Chapter 9
Geological Tourist Tribes

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Abstract Geological tourism has a long history. Certain groups of people have long been attracted to landscapes or landforms to see geomorphic features such as hills, mountains, plateaus, plains, deserts, canyons or glaciers. In addition, many are attracted to the earth surface processes which either build up the earth (such as tectonic or mountain building processes, volcanic activity or sedimentary processes) or tear it down (e.g. wind [aeolian], river or glacial erosion). These geological tourists are often regarded as being 'geo-experts' or 'geo-specialists' and often comprise professional or amateur geologists who have a good understanding of geology and a strong desire to place it at the center of their travels. At the extreme edge of geological tourist tribes are those who search or fossick for minerals, gems or fossils. Today these geological tourists form one segment of a wider group called 'geotourists'. Geotourists with a focus on 'geological' features form one end of a spectrum of geotourists with those having a more 'geographical' focus at the opposite end. Whilst starting with an interest in geology these geographical tourists are now much more interested in learning about the connections between geology, habitats and people. Their focus is on gaining a more holistic understanding of their travel destinations. A number of types of geotourists have been identified including incidental, accidental, serendipitous, intentional and purposeful geotourists. The last two types are emerging as tribes of geotourists having a keen focus on travelling to see and learn about landforms or geological phenomena. Thus, there is emerging a spectrum of geotourists which range from 'geological' to 'geographical' in orientation, and may be passive to active in their travels. This chapter contextualizes geotourism, geotourists and geological tourist tribes.

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9.1 Introduction

At its simplest, tourism comprises either mass tourism or alternative tourism. Traditional 'mass tourism' consists of large numbers of people travelling to'sun, sea and sand' holiday destinations. It is often characterised by people seeking replication of their own culture in institutionalised human-made settings such as large scale integrated resorts, with an absence of natural environmental and/or authentic cultural content. Alternative Tourism, an alternative to mass tourism, includes a large number of special interest tourism elements such as tourism to natural areas. Probably the best known type of natural area tourism is ecotourism with its focus on the biotic or living elements of the natural environment, that is, animals (fauna) and/or plants (flora). Allied to this, travel to areas of outstanding natural landscapes or unique landforms is not new. In recent times this is being referred to as 'geotourism' (Dowling 2013).

9.2 Geotourism

Geotourism is tourism based on geological features (Dowling 2011). Over time it has been variously described as being a type of tourism that is either 'geological' or 'geographical' in orientation (Dowling 2015; Dowling and Newsome 2018). Whereas the former view was that geotourism was a 'type' of tourism in a similar vein to ecotourism, the latter view has been wider thereby representing a new 'approach' to tourism. Depending on one's standpoint, geotourism is now viewed as either a 'type' of tourism (that is, a *geological* orientation) or an 'approach' to tourism (when viewed as a *geographical* orientation). Geotourism is thus viewed through multiple lenses along a geological spectrum which has geotourism as a type of tourism at one end and as an approach at the other. The major difference between the geological and geographical versions of the definition is that the former focuses on geotourism as a 'form' or type of tourism, whereas the latter views geotourism as an 'approach' to tourism, somewhat akin to sustainable tourism (Fig. 9.1). Neither view is mutually exclusive as geotourism when viewed as an approach to tourism naturally encompasses 'geological tourism'. The broader view of geotourism encompasses the application of sustainable tourism principles combined with an element of an area's 'sense of place'. Thus, geotourism is both a *form* of tourism as well as an *approach* to it, but one that firmly ties itself *first* to the geologic nature of an area's 'sense of place'.

Geotourism is tourism which focuses on an area's geology and landscape as the basis of fostering sustainable tourism development (Escorihuela and Dowling 2015).

