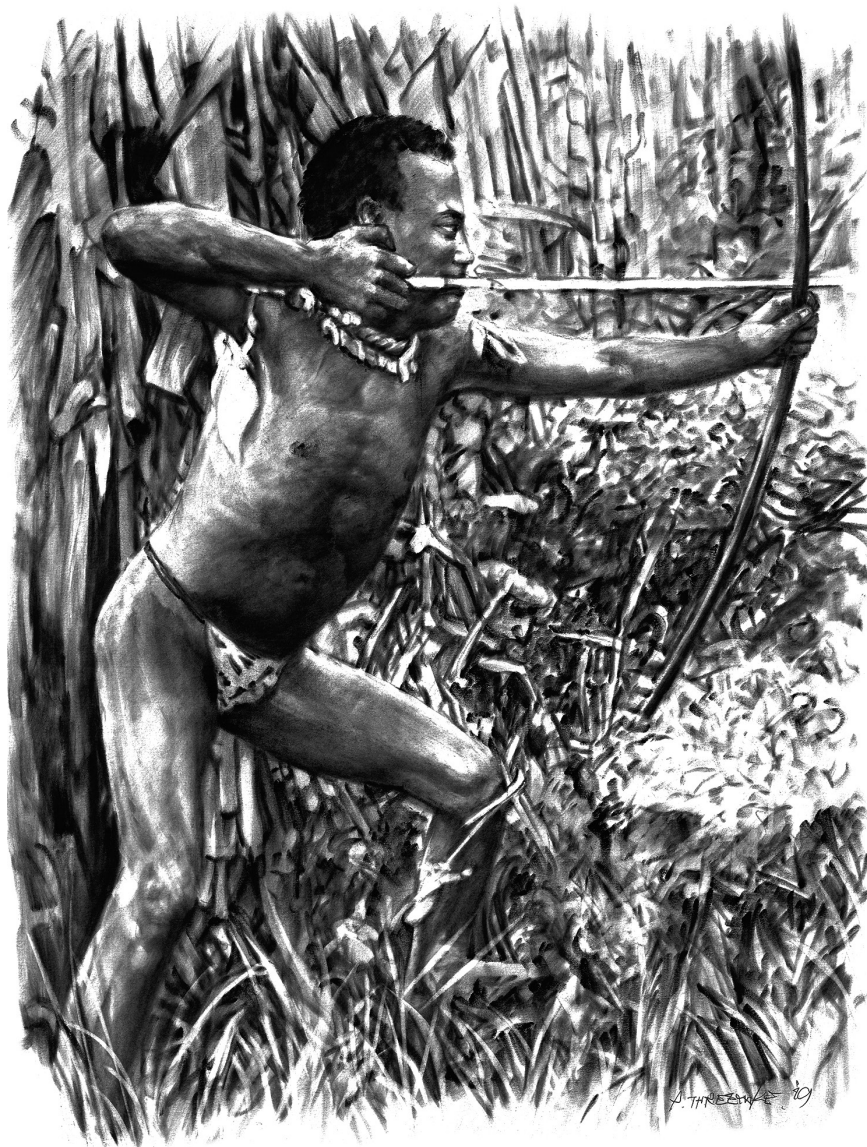


II. EVOLUTION OF FOOD PRODUCTION SYSTEMS TO SUPPORT INCREASING POPULATIONS



An Agta hunter draws his bow against an unseen target in the Philippines province of Aurora (see Minter and Headland, ch. 8, this volume). Hunting deer, wild pigs and monkeys with bows and arrows was a main economic activity of Agta men in the 1960s. Home-made shotguns came into use in the 1970s and by 2010, bows and arrows had disappeared.

Sketch based on a photo by Thomas Headland in 1965.

Synthesis



FORAGING IS NOT ANTITHETICAL TO FARMING

Swidden cultivation, following the perspective of present-day hunter-gatherers

*Edmond Dounias**

It is a truism to say that governments, whatever their latitude, distrust nomadic people. Better access to education, health services, markets and job opportunities are among the recurrent promises brandished by authorities in their efforts to persuade the last of the present-day hunter-gatherer societies to settle down.

