Legal Issues Related To Adventure Racing

BETH A. EASTER.

SARAH E. HARDIN,

&

TAMMIE L. STENGER Southeast Missouri State University

'Adventure' is a term that has come to be associated with high risk recreational or sporting activities. Though it is difficult to identify a beginning point for adventure recreation, van der Smissen (1990) identified it as a movement developed in the 1970s associated with the organizations such as Outward Bound. This movement involved not only risk taking but physical and psychological challenge for educational or therapeutic reasons. Today, 'adventure sports' is a term applied to a variety of outdoor activities. Many of these activities are pursued for recreational purposes rather than for education or therapy. An exploration of websites devoted to adventure sports, such as www.adventuresports.com, garner a number of activities including, among others: road and mountain biking, diving, hiking, paddling, climbing, skiing and mountaineering. (Adventure Sports Online, 2003). Some people use the terms 'extreme sports' and 'adventure sports' interchangeably including hang gliding, snowboarding, and wakeboarding in the mix of adventure sports. One of the major similarities of all of the previously mentioned activities is that they include an element of risk.

Although many people still seek solitude and introspection from the outdoors, the excitement attached to adventure sports is becoming more and more attractive. This is exemplified by the 189 million outdoor enthusiasts who were involved in adventure sports and travel in 1998. (National Sporting Goods Association, 2003). One example of an adventure sport with increased popularity is rock climbing. The recent inclusion of climbers in popular media and advertising and the increased availability of climbing walls for training seems to have attracted more people to the sport. This is exemplified by the increased numbers who are visiting parks and other private and public outdoor areas to use their climbing skills and experience the thrill of taking risks. The gain in popularity of climbing and other challenging outdoor activities is

reflected in the greater number of search and rescue operations reported by the National Park Service (Wilkinson, 1999). In several national parks, rangers and the National Park Service have begun to review potentially dangerous recreational activities for the purposes of banning them or determining strategies for limiting the harm to both people and the parks. Despite the anxiety that officials feel for some of these activities, new 'extreme' and 'adventure' sports continue to be developed.

Risk taking for the purpose of testing personal limits was a key element in the development of adventure racing. In 1988, Gerard Fusil created a race he called the "Raid Gauloises" to challenge the endurance of racers in remote terrain (Crawford, 2003). The first Raid Gauloises was held in New Zealand. Americans did not compete until 1992. Mark Burnett, captain of the U.S. team and developer of the Discovery Channel Eco-Challenge and the television program, Survivor, brought the sport to the United States. Because the Eco-Challenge is a made-for-television event broadcast by the Discovery Channel, the sport benefited from publicity early in its development (Crawford, 2003).

Kay and Laberge (2002) describe adventure racing as "a non-stop, selfmulti-day, sufficient. multidiscipline, mixed-gender team competition that takes place in the wilderness over a designated but unmarked course" (p. 17). The operators of the web site www.adventuredirectory.com write that most events include hiking or walking, kayaking or canoeing, and climbing (Adventure directory.com, 2003). Many events are organized and held annually. Events may be a "sprint," lasting several hours or an "expedition," lasting several days. They may be located in outdoor areas such as a jungle or mountain range or actually take place in an urban setting for those who cannot escape the city. (Fortitude: Team Adventure Racing, 2003). The competitor must be versatile, with skill in many outdoor sports. In addition, individual drive and team orientation are required.

The tremendous growth in terms of number of events and number of participants has resulted in the formation of an organization to govern adventure racing, the United States Adventure Racing Association (USARA). USARA sanctions events and conducts national championships in addition to publishing Adventure World Magazine and maintaining a web site (USARA, 2003). The organization's mission includes a focus on assisting race directors in conducting safe events that provide for "the health, welfare, and safety of participants, spectators, officials and volunteers" (USARA). The USARA has developed a number of standards providing for the safety of race participants, volunteers, and spectators. Any race that is sanctioned by the USARA must meet these standards (USARA).

