challenges (*fig. 1*). This popularity has resulted in noticeable signs of decline at some sites like trail damage, litter, damage to vegetation, noise, and overcrowding. Conflicts between user groups and between users and resource managers have also become more likely.

Because these signs of decline eventually detract from the very characteristics that make natural areas pleasurable, and because the restoration involved to bring them back to their natural state is time-consuming, costly, and frustrating, the desire to understand behaviors leading to this decline has become of greater interest.

We hypothesized that individual values affect environmental ethics, which in turn influence behavior at a recreation site. Personal characteristics and perception of the recreation site also influence behavior. Perhaps wildland areas are viewed as an urban extension rather than as forest or wilderness. A view of wildland areas as urban extensions

may cause visitors to engage in behaviors expected within a city, such as littering or tagging. These behaviors are detrimental in either setting, but are especially discordant with maintaining pleasurable natural areas.

This paper examines the problem of forest decline by addressing the relationship between depreciative behavior and people's perceptions or values about the forest.

## Methods

A self-administered questionnaire was constructed for this study. Respondents were queried about socio-demographics, perceptions of recreation settings, personal values and behaviors, and recommended management interventions related to instances of depreciative behaviors. Forty-three respondents voluntarily completed the survey on-site. When the time for completion proved to be too cumbersome (an average of 30 minutes on-site), we switched to an on-site mini-survey with a delayed self-administered mail-back. Visitors in the mail-back portion of the study were asked to complete a brief survey requesting some socio-demographic information and their address for participation in a mail survey. Those who agreed to participate received the same questionnaire that had been used for the on-site survey respondents, along with a letter of explanation and a self-addressed stamped envelope. A postcard reminder was sent out one week after the mailing of the questionnaire packet, and a whole packet with questionnaire and return envelope was sent out to those who did not respond during the initial mailing periods. The final response rate for the mail-back survey was 44 percent, with many non-responses because of incorrect mailing addresses. An analysis comparing differences between on-site and mailed survey respondents showed a significant difference in education levels; however, other responses were not significantly different and the two pools of respondents were combined for this paper.

Data were collected on weekends between July and September of 1993 on three southern California National Forests including the Los Padres (Pfeiffer Beach, Arroyo Seco Recreation Area and Santa Ynez Recreation Area), the Cleveland (Desert View and San Luis Rey), and the Angeles (Charlton Flat, Crystal Lake and Stoneyvale). A total of 308 completed surveys were collected from visitors to those sites.

## Results

### Respondent Socio-Demographics

Fifty-one percent of respondents were female, and 49 percent were male. Ages ranged from 16 to 83 years old,

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**Figure 1**—Typical recreational use in one of southern California's National Forest settings where study data was collected.

with most being between 26 and 40 (48 percent). The majority were white (68 percent) and about one-fifth were Latino (18 percent), one-tenth were Asian, and a small number were either Native-American or African-American (4 percent). Respondents were well-educated: 51 percent had at least some undergraduate college education, and 23 percent had attended graduate school. Information on occupation was grouped into four categories: management/professional, clerical/technical, laborer/service, and not employed (unemployed, retired, student). One third of the sample fell into the management/professional category, almost a quarter were in the clerical/technical category (24 percent), just over a quarter described themselves as not employed (27 percent), and the remaining 16 percent were in laborer/service jobs.

Each respondent was asked to indicate which of 10 income categories best described their annual household income. Twenty-one percent of the sample came from households with incomes of less than \$20,000, 40 percent from households of \$20,000 to \$49,999, a quarter from households with incomes of \$50,000 to \$79,000, and the remaining 15 percent were from households with incomes of \$80,000 or more.

#### ***Reason for Visiting Recreational Area***

Respondents at the recreational area were asked to choose one reason that best described why they were visiting the area. Most respondents (22 percent) said they visited the area for the scenery/wildlife/being-in-the-forest while almost one-fifth said they visited for peace and quiet (*table 1*).

