

Searching for Germane Questions in the Ethnobiology of Food Scouting

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Abstract

In the past two decades, ethnobiologists have increasingly paid attention to the scouting and documentation of endangered corpora of local food elements and associated traditional knowledge. In this endeavor, food scouting encompasses the methodological tools used for mapping, inventorying, and documenting food and food-related resources. The growing body of research in this field is shedding light on the potentialities of these practices in obtaining baseline data regarding food heritage, which can, in turn, empower local communities in their dynamic understanding and safeguarding of this resource. While food scouting have been gaining an important role in current food and gastronomic ethnobiological research, as well as in other fields of study (e.g., geography and anthropology), little attention has been paid thus far to the methods and approaches underpinning these activities. To partially fill this gap, this contribution aims to tackle some methodological issues connected to the documentation of food and gastronomic elements embedded in local knowledge. Acknowledging the plethora of methods applicable in food scouting research, we describe three specific applications of food scouting to elicit data on local food diversity, highlighting their prospects and limitations. The first case addresses market surveys to obtain baseline data on the local food systems and their associated diversity, the second focuses on context-based freelisting methods for eliciting wild food plant uses, and the third discusses methods for scouting and inventorying artisanal food products. Acknowledging the contributions of Justin Nolan to the advancement of methods in the field of ethnobiology, we suggest that the methodological toolkit of food scouting should include ad hoc transdisciplinary platforms codesigned together with local food actors.

Keywords

food scouting, food heritage, endangered foods, methods

Prelude

I (AP) remember very well when Justin (Nolan) brought me to visit two key interlocutors in the communities he was working on in a tiny Native American village in Oklahoma, at the border with Arkansas. It was the spring of 2013, and the elms were flowering and my allergy to their pollen was being suppressed by heavy doses of antihistamines: I was torn between the beauty of the sweet green hills of the Ozarks and the unpleasant feeling of not being able to breath well. I remember Justin's excitement and generous hospitality, the laughs and the walks in the forest, his enormous passion for food: the buffalo meat burgers and his mythical community barbecues in front of his "cabin" in the forest, the unexpected early morning visit of vociferous wild turkeys. I especially recall the happiness in his eyes in connecting me to these two wonderful people and the deep feeling of respect toward them—mixed with curiosity and wonder, despite having worked with them for years—that exuded from all his pores.

Many scholars and colleagues have written very sharply about methods in ethnobiology, as well as in environmental, food, and medical anthropology, but at the start of everything there is feverish and empathic excitement for otherness,

which food conviviality can perhaps celebrate as no other life context. That feeling puts ethnobiologists in a unique position to connect people, practice a common emotional intelligence, and share true moments of life around a table.

Food Scouting and Its Relevance: Quo Vadunt?

In the last century, the rapid transformation of global food systems (driven by major societal changes such as globalization

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and urbanization) has led to the dramatic erosion of biological and cultural diversity (Guerrero et al. 2019; Johns et al. 2013; Maffi 2001). Food is an important expression of biocultural diversity as it is often a result of not only the local biological diversity of the environment in which it is produced, but also the cultural diversity of the community which prepares it (Gu and Subramanian 2014).

In the face of the consequences of changes in food systems (and dietary patterns, see the works of Popkin), scholars, and in particular ethnobiologists, have brought to the fore the need to take concrete actions to recover and safeguard endangered corpora of local food knowledge, given their potentially crucial role in tackling local and global challenges (Turner 2019; Vandebroek et al. 2011). In this perspective, particular attention is now paid to endangered and marginalized foods, also known as neglected and underutilized foods (De St. Maurice and Miller 2017; Meldrum and Padulosi 2017). While these products are socially and culturally embedded in the rural and indigenous foodscape (Barthel, Crumley, and Svedin 2013), they are gradually losing their nutritional and cultural role and have been marginalized because of their inability to adapt to modern trends in the food sector (e.g., standardization and industrialization of production and marketing systems), and because of unsustainable anthropogenic pressures on these resources and the surrounding environment.

Initiatives aimed at documenting, safeguarding and promoting endangered and marginalized traditional foods have been sporadically designed by scholars—for instance, Nabhan, Walker, and Moreno (2010) engaged several USA actors in identifying and valorizing disappearing wild foods; Taylor and Anderson (2020) identified cultural keystone food groups across migrants; Jacob et al. (2021) developed a method for gathering ethnonutritional data in dietary surveys on food biodiversity—food movements (Slow Food 2021), international organizations (Maundu et al. 2013; Padulosi et al. 2014), as well as governmental and scientific institutes committed to the promotion of national and regional material culture (e.g., The Polish Ethnographic Atlas created by the Institute of Archaeology and Ethnology of the Polish Academy of Sciences [Luczaj 2014] and the project *Wiki de Patrimonio Alimentario* funded by the Ecuadorian Ministry of Culture and Heritage [Ministerio de Cultura y Patrimonio del Ecuador 2019]).

