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Searching for G n pi in the Southern Alps: Dealing with Rules for Wild Plant Harvesting in High-Mountain Areas

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Introduction

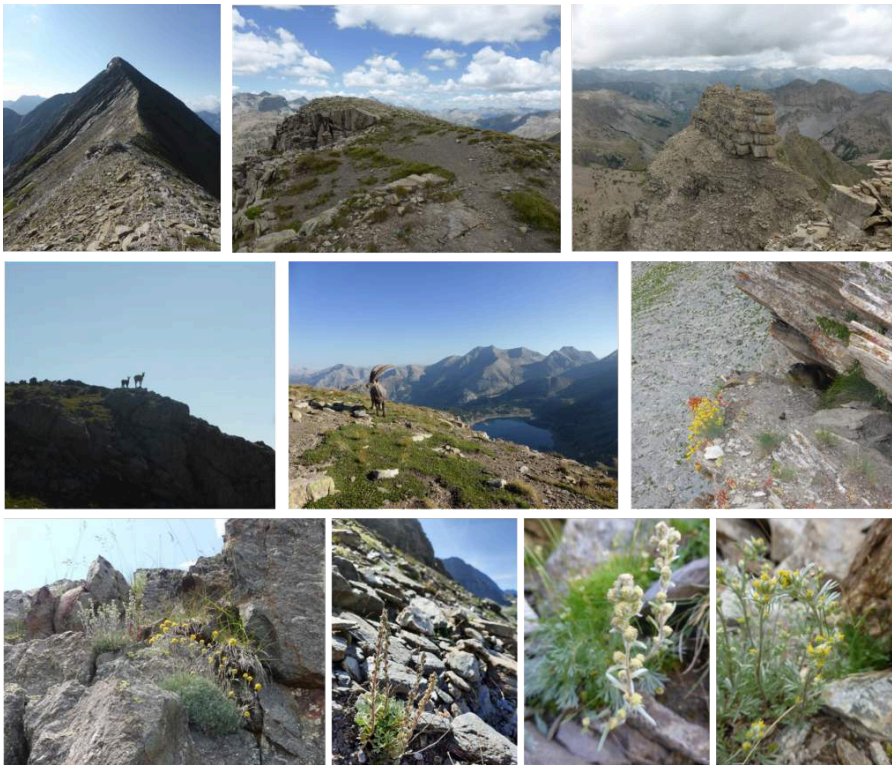
- ¹ In France, harvesting of wild plants and mushrooms was an activity for rural populations (Larr re and de La Soudi re, 2009), linked to peasant culture (Picon, 1991), and a means to use areas of low productivity (forests, wasteland, roadsides - Larr re and de La Soudi re, 2009). Harvesting provided a financial or food supplement. Today, amateur harvesting for domestic consumption - unlike professional harvesting for commercial purposes - has retained only part of this image. Collecting resources in the wild is a way of taking over and improving knowledge of a territory (for example, by prospecting to find the most abundant spots - Lecomte, 2023), asserting regional identity (for example, by maintaining an activity that has been practised in a region for generations - Grasser *et al.*, 2012), and it has a symbolic significance (for example, by considering the harvest as a “gracious gift” from a benevolent nature - Coujard, 1982, p. 265). Amateur harvesting is an ‘off-track’¹ activity, sometimes linked to a quest of minimalism (by getting rid of the superfluous) and autonomy from consumer society (Chang and Bai, 2020).
- ² Many species are harvested worldwide (Pironon *et al.*, 2024) and in France (Lescure *et al.*, 2018), and their uses are diverse, from food (human and animal) to construction, medicine, plant engineering (e.g. transplanting shrubs to control erosion), social uses (particularly religious ones) and fuel (TDWG Economic Botany Subgroup, 1995). The effects of harvesting on the resource and the associated ecosystem are multiple. They

vary in relation to the species, the harvested plant part, the amount and frequency of harvesting (Ticktin, 2004), and also depend on whether one considers the biological scale of the plant or the population, and the temporality (short or long-term). For example, harvesting fruits can contribute to seed dispersal and therefore to the colonisation of new sites by a species (e.g. *cacha* beans in Colombia, semi-domesticated and dispersed in hedgerows - Locqueville *et al.*, 2022). On the contrary, destructive and/or excessive harvesting can lead to the extinction of species, as reported for *Silphium* in Libya, which disappeared in the 5th century probably following over-exploitation for its medicinal and taste properties (Amigues, 2004).

- 3 These negative effects have contributed to the elaboration of regulations. In France, this is reflected in law n 76-629 of 6 July 1976 on the protection of nature: “the preservation of animal and plant species [...] and the protection of natural resources against all causes of deterioration that threaten them are of general interest” (article 1). Some species are therefore strictly protected throughout the country², while others are covered by permanent or temporary prefectural regulations, for example in terms of time, quantity and/or place of collection. Although these regulations are designed to preserve species – this being a prerequisite to maintain the associated activities – they impose constraints on users. This can lead to conflicts (Larr re, 1982) or the circumvention of rules considered to be illegitimate (Fortier, 1999). This range of reactions, from ‘doing with’ to conflict, may be linked to the way individuals perceive their practices, to their motivations or to questions of attachment to a territory (Cadoret, 2017): this is what will be studied here.

