

# Foraging Research from Peter Martignacco

## Foraging - 2025, Nov 16

*It may be helpful to look at related research from other areas, especially European countries. Urban foraging may give insight into human behaviours and regulatory options/effectiveness.*

*Some articles may be paywalled. Folks with access to U of M resources will be able to access, or request through interlibrary loan.*

## Fungi - ecology climate

### **Edible mycorrhizal fungi of the world: What is their role in forest sustainability, food security, biocultural conservation and climate change?**

<https://nph.onlinelibrary.wiley.com/doi/full/10.1002/ppp3.10199>

Edible mycorrhizal fungi (EMF) have been consumed since ancestral times by humans either as food, medicine or for ceremonial use. Nowadays, they are a non-timber forest product and a diverse genetic resource with great ecological, sociocultural, economic, medicinal and biotechnological relevance around the world....

### **Climatic Factors Affecting Wild Mushroom Foraging in Central Europe**

by Petr Procházka 1,\*ORCID,Jana Soukupová 2,3,Karel Tomšík, Jr. 4ORCID,Kevin J. Mullen 1ORCID andInna Čábelková 2ORCID

<https://www.mdpi.com/1999-4907/14/2/382>

Wild mushroom foraging has a long tradition in Central European countries. Protein from wild mushrooms is an important part of Central European diets and has served historically as a meat protein substitute....The results from the Czech Republic show that when the precipitation change was increased by one unit, the change in the amount of foraged mushrooms went up by twenty-seven tons, while the factor of temperature was found to be statistically insignificant. This indicates that with a decline in precipitation, possibly due to climate change, there will be a decline in the amount of wild mushrooms foraged.

## Foraging and Sustainability

### **Commercial harvests of edible mushrooms from the forests of the Pacific Northwest United States: issues, management, and monitoring for sustainability**

<https://www.sciencedirect.com/science/article/abs/pii/S0378112701005436>

Widespread commercial harvesting of wild edible mushrooms from the forests of the Pacific Northwest United States (PNW-US) began 10–15 years ago. A large proportion of suitable forest habitat in this region is managed by the Forest Service (US Department of Agriculture) and Bureau of Land Management (US Department of the Interior). These lands are managed under an ecosystem management philosophy that entails multiple-use, sustainable forest product harvesting, resource monitoring, public participation in forest management issues, and

holistic planning. Managing the harvest of edible mushrooms engages every aspect of this management philosophy. We examine a variety of issues raised by mushroom harvesting and how these issues interact with forest ecosystem management choices. We discuss regulations currently being used by managers to conserve the mushroom resource while further information is gathered, unique challenges and considerations inherent to sampling fungi, and current research and monitoring activities in the Pacific Northwest.....

### **A transdisciplinary approach to define and assess wild food plant sustainable foraging in Norway**

Irene Teixidor-Toneu, Nicolas J. Giraud, Pål Karlsen, Alexis Annes, Anneleen Kool

<https://nph.onlinelibrary.wiley.com/doi/full/10.1002/ppp3.10332>

Foraging wild food plants is sometimes perceived as a conservation threat or, alternatively, as an opportunity for sustainable development. Little is known of how foragers themselves define and ensure sustainable foraging. Here, we collaboratively assessed the activities and motivations of the forager community in Norway in order to achieve a combined social and ecological assessment of foraging sustainability. Current foraging of wild food plants in Norway contributes to an increased appreciation of nature rather than generating negative environmental impact and is hence an opportunity for sustainable development....

### **From trend to threat? Assessing the sustainability of wild edible plant foraging by linking local perception to ecological inference**

Nicolas J. Giraud, View ORCID ProfileAnneleen Kool, Pål Karlsen, View ORCID ProfileAlexis Annes, View ORCID ProfileIrene Teixidor-Toneu

<https://www.biorxiv.org/content/10.1101/2021.09.27.461499v1.abstract>

Wild edible plants as culturally-appropriate sources of nutrition and for food security are now well-recognised. In Europe, the use of wild edible plants is shifting from a subsistence activity to an emerging trend in high-end gastronomy. The environmental impacts of this shift are poorly known. Foraging is increasingly popular for personal consumption and commercially, not least in the Nordic countries where popularity is fuelled by the New Nordic Food movement. Here, we evaluate if this trend entails biodiversity conservation risks in Norway....

