

SPECIAL FEATURE



Wild fruit from the *Anona Senegalensis* (Combretones)©FAO/Roberto Faidutti

From Foraging to....foraging

Edmond Dounias

Only 12000 years ago humankind was still depending exclusively on foraging activities for daily subsistence. Today, the hunter-gatherer societies whose livelihoods still primarily depend on resources that are "taken from the wild" represent only 0,002% of the current world population. We tend to consider these persisting nomadic foragers as the very last depositories of a bygone era when humans were struggling daily to obtain food in very precarious circumstances.

This way of apprehending our contemporary hunter-gatherers induces several misconceptions vis-à-vis foraging activities and the potential role they could still play in managing uncultivated resources and in feeding the world.

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Foraging is seen as an improbable way of tracking down resources. There is a strong belief that nature acts as a safety net in which poor and hungry people may occasionally pick something up to eat in periods of drastic food shortage.

Resources in the wild are accordingly perceived as scarce and available only for small groups of people, and requiring long days of hard work to collect them. And according to the optimal foraging theory which was in vogue three decades ago, their caloric return is often seen as too low to compensate the energy mobilized to collect them.

Foraging activities are perceived as belonging to the past: since it is the principal channel of subsistence for small human groups whose ways of life are about to disappear, foraging is in essence understood as an old-fashioned and anachronistic manner to exploit resources.

This being said, there is no obvious need to explore foraging as a means to provide insights for the future, especially with regard to the challenging issue of feeding the fast-growing world population, which is going to approach 10 billion by 2050.

It is also commonly believed that only the last nomadic hunter-gatherers forage. Foraging is thus perceived as antithetic to farming. Foraging versus farming has become a mainstream polarity, an inevitable incompatibility. Along this line, humankind had no other evolutionary choice but to shift from the former to the latter. This dichotomist and simplistic way of approaching foraging is primarily enacted by the long persisting belief that nature must be tamed and submissive. It thus ignores a vast continuum of evolutionary, yet contemporary practices which should not necessarily lead to the full domestication of food resources.

In current times, diet diversification has become the motto of a modern agriculture which is nonetheless responsible for the excessive homogenization of food resources produced worldwide and of the related drop in biodiversity in agricultural landscapes; only 12 plant crops and 14 animal species ensure 98% of world's food needs. This is in stark contrast to the approximately 7,000 plants species and several thousand animal species that have commonly been used for human nutrition and health since the Neolithic.

While cohorts of agronomists and nutritionists have mobilized around the challenge of looking for ways to (re)introduce diversity in today's agricultural systems and educate the poor on how to diversify their dietary regimes to meet their nutritional needs, common sense should incline us to look at past diets and take lessons from how these people – commonly described as poor – could maintain such diversified and rich diets that we are now trying to eagerly reinvent. Foraging activities once contributed significantly to these diversified diets and discouragement of foraging activities, often hastened by government incentives and development planners, have been the cause of impoverishment of these traditional dietary systems. Time has come to dispel the common myths on foraging.

First of all, foraging has persisted among many farming societies and was not an exclusive practice of hunter-gatherers alone. Foraging was, and still is, an integrating component of farming systems, rendering the classical dichotomy between eating from the wild versus cultivating crops and herding cattle inaccurate. For instance, the edible-wild food resource (www.ediblewildfood.com) reminds us that modern agriculture considers several hundreds of plants as "weeds" yet they are in fact strategic constituents of agroecosystems and contribute significantly to local recipes as flavourings, herbs, spices, seasonings, condiments and vegetables. Foraging is not anecdotal and remains essential in the daily life of several hundreds of millions of smallholder farmers throughout the tropics. Swidden or fallow fields

and gardens are fertile ground for feral forms of plants (and animals), which foster gene flows between domesticated plants and their wild parents. These flows prevent genetic bottlenecks and maintain a high diversity of usable spontaneous resources along a continuum between wild and domesticated.

Agroforestry systems maintained near homestead areas — for instance home gardens and backyards — are also privileged sites for foraging in permanent components of the agroecosystem in which wild, feral and cultivated individuals are tightly intermingled for the sake of diversity.

Many foraging activities among farming societies are carried out by children. Through these activities, children cover alone a significant part of their diet independently of the meals provided by their parents. In periods of food shortage, food collected by children from the wild are eaten as snacks and may ensure up to 35% of daily food consumption. All the food resources that children pick up from the bush — fruits, frogs, fish, small birds, insects and many others generally considered with disgust by adults or taboo — not only provide calories and nutrients: their harvesting is also a pathway towards education. Children are depositories of the sphere of knowledge that they transmit to each other without the intervention of adults. As such, they are not always this high-risk group that we suspect that they are: in many respects, through the control of foraging activities, they contribute to household economy and food security. However, the academic education system rarely acknowledges this “school of nature” and foraging activities.

One of the major drivers for the domestication of food plants was the reduction of the thermostable compounds that they naturally contain to protect themselves from herbivores. Many food plants that are foraged from the wild require neutralization of the phytochemicals they still contain prior to their consumption. The persistence of foraging activities is pending on the preservation of local ecological knowledge and know-how in the field of food technology in order to ensure the palatability of these resources as well as the diversity of the recipes. Reviving foraging practices over resources that have been long neglected is impossible if the related expertise on how to detoxify them has been lost by lack of transmission from generation to generation.

Many foraged resources are “para”-cultivated in the sense that they mobilize perennial harvesting practices aimed at managing the resource production while maintaining it in their original environment. These procedures are accompanied by social rules protecting the rights of ownership over a supposedly “wild” resource, which is cared for, protected, owned, managed, and eventually inherited as a private possession. Beyond their primary function as food, these paracultivated resources occupy the full status of a cultural good. They sometimes appear in matrimonial payments, prestige dishes and the pharmacopoeia, and they may even play a central role as ritual objects. They not only contribute to nutritional security, they also mediate relationships

with the invisible world and the spirits who are seen to exert control over “natural” resources. Paracultivation of foraged resources is much more frequent than we think — it has been reported for instance for wild yams, sago and acai palm trees, honeybee and termite nests, and a few oleoproteaginous seed trees. Foraging clearly illustrates how ecological perspectives should not be separated from cultural aspects, or people’s perceptions of their resources.

*Edmond Dounias works for the French Research Institute for Development ([IRD](#)) and is Senior Research Associate to the Center for International Forestry Research ([CIFOR](#)). He is based at the Center for Functional and Evolutionary Ecology ([CEFE](#)) in Montpellier (France). His research activities focus on the biocultural interactions between forest dwellers and tropical forests in a context of drastic change, with a particular emphasis on hunting and gathering nomadic societies in the Congo Basin and Borneo. **For more information, please contact: edounias@cgiar.org***

Dounias Edmond. From foraging to... foraging. Non-Wood Forest Products Newsletter, 2014, 4, [4 p. en ligne].