G n pi Harvesting in the French Alps

Figure 1: Génépís, emblematic high-mountain species



First row, génépí habitats: rocky ridges that are sometimes unstable; rocky grasslands; scree slopes and sandstone outcrops.

Second row, other species frequenting harvesting sites: a female and a young chamois (*Rupicapra rupicapra*) next to a site with *A. eriantha*; an alpine ibex (*Capra ibex*) next to a site with *A. umbelliformis*; a marmot (*Marmota marmota*) next to an *A. glacialis* plant.

Third row, génépí species: *A. umbelliformis* and *A. glacialis*; *A. genipi*; *A. eriantha*; *A. umbelliformis*.

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- 4 Harvested species are often emblematic of certain places and/or ecosystems: *Salicornia* are harvested in the salty coastal areas, lichens in the Massif Central (France), the Vulnérable des Chartreux (*Hypericum nummularium*) in the Chartreuse massif (France), etc. In the Alps, génépí harvesting is part of local nature and culture (Figure 1). Génépís are alpine wormwoods (*Artemisia eriantha*, *A. genipi*, *A. glacialis*, *A. umbelliformis*)³ that have been attributed various medicinal properties, for example against cold snaps or as a tonic: “the one that is considered by many mountain dwellers to be a universal panacea is genépy, genipi or zdénépí” (Chabert and Fritsch, 1986, p.60). These properties are said to be more or less developed depending on the species, and “each [territory] believes it has the true génépí, i.e. the one with the most effective medicinal action” (Rivière-Sestier, 2000, p.81). Beyond this pharmacological reputation, génépís are famous for their organoleptic properties. The pronounced fragrance of génépí plants is due to their content in monoterpenes (e.g. eucalyptol, pinene, thujone) and sesquiterpenes (e.g. artemorine, santamarine) (Mucciarelli *et al.*, 1995; Vouillamoz *et al.*, 2015) whose properties make génépí plants interesting for harvesting to flavour liqueurs, wines, teas and other preparations (Delahaye, 2008)
- 5 Génépís are high-altitude plants that grow mainly above 2,000 m.a.s.l. and thus not close to mountain villages. Historically shepherds who gathered génépí stems and flowers during their season in mountain pastures, distributed them in the valleys in

autumn (Chaber and Carrat, 2008). People consumed them mainly as a herbal tea, as it was difficult to obtain alcohol to macerate the stems. Génépí liqueur has gained in popularity recently, with the development of mountain tourism (Vouillamoz *et al.*, 2015). The increased needs of liqueur producers have thus led to a rise in wild génépí harvesting (personal communication – discussion with an agent from the Mercantour national park, February 2022). To mitigate the impacts of over-harvesting, regulations were introduced (Box 1), and *A. umbelliformis* cultivation was developed during the 1980s and 1990s (François, 1987; Rey *et al.*, 2002).

Box 1: The regulations for génépí harvesting in the French Alps: differences between species and areas.

In France, the four génépí species are part of wild plant species for which harvesting is subject to permanent or temporary prefectural regulations (decree of 13 October 1989). The regulations concern mainly quantities authorised for harvesting, with differences between departments. There are also specific regulations in protected areas. In the core zones of national parks, all harvesting activities are prohibited by default, except for a few species for which harvesting is considered as a ‘traditional’ activity. This is the case for génépís in the Ecrins and Mercantour national parks. The different regulations are summarised in the table below.

		<i>A. glacialis</i>	<i>A. umbelliformis</i>	<i>A. eriantha</i>	<i>A. genipi</i>
Department regulations	04 - Alpes-de-haute-Provence	100 stems / pers.	100 stems / pers.	100 stems / pers.	100 stems / pers.
	05 – Hautes-Alpes	100 stems / pers.	100 stems / pers.	Prohibited	100 stems / pers.
	06 – Alpes-maritimes	Harvesting limited to family use	Harvesting limited to family use	Harvesting limited to family use	Harvesting limited to family use
	38 – Isère	100 stems / pers.	100 stems / pers.	Prohibited	100 stems / pers.
	73 – Savoie	120 stems / pers. / day	120 stems / pers. / day	-	120 stems / pers. / day
	74 – Haute-Savoie	-	-	-	-
Regulations in the core zones of national parks (NP)	Ecrins NP	100 stems / pers.	100 stems / pers.	Prohibited	100 stems / pers.
	Vanoise NP	Prohibited			
	Mercantour NP	80 stems / pers. / year, only in August, more than 250m away from roads	80 stems / pers. / year, only in August, more than 250m away from roads	80 stems / pers. / year, only in August, more than 250m away from roads	Prohibited

References for French legislation:

Loi n° 76-629 du 10 juillet 1976 relative à la protection de la nature - 1976;
 Arrêté du 13 octobre 1989 relatif à la liste des espèces végétales sauvages pouvant faire l'objet d'une réglementation préfectorale permanente ou temporaire - 1989;
 Arrêté préfectoral n°77-1508 relatif à la réglementation de la cueillette de certaines espèces végétales sauvages - Préfecture des Alpes de Haute-Provence 1977;
 Arrêté préfectoral n°95-1533 relatif à la réglementation de la cueillette de certaines espèces végétales sauvages - Préfecture des Alpes de Haute-Provence 1995;

