

Abstract

Small-scale gathering of nontimber forest products (NTFPs) – wild edibles, medicinals, craft materials, etc. – has a range of benefits which have a specific bearing on the health and well-being of gatherers in contemporary Scottish society. The information discussed in this paper is drawn from qualitative research which focused on identifying and understanding the social, cultural and economic values associated with the collection and use of non-timber forest products (NTFPs) in Scotland. In particular it showed how the collection and consumption of NTFPs provides gatherers with physical health benefits arising from activities such as walking and basket making and the consumption of products rich in vitamins and minerals. It also illustrates how NTFPs contribute to the mental well-being of collectors by providing a source of joy and passion, feelings of self fulfilment and worth, and of human and personal identity. This well-being derived from the development of intimate bonds with the natural environment, family and friends - associations which may be regarded as especially poignant in a society in which the fragmentation of families, as well as a perceived disconnection between people and the natural environment, are concerns. A number of reflections are made on the relevance of these findings for policy and practice.

Background

During the 20th century forests within the UK have been managed primarily for timber production. As we move into the 21st Century there is, however, an increasing interest in the wider resource base contained within forests. These resources include wild edibles, medicinals, craft materials, etc., which are sometimes referred to as non-timber forest products (NTFPs). This trend is, in part, due to sustainable forest management policies (Scottish Executive, 2000) which emphasise the need to pay attention to a broad range of forest uses and related social, economic and environmental benefits. However, it is also a result of the downward pressure on global timber prices which have led forest managers to see NTFPs as potential sources of revenue. Rising public interest in natural foods and cosmetics, environmentally sustainable materials, as well as rising participation in crafts such as basket making, have also sparked this attention.

Until recently, research exploring the values and uses of NTFPs has been focused in developing countries. (Davidson-Hunt, Duchesne and Zasada 2001, Jones, McLain and Weigand 2002, Larrere and Soudiere 1985, Lund, Pajari and Korhonen 1998, McKinnell 1999). In contrast there is only a limited understanding of the extent, nature and impacts of NTFP gathering in developed and post-industrial societies. Within the UK, and Scotland in particular, there has been an increasing amount of work exploring past, present and potential uses of NTFPs and other biological resources (Dyke and Newton 1999, Dyke and Primrose 2002, Milliken and Bridgewater 2001, Murray and Simcox 2003, Sanderson and Prendergast 2002, Wong and Dickinson 2003). A strong focus of discussions and research has, however, been on the economic development potential of these resources and in particular the opportunity they provide to aid the diversification of rural economies away from a reliance on traditional timber and agricultural products. Such research has tended to document revenues, employment and assess emerging market potentials.

Some UK research has however acknowledged and proposed a wider range of values, (including health benefits) and uses (for example, semi and non-commercial uses) associated with 'wild living resources' (plants, fungi and animals):

'...whilst the use of many wild living resources is small in economic terms, they make a contribution to the diversity of culture, livelihoods and lifestyles in the UK. It is likely that small-scale artisanal users are responsible for a significant proportion of the overall range of uses of wild living resources. Conversely, wild living resources may have an appreciable economic impact through the livelihoods afforded to such small-scale users with associated benefits from their contribution to the nutrition, health and leisure of the human population.' (Murray and Simcox, 2003).

The broader livelihood² and quality of life roles associated with NTFPs have however remained relatively unexplored. The 'Wild Harvests from Scottish Woodlands' project therefore set out to redress this imbalance by working with the collectors of NTFPs to explore the social, cultural and economic values of NTFPs and develop recommendations for policy and practice.

² Following Polanyi (1997) we understand livelihood to mean anything which provides for physical and/or cultural survival.

Research Questions

In particular it sought to answer the following research questions:

- What products are gathered and what are their uses?
- What role does gathering play in collector's lives?
- To what extent and when do people depend on them?
- How can land use policies and practices seek to promote the benefits of woodland product gathering?

This was an exploratory piece of work which tried to avoid making *a priori* assumptions about the nature of the social, cultural and economic values of NTFPs. Specific questions on health and well-being were therefore not included. However, analysis revealed these to be important values of gathering.

After setting out the methodological approach taken to the research, this paper will describe and assess how small-scale gathering and use of NTFPs contributes to public health and well-being. It will then identify the possible implications of these benefits for policy and management.

Methodology

The research followed a qualitative (ethnographical) methodology, the aim being to develop understanding by allowing collectors to describe, in their own words, their collecting behaviour, experiences and related impacts. The ethics code of the American Anthropological Association was used to provide a guiding framework on ethical issues to be addressed in the work.

Information was gathered using semi-structured interviews. The interviews were concentrated within two case study areas in southern and north-eastern Scotland (see Figure One). These areas were chosen to provide a contrast between woodland type, socio-economic structure of local communities and existing knowledge of NTFP collection.