Because of the risk inherent in the activities that are included in adventure races, race directors and managers must be vigilant in anticipating and managing the safety of participants. The purpose of this article is to provide an analysis of the legal concerns relevant to limiting liability in adventure racing event management. Among the topics included in the analysis are inherent risk, assumption of risk, waivers and releases, and scope of duty. Due to the fact that adventure races must take place on large tracts of land, recreational land use acts are also addressed

INHERENT RISK

Inherent risk is a foundational legal concept for recreational sporting activities. The nature of the activity itself is a source of risk. Removal of risk from these types of activities is not usually an option for organizers, because the activity would be so fundamentally altered that it would no longer be recognizable as the same activity. According to van der Smissen (2001) although the risks inherent to an activity are foreseeable, they are not considered to be unreasonable. However, when examining the legal issues related to inherent risk it becomes important to identify, which risks are actually seen by experts and the courts to be inherent to the various adventure sports which may be included in adventure racing as well as to the adventure races themselves.

In their comparison of sport safety statutes, Spengler and Burket (2001) outline the legislation from each state specific to sport and the inherent risks listed in the legislation. They found that the majority of the statutes dealt with the activities of snow skiing, roller skating and horseback riding (Spengler & Burket, 2001, p. 160). Some states list other activities that may be more relevant for adventure racing (Spengler & Burket, 2001). For example, Mississisppi's statutes identify inherent risks in water sports and hiking (MISS. CODE ANN. §89-2-3, 2003; Spengler & Burket, 2001). Statutes in Utah list recreational activities including hiking and biking (Spengler & Burket, 2001; UTAH CODE ANN. §78-27-63, 2003). Vermont takes a different approach in that its' statutes do not single out any sports/activities, but state that someone participating in any recreational activity assumes inherent risks that are "obvious and necessary" (Spengler & Burket, p. 164).

While some states specify the inherent risks of particular activities, many elements in adventure racing are expressly recognized by California Code §831.7 as "hazardous recreational activity." According to van der Smissen (1990) and an extensive online search of each state's codes, only California and Illinois (745 ILL. COMP. STAT. ANN. 10/3-109, 2003) specifically deal

with hazardous recreational activities and similar language is used in both states. California's code is therefore illustrative. This code identifies participation in kayaking, orienteering, rock climbing, spelunking (caving), and mountain biking, among others as "recreational activit[ies] conducted on property of a public entity which creates a substantial (as distinguished from a minor, trivial, or insignificant) risk of injury to a participant or a spectator" (Cal. Gov. Code §831.7).

ASSUMPTION OF RISK

The statutes listed previously assist the individual in identifying the inherent risks of an activity. This identification is vital to the determination of an adult participant's culpability in assuming the risk of the activity by choosing to participate. Only inherent risks of an activity can be 'assumed' by the participant (Cotton, Wolohan & Wilde, 2001; Drago, 2002).

When an adult knowingly and with appreciation of the inherent risk involved voluntarily chooses to participate in an activity, that adult cannot recover damages for injuries sustained while participating in the activity (Drago, 2002). Assumption of risk is a common defense against negligence claims (Cotton, Wolohan & Wilde, 2001; Drago, 2002). When an adult chooses to assume the inherent risks of participation, the only duty owed is that conditions are as safe as they appear to be (Drago, 2002).

In Blankenship v CRT Tree (2002) the plaintiff set up a "bungee bounce" by using a crane and bungee cord to suspend and bounce himself near to the ground. In mid-bounce, the anchor point moved, causing him to fall to the ground. The plaintiff was barred from recovering any damages for the resulting injuries due to his primary assumption of risk. The court affirmed the summary judgment for the defendant because it was not disputed that Blankenship knew the dangers of the activity, appreciated the risks, knew the crane had been rented for other purposes, and was being operated by someone who was not a professional bungee bounce operator (pp. *42-*43). He then voluntarily exposed himself to the risks in spite of his fears. The court noted that though the risks may have been reduced by appropriate warnings or safety measures, the risks could not have been eliminated in an activity as inherently dangerous as bungee bouncing.

Assumption of risk defenses are categorized as primary or secondary assumption of risk or alternatively, as express or implied assumption of risk. Drago (2002) argues that these categories are often confused because the distinctions seem unclear. Express assumption of risk may be demonstrated by the signing of a contractual agreement or another document (Cotton, Wolohan

& Wilde, 2001; Drago, 2002; van der Smissen, 1990). This is contrasted to implied assumption of risk in which someone who has chosen to participate implies by that participation that he is choosing to personally assume the risk of the activity (Cotton, Wolohan & Wilde, 2001; Drago, 2002; van der Smissen, 1990). The difference is exemplified by that of a participant in training for an event versus the participant involved in an actual race. When an individual takes part in hiking, kayaking, and rock climbing as preparation for an event, the individual implies assumption of the inherent risks of those activities. When a team member signs a waiver as part of the registration for a race, the team member has expressly assumed the inherent risks of the event activities, as long as the document is clearly written document (Drago, 2002, Express Assumption of Risk, Section I).