Arr t  pr fectoral du 22 novembre 1993 relatif   la r glementation de la cueillette de certaines esp ces v g tales prot g es - Pr fecture des Hautes-Alpes, 1993;
 Arr t  pr fectoral modificatif n 2008-185-7 du 3 juillet 2008 relatif   la r glementation de la cueillette de certaines esp ces v g tales prot g es - Pr fecture des Hautes-Alpes, 2008;
 Arr t  pr fectoral du 18 juin 1991 relatif   la protection et r glementation de certaines esp ces v g tales dans le d partement des Alpes-maritimes - Pr fecture des Alpes-maritimes, 1991;
 Arr t  pr fectoral n 2010-06151 pour la protection des esp ces v g tales sauvages et champignons dans le d partement de l'Is re - Pr fecture de l'Is re, 2010;
 Arr t  du 4 d cembre 1990 relatif   la liste des esp ces v g tales prot g es en r gion Rh ne-Alpes compl tant la liste nationale - 1990;
 Arr t  pr fectoral n 2021-0496 portant r glementation de la cueillette des esp ces v g tales patrimoniales et des champignons - Pr fecture de Savoie, 2021;
 Arr t  du 23 f vrier 2007 arr tant les principes fondamentaux applicables   l'ensemble des parcs nationaux 2007;
 Parc national du Mercantour - R solution n 12-2014 r glementant la cueillette des baies, champignons, g n pis et Camomille du Pi mont dans le c ur du parc national 2014.

- 6 According to discussions with liqueur producers, there is no longer any commercial harvesting of g n pi collected in the wild in the French Southern Alps. Nonetheless, there is still amateur activity, albeit subject to regulations (Box 1). In the core zone of the Mercantour national Park (PnM), all harvesting activities are prohibited, except for a few emblematic species, including g n pis. One person is allowed to harvest 80 floral stems per year, only in August and more than 250 meters away from motorized access routes, except for *A. genipi* that remains prohibited. Outside the core zone, departmental regulations apply: harvesting of the four species is limited to family use in the Alpes-maritimes (06), limited to 100 stems per person using a sharp tool and leaving a few floral stems per plant in Alpes-de-Haute-Provence (04). In the Hautes-Alpes (05), harvesting *A. eriantha* is completely forbidden, while 100 stems per person are authorized for the other three g n pi species.
- 7 In this study, we focused on amateur harvesters in the Southern Alps in relation to three questions. (1) What are their practices and motivations? (2) To what extent do regulations affect these practices? (3) What do these two aspects reveal about harvesters' attachment to place and the 'best practices' they define?

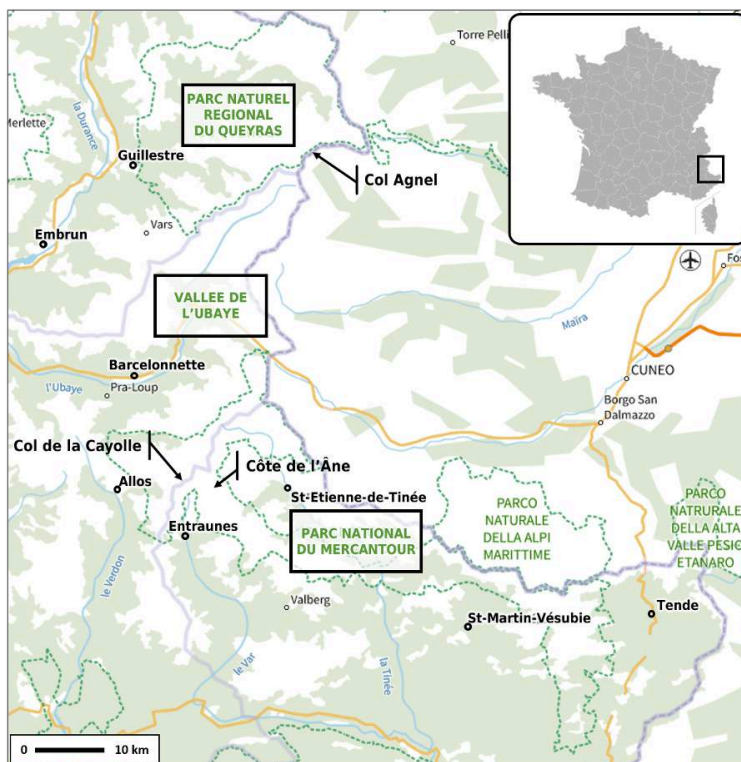
Interviews with Harvesters

- 8 This study is based on semi-structured interviews conducted between October 2020 and September 2024, in three territories of the Southern French Alps: the Queyras (05 department), the Ubaye valley (04) and the Mercantour (06) (Figure 2 – the precise places where the interviews were conducted are not given for reasons of confidentiality, and to keep the secret aspect of harvesting 'corners'). We primarily interviewed persons who were observed to undertake harvesting (during the summers of 2022 and 2023). We also arranged meetings with known harvesters in several villages and other local people who have knowledge of mountain plant species. These

interviews were thus conducted either near the mountain harvesting sites, or directly in nearby villages.