Interviewees were selected using a snowball sampling technique (Valentine 1997), and cross referenced according to an identity matrix to ensure a broad cross-section of participants was obtained in relation to gender, age and socio-economic status. Key informants, posters within local communities as well as series of press releases were used to identify initial interviewees. 15 interviews were conducted in each study area. As can be seen in Table 1, 19 women and 11 men took part in the study. Most of these were 45 years of age or older. They live in population densities from the very rural to urban and pursue occupations from scientific professional to unemployed. Compared to a 2003 omnibus survey of NTFP gatherers in Scotland (NFO World Group, 2003), the sample is slightly older, more rural, and more affluent than that of survey respondents who collect NTFPs. In volunteering themselves to take part in the work (responding to media announcements and posters), the participants to the research are likely to represent the more enthusiastic end of the Scottish NTFP user spectrum. They also represent the voice of small-scale domestic users, rather than large-scale commercial gatherers.

Interviews were conducted in individuals' homes or comfortable public meeting places. A semi-structured interview protocol provided a common set of questions to guide discussions, however, throughout the interviews care was taken to ensure that participants were able to introduce issues they saw as being relevant to the topic in question, rather than simply responding to those introduced by the researcher.

Following the granting of permission by interviewees, all but one of the discussions were recorded on to mini discs. Extensive notes on conversations and issues likely to impact on the research findings were also taken after each interview. Mini disc recordings were transcribed verbatim and then coded and analysed using a textual-data analysis software program (Ethnograph) and categories developed by the researchers. Unless they requested their identity be revealed, participants remain anonymous.

The work was conducted by a team of experts from forestry and botanical organisations in Scotland and the U.S. Forest Service who shared theoretical, methodological, and empirical experience. This co-operation provided a unique opportunity for comparison of the transatlantic Anglo-American experience with NTFPs.

The health and well-being benefits of NTFP collection and use

Over 200 products, from 173 vascular plant and fungal species were collected by the study participants, with individual collectors gathering from 6 to 67 products. Overall a median of 15 products was collected per individual. Most of the products gathered were used and consumed within collector's homes, although the gifting of NTFPs to family and friends was common. The most important use of products was for edible purposes (110 products), for example the consumption of berries and mushrooms. Beverage production (primarily wine making) was also popular with around 34 products (such as berries, tree sap and flowers) being used in this way. Craft products (81 products), particularly those associated with basket making and wool dyeing were also prominent.

Only 18 products were used for medicinal purposes, a low figure compared to other product categories. This is surprising given that as late as the early to mid twentieth century, wild plants were used extensively to prevent and cure ailments in rural communities (Darwin, 1999). It might be that the emerging popularity of natural foods, medicines and nutraceuticals will lead to increased collection of NTFPs for this purpose. The use of rosehip and elderberry concoctions to boost vitamin C levels during the winter months was mentioned by a few individuals. More broadly, it is speculated that the consumption of wild fruits and fungi will boost collectors' vitamin and mineral intake compared to fellow citizens. Indeed, the nutritional benefits of consuming NTFPs were discussed explicitly by several interviewees, who in particular implied benefits were gained from eating food which had been obtained from a trusted source away from the industrial food system and the risks associated with the use of chemicals or genetic modification. Some interviewees did however express concern about the drift of chemicals from agricultural fields adjoining woodlands. Given the poor diet of the Scottish population, the contribution of gathering activities to the consumption of fresh, vitamin and mineral rich food stuffs is particularly significant.

In addition to these medicinal and nutritional benefits, the physical benefits of taking exercise and being in the fresh air were discussed and implicit in conversations with collectors. As discussions developed, it was clear that gathering often reinforced a regular regime of walking by providing a purpose for a trip into the outdoors. For example, several interviewees discussed how the prospect of finding food with a prized flavour or craft materials with special qualities gave an incentive to go for a walk even in bad weather or across rough terrain. The two excerpts below illustrate these points:

I love going out into the hills but I need a reason for doing it. For me, just going for a walk, seems like, "Well, what's the point. I'll go for a walk if there is something to look for. So I get out in the woods an awful lot in the mushroom season. *Man, 45-54, rural resident, unemployed.*

It's very easy sometimes to forget to go for a walk. Or to forget to do something. And if you've got kind of a, an excuse, a sort of purpose, it's easier to remember. "Oh, this is the time of year that if I don't go now, it's not going to happen," you know. "Those are going to be gone and that's it," kind of thing. *Woman, 35-44, rural resident, NGO development worker.*

The benefits of regular exercise may be especially valuable for elderly people. One couple explained how they had begun walking and bicycling in an attempt to prevent the onset of arthritis and how gathering provided them with an incentive for their walks. Willow basket weaving was also mentioned by a lady in her 70s as an activity which she felt had ridded her of the arthritis she had begun to develop in her hands around twenty years previously.