### **Assessment of Mycological Possibility Using Machine Learning Models for Effective Inclusion in Sustainable Forest Management**

by Raquel Martínez-Rodrigo 1,2ORCID,Beatriz Águeda 2,3,\*ORCID,Teresa Ágreda 2,4,José Miguel Altelaarrea 1,Luz Marina Fernández-Toirán 2ORCID andFrancisco Rodríguez-Puerta 2ORCID

<https://www.mdpi.com/2071-1050/16/13/5656>

The integral role of wild fungi in ecosystems, including provisioning, regulating, cultural, and supporting services, is well recognized. However, quantifying and predicting wild mushroom yields is challenging due to spatial and temporal variability. In Mediterranean forests, climate-change-induced droughts further impact mushroom production. Fungal fruiting is influenced by factors such as climate, soil, topography, and forest structure. This study aims to quantify and predict the mycological potential of *Lactarius deliciosus* in sustainably managed Mediterranean pine forests using machine learning models....This research emphasizes the

importance of considering a diverse array of ecosystem variables for quantifying wild mushroom yields and underscores the pivotal role of Artificial Intelligence (AI) tools and remotely sensed observations in modeling non-wood forest products. Integrating such models into sustainable forest management plans is crucial for recognizing the ecosystem services provided by them.

### **Stewardship underpins sustainable foraging**

Irene Teixidor-Toneu<sup>1</sup> irene.teixidortoneu@ird.fr · Giulia Mattalia<sup>1,2,3</sup> giulia.mattalia@uab.cat · Sophie Caillon<sup>4</sup> · Abdullah Abdullah<sup>5</sup> · Živa Fiser<sup>6</sup> · Pål Karlsen<sup>7</sup> · Shujaul Mulk Khan<sup>8</sup> · Anneleen Kool<sup>9</sup> · Gabriela Loayza<sup>10,11</sup> · Anna Porcuna-Ferrer<sup>12,13</sup> · Ismael Vaccaro<sup>14</sup> · Christoph Schunko

[https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347\(25\)00004-7](https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347(25)00004-7)

Foraging wild plants and mushrooms can be both beneficial and detrimental to biodiversity. We examine the role of stewardship practices, which are grounded in care, knowledge, and agency, in fostering sustainable use of wild species. These practices are pervasive among foragers across social–ecological systems yet neglected in research and policymaking.

### **Foraging Practices and Sustainable Management of Wild Food Resources in Europe: A Systematic Review**

by Giorgio Mina <sup>1</sup>ORCID, Valentina Scariot <sup>2</sup>ORCID, Giovanni Peira <sup>1,\*</sup>ORCID and Giampiero Lombardi <sup>2</sup>ORCID

<https://www.mdpi.com/2073-445X/12/7/1299>

Wild food gathering activities (i.e., foraging practices) played an important role in securing food in the past. ...The results highlight that the reasons for the abandonment of foraging practices are related to socio-economic changes as well as changes in the environment such as reduced availability and land-use change. On the other hand, heritagization processes of these resources, such as wild plants sold as traditional local products, in restaurants, or as eco-tourism experiences, are emerging. The sustainability of these practices has not been widely evaluated in the literature. Efficient management strategies of wild food resources could help foster all three dimensions of sustainability at the local level, as well as help preserve traditional knowledge. This systematic review thus contributes to highlighting the framework in which the sustainability of these practices should be assessed.