- 9 There were six sections in the grid used for semi-structured interviews. These sections dealt with knowledge about g n pis (identification and choice of harvested species), description of harvesting practices (objectives and motivations, timing, harvested quantity, tools, sharing of the practice), chosen places (number of harvesting sites, discovery and choice of these sites, habitat types, variation of g n pi flavour in different areas), uses of the collected g n pis (recipes, ways of sharing the product), perceptions of changes in the resource, in the harvesting world, in the regulations, as well as knowledge of the latter and their acceptance.
- 10 For the interviews with harvesters considered to be complete (i.e. all six sections were covered), 31 were conducted in the Mercantour National Park (PnM), 10 in the Queyras Regional Natural park (PnrQ) and one outside of protected areas in the Ubaye valley. In addition, there were 20 conversations with harvesters in the PnM, 1 in the PnrQ and 4 in Ubaye, covering only partially our interview grid, and 13 discussions with ethnobotanists, liqueur producers, professional growers or harvesters, and elected representatives. Their discourse was interpreted following a thematic analysis after transcription and encoding, with an abductive approach, emphasizing the interaction between inductive and hypothetico-deductive approaches (Bajc, 2012).

Figure 2: Location of the study area and of some sites mentioned during interviews.



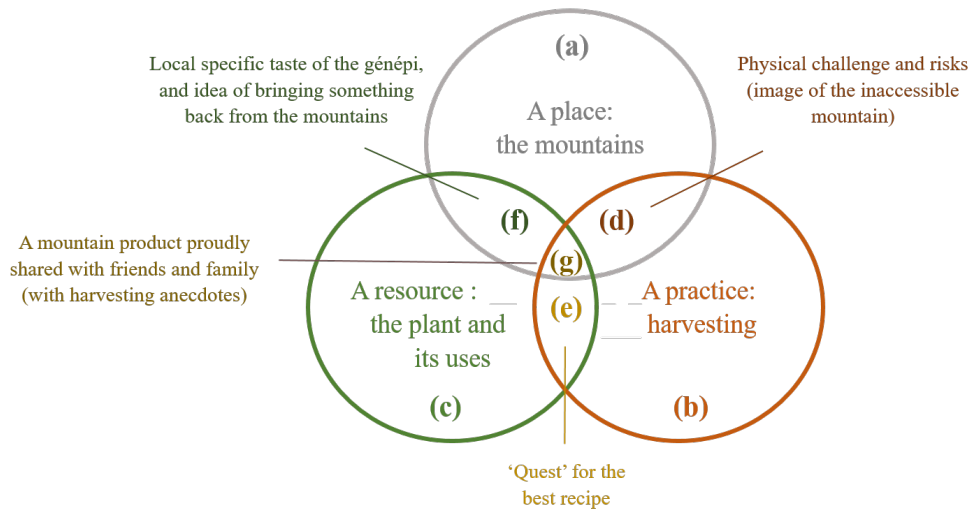
- 11 The interviews were conducted in three territories (Queyras, Ubaye, Mercantour) but the geographical origin of the interviewed harvesters goes beyond these areas, that said the majority of interviewed people live in the Provence-Alpes-C te d'Azur region (although one couple was from Saint Nazaire!). 44 % of the people surveyed are over 60 years old, 31 % are between 40 and 60 years old, 23 % between 20 and 40, and 2 % are

below 20. The vast majority (73 %) are men. However, age, gender or socio-professional categories, that are often taken into account in this type of study, have not been considered here because other underlying factors are likely to be more relevant to g n pi harvesting. For example, the hypothesis of a link between harvesting and age may involve several different and ill-defined processes (physical capacity, time available, etc.) which may ultimately generate uninterpretable results. We therefore focused on identifying factors more directly involved in the harvesting process, such as the criteria to choose sites (accessibility, danger), timing (frequency and time that can be devoted to harvesting), and sharing of the harvesting activity.

Harvesting Steps that Structure the Analysis

- 12 As for the different harvesting practices in Margeride studied by Larr re and de La Soudi re (2009), it is difficult to draw up a typical portrait of the harvesters: profiles are as diverse as practices. This is also true when the focus is on four congeneric species that are relatively similar in terms of morphology and ecology. Drawing on the first elements from our interviews and Bellenger’s work on “predation games” that relate to “the acquisition of a living and symbolic trophy” (Bellenger, 2017, p.18), we propose to decompose g n pi harvesting into three main steps.
- 13 So, searching for g n pi means:
- Hiking in mountain areas where g n pi can be found [a] ;
 - Finding the plant (or stumbling on it) [b] ;
 - Appreciating and observing the most beautiful stalks and sprigs, sometimes smelling them or taking a picture, before harvesting and transforming them into diverse preparations, liqueur, aperitif wine, herbal tea, flavoured sauce for meat, or cr me br l e for example [c].
- 14 This analytical structure makes it possible to identify the steps that are the most important for harvesters, translated in three motivational poles (Figure 3) that emerged from the first interviews, depending on whether the respondents associated g n pi with the place, in this case the mountains [a], with the practice, the harvesting [b], or with the resource, the plant and the associated preparations [c]. In general, several of the three poles were mentioned at one point or another during the interview, and were sometimes associated with each other, hence the representation in Figure 3, which crosses the poles and thus reveals the interactions between motivations [d, e, f, g]. The ‘g n pi corners’ are potentially dangerous, which can mean taking on challenges and risks in the search for plants in the mountain environment [d]. Exploring different preparations is also a form of quest for the best recipe [e]. Harvesting can also be seen as a way of bringing something back from the mountains - tasting the preparations afterwards providing the possibility of recalling the landscapes associated with the place where the plants were harvested. In this context each preparation could have a specific taste depending on the place (terroir effect) [f]. Tasting would also be an opportunity to proudly share the g n pi with friends and family, and to relate the difficulties and anecdotes associated with the hike and the search for the plant [g].

