

Crime in National Forests: A Call for Research

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ABSTRACT

The aim of this article is to explain why research focusing on crime and violence on national forests is necessary and overdue. Four questions are offered to frame future research. First, how much crime is occurring on national forests, and how can the effects of crime and violence best be measured? Second, how is crime spatially distributed across national forests? Third, what actions are effective in mitigating crime in a recreation setting and what should we adopt for a successful crime-stopping arsenal? Finally, how do crime and violence affect recreation behavior and decisionmaking?

Keywords: crime, law enforcement, national forests, recreation research methods, violence, visitor safety

Research on national forest crime is limited. Historically, research efforts focused on vandalism (Christensen and Clark 1978), especially graffiti and target shooting. More recently, Munson (1995) noted problems such as the dumping of garbage and toxic chemicals, vandalism, marijuana cultivation, and timber thefts. Marosi (1999) found that national forests were being used as a dumping ground for murders committed elsewhere, especially in urban-proximate forests (those within an hour's drive of a million or more people). Pendleton (1996) found a 100% increase in national forest crime from 1989 to 1992. Most recently, Chavez and Tynon (2000) found that clandestine methamphetamine ("meth") manufacture and meth lab chemical dumps, once thought to be the bane of urban environments, indiscriminately endanger both those who visit and those who work in national forests.

Tynon et al. (2001) reported on several crime categories uncovered in a study conducted at eight US Forest Service (USFS) sites in four different USFS regions. The categories were urban-associated crime (e.g., arson, body dumping, domestic violence, drive-by shooting, gang activity, murder,

rape and sexual assault, suicide), assault (e.g., personal assault, criminal property damage, and threats against property), drug activity (e.g., marijuana cultivation, meth labs, meth chemical dumps, and armed defense of crops), and takeover or violence perpetrated by members of extremist and nontraditional groups (e.g., satanic cults, white power groups, EarthFirst!, survivalists, and militia/supremacy groups). Later, research at other USFS sites supported those findings (Chavez et al. 2004).

Law Enforcement Officers (LEO) Are Subject to Increased Danger on the Job

Many USFS LEOs were hired with the expectation of conducting natural resources law enforcement (such as catching timber thieves), but they actually spend more than half of their time on what they call "city law enforcement," dealing with "urban spillover" and "urban-associated crimes" (Tynon et al. 2001). They are subjected to verbal threats, abuse, harassment, and physical attacks (Driessen et al. 2000). Public Employees for Environmental Responsibility (PEER) obtained documents through the Freedom of Information Act showing there

were 100 incidents of threats, violence, and vandalism toward USFS and Bureau of Land Management (BLM) personnel and facilities in 1998 (PEER 1999), more than double the 1995 figures (Berkowitz 1995). Most occurred in western states (PEER 1999).

Geographical Isolation and Understaffing May Affect Crime Mitigation Efforts

Some western national forest LEOs patrol, on average, 378,000 ac alone and often are out of radio and cell phone contact (Tynon et al. 2001). This kind of geographical isolation can result in crimes going unnoticed and underreported (Chavez and Tynon 2000, Manning et al. 2001). Still, the number of crimes and related incidents on national forests and grasslands doubled over a 5-year period, while the number of USFS officers and investigators remained almost unchanged.

Understaffed law enforcement in national forests poses a real obstacle to effective control of criminal activities (Tynon et al. 2001). To compensate, USFS managers employ a variety of formal and informal agreements with county sheriffs' offices, city police, highway patrols, and fish and game officers. USFS LEOs increasingly rely on canine units for control in heated situations and, when necessary, they count on support from Special Weapons and Tactics teams, drug task force members, and the border patrol.

A Research Agenda

A variety of research questions related to crime in national forests could be explored using myriad methods and approaches (Table 1). We present four ques-

Table 1. Suggested topics for a research agenda addressing crime in national forests.