### **The nexus between traditional foraging and its sustainability: a qualitative assessment among a few selected Eurasian case studies**

Muhammad Abdul Aziz <sup>1</sup>, Giulia Mattalia <sup>1</sup>, Naji Sulaiman <sup>2</sup>, Adnan Ali Shah <sup>3</sup>, Zbynek Polesny <sup>2</sup>, Raivo Kalle <sup>4</sup>, Renata Šoukand <sup>1</sup>, Andrea Pieroni <sup>4,5</sup>, ✉

<https://pmc.ncbi.nlm.nih.gov/articles/PMC9330945/>

Plant foraging is an important human ecological phenomenon being studied by a number of contemporary ethnobiologists as well as by a few social anthropologists

among rural communities and, more recently, in urban environments. The sustainability dimension of foraging is, however, largely unexplored. We analyse a few case studies from recent field research and qualitatively assess both the environmental and social sustainability of diverse patterns of traditional foraging practices in three distinct human ecological environments (horticulturalism-, forestry-, and pastoralism-driven) located in the Eastern Mediterranean, Eastern Europe, and North Pakistan, i.e. we address the question of when does traditional foraging become unsustainable and what factors may influence this. The main findings are multidimensional....

### **A systematic review of foraging as lifestyle, livelihood, and landscape management strategy**

Mallika Sardeshpande & Tafadzwanashe Mabhaudhi

<https://link.springer.com/article/10.1007/s13280-025-02222-9>

This systematic review of 353 studies evaluates the knowledge on foraging by humans, situating it in the wider context of human ecology. We highlight the strengths and weaknesses, and the micro (individual) to macro (landscape) level implications of foraging, as concerns livelihoods and social–ecological systems. ...Policy recommendations include integrated spatial planning and supporting devolved local economies nested within larger governance and market frameworks to enhance human and natural capital and social cohesion. Actions to foster social–ecological resilience include improving access to forageable resources and spaces, sharing information on sustainable foraging, and landscape stewardship through sustainable foraging.

## **Policy and regulations**

### **Fungi are the future: Realizing the potential of fungi in policy**

K.J.E. Hickman<sup>1,\*</sup> and Kathryn F. Atherton<sup>2</sup>

[https://www.researchgate.net/profile/K-Hickman/publication/383456101\\_Fungi\\_are\\_the\\_future\\_Realizing\\_the\\_potential\\_of\\_fungi\\_in\\_policy/links/66d604b9f84dd1716c7af044/Fungi-are-the-future-Realizing-the-potential-of-fungi-in-policy.pdf](https://www.researchgate.net/profile/K-Hickman/publication/383456101_Fungi_are_the_future_Realizing_the_potential_of_fungi_in_policy/links/66d604b9f84dd1716c7af044/Fungi-are-the-future-Realizing-the-potential-of-fungi-in-policy.pdf)

Fungi have been an important source of food and medicine for humans for centuries and are ubiquitous in both land and ocean environments. However, fungi are understudied when compared to plants, animals, and bacteria, so far less is known about their roles in these environments. This knowledge gap results in public policies and climate change response strategies that often fail to account for fungi. This review seeks to provide an overview of the current state of knowledge of fungi in human, land, and ocean ecosystems and to outline opportunities for broadening our knowledge about fungi to better inform public policy.

### **A way forward for wild fungi in international sustainability policy**

Rodrigo Oyanedel, Amy Hinsley, Bryn T.M. Dentinger, E.J. Milner-Gulland, Giuliana Furci

<https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12882>

A series of international sustainability policies currently in negotiation will shape biodiversity conservation for decades to come. However, discussions of current sustainability policy have a huge blind spot: the absence of Fungi, one of the eukaryotic Kingdoms.....We layout four key steps to foster a much-needed policy and societal transformation: acknowledge the existence of Fungi as an independent Kingdom; tailor sustainability policy targets to include Fungi; implement comprehensive monitoring of wild fungi status and trends; and promote responsible use of wild fungi as a livelihood opportunity in rural areas. These steps can facilitate a transition toward better recognizing, valuing, and conserving the ecosystem services wild fungi provide.