Figure 3: Objectives and motivations of g n pi harvesters, depending on harvesting steps (from [a] to [g] – steps are detailed in the main text).



A large diversity of profiles and interactions with regulations

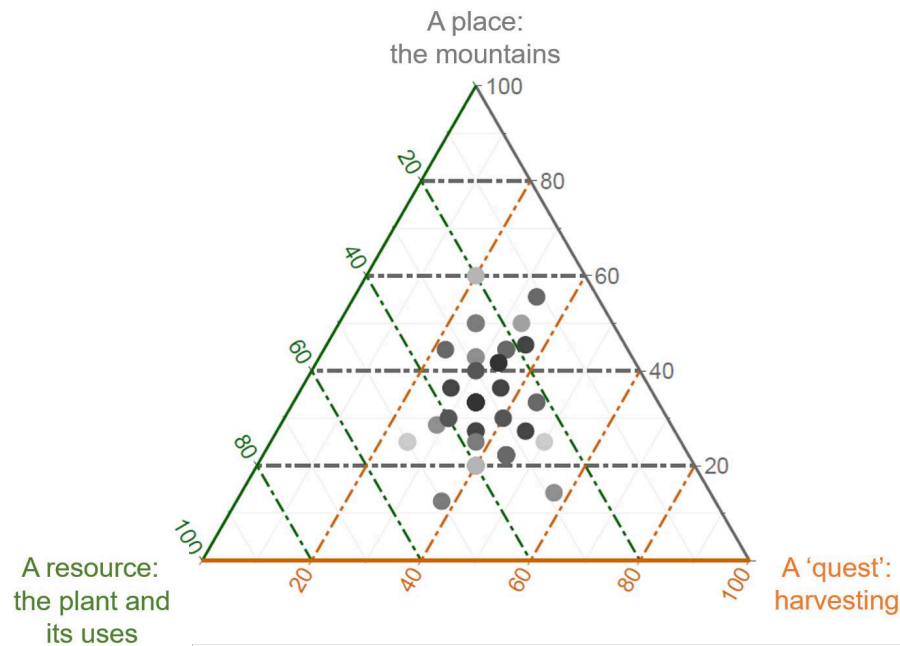
15 Since the people surveyed generally combine several motivations, a value from 1 to 5 was assigned to each motivational pole and each harvester, to represent the importance this motivation has for the harvester. It is a way to position harvesters in the motivation triangle (Figure 3, Figure 4). A value of 1 corresponds to a low importance of the motivation, and 5 to high importance: examples are given in Table 1. Using a gradient from 1 to 5 allows us to refine the importance of one motivation relative to the others, particularly for intermediate levels.

Table 1: Examples to illustrate how we place harvesters in the motivation triangle (only extreme points of the gradient from 1 to 5 are presented to facilitate reading).

Why searching for g�n�pi?	Importance of the motivational pole	
	1 Low importance *	5 High importance
... for the mountain (pole (a))	A group of harvesters that does not stay in the mountain site before/after the harvesting, and chooses the site because it was easy to get to it [Q52]	A harvester saying that the motivation is the hike, and that if they do not find anything it would not matter. This harvester also mentioned several mountain ranges where he liked to go, such as the Queyras or the Ceres [M46] "The g�n�pi, it is a reason for going to the mountains", it is "the pleasure of being in the mountains, the pleasure of hiking and climbing" [M7]
... for the practice of harvesting (pole (b))	A harvester who mentions a site where "all you had to do was bend down to pick" and where "in 1 hour you had everything you needed": it is easy to find g�n�pi and get plenty of it [M20]	"We are going to try to find some now that we have spotted it" [M1]
... for the plant resource (pole (c))	A harvester saying that the motivation is the hike, and that if they do not find anything it would not matter [M46]	A harvester describing himself as a big consumer, who is used to make 4L a year and to drink everything, as a digestive [M12]

* Low importance is often noted in relation to the other motivations rather than in absolute terms: it is rare for a harvester to say directly that a particular motivation is absent.

Figure 4: Harvesters' position between the three motivational poles we identified.



The darker the dot corresponding to the interviewee, the more reliable the interpretation of motivations based on interviews. There are no dots around the edges of the triangle because harvesting is a whole: no motivation appears to be completely absent from the interviews.