Ethnobiologists and ethnobotanists have extensively studied food customs and folk use of cultivated and wild edible plants in the local cuisines. While until the 1990s food ethnobotany was centered on documenting wild food plants uses or local cultivated landraces, in the most recent decades the researches focused more also on the processing/preparations of food plants (gastronomy) and on the sociocultural meaning of the possible temporal and spatial changes of their uses (e.g., di Tizio et al. 2012; Garibay-Orijel et al. 2007; Kalle, Sökand, and Pieroni 2020). In particular, in the last decades, a growing number of scholars have increasingly carried out

research in the fields of food ethnobotany, ethnocuisine and ethnogastronomy with the aims of exploring the interactions between local communities, food, and the environment, as well as the evolution in the role of traditional foods in both traditional and modern culinary and gastronomic settings (e.g., Aceituno-Mata, Tardío, and Pardo-de-Santayana 2021; Blanco-Salas et al. 2019; Jacob and Albuquerque 2020; Luczaj et al. 2012).

In this endeavor, an important role is covered by food scouting, which can be conceived as “the ethnography-based documentation of folk/traditional perceptions, uses, and management of threatened or neglected plant, animal, and microbial food ingredients used within a given cultural setting/community as well as the folk customs attached to them that developed within a certain area as the result of a long socio-ecological coevolution” (Pieroni, Pawera, and Shah 2016, 55).

Food scouting in ethnobiology involves participatory research aimed at documenting and retrieving the food heritage of local communities, entailing a process of local consciousness rising of the unique and diverse local food resources (Pieroni et al. 2021b). It can act as a starting point to create participatory gastronomy-centered projects that can enhance the food sovereignty of rural communities (Turner et al. 2016) and prevent the loss of traditional and indigenous knowledge (Nabhan, Walker, and Moreno 2010). Moreover, as Nolan and Pieroni (2014) highlighted in a special issue of the *Journal of Ethnobiology*, traditional knowledge in local food systems can play a crucial role in the mitigation of food insecurity.

In the past two decades, food scouting has become fully part of the methodological toolkit in food and gastronomic ethnobiological studies (Cano and Suárez 2020; Cucinotta and Pieroni 2018; Pieroni, Fontefrancesco, and Vandebroek 2021a; Purba, Silalahi, and Nisyawati 2018). The growing body of research in this field is shedding light on the potentialities of this heuristic practice. In the ethnobiological and ethnoecological fields, some very comprehensive manuals (Albuquerque et al. 2014) and special issues of scientific journals (Stepp 2005) on basic techniques and methods traditionally used have been written. Among them, Justin Nolan together with other authors (Ryan, Nolan, and Yoder 2000) specifically highlighted ad hoc techniques for eliciting data during interviews by using successive freelisting to explore intracultural variations among informants during the first stages of research. However, not much has been specifically written on the methodology of food scouting.

To partially fill this gap, this contribution tackles some methodological issues connected to the documentation of food and gastronomic elements embedded in local and traditional knowledge. Drawing from our experiences in this field, we describe three possible applications of food scouting to elicit data on local food diversity and discuss the prospects and limitations of our approaches. The current contribution deliberately does not focus on data analysis and dissemination strategies, but only on field methods in food scouting.

Food Scouting: Exploring the Connection Between Products, Places, and People

Food scouting can be conceived as a set of methodological and analytical tools employed in an emerging transdisciplinary field of study involving those branches of ethnobiology, geography, and anthropology that have investigated issues connected to food and gastronomy, especially on food diversity and heritage.

Food scouting draws from ethnobiology and, more specifically, from gastronomic ethnobiology (Pieroni, Pawera, and Shah 2016), for what concerns the study of biodiversity and Traditional ecological knowledge (TEK) related to food. In this sense, it has as its main research topics and subjects the analysis of folk categorization, perceptions, management, uses, and preparation of threatened or neglected food ingredients, as well as their evolution and variability across time and space. Concurrently, food scouting draws from the anthropology of food in terms of methodological and analytical lenses used to explore the social, cultural, and economic dynamics associated with food production, exchange, and consumption. Finally, food scouting is linked to the discipline of geography, particularly to that branch that has dealt with issues related to agriculture, food, and gastronomy, regarding the study of the food-people-place nexus and the variables underpinning its evolution and transformation. By adopting foodscape as a framework, the geographical approach to food scouting aims to understand the place of food in the lives of different sets of communities and to explore how foodstuff and food practices fit within broader cultural and economic systems. In so doing, it seeks to explore the dynamics underpinning the revival and promotion of neglected and marginalized foods and associated heritage, paying attention to the actors, their roles, and interactions along this trajectory, as well as the possible unexpected side effects stemming from these processes.