**Table 1—Reasons for visiting the recreational area**

Reason to visit	Percent
Scenery, wildlife, being in the forest	22
For peace and quiet	18
For outdoor activities	15
To rest and relax	14
For get-togethers	12
To camp	11
Other	8

Variations in the responses of the racial groups was interesting. While Native-Americans/African-Americans and whites were most likely to say that they visited the forest because of scenery and wildlife, Asians were most likely to visit to get together with family and friends, and Latinos were most likely to visit to camp. A third of all Native-Americans/African-Americans and a quarter of all whites visited for the scenery while one-fourth of all Asians visited the forest for get-togethers. One-fifth of the Latino respondents said they visited in order to camp.

### Reasons for Liking and Disliking the Forest

Respondents were asked to list the three things they liked most and the three things they disliked most about the forest recreation area. Respondents listed scenery and the desire for peace and privacy as the main features they liked about the forest. Respondents also liked being outdoors, by the water, the trails, the accessibility of the forest, and the facilities in the forest. On the other hand, respondents listed inaccessibility, inadequate facilities, vandalism, and discomfort while in the forest as things they disliked about the forest (table 2).

Similarly themed questions elicited different responses. For instance, although 9 percent liked the forest for its easy

access, 17 percent disliked it for its inaccessibility; and although 6 percent liked the forest for its facilities, 14 percent disliked the forest for inadequate facilities.

Scenery was the number one characteristic listed by all racial groups as reasons for liking the forest. Whites and Asians were about three times as likely to list access and about two times as likely to list peace/privacy than Native-Americans/African-Americans. The latter group was least likely to mention being outdoors as something they liked about the forest. Native-Americans/African-Americans were far more likely than other respondents to mention being by the water as something they liked about the forest (table 3).

More than a third of the Latinos and Asians listed litter as a reason for disliking the forest. They were far more likely to list this reason than whites or Native-Americans/African-Americans. Asians and Latinos were also more likely than other groups to list poor maintenance. Signs of overuse were listed most often by whites and Native-Americans/African-Americans as a reason for disliking the forest (table 4).

### Depreciative Activities Witnessed by Respondents

A list of 14 depreciative or socially distracting behaviors was provided to respondents, who were then asked to indicate whether they had witnessed or experienced the occurrence of any of the activities while recreating in the forest. With the exception of hunting or fishing in undesignated areas, constructing wading pools, and making barbecue or campfires in undesignated areas, more than half of the respondents reported seeing each of the activities listed in table 5. Litter was the most frequently observed condition.

### Activities and Occurrences That Bothered Respondents

Respondents were provided with a list of 22 activities or occurrences that might be encountered in the forest. They were asked to indicate whether each bothered them a lot, a little, or not at all. Table 6 displays only those items which

**Table 2—Reasons for liking and disliking the forest<sup>1</sup>**

Reasons for liking the forest(pct) <sup>2</sup>		Reasons for disliking the forest(pct)	
Scenery	25	Out of place activity	26
Peaceful/private	16	Litter/dirty	25
Being outdoors	12	Inaccessibility	17
Being by the water	9	Inadequate facilities	14
Easy access	9	Vandalism	8
Hiking/trails	6	Discomfort at site	7
For the facilities	6	Signs of overuse	7
For fresh air	6	Poor maintenance	3
Exercise	5	Not enough wilderness	2
Maintenance	4		

<sup>1</sup>Number of respondents who liked the forest totalled 798; number of respondents who disliked the forest totalled 600.

<sup>2</sup>Percents reflect multiple responses: each respondent could list three answers.

**Table 3—Reasons for liking the forest offered by racial groups.<sup>1</sup>**

Reasons for liking the forest	Native-Americans/ African-Americans	Latinos	Asians	Whites
	-----percent <sup>2</sup> -----			
Scenery	36	25	31	24
Peaceful/Private	9	13	17	17
Being by the water	18	11	4	8
Being outdoors	3	10	7	14
For the facilities	9	11	8	4
Easy access	3	5	8	10
For fresh air	6	3	9	6
Hiking/trails	3	7	4	7
Exercise	6	5	4	4
Maintenance	3	7	4	3
Other	3	3	4	4

<sup>1</sup>Total number of respondents for each racial category: Native-American/African-American—33, Latinos—149, Asians—75, whites—541.