The Geotourism Spectrum A holistic approach to environmental interpretation			
The Environment	**Abiotic**	**Biotic**	**Cultural**
	Geology & Landforms Climate	Animals - (Fauna) Plants - (Flora)	People: Past & Present
Tourism	Geological Tourism Climate dependent tourism eg. Summer resorts or Winter Skiing	Nature Based Tourism Wildlife Tourism Ecotourism Wildflower Tourism	Cultural Tourism Heritage Tourism Indigenous Tourism
Geotourism	**A Type of Tourism** Here geotourism is viewed exclusively as 'geological' tourism	**An Approach to Tourism** Here it is viewed more broadly through a 'geographical' lens, still based on its 'geological' foundation, but also informing an area's Biotic and Cultural elements	
The Geotourism Spectrum	**Geotourism Viewed As** **A Type (or Form) of Tourism** ⟷ **An Approach to Tourism**		

Fig. 9.1 Geotourism spectrum

Such tourism development generates benefits for conservation (especially geoconservation), appreciation (through geoheritage interpretation), and the economy (geoeconomics). Essential to the development of geotourism is the understanding of the identity or character of a region or territory. To achieve this, geotourism is viewed as being based on the idea that the environment is made up of **A**biotic, **B**iotic and **C**ultural (ABC) elements (Dowling 2013). This approach comprises the abiotic elements of geology and climate, the biotic elements of animals (fauna) and plants (flora), and cultural or human components, both past and present (Fig. 9.1). Geotourism argues that to fully understand and appreciate the environment, one must know about the abiotic elements of geology and climate first, as these determine the biotic elements of animals and plants which live there. By extension, the combination of these two components of the environment influence the cultural landscape of how people have lived in the area in the past, as well as how they live there today (Dowling and Newsome 2018; Olson and Dowling 2018).

Thus, geotourism is sustainable tourism with a primary focus on experiencing the earth's geological features in a way that fosters environmental and cultural understanding, appreciation and conservation, and is locally beneficial. It has links with

ecotourism and cultural tourism, but is not synonymous with either of them. It is about creating a geotourism product that embeds geoconservation, communicates and promotes geological heritage, and helps build sustainable communities through appropriate economic benefits.

Geotourism may be further described as having a number of essential characteristics (Dowling and Newsome 2018). These elements combine to shape geotourism in its present form. It comprises a number of interrelated components all of which should be present for authentic geotourism to occur. Three principles are fundamental to geotourism: that it is geologically-based (based on the earth's geoheritage), sustainable (economically viable, community enhancing, and fostering geoconservation) and educative (achieved through geo-interpretation). All three characteristics are considered to be essential for a product to be considered an exemplar of geotourism.

The essence of geotourism is its geological base comprising plate tectonics, fossils and the evolution of life. It also embraces the understanding of geology interpreted through its components of **Form** (landforms and landscape), **Process** (how the landforms originated) and **Time** (when and how long these processes occurred) (Fig. 9.2). This forms the basis of a more holistic understanding of the environment and its component parts and thus provides the resident or tourist with a greater connection to the environment in which they live or are visiting.

9.3 Geotourists

Despite an increase in literature on the form, definition and nature of geotourism as well as geosite potential and development in recent years, empirical research remains scant (Boley and Nickerson 2013). For example, there is an apparent lack of studies in the tourism literature focusing on geotourists.

Early studies defined geotourists from the perspective of geological tourists. Segments included *geologists* (both professional and amateur), *visitors* (interested in one or more parts of geology), *academic and science groups*, as well as others such as *landscape photographers, artists and historians* (Hose 2005; Joyce 2006; Dowling and Newsome 2006). In this approach geotourists were seen as a segment of a broader Special Interest Tourist category (Dowling and Newsome 2006). A central element of geotourism which has remained over time is its emphasis on information, education, knowledge and learning. Other studies found that geotourist motivations include a 'sense of wonder, appreciation and learning' (Allan et al. 2015).

Qiumei and Zhenzjia (2006) stated that geological tourism attractions could raise the enjoyment of understanding and appreciation of the universe, broaden the visitors' minds, boosting their ego values by different tourism activities and sightseeing, and reduce or eliminate the feeling of agony. Hose (2008) argued that there are two main categories of geotourist groups. First, *educational* groups consisting of students of all educational stages 'from pre-school to postgraduate' who are studying geologically related topics, and a second *recreational* group which includes a range of recreational tourists from the beginner to the expert. These are individuals or