Overall, food scouting research explores the people–food–territory nexus within a given foodscape, starting from the documentation of tangible and intangible elements tied to local and traditional food ingredients and dishes. In so doing, it pays particular attention to the situated material, social, and cultural elements and interactions that shape the relationship that a given community has with food and food-related environments.

Food scouting focuses on the search for and characterization of three main kinds of commodities within two dimensions (tangible and intangible), namely local food ingredients (wild and tamed species), food preparations, and recipes. It pays particular attention to food and food-related resources that have been embedded in traditional socioecological systems and foodscape and are now marginalized and threatened. It is remarkable how a few ethnobotanical food surveys also contributed to the discovery of new species to the local floras, fauna, and mycobiota (e.g., Eberhardt et al. 2020; Kasper-Pakosz, Pietras, and Łuczaj 2016).

In so doing, food scouting research aims to achieve two different and complementary objectives:

1. The characterization of the foodscape in terms of the diversity of food ingredients, products, and dishes (e.g., Quave and Pieroni 2014; Rampedi and Olivier 2013).

2. The socio-cultural, economic, and culinary analysis of specific food products, ingredients, or recipes within a specific area (e.g., Gendall et al. 2019; Liu et al. 2018; Svanberg 2015).

In order to achieve these goals, the research could start with the identification of relevant places of food production, distribution, and consumption, which include both public (e.g., restaurants, street food stalls, markets) and private spaces (e.g., houses, home gardens). In these key locations, the research is aimed at inventorying the diversity of local products or analyzing a specific food product, mapping the actors (human and non-human) that are active therein, and exploring the relationships among them.

Food scouting activities can be contextualized within a selected geographical area, whose extension varies depending on the scope of the study: from small locales that coincide with specific villages, cities, or segments of a province (e.g., Łuczaj et al. 2019; Pieroni and Giusti 2009), to more extended areas such as a country or even transnational regions (e.g., Dogan et al. 2015; Kala 2021).

The analysis of the food and gastronomic landscape of the area under investigation can be conducted using a mix of both etic and emic perspectives. The former approach addresses the need to define the main features of a selected region in terms of taxonomy of food commodities and places of production, trade, and consumption, as well as to understand the general practices linked with selected foods. The latter focuses on the folk perceptions of food-related resources, their uses and management with the aim of exploring their embeddedness, relevance, and evolution within a given food and cultural milieu.

To appreciate the perception of local actors, the research should take into account:

- the local systems of beliefs, and how they shape food practices;
- the language and linguistic practices associated with the food domain and the way they shape the local systems of classification used to describe the local foodscape;
- the sociocultural and economic practices (i.e., production, distribution, consumption, and disposal) associated with the food product and their meanings. These also include those actions traditionally identified as culinary practices.

In this perspective, food scouting research takes into consideration the socioeconomic, ecological, and cultural conditions within which food and food practices have developed across time and space, paying particular attention to:

- how the environment is perceived and understood by the community;
- what resources are locally available and used, and why a specific use choice could have been made;
- what factors drive the production, trade, and consumption of food.

Diversity of Methodological Frames for Food Scouting Research: Perspectives and Limitations

Acknowledging the multiplicity of methods applicable in food scouting research, we analyze here three specific scenarios of application of this methodological toolkit. The first case addresses market surveys as a way to obtain baseline data on the local food system and its associated diversity, the second focuses on context-based freelisting methods for eliciting wild food plant uses, and the third discusses methods for scouting and documenting artisanal food products. Overall, drawing from the research experiences of our research groups, we aim at providing scholars with possible conceptual, methodological, and practical guidelines to design and conduct studies aimed at scouting, inventorying, and documenting traditional foods and food-related resources. Specifically, we focus on selected scenarios and food categories or a combination thereof that can be investigated by adopting food scouting approaches.