### **Negotiating the Non-negotiable: British Foraging Law in Theory and Practice**

Jennifer Lee, Supriya Garikipati

<https://academic.oup.com/jel/article-abstract/23/3/415/493637>

Do you have a right to pick blackberries whilst out walking? Though foraging today is mostly a hobby rather than a necessity, this question is relevant to many people. A raft of modern legislation in the UK severely limits our right to forage, and yet the gathering of wild foods is an increasingly popular pastime. In this study, we explore this paradox by examining the socio-legal environment surrounding bilberry gathering. Our findings demonstrate that, in spite of increased prohibitions, foraging for personal use persists due to a complex mix of customs and licence as well as the flexible, local management of plant resources....

### **Food Law Gone Wild: The Law of Foraging Colloquium: Taking a Bite out of the Big Apple: A Conversation about Urban Food Policy**

Linnekin, Baylen J.

<https://heinonline.org/HOL/Page?handle=hein.journals/frdurb45&id=1021&collection=journals&index=>

US Foraging Laws: urban, state, federal

## **Impact of timber harvesting on fungi**

### **Significant and persistent impact of timber harvesting on soil microbial communities in Northern coniferous forests**

<https://academic.oup.com/ismej/article/6/12/2199/7590046>

Forest ecosystems have integral roles in climate stability, biodiversity and economic development. Soil stewardship is essential for sustainable forest management. Organic matter (OM) removal and soil compaction are key disturbances associated with forest harvesting, but their impacts on forest ecosystems are not well understood. Because microbiological processes regulate soil ecology and biogeochemistry, microbial community structure might serve as

indicator of forest ecosystem status, revealing changes in nutrient and energy flow patterns before they have irreversible effects on long-term soil productivity....

### **Impact of harvesting intensity on wood-inhabiting fungi in boreal aspen forests of Eastern Canada**

Hedi Kebli, Suzanne Brais, Gavin Kernaghan, Pascal Drouin

<https://www.sciencedirect.com/science/article/abs/pii/S0378112712003052>

Environmental change, including human disturbance, can have a striking impact on the biodiversity of ecosystems. We used a molecular fingerprinting technique to determine how communities of saproxylic fungi on trembling aspen deadwood change under the influence of silvicultural treatments designed to emulate natural stand dynamics. We describe changes in richness, diversity, and species composition of fungal communities of trembling aspen logs and snags caused by these silvicultural practices. Our study was conducted in the SAFE Project, a series of silvicultural experiments that tests an ecosystem management model based on natural dynamics....

## **Foraging - societal / human behavior**

### **Mycological rationality: Heuristics, perception and decision-making in mushroom foraging**

Roope O. Kaaronen

<https://www.cambridge.org/core/journals/judgment-and-decision-making/article/mycological-rationality-heuristics-perception-and-decisionmaking-in-mushroom-foraging/E3B5C14DE7FADACB68AFD4C8029A233C>

How do mushroom foragers make safe and efficient decisions under uncertainty, or deal with the genuine risks of misidentification and poisoning? This article is an inquiry into ecological rationality, heuristics, perception, and decision-making in mushroom foraging. By surveying 894 Finnish mushroom foragers, this article illustrates how socially learned rules of thumb and heuristics are used in mushroom foraging, and how simple heuristics are often complemented by more complex and intuitive decision-making. The results illustrate how traditional foraging cultures have evolved precautionary heuristics to deal with uncertainties and poisonous species, and how foragers develop selective attention through experience....

### **A new method for tracking Pathways of humans searching for wild, edible fungi**

I. Pacheco-cobos<sup>1</sup>, m. rosetti<sup>2</sup> and r. Hudson

<https://www.redalyc.org/pdf/685/68511349001.pdf>

The study of human foraging behavior is relevant for social anthropology and behavioral ecology, because it makes it possible to study directly the relationship between human communities and the forest resources they use and manage. The recording of individual search pathways in the field has improved, in recent years, due to the availability of satellite technologies like the Global Positioning System (GPS). The present study was carried out in a Nahua community in Tlaxcala, Mexico, where wild fungi constitute an important source of food and income. We discuss different methods used to record foraging paths in humans as well as



the spatial location of fungi gathered. Likewise, we mention the difficulties and procedures we have found useful in overcoming them....