Quantifying the occurrence of criminal activities on national forests
Quantifying the effects of crime and violence on national forests
Data comparability and sharing across agencies and administrative units
Differentiating physical safety, personal safety, and property safety
Model testing and theory building
Understanding the spatial distribution of crime
Resource allocation and planning
Developing tools to mitigate crime on national forests
Replicating studies that measure successful crime mitigation strategies
Quantifying how crime and violence affect recreation visitors, especially
Visitor behavior
Visitor decisionmaking
Visitor perceptions of safety
Differences in perception based on visitor characteristics
Visitor perceptions of the extent of crime on national forests

tions that offer suggestions for framing future research. First, how much crime is occurring on national forests, and how can the effects of crime and violence on national forests be measured? To begin to understand what actions are needed, better qualitative and quantitative research efforts must substantiate clearly the problem. Better database search capabilities are needed. Research questions need to differentiate between physical safety (e.g., safe from avalanches and forest fires), personal safety (e.g., safe from other people), and property safety (e.g., safe from theft or damages), and agency databases need to make similar distinctions.

Data Collection Issues on National Forests. Obtaining statistical data about crime in USFS settings has been difficult because of the way crime is reported and recorded. Law enforcement agreements between the USFS and other law enforcement entities can result in several agencies tracking crime. Local sheriffs track incidents using categories based on the Federal Bureau of Investigation Uniform Crime Reporting (UCR) guide. Part I of the UCR includes categories such as criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, and arson. Part II includes other assaults, stolen property (by buying, receiving, and possessing), vandalism, weapons (carrying and possessing), narcotic drug law violations, driv-

ing under the influence, liquor law violations, drunkenness, and disorderly conduct. Part III of the UCR is about assists to USFS LEOs and assists to the public, where state or local law enforcement personnel contribute to USFS enforcement efforts. Although this information can be made available, local LEOs/sheriffs do not specifically tie data to incidents on USFS lands; it is all combined. Thus, it is impossible to separate out USFS crime data.

The LEOs for the USFS have their own database to track crime incidents using categories from the UCR guide. In addition, they have forest or land management-specific categories (e.g., campfire where prohibited, camping where prohibited, or violating curfew). They track observations of problems, verbal warnings, and written warnings (together these are the total violations). They also track tickets given. Total violations and tickets written equal the total incidents or occurrences. A significant problem is getting the data into the database.

Originally, LEOs entered crime data into a USFS system database called Law Enforcement Management Attainment Reporting System (LEMARS). Then, the USFS transported all their data into a new database program called Law Enforcement and Investigations Attainment Reporting System (LEIMARS). Unlike LEMARS, LEIMARS includes investigative and geographic information system (GIS) data. The GIS data are recorded in latitude and longitude coordinates. Unfortunately, information at some sites was permanently lost during the transfer process. Problems with the new system (i.e., some data were either not recorded or disappeared after being entered into the program) are being corrected. These data will help us determine how much crime really is occurring on USFS lands.

Model Testing and Theory Building. Another potentially fruitful area of research may come from testing models outside the recreation milieu for their efficacy to leisure research. For example, Barker et al. (2002) in *Annals of Tourism Research*, attempted to model tourism crime for special events, while Pizam (1999) attempted to classify acts of crime and violence at tourism destinations. Brantingham and Brantingham (1991) helped break new ground in the 1980s with their theory of environmental criminology, focusing on the control and prevention of crime through environmental design. Michael and Hull (1994) examined crime prevention through environmental design (CPTED) not-

ing important contributions in urban park settings that may hold some promise for managers of larger federal estate lands. Researchers need to tap into the criminology literature in building a theoretical recreation research approach to crime mitigation.

Second, how is crime spatially distributed across recreation areas? Spatial descriptions, GIS maps, and analyses of locations could let managers determine not only where crimes are likely to occur but how best to allocate resources to address crime. Hot spots or areas of crime density can be identified. Geographic profiling holds promise as a methodology because of how it links crime locations with probable offenders (Harries 1999). For now, crime mapping is still in its infancy and exhibits a distinctly urban bias (Harries 1999, Leipnik and Albert 2003). In the USFS, crime analysis still has to occur.

Third, what actions are effective in mitigating crime in a leisure setting and what should we adopt for a successful crime-stopping arsenal? What are managers, LEOs, and others doing now to mitigate crime in leisure settings? Pendleton (1998) noted a shift from soft enforcement (such as issuing warnings) to hard enforcement (i.e., citations and arrests) as a matter of both policy and practice in our national parks. He cautioned that sole reliance on soft enforcement can compromise the image of law enforcement, further facilitating crime. He suggested using a blend of hard and soft enforcement efforts, although additional research is needed to determine relative effectiveness.