Case One: Market Surveys as an Entry Point Into the Local Food System

Open-air markets, farmers markets, and informal markets play an important role in ethnobiological studies and, over the last decades, have been examined in very different geographical and socio-economic contexts (e.g., Bye and Linares 1983; Dénes 2017; Franco et al. 2020; Iskandar et al. 2018; Nanagulyan et al. 2020; Termote et al. 2012). Scholars have used these places as an entry point into local food systems, to establish first contact with local actors and collect baseline data on the foodscape (Łuczaj et al. 2021; Sõukand et al. 2020). Moreover, market surveys can shed light on the heterogeneity of the ethnic food cultures in a particular area, as well as the exchanges, interactions, and complementarity between communities living in a given territory (Farfán-Heredia, Casas, and Rangel-Landa 2018).

Our research team has employed food scouting methods to explore marketplaces (i.e., different sets of social institutions, actors, products, transactional relationships, trading, and cultural practices [Bestor 2004]) and investigate the role covered by selected foods and food categories in these places.

In this regard, methods such as participant and personal observations, questionnaires, and interviews (structured and unstructured) can be used in the preliminary analysis of markets to identify the diversity of products exchanged in the marketplace and the space occupied by local and traditional food products (Zhang et al. 2020).

Our research group addressed this issue with a study on the Ukrainian informal markets that aimed at inventorying the most relevant food plant products sold therein and analyzed how these markets represent remarkable food refugia for local niche foods (Sõukand et al. 2020). To this end, personal

observations and informal conversations were used to explore the occurrence and frequency of homemade and unusual artisan products in 28 markets in different localities across Ukraine. Crossing the baseline data collected during the preliminary scouting activity with an analysis of the origin of *babushka* markets during the Soviet period, the study highlighted the role of this interstitial space as a safety net for local communities, as well as a reservoir of biocultural diversity.

Market surveys can also help to understand the cultural, economic, and economic importance of specific foods and food categories (e.g., traditional and heirloom foods), as well as the factors that favor or constrain their diffusion and commercialization (Manzanero-Medina et al. 2020).

During the research conducted by our research group in Nakuru County, in the Kenyan Rift Valley (Fontefrancesco and Zocchi 2020), we employed food scouting methods to characterize the regional marketplace in terms of food diversity and explore the current role played by indigenous crops (hereinafter IC), also known as neglected and underutilized species (Padulosi, Thompson, and Rudebjer 2013).

Fieldwork preparation entailed two main activities:

1. A literature review (including academic publications and grey literature) on ICs in Kenya aimed at identifying the most representative species produced, harvested, and consumed in Nakuru County, as well as to investigating the food market structure in Kenya and analyze the most relevant market typologies at the national level.
2. The identification of the markets, through a mix of convenience and purposive sampling, which was informed by a preliminary mapping activity using a combination of different tools and data repositories.

Specifically, exploratory fieldwork was also done in collaboration with local assistant researchers to assess the information collected prior to the field period as well as to map other places dedicated to the commercialization of food products, such as informal marketplaces and stalls along the street. In order to assess the ongoing transformation of the regional foodscape, supermarkets were also surveyed.

Fieldwork entailed a two-step market survey in nineteen rural and urban markets in different geographical locations (urban, peri-urban, and rural) of Nakuru County. First, the research was aimed at exploring the organization and functioning of the business practice (i.e., opening hours, general profile of sellers, and consumers), creating a general inventory of the food offering, and identifying the most representative food commodity categories. To this end, personal observations and informal conversations were made with people attending the markets (i.e., sellers, consumers, and market managers). Second, semistructured interviews were carried out with key informants (mainly market vendors and market managers) to collect information on ICs and products obtained from their

processing that were identified either beforehand through the literature review or directly in the field. Informants were asked to list the products sold throughout the year and to mention the ICs they usually sell. A key issue was to find a proper strategy to define and convey the concept of ICs among sellers. To this end, we asked sellers to describe the main characteristics of the vegetables sold in their stalls and to define the food plants according to their main alimentary, cultural, and economic characteristics. In so doing, ICs were defined according to the emic perception of the sellers who often defined this food plant category with the Swahili word *mboga ya kienieji* (i.e., traditional vegetables). For each of the mentioned species, we elicited data on the local names, edible parts, cooking and processing methods, place of provenance, seasonal availability, and frequency of the product in the surveyed markets. By exploring the background of sellers through the life history method (Bertaux 1999), we noticed that the term *mboga ya kienieji* was used to define different taxa of leafy vegetables, both wild and cultivated, whose uses were frequently associated with the preparation of home-made dishes. Accordingly, to further explore the overall diversity of ICs, we asked sellers to mention and describe plant and plant-based foods that they traditionally eat at home, which are not usually offered in the market and/or no longer commercialized. In this latter case, they were also asked to explain the factors behind the absence of these products from the marketplace. The interviews were also aimed at understanding how, according to our informants, trade, purchasing, and consumption practices affected the presence of ICs in the local markets.

