



Recreation Research Update



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Wildland Recreation and Urban Cultures

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Caring for the Land and Serving People

Ecosystem Services and Visitor Perceptions

Ecosystem Services is a term used to describe the benefits to people from natural areas. Some services are categorized as cultural services (such as providing outdoor recreation locations) or as regulating services (such as protecting water quality). It is unclear how familiar urban residents are with services provided by natural areas. Research conducted in two forest canyons in southern California addressed people's beliefs about natural areas and how those areas should be managed. Respondents (n=509) filled out the surveys on-site.

Respondents were told that the Forest Service manages public lands, including natural areas that are set aside for various purposes. For each item on a list they were asked how much they agreed or disagreed that it is important to manage natural areas for that particular item. They were also asked to think about each item and indicate if more areas are needed for that purpose, if there is the right amount set aside now, or if there are too many areas set aside for that purpose.

Cultural Services –The items considered most important to manage natural areas for are these: camping, day hiking, educational purposes, scenic value, watching wildlife, visitor safety, sightseeing, stream play, and swimming. Similarly, respondents reported more areas need to be set aside for: camping, day hiking, educational purposes, scenic value, visitor safety, watching wildlife, stream play, and swimming. They also wanted more areas set aside for picnicking.

Regulating Services –The items considered most important to manage natural areas for are these: protection of water quality, protection of wildlife, improved air quality, and protection of plants. Respondents reported more areas need to be set aside for these same items.

Although we did not define these services as “cultural” or “regulatory” to the respondents, it seems that the ecosystem services provided in natural areas resonate with them. Therefore, managers of these natural areas in southern California might want to consider communication and educational programs focusing on describing the benefits to people from natural areas, especially emphasizing regulating and cultural services. It might be an opportunity to increase knowledge levels of what natural areas do for people. Awareness can lead to an informed public and in turn

result in support for protected natural areas. *For more information about this study contact Debbie Chavez at 951-680-1558 or dchavez@fs.fed.us.*

Connection to the Land, Management Preferences, and Urban Proximate Wilderness Visitors

A survey of urban proximate wilderness visitors was conducted in 2005, with selected findings reviewed in issue 56 of our Research Update. This issue's summary focuses on items from the mail-back survey (n=103).

Respondents' reasons for visiting the Wilderness included (listed by a majority): exercise, visit a natural unspoiled area, relax, be close to nature, be physically challenged, observe wildlife, be with family and friends, renew my soul, prepare for more challenging trips, and sleep outdoors. Almost half came to be alone or star gaze.

Using a modified version of Clayton's Environmental Identity Scale (using a 7-point scale where 1=not at all true of me, 7=completely true of me) we measured visitor's connection to the land. Respondents' indicated the most agreement with “I really enjoy camping and hiking outdoors”, “I would feel that an important part of my life was missing if I were not able to get out and enjoy nature from time to time”, “learning about the natural world should be an important part of every child's upbringing”, and “when I am upset or stressed, I can feel better by spending some time outdoors communing with nature”.

The Environmental Identity Scale items were combined into an overall score and used to examine responses to questions about public land management priorities and adequacy of areas available for purposes. These priorities and purposes were characterized as environmental protection, low impact recreation, and high impact recreation (each involved a number of items used to create composite measures).

Respondents with stronger connections to the land were more supportive of managing natural resources for environmental protection as well as the need for more areas for that purpose. Examples included protection of plants and improved air quality.

Managers wishing to foster support for protection efforts might use these findings as a reminder to make personal meanings and connections salient to publics

before asking them to choose among management priorities. *For more information about this study contact Pat Winter at 951-680-1557 or pwinter@fs.fed.us.*

Interpretation Effectiveness at Schulman Grove

A study of interpretation at the Schulman Grove (SG) on the Inyo National Forest in California is now available. SG has educational exhibits, displays, interpretive panels, a film and two interpretive trails focused on Bristlecone Pines, dendrochronology, and local fauna and flora. These were studied in cooperative venture between Humboldt State University (Dr. Carolyn Ward & Dr. Steven Martin), John Louth (Inyo NF) and PSW's Dr. James Absher during the 2004 and 2005 summer seasons. Onsite surveys yielded 267 questionnaires, 40 interviews, and 230 group observations.

Results show that visitors are mostly middle class and well educated with little to no previous site experience. Typically they came in groups of two (48%) and in family groups (58%). The average time spent onsite was four hours and eighteen minutes.

The main reason for a SG visit is, not surprisingly, seeing the old trees (38%), although personal and social reasons were also noted. Visitors were highly satisfied. They sought out trail signs as sources of information (79%) followed by staff (70%), indoor signs/ exhibits (61%), and patio signs (51%). Only 5% of visitors attended a guided walk or campfire talk. Main message recall showed that most (54%) stated a fact about Bristlecones or dendrochronology, followed by the age of the trees (27%). Almost 92% of visitors stated that they learned new information at SG. Visitors rated the overall quality of information and visual appeal of the signs as very high.

The best patio exhibits or trail signs were those that contained scientific information. Visitors would like more natural history, geology, scientific information, and staff interaction. SG visitors prefer traditional interpretation: there was an overwhelmingly negative response to the use of computers, saying they go to SG to get away from technology and do not want interpretation to take away from the impact of the Bristlecone Pines themselves.

In summary, SG visitors are very satisfied, yet suggested some improvements, notably more scientific information, better trail markers and more staff or volunteer interaction. Finally, given the remoteness of the site, the availability of more food and cold drinks

for purchase in the Visitor Center would be appreciated. *For more information about this study contact Jim Absher at 951-680-1559 or jabsher@fs.fed.us.*

Unit Publications

Absher, J.D.; Vaske, J.J.; Bright, A.D.; Donnelley, M.P. 2006. **Ipsative crystallization effects on wildland fire attitude—policy support models.** *Society and Natural Resources*, 19, 381-392.

Havitz, M.E. 2006. **Commitment to public leisure service providers: A conceptual and psychometric analysis.** *Journal of Leisure Research*, 38, 78-103.

Heid, M. 2006. **Sign language: a word to the wise for outdoor stewards.** *AMC Outdoors Magazine*, 17, 1, 24-25.

Kyle, G.T.; Mowen, A.J.; Absher, J.D.; Havitz, M.E. (2006). **Commitment to public leisure service providers: A conceptual and psychometric analysis.** *Journal of Leisure Research*, 38, 78-103.

Mann, C. 2006. **Konflikte in Erholungsgebieten – Ursachen, Wirkungen und Lösungsansätze.** [Conflicts in recreation areas – causes, effects and solutions]. Ph.D. Dissertation, Albert Ludwigs Univesitat, Freiburg] Remagen-Oberwinter, DE: Verlag Kessel Forstbuch. ISBN: 3-935638-75-2, 256p.

Tynon, J.F.; Chavez, D.J. 2006. **Crime in National Forests: a call for research.** *Journal of Forestry*, 104, 3, 154-157.

Ward, C.J., Martin, S.R., Absher, J.D., Taylor, J. & Jensen, K. 2006. **Interpretation Effectiveness at Schulman Grove: Visitor Center and Adjacent Ancient Bristlecone Pine Forest Trails.** RWU-4902 Technical Report. Riverside, CA: USDA Forest Service, Pacific Southwest Research Station. 107p.

Winter, P.L. 2006. **What is the best wording to use on signs? The impact of normative message types on off-trail hiking.** *Journal of Interpretation Research*, 11, 1, 35-52.