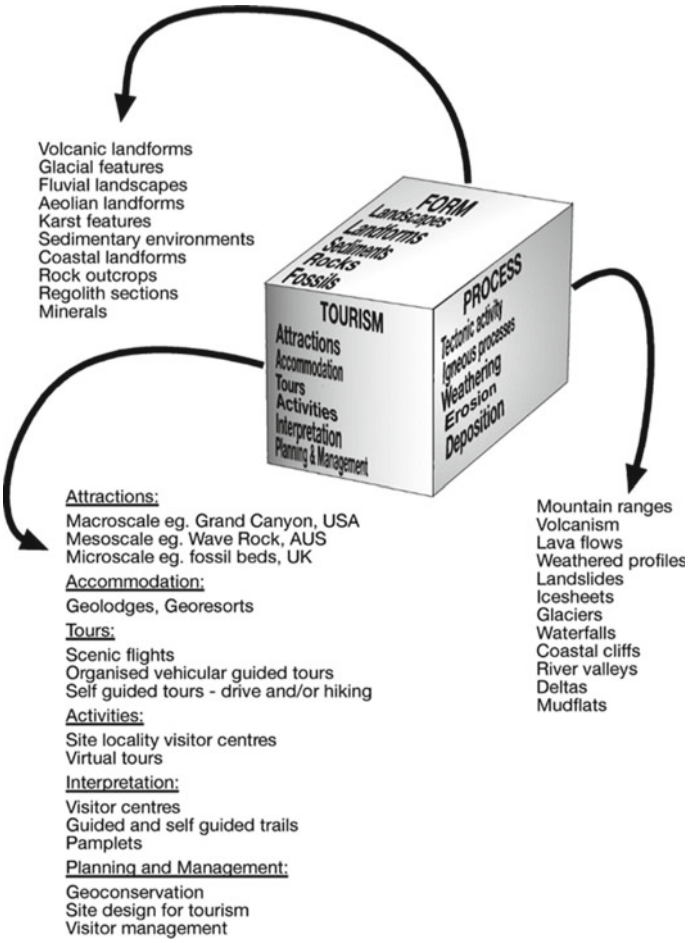

Fig. 9.2 Form, process and time

groups who visit the different geological and geomorphic attractions at a geosite or a geopark. Robinson (2008, p. 2) supports the educational role of geotourism describing the role of geotourism in geotourist learning as extra information which doubles the value of a tour. This view is also supported by Farsani et al. (2011, p. 68) who noted, "at present, geotourism is a new movement helping travellers to increase their knowledge about natural resources, the cultural identity of hosts and ways of preserving geosites".

Thus information, education, knowledge and learning have been central elements of geotourism sought out by geotourists, whether they be specialised geological tourists or the more broadly based geotourist interested in the environment's abiotic, biotic and cultural segments.

A 2008 survey of 154 geologists who were members of the Geological Society of Australia discovered that most of the respondents were highly qualified, having a first or higher degree, had a high level of income and preferred to travel independently rather than on group tours (Mao et al. 2009). The reasons they undertook geological travel was to increase their knowledge of geological sites and landforms; to satisfy their curiosity; to have a memorable experience; to obtain intellectual stimulation; and to visiting destinations offering natural environmental and cultural attractions. This study was seminal in realizing that geologists who undertook geotours for their geological content also wanted to include natural and cultural attractions and activities. Grant (2010) identified several types of geotourists—those, who could be unaware, aware or interested in geological tourism as well as interested visitors, who are geo-amateurs, geo-specialists and geo-experts. Yalgouz-Agaj et al. (2010) asserted that the type of tourists who were visiting geotourism sites were different from other types of tourists because geotourism had distinctive characterstics. For example, geotourism was viewed as relying on scientific, educational and historical values, geotourism appeal, international importance, social and cultural structure, biodeveristy, and appearance.

At the beginning of this decade geotourists were still being viewed through the geological lens as individuals who visited sites with significant geological or geomorphic characteristics to view it and gain knowledge about its features (Allan 2012). The addition of geotourism being able to take place in urban settings, that is, wherever geological interests lay, was a clear separation from ecotourism which by definition could only take place in natural settings.