Ultimately, the field observations and data gathered during the interviews were contextualized with respect to the literature to infer the reasons behind the standardization of the food offered across Nakuru County.

Using ICs as a proxy to understand the overall dynamics related to the presence and diffusion of traditional foods in the foodscape of Nakuru, the research highlighted a homogeneous foodscape regardless of the geographical location of the market, with a limited diffusion and offer of ICs, especially for leafy vegetables. According to sellers and consumers, this scenario was due to a lack of knowledge of the product and its cooking preparation, to the perishability of the product, as well as to the reluctance of Kenyan consumers to introduce new foods into their diets. Moreover, cultural diversity and infrastructural accessibility seemed to play central roles in motivating the entrepreneurial choices of marginalizing ICs in the market. In fact, while people provide the majority of ICs through domestic self-production or directly from the place of provenance far away from Nakuru, in the marketplaces of the county they buy the most common and longest-lasting products whose consumption is shared by different ethnic groups. The predominance of cash crops also reflects some logistical features of most marketplaces (e.g., lack of storage and refrigeration technologies and facilities) that force sellers to offer fast-selling and long-lasting products, further diminishing the space for ICs in the market.

While market surveys have some limitations (Nguyen, Wieting, and Doherty 2008; Taylor and Anderson 2014), they represent a valuable tool in the framework of food scouting research for conducting a preliminary screening of food resources, including their occurrence and importance at the scale of the analysis. As shown in the cases discussed above, market surveys, carried out with a combination of anthropological and ethnobotanical methods, can highlight specific dynamics underpinning the presence and diffusion of traditional products in public spaces. In doing so, they can guide researchers in future activities aimed at the scouting and documentation of traditional foods by:

- exploring the interplay between tangible and intangible elements in the food characterization of the marketplace,
- tracing back the chain of specific food products (identified during market surveys) and explore more thoroughly their embeddedness in the local/regional foodscape,
- expanding scouting activities in other places and spaces dedicated to the production and consumption of traditional foods.

Case Two: Eliciting Wild Plants and Mushrooms Through Context-Based Freelisting

Researching wild foods has been the objective of many ethnobiological (ethnobotanical, ethnomycological and ethnozoo-logical) studies over the last two decades and in various areas of the globe (e.g., Duda, Gallois, and Reyes-García 2018; Pieroni, Fontefrancesco, and Vandebroek 2021a; Živković et al. 2021).

The quest starts from understanding how to convey to people the notion of “wild,” as it differs based on the culture and the presence of “wildness” in the specific field location. While bioscientists have more or less agreed on what wild is, namely those plants that are not directly cultivated, local perceptions of wilderness may be slightly or considerably different in different countries and regions. For example, in Estonia plants (trees, bushes) once cultivated but now growing on no-man’s-land or fruits hanging out over the fence of someone’s garden are considered wild (Sõukand and Kalle 2015; Sõukand and Kalle 2016), while in Southern Italy non-deliberately-cultivated leafy vegetables fit into one cognitive group of food ingredients named *foglie* (Pieroni et al. 2002). Furthermore, in addition to the wild plants commonly considered valuable/useful, Romanians living in Ukrainian and Romanian Bukovina identified another category: *buruieni* (possibly translated as weeds), that is (common) plants that have little economic value yet could represent a source of food in various preparations. Similarly, during research studies conducted in Pakistan, people were confused by the term “wild” as this was mostly used to refer to those plants that grow in forests or mountains and never included those plants that grow in the vicinity of their houses. It was observed

that the term “non-cultivated” was more appealing to them and easily understood. Moreover, in another Pakistani region, the term “wild” was normally utilized for those plants that were no longer of use to humans (Aziz et al. 2020a; Aziz, Ullah, and Pieroni 2020b, 2021), while in northern Albania the same term is attributed to plants that are similar to a cognitive prototype, namely plant species resembling the most used reference plants (Pieroni 2010).

A further crucial element of field documentation of traditional wild foods is understanding emic food categories. Following Quinlan, Quinlan, and Nolan (2002), our research groups have often used a two-step process to begin the research. From a general list of wild food preparations, we first identify those that are possibly applied in the community we want to study. Drawing from Balée and Nolan (2015), we use structured freelisting to compile a general and representative emic model within the community setting. To explore the emic understanding of what constitutes the cultural domain of wild food, different cognitive categories including morphological, functional rationales, and classification in the culinary sphere are taken into account.