- 16 In this way a harvester with a single objective or motivation is what we call a 'typical profile'. In addition to the three typical profiles (i.e. the three poles), we identified two other types: the 'relentless' and the 'ex-harvester' profiles. Based on our interviews, we described the main characteristics of these five profiles, as well as their interactions with the regulations. Interviewees are often between these typical profiles (Figure 4), since they mention several motivations, to varying degrees: typical profiles are therefore illustrated using the most striking elements from the interviews.
- 17 A first typical profile that we called the 'contemplative mountain dweller' (pole [a] in Figure 3), is used for harvesters that search for g n pi every year or very regularly, avoiding areas that are the most surveyed by park wardens, easily accessible and thus heavily frequented such as the area around the Cayolle and Agnel passes. Such harvesters often just smell stems as they walk, sometimes keeping a stem between the lips for a whiff of the plant's fragrance. For this profile, harvested quantities are limited, as is the consumption of the products prepared with the stems. A couple we met in the Queyras [Q58]⁴ harvested around 60 stems, precising that this was enough for their consumption as it is possible to make one litre of liqueur with this amount. The man says that when he drinks his g n pi, he remembers the mountains, the scenery and the hike. So the aim of searching for g n pi is to enjoy the mountains, an emblematic environment and a place of attachment. Other ways to do so are the practice of activities such as trail running, mountain biking or ski touring. Another harvester close to this typical profile says that he harvests g n pi every year, around the Bric Boucher, the Grand Galibier, when he does mountaineering routes nearby [Q47]. Going up into the mountains to collect g n pi also gives you the chance to see

animals, and this harvester referred to an anecdote about a group of ibex that paid little attention to his presence.

- 18 Harvesters in this typical profile respect the regulations, even if they are not always precisely known, because they do not restrict their practice. Overall, the regulations are considered to be relevant because they have curbed the abuses of the 1980s and 1990s, when one of the consequences of commercial harvesting was to “empty the mountain” [M33]. Today, thanks to this regulation authorising the harvesting of 80 stems in the heart of the PnM, “everyone can go and make their own bouquet” [M33].
- 19 A second typical profile, the 'treasure seeker' (pole [b] in Figure 3), justifies his or her trip by the very act of harvesting. He or she brings friends, children or grandchildren to show them the practice of g n pi harvesting. This type of harvester chooses places that are easy to get to, where they are almost certain to find g n pi (e.g. C te de l' ne or Col Agnel), in order not to put off or frustrate the people they want to initiate. For the latter, it is a quest, a sort of treasure hunt to find the precious stems. After their friend had shown them how the plant looked like, a woman and her son who had just been initiated said “we are going to try and find some now that we have spotted it” [M1]. The friend who initiated these two people points out that you do not pass it on to just anyone. For another harvester, it was a response to the fact that “a lot of things get lost”. He was proud to have been able to “show [harvesting to] my colleague and grandson” [M26]. Another group said they were there to “take over” [M65] from the father-in-law who introduced them to g n pi. These 'treasure seekers' therefore try to pass on a tradition without harvesting large quantities. The traditional, habitual, “ritual” aspect [M13] means that they come back to harvest every year. The tradition is also shared by giving a bottle or stems so that friends can prepare the liqueur themselves. For an insider from Saint Nazaire, g n pi “is something you drink in its juice” [M40], it is part of the mountain atmosphere but it is not very interesting to drink it back in St Nazaire: for him, tasting g n pi does not have the evocative power of the mountains mentioned by the couple of 'contemplative mountain dwellers'.
- 20 Here again, the regulations are respected, but one of the reasons, mentioned several times, is the certainty of being checked. Accessible and relatively well-known harvesting sites are more closely checked, and the people who share the practice said they get checked every year: “you mustn't take [the rangers] for fools [...], I prefer to show the box”, said one harvester, especially as he had “seen the car [and] knew that you [the rangers] were in the Tours [d'Allos] watching” [M13].
- 21 A third typical profile, called the 'alpine-farmer' (pole [c] on Figure 3), is characterised by a marked use of mountain resources, through harvesting but also hunting or pastoralism. He or she seeks to make the most of what the mountains have to offer: a spot with plenty of g n pi to harvest, a beautiful chamois to hunt, or a mountain pasture to feed the sheep. One harvester believes that “the mountains need to be worked and looked after” [M16]. Another said he also gathered camomile, edelweiss and raspberries, and explained that the aim of hunting and harvesting was similar: to bring something back [M32]. Such harvesters consider that harvesting would have a positive effect on the plant, that it would strengthen it, that “the plant looks good” when pruned [M16]. Various explanations were given, for example one harvester said that in his opinion, if the stems were left, the plant would have completed its reproductive cycle and would not flower again [M32]. For a shepherd, harvesting g n pi, is akin to grazing; it would cut back the plants, that would then grow better the

following year, perhaps doubling the number of stems. He pointed out that when you see the dry stems from the previous year on the stalks, there are few stems from this year: “there are plants like that, for example the olive tree, which you have to prune” [M5]. For this person, nature should be controlled by humans so that it can flourish and offer a multitude of services.