Jordan has a number of geological sites of interest to tourists. In 2011–2012 a study was undertaken of 200 tourists who were visiting Wadi Rum (Allan 2012; Dowling and Allan 2018). Almost two-thirds of the respondents at Wadi Rum (66%) were from Jordan. Other international tourists were Dutch (13%), Syrians (10%) with other respondents being from a variety of locations in the Middle East, Asia, North America and Europe. When asked how they gained information about Wadi Rum before their visit, their sources included the Internet (48%), brochures (12%) and friends or relatives (10%). What is interesting in this data was that only one respondent had used the local tourist office to source information about Wadi Rum. The study found that the geotourists were young to middle aged and well educated and that their main reasons for visiting the area were to explore new places, for enjoyment and for education. The key variable underpinning their desire to explore new places was their desire to undergo a ‘sense of wonder’. Motivated by a high level of intrinsic motivation they want to learn about geosites and be given sound information about the attraction they are visiting.

Around this time it was claimed that geotourists visited geological attractions in either ‘natural areas’ or ‘urban/built areas’ (Newsome et al. 2012). In addition, the ‘ABC’ approach to geotourism was advanced as noted earlier (Dowling 2013). This now broadened our understanding of geotourists from the narrow geological tourist to the more holistic geographical tourist seeking not only geological information but how this has shaped its related living and cultural environments. This finding was later supported by Nita and Myga-Piatek (2014) who asserted that geotourist

attractions can occur not only in the natural environment but also in the anthropogenetic transformed environment, and such attractions are linked to the products of the material culture of humanity.

This wider application of geotourists was investigated in a case study of tourists to Crystal Cave in Yanchep National Park, Australia (Hurtado et al. 2014). Based on the cultural tourism typology model of McKercher (2002), the Australian study found a number of geotourist 'types'. These include *purposeful* geotourists whose main motivation for travel is to visit a geo-site. They generally had a positive experience based on their interest in the geo-site and desire to learn more. The *intentional* geotourists are influenced by the geo-site but they are not as purposeful as the former category though they do seek information about the geo-site they are visiting. A third category is the *serendipitous* geotourists who do not actively seek geo-sites but when they do, they have a positive experience. *Accidental* geotourists may not even be aware of the geo-site prior to visitation, however, once on-site, their experience is positive. Finally, *incidental* geotourists are tourists where geotourism plays no meaningful role in their destination choice and their experience encountered is negative.

Nowadays there is a clear understanding that geotourists seek learning experiences and expect to have geosites interpreted well so that the visitor can acquire education about the geology and how it supported and created the surrounding environment. A study in Mt Kinabalu National Park, Sabah, Malaysia, a World Heritage Region based on mountain hiking and geotourism, found that there was increasing demand among tourists to learn more about the park and its features during their visit, than was currently offered (Goh and Rosilawati 2014). A similar survey of the segmentation by motivation of visitors to a geopark in Hong Kong, China found a close link between interpretation and satisfaction (Fung and Jim 2015).

An investigation of the effect of visitors' travel motivations on their willingness to pay for accredited geo-guided tours was conducted in Hong Kong's UNESCO Global Geopark (Cheung 2016). Of the 310 visitors surveyed the results indicated that the visitors were willing to pay a premium price for the accredited geo-guided tour. Tourists were willing to pay an average HK$165.3 for the accredited tour, which is HK$34.5 higher than the price that they were willing to pay for the non-accredited counterpart. The results suggested that geopark visitors are motivated by four factors—'novelty seeking', 'enjoyment', 'social interaction' and 'escaping'.

An Egyptian study investigating the factors predicting the behavioural intention to take geotours among international tourists discovered that they are environmentally oriented travellers interested in nature and local cultures and prefer staying in a small-scale accommodation (Soliman and Abou-Shouk 2017). Geotourists find these tours useful and helpful to them to learn new things and gain new experiences. Geotourists travel to gain new experiences and their travel is motivated by the desire to explore new places to 'escape' from daily-life and re-fresh their mental and physical states. They are also environmentally oriented and they care about the environment in their choices for holidays. They see that visiting historical attractions, learning about new cultures and living in harmony with nature enhances their quality of life. In

addition,Soliman and Abou-Shouk found that geotourists are interested in remote areas, local restaurants and foods, community festivals and art galleries.