<sup>2</sup>Percents reflect multiple responses: each respondent could list three answers.

**Table 4—Reasons for disliking the forest offered by racial groups.<sup>1</sup>**

Reasons for disliking the forest	Native-American/ African-Americans	Latinos	Asians	Whites
	-----percent <sup>2</sup> -----			
Litter/dirty	16	36	35	21
Signs of over-use	21	18	21	28
Inadequate facilities	16	14	14	14
Feeling discomfort while at the site	16	7	7	6
Inaccessibility of the area	21	4	3	7
Out-of-place activities	5	9	7	10
Vandalism	5	7	7	9
Poor maintenance	0	5	5	3
Not enough wilderness	0	2	2	2

<sup>1</sup>Number of respondents for each racial category was: Native-American/African-American—19, Latinos—106, Asians—58, whites 417.

<sup>2</sup>Percents reflect multiple responses: each respondent could list three answers.

50 percent or more of the respondent said bothered them a lot. The highest percentage of respondents were bothered by seeing spraypaint on rocks and trees, and by seeing litter on the trails or along the road (almost 90 percent each). Interestingly, 44 percent of the respondents said that seeing people smoking bothered them a lot, but only 29 percent were bothered a lot by seeing people drinking alcohol.

Racial variations in activities and occurrences that bothered respondents a lot were not that noticeable, with the top three items selected being the same for all races including seeing spraypaint on rocks and trees, seeing litter on trails/along the road, and seeing litter at picnic sites (*table 7*). Ninety-five percent of whites claimed that they were bothered a lot by litter on the trails or roads, and 90 percent were

bothered by litter at picnic sites. These percentages are higher than that reported by any other group of respondents. Whites were also more than two times as likely as Native-Americans/African-Americans to report they were bothered a lot by loud music.

Asians were much less likely than other groups to say large crowds in the recreational area or many people on the trails bothered them a lot. For instance, they were about three times less likely than others to say that seeing many people on the trails bothered them and two times less likely than whites to be bothered by large crowds in the forest. Although high percentages of respondents were bothered a lot by seeing evidence of spray painting, Asians were the least likely to report being bothered a lot by it.

**Table 5—Activities and occurrences witnessed or experienced in the forest**

Activities	Percent
Litter at picnic sites/along the road	83
Carvings on trees	75
Other recreators making loud noises	71
Other recreators playing loud music	68
Other recreators walking dogs without a leash	68
Paintings, graffiti on rocks	67
Writing on the walls of the toilets	64
Cars parked on the grass or other no-parking areas	55
Others walking around on areas without trails	50
Tree branches used for barbecue fires	50
Other recreators making wading pools in the river	39
Barbecue/campfires in undesignated areas	38
Other recreators fishing in undesignated areas	18
Other recreators hunting in undesignated areas	14

**Table 6—Activities or occurrences that bothered respondents.**

Activity or occurrence	Percent
Spraypaint on rocks and trees	90
Litter on trails/along the road	89
Litter at picnic sites	86
Evidence of barbecues/campfires in undesignated areas	58
Trampled plants	57
People picking flowers, plants, or catching animals	55

On the other hand, Asians were five times more likely than Native-Americans/African-Americans to report that they were bothered a lot by seeing someone smoking. They were also twice as likely as Native-Americans/African-Americans to report being bothered by other recreationists' laughter. In addition, Asians were more than twice as likely as other respondents to be bothered a lot by people walking or wading in the river, seeing evidence of trail damage, dogs playing in the river and dogs unleashed. Latinos were more likely than

any other group to report that they were bothered a lot by seeing picnic tables in need of repairs, while Native-Americans/African-Americans were more likely than any other group to report being bothered by seeing trampled plants (table 7).

### Activities That Respondents or Members of Their Party Engage In

Respondents were asked to indicate whether they or any member of their party engaged in any of the activities listed in Table 8 while recreating in the forest. Almost 40 percent of the respondents reported that they or members of their party walked around forested areas that had no trails, more than 20 percent reported that they or others in their party walked a dog without a leash and 20 percent reported making loud noises. Less than five percent reported painting or writing graffiti on rocks, hunting in undesignated areas, carving on trees, writing on bathroom walls, or fishing in unauthorized areas (table 8).