Present-day hunter-gatherers comprise around 10 million people. They represent 2.1% of the world's indigenous peoples. This small fraction of humankind – approximately 0.12% of the worldwide population – speaks nearly 5% of the 7700 languages that are still spoken around the world. But languages are receding dramatically, and so is the cultural diversity that is related to them (Hays et al., 2022) and the biological diversity that is hosted in the territories of these indigenous peoples (IPBES, 2019). Despite their small numbers, then, hunter-gatherer groups maintain a critical repository of human cultural and linguistic diversity, and play an important role in maintaining the biodiversity of the lands on which they live (Garnett et al., 2018).

Hunter-gatherer groups are not only recognizable by their high mobility along linear territorial paths that are used on a seasonal basis, but they also have socio-political features in common, which can be summarized as (1) egalitarian social structures; (2) sociality based on inclusion and non-coercive relations; (3) an emphasis on individual autonomy; and (4) environment-oriented ontologies that contribute to sustainable forms of natural-resource use (Bird-David, 2015). They are finally distinguishable by their far-end position along the spectrum of marginalization, making them most vulnerable to its pernicious effects. Almost everywhere, they experience rapid dispossession of their lands, forced sedentarization and targeted assimilation processes. Furthermore – like most indigenous peoples – they also face

* DR. EDMOND DOUNIAS, Research Director at the French National Research Institute for Sustainable Development (IRD), CEFE, Univ Montpellier, CNRS, EPHE, IRD, Montpellier, France.

imminent threats that include climate change and environmental deterioration, extractive industries, land insecurity, and social unrest (Mamo, 2020). Most hunter-gatherer societies now confront both exclusion and assimilation simultaneously. They are no longer able to survive solely from their traditional subsistence techniques, and now need to engage in diversified economic activities.

A large majority of persisting hunter-gatherer societies, whose livelihoods used to depend mainly on foraging activities, have now adopted swidden cultivation (Dounias et al., 2007). Compared to the swiddens of full-time farmers, those of hunter-gatherer societies are much smaller in size and less carefully prepared, cleaned, and maintained. Tree cutting and burning is minimal, or replaced by slash and mulch; there is less weeding and elimination of vegetal debris and there are neither fences nor surveillance. The crops are poorer in diversity, with fewer cultigens and fewer cultivars of each cultigen. In the end, crop yields appear ridiculously low in comparison to yields obtained by neighbouring traditional farmers.

Nevertheless, it is important to adopt the foragers' point of view in order to better capture the logic of their swiddening activities, and not to be misled by the false mediocrity of their practices.

First of all, by practising shifting cultivation, hunter-gatherers wish to reassure the outside world of their efforts to conform to a way of life deemed decent by the authorities, and thus to deserve the consideration due to them. Their swiddens are seen as evidence of their efforts to settle down and to request the socio-political advantages granted to farmers. As hunter-gatherers, they have always been deprived of such advantages. Comforting the administrative authorities allows them to legitimately claim basic civil rights, including identity cards, the right to vote, and access to primary healthcare. At the very least, they can claim to be regarded as human beings worthy of consideration.

The apparent paucity of hunter-gatherers' farming practices should not be interpreted as a lack of skill, but rather as a deliberate choice. Accordingly, action plans carried out by authorities and many non-governmental organizations (NGOs) in order to improve their capability and autonomy in farming are a waste of time and reveal a lack of foresight. In most cases, swidden agriculture constitutes only a secondary component of the diversified land-use system of hunter-gatherers. Their skills in swiddening are long learned and constantly practised when they work as labourers in the fields of more experienced farmers. Many hunter-gatherers prefer to hire out their labour and receive in-kind payments in return. Full-time farmers pay them out of their agricultural surpluses, and this compensates hunter-gatherers for the shortcomings of their agriculture. Thus, everyone reaps a reciprocal benefit.

The low-yielding swiddens of present-day foragers reveal a deliberate strategy to invest minimally in crop production and a well-reasoned decision to attribute a marginal value to farming and to redirect their efforts to other components of a diversified livelihood strategy. This translates into an intention to devote as little time as possible to their farms, including swiddens, plantations and home gardens, and when it is necessary to increase this time, they prefer to accept the tasks of salaried agricultural labourers.