Coupled with these physical benefits, a range of psychological and emotional gains which people experience as a result of taking part in NTFP collecting were identified. Perhaps most evident was the joy and passion which collectors associated with gathering. People spoke about the feeling of freedom and escape from their worries that it provided. One person described it as being a kind of "therapy":

It's a very therapeutic thing to do. It is, you know. It takes you out of yourself and it takes you away from all these problems and troubles. We're always worrying about things, aren't we? We're always moaning. We're always complaining. And it's very, very good for the soul to be able to just go and pick something or collect something or do something. And sometimes not just going for a walk but actually finding something makes it even better. You know, either going specifically to look for something like fungi for dyes. Or just happening across something and eating it. That just kind of adds to it. *Woman, 45-54, urban resident, secondary school teacher.*

Collecting was also described as a means of relaxation and a way of putting oneself into a "good mood". For others it was a source of excitement, for example one individual described the feelings of anticipation he experienced prior to trips to forage for fungi. Indeed, it was clear that for many of the interviewees gathering was something deeply embedded within their psyche and as such formed an essential part of their lives. One individual went as far as saying:

'If they ever restricted you the use of the woods I think I would just fold and die...because I have got to go out there. Well, it means everything to me. I mean, it is my life. I would pine if we were not able to.' *Woman, 45-54, small town resident, book keeper.*

The pride in being recognised as someone in possession of knowledge about NTFPs was also explicitly discussed by one interviewee (in relation to mushrooms) and clearly present amongst others. We see therefore that the collection of NTFPs provides people with emotional well being by providing them senses of pleasure, purpose, fulfilment and self worth.

As many interviewees discussed, the contact with nature that collecting necessitates, was a key source of well-being. Collectors described how they had, as a result of gathering, discovered and explored new places and developed intricate knowledges of and intimate connections to the areas they visit. They spoke of how through observation, reading and conversation they had learned about the timing and location of the appearance of particular species as well as their ecological associations, for example they spoke of ground elevation, weather conditions and the availability of light. This knowledge and appreciation was related not only to the species and locations in which people gathered but to landscape and nature more broadly; interviewees spoke of watching the activities of birds and animals and of changes in vegetation and landscape. These close relations with nature gave gatherers a strong sense of the changing seasons and the passage of time. For some the relation and dependence on nature was regarded as a fundamental aspect of human nature and gathering, a means by which they could remain in touch with a basic part of their human identity. The learning and appreciation of nature that gathering provides was seen by some to be particularly important in an age when people, particularly children, are regarded as having become disengaged from the natural world.

One collector who discussed the links between nature and collecting summed up his feelings as follows:

Well I would say it makes your life much more fulfilled. It adds a dimension to walking in the country. Yes, because you are not looking at scenery all the time and you are not walking beside someone just chattering away. You are walking and looking at all the things that are around you really. Not just birds and trees but everything. *Man, 65+, urban resident, retired chiropractor.*

As well as creating links with the natural environment, it was evident that feelings of well-being associated with gathering were strongly connected to the opportunities it gave for contact with family and, to a lesser extent, friends. Indeed, this research found that whilst collectors tended to gain their knowledge about NTFPs from a broad range of sources (including books, television and the internet), most commonly it was passed on from parents or grand parents. A few people had been introduced to gathering by friends. In turn, whilst most sometimes gathered alone, they frequently collected with family members, for example partners, parents, off-spring and grandchildren (see Figure Two). Sometimes the preparation and use (including consumption) of materials was also shared.

We see therefore that gathering provides a motive for family members, often of different generations, to spend time together, take part in shared activities and learning, and develop common joys and enthusiasms. These physical and emotional bonds were clearly a source of considerable pleasure and pride among many collectors with whom we spoke and provided people with the opportunity to nurture and care for others and create a sense of personal fulfilment and belonging. One collector, described the links between gathering and social relations as follows:

I really like doing it with my daughter. Because it's something that I did as a child with my parents. I'm passing on, yeah, that sort of knowledge and just all the different ways of being out of doors. And, I think it's a really, to a child, really obvious way to teach them to respect the outside world because they see something tangible that the family's getting from it. *Woman, 35-44, rural resident, NGO development position.*

Another said:

I took her (my mother) up to see [a particularly good mushroom patch]. I had to. She has to use two sticks now to climb all that way. It took us ages to get up there. Because she's 76 now, you know? And she's got really bad arthritis. But, with the walking sticks and we climbed that hill and she had such a fabulous time. So, she's told all the family about this wonderful day that we had...So, I'll be doing the same with my daughter when I'm that age. *Woman, 45-54, rural resident, tour guide.*

The opportunity gathering provides to relax and spend time with family and friends is particularly poignant as society, arguably, becomes increasingly fast paced and families more spatially and temporally fragmented.