Some states may make different distinctions between primary and secondary assumption of risk. For example, according to van der Smissen (1990), in the Minnesota courts the "secondary assumption of risk goes to the conduct (unreasonable) of the plaintiff, whereas primary assumption of risk is concerned with plaintiff's voluntary consent to encounter a known danger or risk of the activity in which the plaintiff wishes to participate" (emphasis in original) (p. 237). In secondary assumption of risk, the participant acts unreasonably and thus contributes to the injury (van der Smissen, 1990). An example of this would be if an adventure racer continued to participate after becoming aware that the race organizers were negligent. Examples of race organizer negligence include a lack of emergency plans or omission of requirements that participants wear standard safety equipment (USARA, 2003). Some states use comparative negligence to deal with this type of unreasonable conduct on the part of the plaintiff rather than using secondary assumption of risk (van der Smissen, 1990). Comparative negligence is an approach to determining damages to be recovered by a plaintiff. proportion of the blame for the injury of the defendant is the percentage of the monetary damages the defendant must pay from the overall damages established by the court. Therefore, if the court determines the defendant had 60% of the blame and the damages were \$100,000, the defendant would pay \$60,000 in damages. This is contrasted to using secondary assumption of risk, which totally bars the plaintiff from recovering damages because the defendant contributed to the injury by assuming unreasonable risks.

There are a number of issues that could impact an assumption of risk defense in a negligence case for adventure racing. All involve the ability or capacity of the participant to understand and appreciate the risks of adventure racing. In most situations race organizers will use some sort of waiver, release, informed consent, or agreement to participate form informing registrants of the

risks of the race. Although most participants will be adults, it is possible that some minors may participate. A younger competitor may choose to have the contractual agreement such as a waiver voided because a minor does not have capacity to contract. Yet the defense of assumption of risk could still be effective if the minor participant can be shown to have been informed of the risks, to appreciate fully the risks involved, and to have voluntarily taken part in the activity.

An often overlooked issue when providing recreational programs is the liability of a participant that injures another during the course of those activities. Recent court cases have added "co-participation" to the inherent risks assumed by participants involved in active recreational activities and sports (Hansen-Stamp & Gregg, 2003). For example, the 1992 California Supreme Court ruling in the Knight v. Jewett (1992) concluded that participants are not liable to each other unless there is evidence of reckless or intentional misconduct (p. 318-319). The ruling of another case has shown that participants should not be held liable for careless behavior during the course of activity because "in the heat of an active sporting event... a participant's normal energetic conduct often includes accidentally careless behavior" (Distefano v. Forester, 2001, p. 821). In a more recent case involving a non-competitive bicycling accident, Moser v. Ratinoff (2003), the court reinforced that this doctrine applies when an activity is "done for enjoyment or thrill, requires physical exertion as well as elements of skill, and involves a challenge containing a potential risk of injury" (Moser, p. 205). How this rule will apply to competitors in adventure races has yet to be determined, as most of the court cases that have extended the Knight (1992) inherent risk rule have involved non-competitive recreational sporting activities (Hansen-Stamp & Gregg, 2003).

WAIVERS AND RELEASES

The legal concerns of assumption of risk and the use of waivers and releases are interrelated. Waivers or releases, also called exculpatory clauses, may be used to establish express or primary assumption of risk (Cotten, 2001b). A waiver is a contract between the service provider, the race organizer, and the participant (Cotten). In the contractual agreement, the competitor agrees to accept the risk of harm from the race organizer's negligent conduct and the participant is barred from recovery (Cotten). Cotten (2001b) shows that states vary in the rigor they require for a waiver to be upheld. Most states will uphold a well-written waiver that is properly used and signed by a consenting adult to protect a service provider, in this case,

adventure race organizers, against ordinary negligence (Cotten, p. 87). However, in a case from Vermont, *Umali v Mount Snow, Ltd., et al.,* (2003), the exculpatory releases were considered to be void because they were against public policy. According to the court, in order to waive one's rights to recovery, a danger must be obvious and necessary. In this case, the race organizers were negligent in including a double bike jump at the end of the dual slalom bike race that inexperienced racers could not recognize as an obvious and necessary danger (*Umali*, 2003). Therefore, the defendants were not protected by the waiver (*Umali*).