Most importantly, the historical ecology approach reveals a connivance between hunter-gatherers and their natural environment, based on a co-construction of ecosystems whose dynamics result from the combined interventions of humans and natural engineers. Through generations that have succeeded one another over millennia, hunter-gatherers have profoundly oriented the distribution of spontaneous resources in space and time. They have shaped the mosaic-like structure of the ecosystems upon which they rely for their subsistence.

Unless they are fully domesticated, the ecosystems that sustain hunter-gatherers are no longer completely 'natural'. The shaping of these ecosystems by formerly nomadic hunter-gatherers involves very diverse forms of intervention along a continuum between two idealized extremes referred to as 'wild' versus 'domesticated'. The swiddening practices of these peoples are fully integrated along this continuum; they participate in a cosmogony that aims to accompany natural ecological dynamics and is without any pretention of eventually taming nature.

Hunter-gatherers show a strong preference for cultivating less toxic varieties of staple crops; their intention is clearly meant to reduce the food-processing time when these crops are harvested. In line with this same intention, hunter-gatherers prefer to be paid 'in kind' in exchange for their labour. The direct conversion of 'pay' into immediate consumption of meals allows a substantial saving of time that would otherwise be spent in harvesting, storage, and tedious processing of foods that contain toxins.

Another peculiarity of the swiddens and home gardens owned by hunter-gatherers is their relative lack of spice plants. As well as acting upon the sensory organs, spices are known for their antimicrobial properties, which are particularly necessary when food processing and consumption are deferred from the moment when the food resources are obtained. Hunter-gatherers are characterized by their 'immediate-return economy'; they obtain a direct return from their labour and their food is neither elaborately processed nor stored (Woodburn, 1982). Thus, they enjoy consuming very quickly their freshly acquired food products. This propensity for immediate consumption makes the recourse to spices and their anti-bacterial properties unnecessary (Dounias et al., 2006).

The swiddens form pools of cultivars that are accessible when needed, without restrictions, to all members of the community, especially when fields have turned into fallows. Because they are neither protected by fences nor safeguarded, the swiddens also attract wildlife. In essence, swiddening hunter-gatherers accept a loss of crop production because the loss is advantageously compensated by the capture of game. Furthermore, wild animals are attracted to the cultivated plots by fruit and seeds produced by trees that have not been felled and that purposely persist in the swiddens. This wildlife has a major part to play in dissemination processes and significantly contributes to the fast regeneration and enrichment of forest regrowth.

The small, sparsely planted and poorly controlled crop fields contribute to a much faster recovery of the forest. Hunter-gatherers' swiddens then mimic spontaneous and ephemeral forest gaps and windfalls. These clearings provide optimal conditions

for the spontaneous propagation of useful plants that are light demanding for their establishment, such as wild yams, sago palms and rattans. These will be exploited later, during foraging activities. Clearings created for swiddening thus indirectly contribute to the overall dynamics of forests and their enrichment with valuable resources, and they participate in the perpetuation of foraging activities. Over time, these pervasive yet non-invasive interventions of hunter-gatherers, referred to as ‘paradomestication’ (Dounias, 2014), tend to exert a control over the spatial and temporal distribution of spontaneous resources and to mitigate the uncertainty in food supply during foraging activities.

It is worth mentioning that foraging is not an exclusive practice of hunter-gatherers alone, and has persisted among many farming societies. Foraging was, and still is, an integrative component of farming systems, rendering the classical dichotomy between eating from the wild versus cultivating crops and herding cattle inaccurate.

Lastly, forest is commonly presented as a safety net for forest peoples. Contemporary hunter-gatherers have adopted a meaningful opposite view, in that they consider their swiddens as a safety net for their foraging activities.

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FARMER INNOVATIONS AND BEST PRACTICES BY SHIFTING CULTIVATORS IN ASIA-PACIFIC

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with the assistance of Bob Hill and Tossaporn Kurupunya



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CABI
Nosworthy Way
Wallingford
Oxfordshire OX10 8DE
UK

Tel: +44 (0)1491 832111
E-mail: info@cabi.org
Website: www.cabi.org

CABI
200 Portland Street
Boston
MA 02111
USA

Tel: +1 (617)682-9015
E-mail: cabi-nao@cabi.org

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