- 22 Unlike the first two profiles, the ‘alpine-farmer’ does not respect the rules until he or she is checked, relying on discretion. Regulations are sometimes considered “ridiculous” [M5], and, according to this harvester, it would be better to focus on the ‘real’ problems facing society. His feeling is of injustice that is fuelled by the fact that a harvester can be fined for a few stems of g n pi, while crimes or offences such as embezzlement go unpunished. This feeling also arose when he talked about the authorised quantities in the regulations: for example raspberries and mushrooms, for which the authorised volume is calculated in litres, which puts harvesters at a disadvantage because the empty spaces between the berries or mushrooms are not taken into account [M5].
- 23 The fourth typical profile was described as ‘relentless’, based on the expression “those who are relentless about g n pi”, which was heard in two interviews [M16, M86]). For the ‘relentless’ harvesters, the three poles are equally important and very marked. People search for g n pi in groups of friends, and collect stems in large quantities, since their consumption of liqueur requires a large supply. One harvester said that by the end of the summer of 2022 he had a full pillowcase, which he estimated at 3,000 stems [U43]. Having a large quantity of g n pi means you can try out different recipes, with different maceration times, more or less sugar, or by separating stems from different origins, for example. Harvesting a large number of stems means choosing quiet, discrete places, finding new, potentially dangerous and inaccessible spots and/or going out to harvest more than once. The sites chosen are those where frequentation is low and g n pi plants are abundant, in order to compensate for poor accessibility often involving a long journey by car and then on foot [M62]. These harvesters come to collect g n pi for personal consumption and to distribute to friends and colleagues. This type of harvester is therefore an experienced mountain dweller that searches for g n pi because of the challenge of finding enough of it and to share the processed product. In this case the three poles are combined, and this type would be in the centre (g) of Figure 3.
- 24 Regulations partly affect the choice of sites: the core zone of the PnM is avoided, “so as not to annoy park people” [M12], and to be able to harvest quantities that far exceed the number of stems authorised. Despite this, a certain amount of attention is paid to the resource: one harvester said that he identifies g n pi plants and counts the stems produced from year to year, to follow-up the plant production [U43].
- 25 A last typical profile, known as an ‘ex-harvester’, who harvested in the past but no longer does so due to a lack of time, interest or choice (regardless of age), in favour of other activities or because he or she sees a decline in g n pi populations. Basically, this person lacks motivation to continue harvesting. For example, one person who (almost) no longer goes out described sites that were over-harvested in the past, saying “it’s the desert”, “it’s the archetype” of the decline in g n pi [M39]. In his opinion, harvesting is a practice that is being lost, which he sees as a good thing for the g n pi populations. The people in this profile recount many anecdotes about their past as harvesters (“it was a different time!” [M8]), the misadventures or successes of their youth when they

managed to go under the noses of agents, or old customs linked to g n pi, which was part of their life since “even the cows were given g n pi” [M39]!

- 26 The regulations suit these 'ex-harvesters' because they have no impact on them, first because he no longer harvests [M31], second because he considers that it limits harvesting and that a total ban would not be appropriate: “it [would be] total bullshit, it encourages people to go!” [M39].

Relationships with the Territory and ‘Best Practices’

- 27 “A territory is the work of people” (Baud *et al.*, 1995, p.113): it is the relationships that individuals and groups of individuals develop with their environment that gives meaning to the territory⁵. The latter is taken in its most commonly used definition in (French-speaking) geography, i.e. a space (whatever its size) that is socialised and appropriated, in particular through memory, practices and representations (Baud *et al.*, 1995). Thus, by cross-referencing the elements from the interviews with pre-existing work on questions of attachment to place (see in particular Cadoret, 2017; Sebastien, 2020), we seek to identify the relationships to the territory that are central to each typical profile. These different relationships also contribute to the definition of “good harvesting practices” (AFC, 2022), which are not always shared by the different profiles of harvesters.
- 28 In our study, for those who search for g n pi because they like the mountains (profile of the 'contemplative mountain dweller'), the territory represents a living environment. In the words of Beuret and Cadoret (2014), this corresponds to living *in* the territory (as opposed to living *off* the territory). It is therefore the place that supports professional and personal projects (Tommasi, 2015), of which leisure activities are a part, that is highlighted by this profile: multiple activities are practised in this living environment, in summer (e.g. hiking or mountain biking) as well as in winter (e.g. skiing or snowshoeing). Mountain activities, particularly sporting ones, are practised here in all cases, even without harvesting: g n pi is a ‘plus’ for the hike. In addition to these activities, it is also the rural, relatively isolated and quiet setting that defines the mountain territory that is inhabited by this typical profile, hence the choice of harvesting sites. For the 'ex-harvester' profile, the territory is also a living environment, but one in which regulations (institutional dimension of the territory - Pachoud *et al.*, 2022), such as those promulgated by the PnM, protect the assets and natural heritage from abuse and human pressure. They also comply with the regulations like the 'contemplative mountain dweller' and 'ex-harvester' profiles, paying attention to the environment in which the g n pis grow, trying to integrate their activity without disturbing it (in order to be able to observe the fauna in particular) and establishing best harvesting practices. More generally, it is about a certain vision of good behaviour and respect in the mountain environment.
- 29 Those who bring friends and family to search for g n pi attempt to discover and pass on a practice (the 'treasure seeker' profile) that represents a symbolic and identity-based link to the region. This is in line with the ideal dimension of the land (Pachoud *et al.*, 2022), where the image that local stakeholders have plays a central role and is gradually built up over time (Di M eo, 1998). Sharing the harvest is a way of showing the knowledge of the territory, as being able to find g n pi despite the discreet nature of this alpine plant. What is more, since the liqueur is a symbol of the

high mountains, being able to label it 'homemade' is a sign of belonging to the mountain community (Manceron, 2019).