SCOPE OF DUTY

Despite the fact that race participants assume inherent risks and may sign waivers, informed consent forms, or agreement to participate forms acknowledging that they accept those risks, race and event organizers still must fulfill their duty to conduct reasonably safe events and abide by typical industry standards and practices (Hansen-Stamp & Gregg, 2002). One 2002 case involved a runner who was diagnosed with severe hyponatremia, a loss of sodium and other electrolytes, that led to a grand mal seizure shortly after the end of a marathon. In this case, the California Court of Appeals found that the race organizers breached their duty to provide a "reasonably safe event" for the participants (Saffro v. Elite Racing, Inc., 2002). One industry standard for marathon racing events is to provide water and electrolyte fluids at multiple stations along the course. In this case, the start of the event was delayed for forty-five minutes, but participants were unable to leave the "staging area" to get drinks during the delay. Additionally, the first few refreshment stands ran out of water or cups and there were no electrolyte drinks left by the time the plaintiff reached each subsequent refreshment stations, even though their preevent publicity stated that water and electrolytes would be provided. It should be noted that dehydration and hyponatremia may be inherent risks of certain types of races, but in this case, the defendant breached their duty to reduce those inherent risks.

RECREATION LAND USE ACTS

Recreation Land Use Acts serve the public interest by enabling land owners to allow recreational use on undeveloped property knowing that their liability will be limited by the state statute. An example of this reasoning comes from the Alabama code that states:

it is in the public interest to encourage owners of land to make such areas available to the public for non-commercial recreational purposes

by limiting such owners' liability towards persons entering thereon for such purposes; that such limitation on liability would encourage owners of land to allow non-commercial public recreational use of land which would not otherwise be open to the public, thereby reducing state expenditures needed to provide such areas. (ALA. CODE §35-15-20, 2003)

Some states require that the land in question be undeveloped land for the limitation of liability to apply and some require that the landowner charge no fee to those individuals using the land for recreation (Cotten, Wolohan, & Wilde, 2001). All states except for Alaska and North Carolina have Recreation Land Use Acts (Hronek & Spengler, 1997).

Recreational Land Use Acts have also been used as a rationale for limiting the liability of a public agency. Hronek and Spengler (1997) write, "In most states, the recreation land use statues apply to private, local, state, and Federal lands. However, some state statutes and subsequent case law does not provide the privilege of limited immunity to any land ownership other than privately owned lands" (p. 172). In Bertoniere v United States (2003), the plaintiff was injured at the Gum Springs Recreation Area in Kisatchie National Forest swinging from a rope attached to a tree branch. She fractured her ankle when the rope broke and this resulted in her leg being amputated below the knee. Her motion for reconsideration of a summary judgment for the defendant was denied (Bertoniere, 2003). The opinion relied on case law to demonstrate that courts had used recreational land use statutes in the past to bar recovery for injuries using rope swings (Bertoniere). Though a rope swing is not a natural condition, the courts did not consider it a "development" of the land. Moreover, a rope swing is open and obvious so that those who choose to swing on one assume their own risk (Bertoniere).

Another issue that courts must consider is whether an activity is recreational. Many states list examples of recreational activities that are included under the act yet have language indicating that the list is not exhaustive. A case decided by the Nebraska Supreme Court shows how the courts determine what is a recreational activity (*Dykes v Scotts Bluff County Agricultural Soc., Inc.,* 2000). The plaintiff was injured while viewing livestock at a county fair (*Dykes,* 2000). The opinion of the courts indicates "Generally speaking, the activities listed in [the recreational land use act] are more physical than not, generally require the outdoors, and are not 'spectator sports'" (*Dykes,* p. 821-823). The court ruled that viewing exhibits of livestock was not a recreational activity under the Nebraska code (*Dykes*).

IMPLICATIONS

The legal codes and cases described in previous sections may serve to inform race organizers in their decision making. As mentioned earlier, the USARA is an organization that sanctions races and provides race organizers with standards for the safety and well-being of those involved. The USARA has set minimum criteria for events to be sanctioned in the areas of race management, medical plan, safety plan and post race duties (USARA, 2003).