### **Foraging Wild Resources: Evolving Goals of an Ubiquitous Human Behavior**

Serge Svizzero

<https://hal.univ-reunion.fr/hal-02147756/>

Although human foraging behavior, i.e. the method used to get food procurement from the wild, is the economic criterion usually used in the academic literature in order to define hunter-gatherer societies, it is restricted neither to these societies nor to this goal. It consists of the extraction of natural resources by means of various techniques, such as hunting, fishing and gathering. It is applied to a broad range of wild resources – aquatic and terrestrial, plants, animals and minerals – even though in some cases it could be limited only to some of these resources such as the non-timber forest products (NTFPs). The aim of this paper is to demonstrate that while foraging is an ubiquitous human behavior, its goals are evolving with the passage of time. More precisely these goals that exist today have been present in some form in the past, only their importance and emphasis has changed over time and with the historical, sociological and ecological contexts....

### **The Ethnobiology of Contemporary British Foragers: Foods They Teach, Their Sources of Inspiration and Impact**

by Łukasz Łuczaj 1,\*ORCID,Monica Wilde 2ORCID andLeanne Townsend 3

<https://www.mdpi.com/2071-1050/13/6/3478>

Foraging in the British Isles is an increasingly popular activity for both personal consumption and for commercial purposes. While legislation and guidelines exist regulating the sustainable collection of wild edibles, the founding principles of the British foraging movement are not well documented. ....Frequent contact among foragers has led to the standardisation of knowledge and practices among them forming a “new tradition”, partly based on old British traditions but modified by influences from other countries and cultures, both in terms of choice of species and processing techniques. Contrary to expectations, foragers rarely reported clashes with nature conservation or forestry managers. The authors argue that knowledge and practice developed by the Association of Foragers (AoF) are sustainable and could be integrated into the British food and nature conservation system.

### **Thirty Years of Research on Ecosystem Services: The Socio-Economic Role of Forest Visits and Foraging in Enhancing Human Well-Being**

by Marcel RiedlORCID,Martin NěmecORCID andVilém Jarský \*

<https://www.mdpi.com/1999-4907/15/11/1845>

This paper examines the socio-economic significance of forest visits and the collection of forest berries and mushrooms (FBMs) in the Czech Republic, emphasising their role in enhancing human well-being and contributing to regional economies. Over a 30-year period, data were collected on the quantities and economic values of FBMs, alongside the intensity of forest visits by the Czech population. This study incorporates a detailed analysis of time series data on FBM collection, exploring trends and fluctuations in the harvested quantities and their economic value. ...The findings emphasise the potential of territorial marketing strategies to enhance

well-being, particularly in economically disadvantaged regions, and advocate for sustainable forest management practices to protect these valuable resources and ensure equitable access to the benefits provided by forest ecosystems.

### **Mushroom Harvests and Harvester Practices in the Mid-Atlantic Region of the United States and the Emergence of Digital Community Mycology**

Amy C. Wroblewski & Eric P. Burkhart

<https://link.springer.com/article/10.1007/s12231-025-09651-3>

The Mid-Atlantic region of the eastern USA, spanning New York to North Carolina, has a long history of mushroom harvesting that has not received much formal study. A survey was distributed to mushroom harvesters in this region during 2022 and 2023, yielding 826 participants. This survey sought to document: (1) which mushroom species are harvested in the region and their common uses; (2) harvest practices intended to sustain the resource; and (3) how harvesters learn the skills they need to safely harvest. The most popular mushroom species harvested were found to be edible or medicinal, with 84 genera containing 160 species. Harvest practices often incorporate sustainability-oriented activities, such as trying to promote the distribution of desirable species by spreading spores.....