Racial variations in these activities were also of interest. Although Latinos were the group most likely to report picking up litter at picnic sites (fig. 2) and Asians the group most likely to report that they look for a cleaner spot to recreate, or leave the forest if it was littered (table 9), these two groups were far more likely to report that they or members of their party had left litter at a picnic site or along the road.

### Respondents' Interventions

Respondents were asked to say whether they engaged in any one of 16 actions/interventions while visiting the forest. The majority had picked up litter at picnic sites (90 percent) and looked for a cleaner spot to recreate (73 percent). About a third had left the forest because of crowding (44 percent), asked another recreator to stop making noise (33 percent), and asked another recreator to stop littering (31 percent). Very few (15 percent) had called the police or a ranger.

Differences between the Asian subsample and the rest of the respondents were striking. Although most respondents reported that they picked up litter at picnic sites, Asians were far less likely to report taking such actions (65 percent

**Table 7—Activities/occurrences that bothered respondents by race.**

Reasons for disliking the forest	Native-American/ African-Americans				Whites
	Latinos	Asians	-----percent <sup>1</sup> -----		
Spraypaint on rocks and trees	92	83	71	94	
Litter at picnic sites	83	80	77	90	
Litter along trails/roads	75	79	74	95	
Barbecues/campfires in undesignated sites	58	56	63	57	
People picking flowers/plants/catching animals	58	44	45	59	
Trees with broken branches	50	46	43	49	

<sup>1</sup>Only the first six highest percentage categories were listed, and at least 50 percent of one racial group was bothered a lot by the activity or occurrence.

**Table 8—Activities engaged in by respondents or members of their party while visiting the forest.**

Activities	Percent
Walked around forested areas that have no trails	37
Walked a dog without a leash	23
Made loud noises	20
Parked cars on grass or other no-parking areas	16
Made wading pools in the river	14
Used tree branches for barbecue fires	14
Played loud music	11
Made barbecue or camp fires in undesignated areas	8
Left litter at a picnic site or along the road	8
Fished in unauthorized areas	4
Wrote on the walls of the toilets	4
Made carvings on trees	4
Hunted in unauthorized areas	3
Put paintings, graffiti on rocks	3

versus 91 to 94 percent). This is even more interesting when one notes that Asians were far more likely than other groups to ask forest rangers about litter pick-up (29 percent versus 14 to 19 percent for others), to look for cleaner spots to recreate (81 percent versus 70 to 73 percent), and to leave

the forest because of litter, noise, crowding, drinking, or fear of violence. Almost half of all Asians reported leaving the forest because of litter. Asians were the least likely of all the other racial groups to approach other recreators and ask them to stop littering, making noise, drinking, or smoking.

Despite the finding that Asians visited the forest for get-togethers with family and friends (26 percent) and were less likely than others to be bothered a lot by crowds at the recreation site or by many people on the trails (19 and 7 percent respectively), they were most likely to leave the forest because of crowding (52 percent). This finding suggests that Asians are leaving the forest to go elsewhere to find a place to recreate with their families and friends.

Latinos were most likely to report picking up litter at the picnic site (95 percent), yet they were the least likely to look for a cleaner spot to recreate (70 percent versus 72 to 81 percent for others). Latinos were far more likely to ask others to stop drinking, smoking, spraypainting, and cutting down trees and branches.

### **Suggested Penalties for Engaging in Depreciative Behaviors**

Respondents were provided with a list of 17 activities which might occur in the forest, and were asked to indicate which penalties should be applied to the perpetrator. Penalties included paying a fine, being asked to leave the forest, receiving a verbal warning, arrest, and watching a forest