Refining of the categories according to the context we are going to study may necessitate literature research, yet the best picture and specific details (e.g., ritual and sacred foods, names of foods/food categories) can be obtained only in the field itself, especially if the community is an ethnic/linguistic/cultural/religious minority. From that, a mental map of the category list can be built, which can support the elicitation of data during the interview, as a semi-structured interview based on dishes can yield new and unexpected findings. The mental map avoids accidentally omitting some food categories. An example of a general list we have used for more than 20 years in our research group, adapting it to specific circumstances for eliciting information on wild food and mushroom products (or even sometimes on cultivated plants whose use diverge from the mainstream) can be found below:

- wild vegetables (both aerial and subterranean plant parts prepared as salads, or cooked in soups or side dishes, as well as in omelettes, filled pies, pasta, etc.);
- wild fruits (fresh, dried, jams, and other preserves with or without sugar);
- seasoning/aromatic wild plants;
- wild plants used in fermented foods (i.e., additives to lacto-fermented preserves or rapid lacto-fermentations (cereal drinks, kvass, vegetables) (for more details, see Sõukand et al. 2015), plants used as yeast, rennet, or yogurt starters);
- wild plants used as food wrapping material (e.g., *sarma*; see Dogan et al. 2015);
- alcoholic (fruits added to liqueurs, aromatized wines, cordials) and nonalcoholic beverages; syrups, *kompot* (preserved fruits in sweet water), tree saps (the fluid transported by xylem cells of a tree, mainly collected from birch and maple during early spring and then consumed fresh or preserved fermented, frozen, or pasteurized; specific to the Northern hemisphere, see also Svanberg et al. 2012);
- herbal teas;
- wood and other plant parts used in food smoking;
- raw plant parts snacked on or sucked—normally ingested within nondomestic contexts or by children;
- mushrooms (including truffles);
- algae (and other biological organisms, such as cyanobacteria).

In many areas of the world, one of the hardest tasks is to find study participants willing to talk enthusiastically on the subject from the very start. Very often the first answer from a person is “I do not pick any plants from the wild at all.” Therefore, to continue the conversation and obtain the necessary information, it is important to approach them through examples or—in the case of plants used mainly in the past—positive memories: “How did your mother/grandmother use the plants? What plants did she put in her mouth while playing with other children as a child?” Such memory drivers arouse a person’s interest in continuing the interview.

The use of wild plants can also be remembered by trying to elicit the most common local wild foods (the ones surely everyone has used and/or tried) or by asking participants to name the most important plants at different times of the years. For example, in the Northern hemisphere, researchers can ask about the first plants growing in spring and later in summer and autumn.

Surely everyone has also eaten some wild berries and fruits, and so asking about berries and fruits right away will also help move the conversation forward. At the same time, it should be noted that people often do not categorize fruits growing on trees and shrubs as berries. Nuts and tree sap are also often forgotten. They must be asked about separately.

It is then possible to continue the conversation by asking the person what flowers or plants they have put in the mouth or picked from nature (e.g., to make tea). Recalling such beautiful memories often gives a person a good feeling. Then ask further what leaves, stems, seeds, and tree bark they have tried and what taste those items have. Roots should be asked about last as the answer is usually “no” and it is difficult to continue the interview if the first answer is simply “no.”

It is also helpful to structure the questionnaire by asking about the ecological places where the plants grow. What edible plants they use from forests, meadows, swamps, near rivers/seas/lakes, weeds in fields and gardens, growing by the roadside, etc. By the end of this part of the semi-structured interview, it is important to ask if the interviewee can remember the (past) use of any other plant (also those not included in the mentioned categories).

Lastly, it is important to involve representatives of as diverse a cross-section of the community as possible. It often happens that the village elite suggest not visiting certain neighborhoods, yet interviews with exactly those households can reveal several previously unmentioned plants or uses.

Case Three: Scouting and Documenting Artisanal Food Products

Artisanal foods are a good proxy to study the characteristics and development of traditional food knowledge embedded in food socio-ecological systems. Artisanal foods are here defined as those products requiring some form of processing or preservation, whose transformation involves the use of traditional techniques and low levels of capital investment (West 2016). They are the result of a longstanding relationship between local communities, the surrounding environments, and their resources.

A growing number of ethnobiological studies have investigated so far traditional knowledge and practices linked to the preparation and consumption of artisanal foods such as sweets (Jain 2020), traditional beverages (Cano and Suárez 2020; Madej et al. 2014), cereal-based products (Chemache et al. 2018), as well as meat and fish preserves (Ivanova et al. 2022; Svanberg 2015).

