# **Adventure Tourism Research: a Guide to the Literature**

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Abstract

Adventure tourism is a substantial industry sector which to date has received relatively little research attention. Most relevant research is from outdoor recreation.

The major research themes are: psychological, including thrills, conflicts and norms;

safety, including injuries, illnesses and insurance; impacts, whether ecological, social

or economic; and participation and management. There has been rather little research

on the structure of adventure tourism products or associated business aspects. Future

research priorities include: operational audits; commercial statistics; client

characteristics; site geography; equipment manufacture; safety and insurance;

recreation ecology; adventure destination marketing; and links with amenity

migration and lifestyle.

Introduction

Adventure tourism is a large but little-studied sector (Buckley 2004a, Travel Industry

Association of America, 2005). Here, therefore, I review the principal themes

addressed to date in adventure tourism research, in order to identify future priorities.

This review does not attempt to summarise the findings of each individual piece of

published research, but rather to discern the major directions in the research literature

overall. To achieve this as succinctly as possible, clusters of related references are

presented in tabular form. The number of references listed for different topics in these

tables is not itself a measure of research effort, since for some topics there are recent

reviews and for others there are not. Rather, the titles and structure of the tables are

intended to illustrate the research themes identified, and the references are there to

demonstrate the data behind these patterns.

Adventure tourism has been variously defined (Weaver, 1998; Fennell, 1999; Manning, 1999; Bentley *et al.*, 2000, 2001a,b,c; Buckley, 2000, 2004a; Bentley and Page, 2001; Newsome *et al.*, 2001; Page and Dowling, 2002). Broadly, it means guided commercial tours where the principal attraction is an outdoor activity which relies on features of the natural terrain, generally requires specialised sporting or similar equipment, and is exciting for the tour clients.

There seem to be five books of particular relevance to adventure tourism: Miles and Priest (1999) on adventure programming in outdoor education; Hudson (2002), focusing principally on sports tourism; Swarbrooke *et al.* (2003) on human adventure psychology; Easson (2006) on the philosophy and psychology of extreme sports; and Buckley (2006) on the structure of adventure tourism products.

The majority of relevant research literature, however, seems to be derived from other fields of tourism, outdoor recreation and outdoor education. Texts on ecotourism, recreational tourism, tourism in protected areas and even wilderness management and say little or nothing about adventure tourism, though some do mention commercial outfitters and outdoor recreational activities briefly.

## **Research Themes**

The principal themes in adventure recreation research have been psychological, focussing on the reasons why people engage in adventure activities and their experiences whilst doing so (Table 1). Adventure tourists want to be thrilled and perhaps frightened but not actually endangered (Cater, 2005). Such sensation seeking behaviour, and perceptions of risk, have been reviewed more generally by Cheron and Ritchie (1982), Ewert and Hollenhorst (1989), Crawford *et al.* (1991), Slanger and Rudestam (1997), Jack and Ronan (1998), Holyfield (1999) and Fluker and Turner (2000).

Behavioural norms, and ways to measure and change them, have received particular attention (Table 1). Recent reviews include Manning *et al.* (2002, 2004) and Manning and Freimund (2004). One useful practical application is through codes of conduct.

These have proliferated in many sectors worldwide, but their effectiveness has rarely been tested, and generally found wanting. Scarpaci and Dayanthi (2003), for example, found that swim-with-dolphin tour operators persistently breached an operational code of conduct even though it was a legislated condition of their operating permits and there were identified observers on board their vessels.

Conflicts between practitioners of different activities in the same area have also received attention. In addition to the activity-specific examples in Table 2, general reviews have been provided by Jacob and Schreyer (1980), Devall and Harry (1981), Hendricks (1995), Watson (1995), Schneider (2000) and Vaske *et al.* (2004). Conflicts may be triggered by fashion, age, gender or experience, as well as different activities. They may occur between commercial tour clients and private exponents of the same activity. They are especially common between motorised and non-motorised users of the same areas, where motorised users seem to be unaware or indifferent to their impacts on the silence, solitude and safety of non-motorised users.

Accident and injury statistics provide another major theme (Table 3). Most of the original data are presented in medical journals, but the tourism implications are summarised well by Bentley *et al.* (2003) and Page *et al.* (2003, 2005). Snow sports and diving have been investigated most intensively, with reports on the frequencies of different injuries and the effects of age, experience and safety equipment.

The environmental impacts of outdoor recreation have received some attention, and much of this is directly applicable in commercial adventure tourism. Some impacts, activities and areas have been analysed much more than others (Table 4). There are also reviews of impacts on particular ecosystem components, such as Beale and Monaghan (2004), Buckley (2004b,c) and Cole (2004).