Geotourists as visitors with a specific preference for geoheritage and attractive geodiversity have been identified and typified by many studies across the world (Dowling and Newsome 2018). Up until now geological tourism tours for people with special needs are still very scant. This is commonly due to several barriers that hamper the supply and demand sides for geotourism experiences (Allan 2020). Accordingly, it is essential to create accessible geological tourism sites for children, seniors and those with disabilities (Lima et al. 2013).

A survey of tourists undertaken in Vojvodina Province, North Serbia was carried out in a region with a lack of geotourism terminology and where the general public is not familiar with the term (Vasiljević et al. 2018). 198 people were surveyed to discover their travel preferences and environmental attitudes including their relationship with landforms and geology. Exploratory factor analysis revealed that tourists fell into five categories. *Local community oriented* visitors respect the local community of the visited destination and want to know more about it both before and during their travels. They seek authentic destination tours and experiences through small group tours.

Environmentally aware travellers are aware of the environments in which they travel and prefer their experiences to have minimal adverse impact on the environment. *Nature-based travellers* appreciate nature and seek travel to natural areas in order to see nature including landforms and geological attractions. *Eco-responsible* travellers embrace conservation activities in their own home and environment and choose tourist products which foster conservation principles. *Plog psychocentric* travellers prefer to travel in organized groups to well-known and visited destinations. They enjoy learning about their destination as opposed to experiencing it through physical activities (Vasiljević et al. 2018).

Other significant findings which can be linked to the geotourists' profile is that women pay more respect to the community and are more local community oriented on travel. Also, individuals who have a higher degree of education are more environmentally aware and individuals from rural areas are more interested in the environment and are more eco-aware than people from urban areas.

A study of Australian geology alumni and professional societies estimated that the market size of geologists in this age-group is around 3000–4000 and presents a growing opportunity for geotourist offerings (Robinson 2018). Whilst an earlier study found that geotourists were mainly in the 45+ age bracket (Mao et al. 2009), it is suggested that the geotourists of the future will extend to embrace a wider group of demographics including those aged between 18 and 25 years. In addition, it will be more broadly defined globally supported by the UNESCO's Global Geopark program where national geoscientific assets are better understood, interpreted and marketed by both destination managers and tourism operators (Robinson 2018).

A different outcome was found in a study of tourists to Kandovan Village, Iran,one of only three ancient stone villages in the world. It is located in the Sahand Rural DistrictEast Azerbaijan Province, northwestern Iran at the foothills of Mount Sahand. The village has many human-made cliff dwellings which are still inhabited. The

homes are excavated inside volcanic rocks and tuffs and have been cut into the lahars of Mount Sahand. Tourists attracted to the village for its geological and historic attractions were mainly males aged 18–49, undergraduate, employed and married (Allan and Shavanddasht 2019).

A survey of 543 Slovak Republic geotourists found that the five most important criteria preferred by tourists to a geotourism attraction are visual attractiveness of locality, access, tour/visit safety, uniqueness/rarity, and information availability (Štrba 2019). A vast majority of respondents (91%) sought information about the geosite before their visit with the most frequent source of information being the internet followed by family and friends. Safety during the visit and comfortable access to the site or destination have a significant positive impact on the selection of geo-destination. Finally, an interesting finding is that while members of the general public place a high level of importance on geosite attractiveness, access and safety, visiting professionals are more motivated to visit by the geo-sites scientific and environmental features. This supports the recent findings in Australia of geological groups by Robinson (2018).

A study of six representative caves in the karst region of Eastern Serbia found that geotourists are seeking greater promotion of the caves, a tour guide service, interpretive panels and increased tourism infrastructure (Tomic et al. 2019). The authors suggest that better marketing activities are needed, including both national and international promotion through websites, virtual tours, brochures and maps. It is also suggested that there is a need for a multi-lingual tour guide service provided by geologists. By undertaking these actions it is suggested that the caves would attract a larger number of tourists thus benefitting the local economy through higher revenue and additional jobs.