Race management criteria include severe weather plans and notification of local law enforcement and emergency personnel. The medical plan requires identification of the person in charge with communication and medical forms, on-site minimum medical staff requirements, the development of an emergency reaction plan with the area Emergency Medical Service. This provides a means of available immediate communication and guidelines for incident reporting documentation. The safety plan requirements include: a search and rescue plan for missing racers and teams, a documented process for monitoring team positions on the course, participant requirements for safety equipment, a water safety plan, and minimum standards for ropes, anchoring ropes, and safety belay systems (USARA, 2003).

The USARA has also established a Safety Compliance Committee so that racers may report event organizers who are not following the minimum safety standards. The Association reviews complaints, makes recommendations for a course of action to the race organizers, and follows up to insure implementation of the action plan (USARA, 2003).

There is, however, a financial drawback to hosting a USARA-sanctioned event. The cost of sanctioning may discourage some race organizers from seeking it. In addition, races pass the costs on to the participant; e.g. a participant who is not registered with the USARA has to pay additional entry fees. Consequently, this may discourage participation in the race.

Limitations to promoting safety in adventure racing are numerous. Media coverage of international events may influence the ability of an event organizer to promote safety. Also, the motivation for participation may impact the degree of risk taking among competitors. For example, Kay and Lebarge (2002) found a distinction between the degree of risk taking among race participants in international events such as the Eco-Challenge due to the fact that some of the racers in that competition are considered to be 'professional racers,' who have a different purpose than do those on the more 'amateur' corporate teams. A sanctioned event or a televised event will have a greater degree of planning for emergencies and safety than a race planned by a small group of enthusiasts or a group who are training for an event.

Another limitation for providing safe races includes lack of awareness of sanctioning organizations. Those who have staged road races, trail races, or triathlons are often eager to attempt an adventure race and may be unaware of the minimum standards or assistance provided by governing bodies like USARA.

The conditions and climate of each race will provide different dangers. For example, during an Eco-Challenge held in Malaysia, many racers reported symptoms of a potentially fatal infection contracted at the race. The Center for Disease Control and Prevention had to attempt to contact all 155 American racers (Henderson, 2000).

Most adventure races are small, regional or local events but due to the nature of the activities involved, have a great potential for injury. Although case law specifically addressing adventure racing is currently limited, the legal principles addressing recreation and sports in general can be applied. The efforts of governing bodies such as USARA lead the field in establishing an industry-wide standard of care. It may take specific cases involving injury to adventure race participants before all race organizers will adopt similar standards and practices.

ABOUT THE AUTHORS

BETH A. EASTER, Ph.D. is an Assistant Professor of Sport Management in the Department of Health, Human Performance and Recreation at Southeast Missouri State University. She earned her Ph.D. in Sport Administration from the University of Kansas. She currently teaches courses in Sport Law, Governance and Event Management, Management and Leadership, and Social Issues in Sport. Research interests include organizational culture, legal issues in sport, and public relations.

SARAH E. HARDIN, Ph.D. is an Assistant Professor of Recreation in the Department of Health, Human Performance and Recreation at the Southeast Missouri State University. She is a Certified Recreational Sport Specialist (CRSS) who currently teaches courses in Recreation Administration, Program and Facilities Planning and Management, and Issues and Trends in Leisure Services. Research interests include co-curricular learning experiences, legal issues in recreation, and challenge course development and outcomes.

TAMMIE L. STENGER, Ed.D. is an Assistant Professor of Recreation in the Department of Health, Human Performance and Recreation at Southeast Missouri State University. She is a Board Member for the Association for

Outdoor Recreation and Education (AORE) who teaches courses in Recreation Leadership and Issues and Trends in Leisure Services. Her research interests include outcomes of outdoor experiences, legal issues in outdoor recreation, and challenge course development and outcomes.