Conclusion and discussion

It is popularly stated that in Scotland (and the UK more broadly) forest culture ebbed away with the rise of industrialised and urbanised society. This research has however revealed that small-scale domestic gathering is more deeply embedded in culture than is often speculated and that it is a beneficial and passionate part of the lives of people from a broad range of socio-economic groups. Furthermore, the research has demonstrated that NTFP gathering provides a range of positive impacts which have a specific bearing on the health and well-being of gatherers in contemporary Scottish society.

In particular it shows that the collection and the consumption of NTFPs provides collectors with:

- Physical health benefits associated with activities such as walking, being in the fresh air, and the consumption of products rich in vitamins and minerals as well as food stuffs that are free from contamination by chemicals and genetic modification.
- Mental well-being flowing from the senses of joy and passion, feelings of self development, fulfilment and worth, a sense of purpose and belonging, and of human, personal and social identity.

This well-being is derived from interaction with and the development of intimate physical and emotional bonds with the natural environment, family and friends. These are associations which may be regarded as especially poignant in a society in which the weakening of social bonds, and in particular, the fragmentation of families, as well as the physical and intellectual disconnection between people and the natural environment, is often bemoaned. The value of gathering amongst the young and elderly might be seen as especially significant with collecting providing an opportunity for both generations to keep body and mind active by maintaining or improving physical fitness, exploring and finding new passions and knowledge.

It can be seen that people who collect NTFPs are likely to have strong attachments and needs to the woods and other lands where they collect. The impacts of management decisions upon their gathering activities are likely to be deeply felt. Whilst it was clear from this work that collectors do not currently feel constrained in their abilities to gather, it is important to acknowledge that increasing interest in the commercialisation of NTFPs, as well as rising levels of non-commercial harvesting, may lead to changes in the attitudes and actions of land managers and policy makers which act to constrain or even prevent small-scale gathering of NTFPs³. The sustainable utilisation of NTFPs needs to be founded upon a sound knowledge base about the values and impacts of gathering to people and on the environment. Without this, there is a danger that unintended and negative consequences for gatherers as well as NTFPs themselves will arise.

We argue that in order to maintain the current situation as regards to small-scale domestic NTFP collecting in Scotland, and certainly in order to develop the health and well-being benefits it has to offer, greater focus needs to be placed upon NTFPs within forest and health sector management policies and on securing the financial resources required to make this possible. In particular, understanding of NTFPs and their associated social, economic and ecological systems should be cultivated, and policies and practices which protect the rights of people to gather, as well as address issues of environmental sustainability⁴, should be pursued.

Given the strong interests gatherers have with the land they should be given opportunities to take an active role in the processes through which management decisions are reached. Indeed the participants to this research identified a range of actions, which if fostered, could increase the opportunities for people to benefit from NTFPs. Examples of such activities include the planting of more mixed species woodlands, improved under-story vegetation in woodlands, more social infrastructure within woods, opportunities for gatherers to network to exchange information, and agreements with land owners to enable gatherers to collect in areas due to be clear felled.

³ It is recognised that policies and practices which regulate large scale commercial gathering will likely differ from those which address smaller scale domestic gathering, for example it may be considered appropriate to issue permits and charge commercial collectors to gather products (see Emery, Martin and Dyke, 2005, for further details).

⁴ At present the scale of gathering of products (with the exception of moss) is not believed to alone threaten the survival of species (Joint Nature Conservation Committee, 2004).

In addition, we suggest that:

- NTFP gathering would benefit from national law and FC bylaws which affect collection being brought in line with customary practices which permit small-scale domestic gathering.
- Forest management should incorporate sound methods for monitoring levels of gathering and volumes of materials harvested.
- Research to develop best practice in terms of sustainable harvesting regimes⁵ (see for example The Scottish Wild Mushroom Code) and silvicultural practices which promote the sustained growth of NTFPs is also required.
- Given the absence of medicinal uses of NTFPs amongst the participants to this research as well as emerging trends which favour the consumption of herbal remedies, research to document historical and new medicinal NTFP knowledge may be warranted.
- The dearth of young people and urban dwellers from our sample means that research to explore gathering activities and related benefits for these groups is strongly recommended.

More fundamentally, proactive engagement between the forestry and health sectors to raise awareness of and develop formal and informal opportunities for people to take part in the gathering and use of NTFPs needs to be taken forward. Such efforts could be targeted at specific social groups. This might involve the development of leaflets to highlight harvesting opportunities and methods (products and uses), guided foraging trips and workshops to develop skills in the collection and use of products.

⁵ Many of the small-scale gatherers documented in this study took measures to try to prevent damage to species populations, for example not harvesting all those materials present in a particular place, taking into account the size and age of products as well as the timing and method of removal.

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