In this regard, our research groups have carried out food scouting investigations in Europe, Latin America, and East Africa within the framework of the Ark of Taste project with the aim of recording artisanal food productions and their associated heritage, as well as preliminarily assessing the main trends connected to their production, commercialization, and consumption (Barstow & Zocchi 2018; Kalle 2021; Zocchi 2017).

A general list of the artisanal food categories we have investigated in our research includes the following:

- bread and baked goods,
- cheese and dairy products,
- cured meats and meat products,
- distilled and fermented beverages,
- fish-based products and preserves,
- fruit preserves,
- pastries and sweets,
- vegetables preserves.

In the last two decades, scholars have tried to design ad hoc methodologies to inventory these products and their cultural values, but often from the angle of specific disciplines (e.g., Grimaldi, Fassino, and Porporato 2019). Our mapping and scouting of artisanal products draw from an interdisciplinary approach, where ethnological, ethnobiological, geographical, and historical science methods are combined.

The methodological approach to the scouting of artisanal foods involves two main tasks, namely food mapping and the analysis of ecogastronomic units of concern (i.e., local food biocultural heritage resources threatened or endangered [Nabhan, Walker, and Moreno 2010]). Such activities can be carried out simultaneously or separately according to the scope of the research.

Food mapping is performed to collect, record, and analyze information on the food and culinary resources, places, networks, and patterns of usage of specific food categories in a

given area. To this end, a combination of desk (grey and scientific literature reviews, online scouting) and field research methods (personal observations and informal conversations) is used.

Within a given area, places such as production and processing sites (e.g., artisanal workshops, bakeries, mills, breweries), markets, food shops, food fairs, and restaurants are mapped, and an inventory of the local food products present therein is carried out. Besides the outlets traditionally linked to the commercialization and consumption of artisanal food, considering supermarkets and modern shops may help to better understand the presence and role of these products within the foodscape, as well as to detect the existence of modern and traditional variations of these food categories.

Scientific and grey literature (e.g., historical records held by libraries, local government offices, local communities in the area, universities or study centers) may represent useful sources during food mapping activities. Moreover, online platforms (e.g., social media, YouTube, websites) are increasingly becoming an important tool for mapping places and actors connected to the local food system. However, this information must be viewed cautiously since online research could generate biased and partial representations of the diversity and relevance of local food productions. Two different problems may arise, namely the overrepresentation of commercial versions of artisanal products and the omission of products intended for home consumption or marketed through informal networks.

During food mapping, exploratory field visits can be carried out to establish first contact with key informants (i.e., bearers of knowledge and specific experiences connected to food and agricultural milieu) and preliminarily analyze the diversity and relevance of specific food and food-related resources. In this sense, informal conversations and meetings with direct food actors (e.g., small-scale farmers, artisan producers, sellers, traditional cooks, artisanal producers of cooking utensils and tools) can highlight crucial elements to define the meaning of a product, a food category, or a processing technique within the local food and cultural system.

Information gathered from direct actors can be further expanded through interactions with nondirect food actors (e.g., representatives of local professional associations, food movements, cultural associations, tourism, and hospitality organizations) and triangulated with the available literature.

While food mapping aims to frame the general food-related resources within a given area, the analysis of ecogastronomic units of concern entails an in-depth documentation and investigation of precise local food products.

The activity could start by scaling down the scope of food scouting to artisanal foods with the following characteristics:

- linked with local varieties or native landraces or breeds and processed with traditional processing techniques;
- tied to a specific territory and the memory, identity, and traditional knowledge of a particular community;

- produced on a small scale both for home consumption and marketing;
- threatened with extinction (current, possible, or foreseeable). In this regard, we paid particular attention to those products that, due to social, cultural, ecological, and economic factors, are likely to disappear from the local foodscape. Often, what is at risk is not always the product itself, but rather its ingredients and traditional uses.

To elicit data on ecogastronomic units of concern, our research teams have relied mainly on ethnographic methods such as open and semi-structured interviews, life-history recollections, focus groups, and direct observations.

During the fieldwork, we usually gathered information from direct actors involved in the processing of the product, focusing on three main topics: (a) characteristics of the product and processing methods, (b) connection of the product to a given socio-ecological system, in both environmental and socio-historical terms, and (c) availability and diffusion at the scale of analysis.

Fieldwork activities with artisanal producers and related actors could be aimed at eliciting information on:

- the physical and sensory characteristics of the artisanal food,
- its ingredients,
- the different stages of production,
- the techniques and tools used during the processing.