From a tourism management perspective, one of the critical issues is whether interpretation, especially by commercial tour guides, can successfully reduce visitor impacts. There seem to be only two relevant studies, by Medio *et al.* (1997) for divers and Littlefair (2004) for hikers.

The economic and to a lesser extent the social impacts of some adventure tourism subsectors have also been addressed, but only in some areas (Table 4), and using a variety of different definitions and estimation methods (Buckley, 1998; Mallett, 1998; Page *et al.*, 2005).

Relatively few authors have described the structure of individual adventure tourism products (Table 5). There are, however, a number of descriptions of outdoor recreation activities, commercial as well as individual, at particular adventure destinations; and various analyses of participation rates and preferences (Table 5). Participation in adventure tourism and recreation has also attracted particular attention from a land management perspective (Cordell and Bergstrom, 1991; Watson *et al.*, 1995; Cole, 1996; Hammitt and Cole, 1998; Bowker, 2001; Hendee and Dawson, 2002; Ewert and Jamieson, 2003; Outdoor Industry Association, 2005).

## **Research priorities**

Any selection of research priorities will probably reflect the disciplinary background of the person making the selection. With that caveat, here are my suggestions:

- operational audits and case studies of individual adventure tourism products as a basis for general trend and pattern analyses.
- commercial statistics: how many businesses offer what products where and at what price.
- client characteristics: when, where and for how long they travel, and how such patterns depend on demographic factors.
- similarities and differences between adventure tourism and non-commercial adventure recreation, so as to apply recreation research to adventure tourism
- geography of icon and secondary sites for different adventure activities, both extreme and routine.
- manufacture and sale of adventure equipment: technologies, designs, materials, models, prices, volumes, partitioning between manufacturers, changes in product mixes over time, alliances between manufacturers and lobby groups.
- legal wording of waivers, disclaimers, indemnities, insurances and permit conditions.
- accident and disease statistics for different areas and activities recreation ecology: impacts of different activities under different conditions on different ecosystem components
- social impacts of adventure tourism operations on local residents and communities
- links between adventure tourism and amenity migration.
- links between adventure tourism and broader lifestyle aspects.

## **Conclusions**

Most of the research currently applied in commercial adventure tourism is actually derived from the outdoor recreation literature. Adventure tourism deserves research attention in its own right. In particular, the focus to date seems to have been on the individual participants, their risks and experiences. The business and geography of adventure tourism products, packages and providers seems to have been ignored.

**Table 1. Psychological Aspects of Adventure Tourism** 

Activity	Thrills, Attitude	Norms, Codes,	Service, Guiding
ľ	,	Compliance	, ,
Raft, kayak		Shelby 1981;	Arnould and Price
		Wellman et al. 1982;	2003; Sharpe 2005
		Shelby <i>et al.</i> 1996	
Dive, snorkel		Inglis <i>et al</i> . 1999	O'Neill et al. 2002
Surfing	Farmer 1992		
Climbing,	Ewert 1994; Breivik	Jakus and Shaw 1997	Parker and Avant
mountaineering	1996; Feher <i>et al</i> .		2000; Beedie 2003
	1998; Schuster <i>et al</i> .		
	2001; Delle Fave et al.		
	2003		
Hike	Manning 1999;	Vaske <i>et al.</i> 1986;	
	Chhetri et al. 2004	Manning et al. 2002,	
		2004; Vaske and	
		Donnelly 2002;	
		Needham et al. 2004	
Snowmobile	Gyimothy and		
	Mykletun 2004		
Wildlife,		Gjerdalen and	
marine and		Williams 2000;	
estuarine		Carlson 2001; Scarpaci	
		and Dayanthi 2003;	
		Garrod and Fennell	
		2004	

**Table 2. Activity-Based Conflicts in Adventure Tourism** 

Activity 1	Activity 2	References
skiers	snowmobilers	Knopp and Tyger 1973; Jackson and Wong 1982; Vaske et
		al. 2000; Vitterso et al. 2004;
skiers	snowboarders	Williams et al. 1994; Thapa and Graefe 2003; Vaske et al.
		2004;
hikers	riders, packers	Watson et al. 1994; Blahna et al. 1995;
hikers	mountain bikers	Watson et al. 1991; Ramthun 1995; Carothers et al. 2001;
paddlers	motorboaters	Shelby 1980; Adelman et al. 1982;