### **From Tradition to the Digital Age: The Evolution of Foraging in Slovenia**

Živa Fišer & Andrea Pieroni

<https://link.springer.com/article/10.1007/s12231-025-09644-2>

Wild plant foraging has experienced a resurgence in Slovenia, with foraging educators—namely individuals who organize workshops, courses, or similar activities about foraging—playing a crucial role in knowledge transfer and community building. This study explores how foraging knowledge is obtained, shared, and shaped by foraging educators. ...There is great diversity in the activities offered by the foraging educators, with an increasing number of online activities. Social media platforms, particularly Facebook, play a vital role in the promotion of foragers and their events, though educators remain skeptical of their reliability as a source of botanical knowledge. Emerging events such as the Festival of Foraging and FesDivjal have an important impact on the evolving foraging community, providing the foragers a sense of belonging and promoting important messages related to conservation. This study highlights the evolving nature of foraging in Slovenia, stressing the role of digital platforms in shaping knowledge exchange. It underscores the importance of conservation-oriented education in combating plant blindness and fostering environmental stewardship.

### **Why forage when you don't have to? Personal and cultural meaning in recreational foraging: a New Zealand study**

C. Michael Hall

<https://www.tandfonline.com/doi/abs/10.1080/1743873X.2013.767809>

Foraging is a historically and culturally significant recreational food-related activity in many communities. Foraging is also part of national identities and cultural traditions, as well as being significant for personal identity and heritage. The study provides the results of a series of qualitative interviews with foragers in Christchurch and Tauranga in



New Zealand undertaken from 2006 to 2011. The study finds differences in the types of food foraged but some commonalities between different cultural groups with respect to the nostalgia associated with foraging, as well as its role in personal and collective identity.

### **Should I Go Back to the Roots to Obtain My Food? Understanding Key Factors Driving U.S. Consumers' Preferences for Food Foraging over Buying and Growing Food**

by Meike Rombach <sup>1</sup>ORCID, Julio Botero <sup>2</sup> and David L. Dean <sup>3,\*</sup>ORCID

<https://www.mdpi.com/2071-1050/15/20/14845>

Alternative forms of food procurement have increased in consumer popularity since the occurrence of food price inflation and the ongoing recession in the U.S. The present study explores predictors such as food engagement, food-related COVID-19 concerns, and the importance of sustainable foraging practices as determinants for U.S. consumers' preferences for food foraging. ...However, food-related COVID-19 concern appears to only be relevant for the foraging over buying scenario and the importance of sustainable growing practices is only relevant for the foraging over growing scenario. These findings are important because they indicate the attitudinal triggers of food foraging and are therefore of relevance to foraging communities and managers in municipalities, food retail, and horticultural businesses who are associated with traditional and alternative forms of food procurement.

## **Indigenous stewardship**

### **Tribal stewardship for resilient forest socio-ecosystems**

F.K. Lake, J. Long, B. Twieg, J. Hostler

<https://research.fs.usda.gov/treesearch/68388>

The Yurok Tribe, along with other tribal communities in northwest California, non-profit organizations, universities, and governmental agencies are working to restore forests and woodlands to be more resilient to wildfires, drought, pests and diseases. Our current work within ancestral Yurok territory is designing and evaluating effects of forest treatments including fuels reduction, tree harvesting, and intentional burning based upon indigenous knowledge and associated traditional stewardship practices. Central to these evaluations are the potential availability, quantity, and quality of desired cultural resources used for food, basketry, medicine, ceremony, tools, and building materials, as well as habitat quality for plants, fungi, and animals that are an integral part of the Yurok homeland....