We also need to know what else is likely to work, which means trying new crime-fighting approaches. Chavez and others (2004) revealed successful crime mitigation characteristics (e.g., force of personalities, resources, persistence, collaboration, and communication) that emerged from USFS case study research efforts. Using these strategies resulted in areas safer for visitors, natural resource managers, and staff. Research needs to continue in this area.

As noted previously, CPTED strategies that work in urban parks (Michael and Hull 1994) could be tested in national forests, but in thinking about successfully mitigating crime, researchers also need to consider appropriate responses to crime and what obligations of safety are owed to visitors. It is important to find a balance between what is an appropriate response to crime in a leisure setting and maintaining the integrity of the resource. In *Mountains Without Handrails*,

Sax (1980) said when enough people go to a national park we put up safety features such as fences to keep visitors safe, even though that detracts from the scenery and from the experience. We wonder what should take precedence—safety or the unfettered natural scene? How can agencies make public recreation areas safe without sacrificing quality? Are national forests destined for the hidden-camera surveillance that exists in our cities? Pendleton (2000) urged caution in thinking about enforcement on public recreation lands. He pointed out that simply applying an urban crime-stopping model to law enforcement in leisure settings “ignores the paradoxical nature of leisure setting crime” (Pendleton 2000, 112), the special features of the setting, and the dramatic differences between criminal justice institutions and leisure institutions. Opportunities for solitude, likewise, offer opportunities for criminal concealment. How, then do managers and researchers decide what actions are appropriate for use on public lands when managing against crime and violence? What is necessary for safety’s sake? And what are the concomitant liability issues?

Fourth, researchers need to know how crime and violence affect recreation behavior and decisionmaking. Although USFS LEOs reported that criminal activities can trigger some visitors to relocate to other areas of a national forest and that some visitors may be displaced (Chavez and Tynon 2000), few empirical studies have been conducted on how the occurrence, awareness, and perception of criminal activities affect visitors to national forests.

Related research that might inform future efforts includes that done by Manning et al. (2001). They examined how safe visitors feel on the Appalachian Trail and found that hikers who are concerned about safety are deliberately seeking others to hike with—a behavior anathema to solitude on the trail. They found that crime is substantially underestimated on the Appalachian Trail because visitors are not reporting incidents. Schneider et al. (2002) examined women’s fears of violence in urban park settings and found that women devise a variety of strategies (e.g., altered routines and displacement) to increase their perceptions of safety.

Research on leisure, stress, and coping help us better understand the consequences of crime to visitors (Schneider and Iwasaki 2003); however, much remains unknown. We don’t know if visitors’ fears are warranted. We have not examined whether or not there is con-

gruence between visitors’ perceptions of safety and the perceptions of managers and LEOs and how that affects visitor behavior and decisionmaking. We have not determined if there are differences in perceptions of safety based on urban/rural residence or experience. Questions remain about visitor—and criminal—displacement to other areas.

USFS LEOs believe that some visitors to national forests are unaware of or unaffected by crime and violence, which explains why there is the perception that criminal activities have little affect on recreation demand. LEOs feel that urban visitors seem especially blasé about crime, because they often will return to the site of a previous days’ gang stabbing or shootout (Tynon et al. 2001). By way of contrast, the negative effects of criminal activities on tourism demand, particularly from an economic perspective, have long been studied (Enders et al. 1992, Schiebler et al. 1996). Parallel studies on recreation demand and an in-depth examination of changes in recreation trends are needed. Future research also could examine visitor opinions on the extent of crime in leisure settings and the factors that influence their perceptions so researchers can better understand how these affect the decisionmaking and participation patterns of recreationists.

Conclusion

Pendleton (2000) suggested that crime and violence may be a defining part of an evolving leisure experience and, further, that this possibility has not been fully recognized and explored. Responding to crime that occurs in national forests—even crimes more closely associated with urban environments—requires sensitivity to the nature of special places.

National forest managers owe their staff and the recreation visitors they serve a high level of safety from criminal offenders. Researchers can aid in that effort by bringing their knowledge to bear on mitigating crime in national forests. A research agenda focused on crime and violence on national forests is necessary, it is overdue, and it should be an essential part of the purpose of recreation research.

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