Particular attention could be given to the main ingredients of the product and their value chains. In this regard, it is useful to explore the provenance and means of procurement of raw materials. Moreover, specific attention can be paid to the embeddedness of the processed product and its raw materials in the local food system. To this end, it may be helpful to ask whether the product is made with local plant species or native breeds and to know if these raw materials exist only in this territory or if they can be found in broader geographical areas.

To assess the accuracy of the evidence obtained, fieldwork activities should involve different members of the same community and expand the reach of the research to neighboring villages. A more comprehensive geographical documentation of the product would shed light on its spatial variability. This would, in turn, help to define in a more precise way its connection with a specific food socio-ecological system.

Exploring the temporal evolution of a product's characteristics, as well as its historical and cultural meanings (i.e., diachronic analysis), is another central point in the documentation of artisanal foods. Interviews with members of different generations may shed light on the material modifications the product has gone through (e.g., ingredients, processing techniques, tools), as well as the factors that have driven these changes, and the main differences between modern and traditional variations. For instance, elderly individuals can provide information on local raw materials, which today might be difficult to find,

and on processing techniques that have been replaced. Moreover, they can help to determine when "ancient" versions of the products were last made, and to identify how many generations we must go back for this to be established. Starting from questions on physical aspects of the product (e.g., substitutions of ingredients, modernization of processing techniques), it is possible to expand the conversation on the impacts of these changes on intangible elements that have traditionally tied the product to the food and cultural heritage of the local community.

To assess the role and diffusion of the product in the area under investigation, it is crucial to follow and explore the networks that link the product to the local and regional foodscape. To this end, fieldwork activities can be carried out in different settings and involve interactions with different actors along the production and marketing chains of a product (e.g., suppliers of ingredients, sellers, cooks, and customers). By expanding the research beyond the spaces dedicated to production, it is possible to follow the channels through which the product enters into broader socioeconomic and cultural circuits and explore the differences and similarities in the roles and meanings attached to the product by the actors therein. This would also help to identify current marketing and consumption patterns connected to the product or the broad category to which it belongs and understand the extent to which they can feed back on and shape elements connected to the production context.

At the End of the Day...

Acknowledging the contributions of Justin Nolan to the advancement of methods in the field of ethnobiology, this paper seeks to preliminarily address some methodological aspects connected to the documentation of local food products and associated heritage.

Drawing from our experiences in this field, we suggest that germane questions and rigorous research in food scouting can contribute in multiple ways to advancing our understanding of the evolution of food habits and the overall dynamics shaping local food systems. This would, in turn, allow ethnobiologists (and more in general scholars working on these topics) to offer communities instruments and methodologies for possibly preserving and promoting local foods, preparations, and techniques holding cultural, social, ecological, and economic values.

In this regard, market surveys have proved to be a valuable means to understand specific dynamics underpinning the presence and diffusion of traditional products in public spaces, as well as the prospects and barriers toward their promotion.

Moreover, as shown in the case studies on the research and documentation of wild foods and artisanal foods, the ethnobiology of food scouting may help to understand the evolution of the cultural role of local food products. Specifically, it can shed light on the drivers of change and their nature (i.e., economic, social, and cultural) and foresee the current and future impacts of change on the complex interactions between human societies, food, and the environment.

Indeed, food scouting activities do not stop with the mere documentation of local food itself. They are, foremost, designed to analyze, often cross-culturally, and interpret the cultural insiders' views of local food-related resources (i.e., perceptions, narratives, and stories), placing them in the broader sociocultural and economic context of belonging.

Overall, food scouting seeks to move beyond the focus on specific disciplines to unpack the complex and mutually dependent variables that shape the ways food and food practices engage different stakeholders/agents with issues connected to their identity, culture, and livelihoods. As such, food scouting could open up processes of food heritagization through the recognition of specific food ingredients, products, dishes, and food practices as part of a collective heritage. Moreover, if properly designed, calibrated, and disseminated, the scouting and documentation of local and traditional foods can help to limit some side effects connected to the heritagization process, such as the omission of tangible and intangible elements of the local food system, and the exclusion of key stakeholders from the potential benefits stemming from the promotion of food heritage (Zocchi et al. 2021).

We strongly believe that future trajectories of food scouting should include the codesign of ad hoc transdisciplinary methods together with local actors that allow exploring relationships with food and its surrounding context through their personal experiences. This would, in turn, help to raise awareness for the central role played by food and gastronomy in the cohesion of local communities, as the contributions of Justin Nolan have clearly shown.

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