## **Foraging & local economies/tourism**

### **Mushroom Foraging in Woodland Areas: A Fusion of Recreation and Sustainable Tourism**

Gideon Areo

[https://www.researchgate.net/publication/385492486 Mushroom Foraging in Woodland Areas  
A Fusion of Recreation and Sustainable Tourism](https://www.researchgate.net/publication/385492486_Mushroom_Foraging_in_Woodland_Areas_A_Fusion_of_Recreation_and_Sustainable_Tourism)

Mushroom foraging has evolved from a subsistence activity into a popular form of recreation and a vital component of sustainable tourism. As more people seek nature-based experiences, the fusion of mushroom foraging and tourism in woodland areas offers a unique opportunity to connect with nature while promoting environmental stewardship. This article explores the historical, ecological, and economic significance of mushroom foraging and its role in sustainable tourism. It discusses how mushroom picking fosters biodiversity awareness, boosts local economies, and strengthens woodland conservation....

### **Economic Assessment of Morel (*Morchella* spp.) Foraging in Michigan, USA**

Trey Malone, Scott M. Swinton, Aastha Pudasainee & Gregory Bonito

<https://link.springer.com/article/10.1007/s12231-022-09548-5>

Wild-foraged mushrooms represent a natural resource that provides economic value to foragers through both market and nonmarket recreational channels. Despite the importance of non-timber forest resources for sustainable management of forestlands, little attention has been paid to who forages for wild mushrooms, why they choose to forage, where they go, and what economic value is generated. This report draws upon survey data from 78 foragers who are certified to sell their mushrooms and 85 noncertified foraging enthusiasts. Its goal is to understand foraging patterns and values for morels (*Morchella* spp.) in the State of Michigan (USA)....

### **Characterising the landscape of mycotourism initiatives in Quebec: a comprehensive overview including a classification, cluster analysis and strategic group approach**

Amélie Cloutier, Marc-Antoine Vachon & Patrick Coulombe

<https://www.tandfonline.com/doi/full/10.1080/14724049.2024.2440433>

Even if a niche activity, mycotourism has gained in popularity internationally, with various initiatives emerging to cater to the growing interest of tourists toward mushrooms and mushroom-related goods and services. This article presents the argument that mycotourism encompasses a diverse range of activities that have yet to be fully explored and understood by decision-makers and scholars alike. This paper addresses this research gap by providing a comprehensive understanding of the diverse mycotourism initiatives in Quebec (Canada). Through an in-depth environmental scanning process, this study presents an overview of mycotourism offerings, employing a classification, cluster analysis, and strategic grouping approach to synthesise and organise knowledge based on 57 organisations.

### **Foraging tourism: critical moments in sustainable consumption**

Anna de Jong & Peter Varley

<https://www.tandfonline.com/doi/abs/10.1080/09669582.2017.1384831>

Despite the prevalence of sustainability discourses across the Global North, for the majority of people abstract issues of sustainability often have a low salience with the realities of travel choices....By engaging with debates surrounding the meanings of sustainable tourism, the paper extends understanding of these concepts through the

identification of foraging tourism as a facilitator in rethinking everyday practice and discourse. The paper ends by evaluating the potentials of tourism in facilitating sustainable performance and discourse.

## Urban foraging

### **The ‘quiet hunt’: the significance of mushroom foraging among Russian-speaking immigrants in New York City**

Tatiana Marquinaa, Marla Emery, Patrick Hurley & Rachelle K. Gould

<https://www.tandfonline.com/doi/full/10.1080/26395916.2022.2055148#abstract>

Urban foraging provides city dwellers with numerous ecosystem services, but this human-nature interaction is largely missing from the urban ecosystem services scholarship. This exploratory study aims to address this gap in the literature and examines the benefits and values associated with foraging in New York City, United States. We focus on Russian-speaking mushroom foragers, a previously unstudied community. Data from 10 interviews reveals that for some groups, foraging is primarily about cultural ecosystem services, with a provisioning attribute. Foraging supports multiple benefits, most notably contributions to social relations, cultural heritage, and recreational experiences; these nonmaterial contributions often intertwine with material benefits. Our findings further demonstrate the mutual exchange of benefits between humans and nature, including services to ecosystems and species....