9.4 Volcano Tourists

Volcano tourism involves the exploration and study of active volcanic and geothermal landforms (Erfurt-Cooper and Cooper 2010). Volcano tourism also includes visits to dormant and extinct volcanic regions where remnants of volcanic activity attract visitors with an interest in geological heritage (Lopes 2005, 2011, 2014).Volcanos have always attracted tourists to extinct, dormant and especially also tohighly active volcanic environments such as Iceland (Dowling 2010), Reunion Island (Dowling and Margueritte 2014), Galapagos, Ecuador (Dowling 2014), New Zealand (Dowling 2018), Japan (Erfurt 2018) or Hawaii, USA (Erfurt 2018). Volcano tourism is grouped into at least three categories, day trip visitors, field trip excursions, and adventure or scientific expedition visitors. Reasons for visiting volcanoes include sightseeing, curiosity, scientific interest or taking photos (Erfurt 2018). Visitors to volcanic regions often combine their visit with outdoor activities such as climbing, hiking, trekking, skiing and camping.

A study of visitors to the world's leading volcanic regions estimated that there were approximately 134.5 million people visiting a volcanic environment on an

annual basis (Erfurt-Cooper 2011). A more recent study investigating the motivations of 174 visitors undertaking a volcano tour at Mount Pinatubo in the Philippines identified a range of push and pull motives for visitation (Aquino et al. 2017). These included four push motives, namely escape and relaxation, novelty-seeking, volcano knowledge-seeking and socialisation, and two pull motives, namely disaster and cultural heritage-induced and volcanic and geological attribute-driven (Aquino et al. 2017).

Thus within the broader ambit of 'geotourism' there appears to be a number of neo-tribes where geotourists groups are bound together by shared sentiment, rituals and symbols. A central element is the symbolic element of a shared sense of interest in and accountability for the earth. This is supported by the behavioural element of viewing and experiencing the world together (Hardy et al. 2013). This is especially true of geological tourists who, whilst on a geological tour, share their geological passion and understanding with each other. This is carried out by a shared sentiment and empowerment which envelopes the group.

9.5 Geological Tourist Tribes: Cases from Namibia

Namibia is a geological treasure box (Grünert 2015). Most of the well-known attractions of the country are based on geology. These include the Fish River Canyon, which is one of the largest canyons in the world (Fig. 9.3), the Namib Desert with

Fig. 9.3 The Fish River Canyon, Namibia. *Source* Nicole Grünert

Fig. 9.4 The Namib Desert, Namibia. *Source* Nicole Grünert

stunning dunes visited by thousands of guests every year (Fig. 9.4), the Brandberg, the highest mountain in the country and home to thousands of rock paintings, Spitzkoppe and the Erongo Mountains, which exhibit fascinating granite weathering, the Hoba Meteorite, which is the largest single iron meteorite in the world or even the Etosha Pan within the famous Etosha National Park. All of them are well-visited geological phenomena (Grünert 2014).

Therefore, it is argued that all visitors to Namibia are geotourists, although they are not aware of it (Dowling and Grünert 2018). Nevertheless, there is a particular group of travellers who join specialised geological tours. These special interest tours can cover several aspects of geology and hence different geotourism tribes exist.

The first and oldest tribe of geotourists travelling to Namibia were *mineral collectors*. Due to the stunning wealth of world-known mines and mineral sites, such as the Tsumeb Mine, Namibia was and still is on top of the list for mineral collectors from all over the world. The tribe of mineral collectors however is quite diverse. On the one hand it is a group of people who want to purchase first class specimen from famous places or even buy cut gemstones such as tourmaline or diamonds. The second group is more active and wants to hunt for specimen themselves. Amongst this group of travellers the quality of the finding comes second, as the adventure of having found it themselves is more important. In their home countries most of the mineral collectors are organized in mineral clubs. Their members have regular meetings and visit public talks. Together they set up mineral shows and sales events. The bigger organizations even publish mineral magazines with articles from all over

the world. These magazines are also suitable media to advertise for mineral—and geo-tourism.