**Figure 2—** Young man depositing litter at trash can in recreational area that is part of this study.

**Table 9—Activities engaged in by respondents or members of their party while visiting the forest.**

Activities	Native-Americans/ African-Americans	Latinos	Asians	Whites
	-----percent-----			
Walked around forested areas that have no trails	42	28	21	42
Walked a dog without a leash	18	24	7	25
Made loud noises in the forest	25	18	7	21
Made wading pools in the river	18	15	21	13
Parked cars on the grass or other no-parking areas	9	22	14	15
Used tree branches for barbecue fires	8	20	10	13
Made barbecue or campfires in undesignated areas	17	9	10	7
Left litter at picnic sites or along the road	0	11	0	3
Fished in authorized areas	0	11	3	2
Put paintings/graffiti on rocks	0	9	4	1
Made carvings on trees	0	11	0	2
Wrote on the walls of toilets	0	11	0	2
Hunted in unauthorized areas	0	11	3	2

conservation film. Respondents clearly considered some activities more deserving of serious penalties than others. Verbal warnings and fines seemed to be the most agreed upon consequences in many cases (*table 10*).

Differences between the Asian subsample and the rest of the respondents on this section of the questionnaire were striking. Asians were the group least likely to say there should be no penalty for collecting fallen branches and twigs

to make barbecues or campfires (40 percent versus 52 to 58 percent). Asians were more likely than others to say that visitors should be fined for 14 of the 17 activities listed, in some instances they were three to four times more likely to suggest a fine. They were slightly less likely to suggest a fine for only three activities: carving/spraypainting, breaking tree branches, and lighting campfires/barbecues in undesignated areas.

**Table 10—Respondents suggesting penalties for forest visitors engaging in depreciative/socially annoying activities.**

Activity	None	Fine	Leave Forest	Verbal Warning	Arrest	Watch Film
	-----percent of visitors <sup>1</sup> -----					
Throwing garbage on trails/roads		63	14		11	
Playing loud music			27	59		
Carving/spray- painting trees		45	13		33	
Spraypainting rocks		44	13		33	
Breaking off branches		29	17	34		12
Parking or driving unauthorized area		33	14	45		
Walking on young plants		14	11	44		24
Picking or remove plants/animals		34	16	22		18
Lighting barbecue/ fire in undesig.		45	16	22		
Camping/picnicking in undesig. area		22	17	49		
Collecting fallen branches/twigs	53			28		
Hanging hammocks from trees	45			41		
Fishing in undesig. area		42		39		
Swimming in undesig. area		20		61		
Loud/rowdy behavior			47			
Making wading pools	17		11	56		
Walking dogs without a leash	18	22		51		

<sup>1</sup>Percentages are provided only when they are equal to, or greater than 10 percent.

Asians were also more likely than others to suggest that visitors be expelled from the forest for playing loud music, walking on plants, lighting campfires or barbecues in undesignated areas, collecting twigs/branches for barbecues or campfires, swimming in undesignated areas, and walking dogs without leashes.

In contrast, Latinos were more likely than other groups to suggest a verbal warning for playing loud music, walking on plants, picking or removing plants or animals, making campfires or barbecues in undesignated areas, fishing or swimming in undesignated areas, engaging in loud or rowdy behavior, and making wading pools. For many of the activities, whites were the group most likely to suggest the offender watch a forest conservation film (suggested for nine of the activities by between 5 and 26 percent of the white respondents).

## **Conclusions and Recommendations**

Although the results of our survey are preliminary, they do indicate a relationship between people's values about the forest, and their personal perceptions of the recreation site,

and depreciative behavior. The findings show that visitor's reasons for visiting the forest--such as enjoyment of scenery and natural areas--are similar. Most respondents also liked and disliked the same aspects of the forests. But perhaps of greatest interest was the reporting of actions engaged in, and respondents reactions to them. Racial variations were much greater in these areas of inquiry.

Racial affiliation was found to be an important factor in reactions to depreciative acts, as well as perceptions of appropriate agency intervention. The willingness of some groups to admit leaving litter may reveal something worthy of further investigation. For instance, because Latinos and Asians were most likely to admit leaving litter, they either were much more likely to do so, or more likely to admit to it. But because our data was obtained from a survey, some respondents may not have accurately reported actions and potential reactions to depreciative behaviors. Thus, future research should include other independent variables so that more insight and understanding can be obtained about depreciative behaviors and informed strategies of intervention can be implemented.