### **Gathering “wild” food in the city: rethinking the role of foraging in urban ecosystem planning and management**

Rebecca J. McLain, Patrick T. Hurley, Marla R. Emery & Melissa R. Poe

<https://www.tandfonline.com/doi/abs/10.1080/13549839.2013.841659>

Recent “green” planning initiatives envision food production, including urban agriculture and livestock production, as desirable elements of sustainable cities. ... Drawing on research from Baltimore, New York City, Philadelphia, and Seattle, we show that foraging is a vibrant and ongoing practice among diverse urban residents in the USA. At the same time, as reflected in regulations, planning practices, and attitudes of conservation practitioners, it is conceptualised as out of place in urban landscapes and an activity to be discouraged. We discuss how paying attention to urban foraging spaces and practices can strengthen green space planning and summarise opportunities for and challenges associated with including foragers and their concerns.

### **Urban non-timber forest products stewardship practices among foragers in Seattle, Washington (USA)**

R.J. McLain <sup>a 1</sup>, Melissa R. Poe <sup>a 2</sup>, Lauren S. Urgenson <sup>a 3</sup>, Dale J. Blahna <sup>b</sup>, Lita P. Buttolph <sup>a</sup>

<https://www.sciencedirect.com/science/article/abs/pii/S1618866717304223>

Our research seeks to expand the concept of urban environmental stewardship to include the everyday stewardship practices of urban nontimber forest products foragers. Ethnographic data from 58 urban foragers and 18 land stewards in the city of Seattle (USA) revealed that foragers

reported using a variety of practices to enhance and minimize negative desirable species and their habitats. Many of these practices were identical to those practiced by restoration volunteers in formal programs and align with Seattle Parks Department management objectives. Foragers actively sought to learn more about what practices are sustainable; many mentored others in sustainable harvesting practices.....

### **Designing Edible Cities: Exploring the Origins and Future of Urban Foraging and Wild Herbalism in the United Kingdom**

Alessio Russo & Laura McCarthy

[https://link.springer.com/chapter/10.1007/978-981-97-0345-6\\_10](https://link.springer.com/chapter/10.1007/978-981-97-0345-6_10)

Foraging and wild herbalism are important elements of the edible green infrastructure which could, by design, enhance the urban framework of the edible city. Despite recent attention to urban agriculture, landscape architecture has rarely focused on aspects of urban foraging and how to design sustainable urban green infrastructure for foragers....The research collates information gathered at the three urban locations. This data is compared and contrasted and used to inform urban foraging design recommendations, which are anchored in a place-specific historical context.

### **Exploring and limiting the ecological impacts of urban wild food foraging in Vienna, Austria**

Christoph Schunko, Anna-Sophie Wild, Anjoulie Brandner

<https://www.sciencedirect.com/science/article/pii/S1618866721001898>

Wild food foraging in urban areas can have considerable benefits, but concerns have been raised by public authorities about its potential negative ecological impacts....A range of preventive, limiting, and damaging practices were reported as taking place at the same time. The ecological impact of foraging practices related to the selection of plant species and foraging locations, the quantities foraged, the foraging techniques applied, foraging dates and the care taken when foraging. The experts suggested that two different types of impacts can be harmful: first, urban foragers can cause negative ecological impacts to plant populations if they are not familiar with the species being foraged or with foraging in public urban green spaces; second, urban foragers can harm the integrity of public urban green spaces in foraging hotspots in particular. ...

### **Fungi and the urban environment: A review**

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<https://www.sciencedirect.com/science/article/abs/pii/S0169204610000745>

Although the functional importance of fungi in ecosystems is well recognised, there has been comparatively little focus on their role in urban systems and the ways fungi may be affected by urbanisation. This review advances our knowledge in these areas by drawing together urban fungal studies along with relevant broader research on both fungal and urban ecology. From these studies we discuss the ecological roles of fungi,

such as their beneficial interactions with plants and animals. We also highlight the ecological processes that could potentially threaten the persistence of fungi in cities...