Mineral collectors can join specialised mineral collecting safaris. On such organised trips a local knowledgeable guide accompanies the group. The guests visit well-known and secret mineral sites where they can dig for their own specimen (Fig. 9.5). Sometimes even mine visits to operating mines can be organised. Besides this the guests have the opportunity to purchase specimen from local vendors at reasonable price. Visits to mineral museums can also form part of the program. At the end of the trip shipping of the findings is organised by the guide and weeks later, big treasure boxes arrive at home. Of course, most well-known Namibian tourist attractions along the route will be visited as well, however for this specific geotourism tribe the main focus of such safari is mineral collecting.

The second tribe of geotourists are **hobby geologists**. The aim of their holiday is to get a deeper understanding of the visited geo-sites and not just tick off well-known tourist attractions. This group is very diverse as the basic understanding of geological processes differs a great deal. It is the challenge for the geological guide to put often very complex and scientific facts in easy terms for the laymen to understand (Fig. 9.6). Hobby geologists visit well-known Namibian tourist sites where most people travel to, but also get to see secret places, which are not even described in travel guide books. In their home countries hobby geologists are often organized in special interest groups. They visit public lectures about geologically relevant topics and attend fossil preparation and identification seminars. Some of

Fig. 9.5 Mineral collectors, Namibia. *Source* Nicole Grünert

Fig. 9.6 Hobby geologists, Namibia. *Source* Nicole Grünert

the elderly are even enrolled as retired senior students at university where they are allowed to attend university lectures.

Hobby geologists as well as mineral collectors often travel to many interesting parts in the world to either collect specimen or gain knowledge about fascination geological phenomena.

Guiding **professional geologists** including academics has different challenges. These specialist travellers not only want to deeply understand the geological formation of individual sites and get to know the geological evolution of the country, but also put the geology in a regional and even global context. Therefore, a geological guide must not only know his home terrain but at least have a basic understand of fundamental geological processes and world-wide events.

A more specialist group of professional geologists are **university student groups**. Nowadays students undertake their compulsory university excursions not only in their home countries, but rather chose exotic places abroad. Sometimes their professors have worked in a specific country and thus have a particular link to that place. More often, however, popular tourist destinations with outstanding geology are chosen to undertake a geological student excursion. Namibia is the ideal locality for such an event. Besides stunning geology Namibia offers a perfect tourism infrastructure. In preparation for the excursion students often have to attend seminars at university and prepare speeches to relevant topics which they have to present during the trip. Students as well as professional geologists normally take notes during the field trip

and compile an excursion guide which summarises the geological topics and formations discussed along the route. Gaining in-depth geological knowledge is the main focus of such tours, rather than having a holiday.

It is not uncommon during such excursions that students raise such an interest that they find a topic for their final thesis and return to the country visited for professional work at a later stage in their career. The professional tribe of geotourists normally chooses tailor-made camping excursions. This is not only for keeping costs low for student trips, but also enables the group to access sites which are much off the beaten track, often in remote areas. This not only has the advantage of being at places alone without other tourists, but also having the challenge to encounter big game which roams freely in some geologically interesting places in North-western Namibia. Camping tours are not limited to student groups, but are essential if remote sites are visited which do not offer accommodation establishments in the vicinity.

Besides all the different tribes of geo tourists in Namibia they have one thing in common: a deep love for nature and the desire for deeper understanding of fundamental geological processes, which eventually have also made human life possible on this planet.

9.5.1 A Spectrum of Geotourist Tribes

While geotourism may be able to be defined, it is harder to say exactly who is a geotourist. An early attempt at classifying geotourists divided them into ‘educational group tourists’ and ‘recreational group tourists’ (Hose 2008). A study in Australia of geologists discovered major geotourist segments amongst ‘baby boomers’ and ‘alumni groups’ (Mao et al. 2009). Another typology suggested that there is a spectrum of geotourists from general ‘visitors’ who are either unaware, aware or interested in geological tourism, to ‘geo’ tourists who range from geo-amateurs and geo-specialists to geo-experts (Grant 2010).A study of visitors to a national park cave in Western Australia discovered a number of geotourist types from ‘incidental’ (that is, indicating that geotourism was not their main focus for their visit) to ‘purposeful’(where geotourism was their main motivation for travel) (Hurtado et al. 2014). Another group of geotourists are those interested in ‘geoheritage and geodiversity’ (Newsome and Dowling 2018). These are ‘hard core’ geotourists with a strong geological background. Finally, this paper suggests that geotourist tribes can be segmented into mineral collectors, hobby geologists, professional geologists and specialist groups such as university student groups (Fig. 9.7).