Table 3. Risks, Accidents and Sickness in Adventure Tourism

Activity	Reference	
Raft, kayak	Schoen and Stano 2002; Bentley et al. 2003; Page et al. 2003	
Dive, snorkel	Wilks 1992, 1993, 1999; Byrd and Hamilton 1997; Wilks and	
	Davis 2000; Trevett et al. 2001; Bentley et al. 2003; Page et al.	
	2003; Taylor <i>et al.</i> 2003	
Surfing	Nathanson et al. 2002	
Ski/snowboard	Garrick and Kurland 1971; Requa et al. 1997; Johnson et al. 199	
	Deibert et al. 1998; Goulet et al. 1999; Prall et al. 1995; Tarazi et	
	al. 1999; Machold et al. 2000, 2002; Macnab et al. 2002; Ronning	
	et al. 2000; Yamakawa et al. 2001; Federiuk et al. 2002; Hagel et	
	al. 2004; Levy et al. 2002; Matsumoto et al. 2002	
Climbing,	Bentley et al. 2003; Williamson 1999; Malcolm 2001, Page et al.	
mountaineering	2005	
Riding, biking	Bentley et al. 2003	

 ${\bf Table~4.~Ecological~and~Socioeconomic~Impacts~of~Adventure~Tourism}$ 

Activity	Ecological impacts	Economic and social impacts
Raft, kayak		Bowker et al. 1996;
		English and Bowker 1996
Dive, snorkel	Allison 1996; Hawkins et al.	Park et al. 2002; Green and
	1999; Jameson <i>et al.</i> 1999;	Donnelly 2003
	Schaeffer et al. 1999; Schleyer	
	and Tomalin 2000; Rouphael and	
	Inglis 2001; Tratalos and Austin	
	2001; Zakai and Chadwick-	
	Furman 2002; Musa 2003	
Ski/Snowboard	Buckley et al. 2000; Hadley and	
	Wilson 2004; Watson and Moss	
	2004	
Riding	Weaver and Dale 1978; Whinam	
	et al. 1994; Newsome et al. 2004a	
Climb, cave,	Camp and Knight 1998; Farris	Hanley et al. 2001, 2003;
mountaineering	1998	Grijalva <i>et al</i> . 2002
Hiking	Cole 2004;	
	Marion and Leung 2004	
Biking	Goeft and Alder 2000; Thurston	Fix and Loomis 1997
	and Reader 2001	
Off-road, ATV	Neumann and Merriam 1972;	
	Vail and Heldt 2004; Buckley	
	2004a	
Wildlife,	Beale and Monaghan 2004;	Barnes et al. 1999; Wilkie and
terrestrial	Buckley 2004b	Carpenter 1999a,b; Archabald
		and Naughton-Treves 2001;
		Mvula 2001; Thompson and
		Homewood 2002; Sekhar 2003;
******	17 14 1000 Pi	Adams and Infield 2003
Wildlife, marine	Kovacs and Innes 1990; Blane	Duffus and Dearden 1993; Davis
	and Jaakson 1994; Corkeron	and Tisdell 1996; Hoyt 2000;
	1995; Bejder <i>et al.</i> 1999;	Parson et al. 2003
	Constantine 2000; Scarpaci et al.	
	2000; Nowacek <i>et al.</i> 2001, 2004;	
	Higham and Lusseau 2004	

**Table 5. Products, Destinations and Participation in Adventure Tourism** 

Activity	Product structure	Destination	Participation rates,
		summaries,	types
		management	
Raft, kayak			Ewert and Jamieson 2003
Dive, snorkel	Tabata 1992; Shackley 1998; Livet 1997	Tabata 1989; Hawkins and Roberts 1994; Davis and Tisdell 1996	Mundet and Ribera 2001
Ski/snowboard		Fredman and Herberlein 2003	
Riding (horse, camel)	Shackley 1996a		
Climbing, mountaineering	Johnson and Edwards 1994	Wyder 1987; Suzuki and Kawamura 1994; Kayastha 1997; Booth and Cullen 2001; Bordeau <i>et al.</i> 2002	Ewert and Jamieson 2003
Biking		Goeft and Alder 2000	Ewert and Jamieson 2003
Wildlife, terrestrial	Shackley 1996b		Sournia 1996; Sekhar 2003; Lamprey and Reid 2004
Wildlife, marine and estuarine	Davis et al. 1997; Ryan 1998; Ryan and Harvey 2000; Wilson and Tisdell 2001; Scott and Laws 2004	Duffus and Dearden 1993; Duffus 1996; Berrow 2003; Parsons et al 2003;	

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