REFERENCES

- Adventure directory.com (2003). Available: http://www.adventuredirectory.com (last visited October 10, 2003).
- Adventure Sports Online: Your inside resource for outside adventure (2003). Available: http://www.adventuresports.com com (last visited October 10, 2003).
- Bertoniere v. United States, 2003 U.S. Dist. LEXIS 11417 (E.D. La. 2003).
- Blankenship v. CRT Tree, 2002 Ohio 5354 (OH Ct. App., 8th App. Dist. 2002).
- ALA. CODE §35-15-20 (2003).
- CAL. GOV. CODE §831.7 (2003).
- Crawford, J. (2003) Adventure racing history. Retrieved June 7, 2003, from http://www.adventuresportsonline.com/history.htm.
- Cotten, D. J. (2001a). Agreements to participate. In D. J. Cotten, J. T. Wolohan, & T. J. Wilde, (Eds.), *Law for recreation and sport managers* (2nd Ed.), (pp. 97-104). Dubuque, IA: Kendall/Hunt.
- Cotten, D. J. (2001b). Waivers and releases. In D.J. Cotten, J. T. Wolohan, & T. J. Wilde, (Eds.), *Law for recreation and sport managers* (2nd Ed.), (pp. 87-96). Dubuque, IA: Kendall/Hunt.
- Cotten, D.J., Wolohan, J.T., & Wilde, T.J. (Eds.) (2001). Law for recreation and sport managers (2nd Ed.). Dubuque, IA: Kendall/Hunt.
- Distefano v. Forester, 85 Cal. App. 4th 1249 (Cal.. App., 4th App. Dist. 2001).
- Drago, A. J. (Winter, 2002). Assumption of risk: An age-old defense still viable in sports and recreation cases. Fordham Intellectual Property, Media & Entertainment Law Journal, 12(2), 583.
- Dykes v Scotts Bluff Count Agricultural Soc., Inc., 617 N.W. 2d 817 (Neb. 2000).
- Fortitude: Team Adventure Racing (2003). What is adventure racing. Retrieved July 29, 2003, from http://www.fortitudear.com/.
- Hansen-Stamp, C. & Gregg, C.R. (2002). Scope of duty Race organizer. Outdoor Education and Recreation Law Quarterly, 2(3), 14-15.

- Hansen-Stamp, C. & Gregg, C.R. (2003). Co-participant liability Revisited. Outdoor Education and Recreation Law Quarterly, 3(1), 14-15.
- Henderson, C. W. (2000, September 26). Health officials worried about bacterial infection in adventure racers. *Tuberculosis & Outbreaks Week*, 15316432 via NewsRx.com. Retrieved June 20, 2003, from Academic Search Elite (EBSCO Host).
- Hronek, B. R., & Spengler, J. O. (1997). Recreational use of natural resources. In B. R. Hronek, & J. O. Spengler, *Legal liability in recreation and sports*. (pp. 167-172). Champaign, IL: Sagamore Publishing.
- 745 ILL. COMP. STAT. ANN. 10/3-109, 2003.
- Kay, J. & Laberge, S. (2002). The "new" corporate habitus in adventure racing. *International Review for the Sociology of Sport*, 37(1), 17-36.
- Knight v. Jewett, 3 Cal. 4th 296 (Ca. 1992).
- MISS. CODE ANN. §89-2-3 (2003).
- Moser v. Ratinoff, 105 Cal. App. 4th 1211 (Cal. App., 4th App. Dist., 2003).
- National Sporting Goods Association. (2003). Available: http://www.nsga.org (last visited October 10, 2003).
- Saffro v. Elite Racing, Inc., 98 Cal. App. 4th 173 (Cal. App., 4th App. Dist., 2003).
- Spengler, J. O., & Burket, B. P. (2001). Sport safety statutes and inherent risk: A comparison study of sport specific legislation. *Journal of Legal Aspects of Sport*, 11(2), 135-168.
- Umali v Mount Snow Ltd., et al., 247 F. Supp. 2d 567 (Vt. 2003).
- United States Adventure Racing Association (2003). Available: http://www.usara.com (last visited October 10, 2003).
- UTAH CODE ANN. §78-27-63 (2003).
- van der Smissen, B. (1990). Camping, environmental education, and adventure recreation. In *Legal liability and risk management for public and private entities*, 1, 254-301.
- van der Smissen, B. (2001). Elements of negligence. In D.J. Cotten, J. T. Wolohan, & T. J. Wilde, (Eds.), *Law for recreation and sport managers* (2nd Ed.), (pp. 87-96). Dubuque, IA: Kendall/Hunt.
- Wilkinson, T. (1999, July/August). Caught in a free fall. *National Parks*. 26-30. Retrieved July 31, 2003, from Academic Search Elite (Ebsco Host).