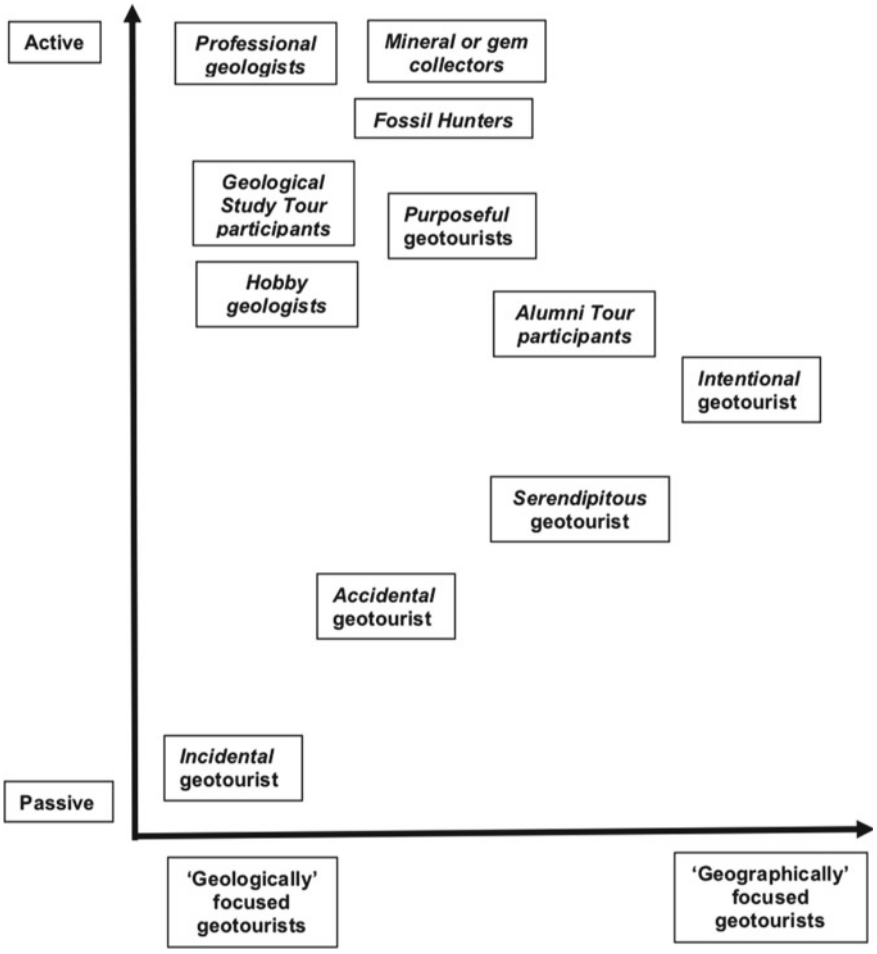

Fig. 9.7 Geological tourism tribe

9.6 Conclusion

There is probably only a very small percentage of the world's tourists who actually identify themselves as 'geological tourists'. Most probably they would identify themselves as being general tourists with an interest in geology. Such people are most likely to be 'geological tourists' who are either professionally or personally interested in the Earth, its landforms and processes. They could also be mineral collectors, gem collectors or fossil hunters who travel to collect specific geological items. 'Geographically' oriented geotourists have a broader ambit for travel and are more likely to be interested in gaining a 'sense of place' in relation to the places they visit. These tourists are more interested in trying to understand, appreciate and

engage with the land, habitat and people who live there. However, as geotourism is growing around the world, especially through the rapid growth of the UNESCO Global Geoparks network, so too are the numbers of geotourists. These tourists are exploring their travel destinations through the lens of a more holistic view of the environment which starts with an understanding of the geologic elements of the landscape to explain the surrounding habitats and cultural attributes of the environment. Parallel to this growth in geotourists with a 'geographic' viewpoint is a similar growth in the numbers of 'geological' oriented geotourists who are now forming distinct and growing 'tribes'.

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