- 30 The territory is thus seen as a collective 'playground' for experienced mountain dwellers who harvest g n pi in groups of friends (the 'relentless' profile). This is a form of identity link, that is part of a collective identity (the construction of belonging being both an individual and collective process - Tommasi, 2015). Institutions such as the PnM or the PnrQ can then be recognised for their role in protecting cultural and natural heritage. This heritage forms the 'playground' through its ecological, geological and topographical characteristics (which ties in with the 'living environment' territory in the previous paragraph), but can also involve taking risks, putting oneself in a dangerous situation and/or challenging friends, as well as written or tacit rules of the game. For the 'treasure hunter' profile, initiation is an opportunity to share these rules and best harvesting practices, a way to ensure the sustainability of the practice (G mez-Baggethun and Reyes-Garc a, 2013). For example, the harvester respects the quantities authorised for harvesting and leaves a few stems per foot of g n pi (written rules). The harvester also holds on to the plant to avoid uprooting and chooses sites with a high density of g n pi, avoiding competition with other harvesters ("we don't go into other people's corners" [M12]) so as not to deplete the resource locally or "ruin the area" [M7] (tacit rules). Thanks to these gestures, the 'relentless' profile considers that they are following best practice rules despite exceeding the authorised quantities.
- 31 In the case of the 'alpine-farmer' profile, attachment to place relies on its material appropriation, the mountain is considered as a "source of resources" (Pachoud *et al.*, 2022, p.104). This profile is not limited to a symbolic production of g n pi liqueur, as is the case for the 'treasure hunter' profile; the harvester must know how to make the most of all the resources in the territory, from harvesting plants to hunting wild animals (game). From the point of view of this typical profile, the 'good harvester' would be someone who prunes the plant efficiently, sometimes removing the stems down to its base, in the belief that this allows the plant to regenerate, and also someone a person who is capable of collecting a lot of g n pi, just as the 'good farmer' can be seen as someone capable of producing a lot on his or her land (Burton, 2004). Since appropriation through land ownership (Gu rin-Pace, 2006; Manceron, 2019) is more difficult in high-altitude areas where land ownership is often collective (Crosetti and Joye, 2021), appropriation, for this profile, would involve harvesting. The introduction of regulations restricting the use of resources would then be perceived as a form of expropriation, all the more so if the decisions are taken by institutions deemed to be remote from the territory (Musset, 1982; Depraz and Laslaz, 2017).

Conclusion

- 32 This study of recreational practices associated with g n pi harvesting reveals a multiplicity of forms of attachment to place that are reflected in the different ways in which people approach harvesting (motivations and practices), that can be used to define a non-consensual field of 'best practices'. This multiplicity poses challenges for the conservation of this natural and cultural heritage. First, the diversity of practices highlighted by the description of typical profiles makes it difficult to assess the effects of harvesting on the resource (Teixidor-Toneu *et al.*, 2023; Fontaine *et al.*, 2024). It is therefore not easy to elaborate regulations that guarantee the sustainability of this

activity, be it in terms of locations, dates or quantities authorised for harvesting. Second, beyond guaranteeing the persistence of g n pi populations, regulations are considered to be effective if they are accepted by local stakeholders (Bottrill and Pressey, 2012). However, we have shown that each harvester has his or her own definition of 'best practices', which does not necessarily correspond to the regulations in force.

- 33 Making this range of knowledge and interpretations of rules visible is a first step towards understanding the plurality of ways of relating to the territory in the world of harvesting. Sharing and discussing these multiple viewpoints would make it possible to “create a shared representation of environmental problems as well as of the solutions to be recommended, to adopt a common approach” (Debril, 2014, p.30), that is necessary to preserve a territory and its natural and cultural heritage. This is one of the aims of the *Association fran aise des professionnels de la cueillette de plantes sauvages* (AFC) with the guidelines they recommend for best harvesting practices, guidelines it defined by combining feedback from harvesters and monitoring of resources. With this in mind, it is important to link the profiles of harvesters to the spatial and temporal variability of the practice, as well as to ecological studies aimed at quantifying the effects of harvesting on g n pi populations, as part of an interdisciplinary or even transdisciplinary approach. Being able to link users and their motivations to the effects of their activity represents an essential link in assessing the sustainability of harvesting.

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NOTES

1. Double quotes (“...”) are only used to cite the words of authors or people who were interviewed, and are therefore followed by a reference. Single quotes (‘...’) are used to highlight specific terms or expressions.
2. Decree of 20 January 1982, establishing the list of vegetal species that are protected throughout the country.
3. The four *Artemisia* species are called ‘g n pi’, sometimes with an adjective to differentiate the species: woolly, rough or male g n pi for *Artemisia eriantha*, black, true, blue, male or female g n pi for *A. genipi*, glacier, true, yellow or male g n pi for *A. glacialis*, white, yellow, grey, loose or female g n pi for *A. umbelliformis* (Fontaine, 2024). This diversity of names and the fact that a same vernacular name is sometimes associated with different species depending on the valley and the person, can be an important source of confusion. We faced this problem during interviews, but the use of a name or another seems to be ancillary when dealing with harvesters’ motivations: we therefore did not developed this aspect in the article.
4. Each interview is referred to with a single code, written between square brackets, with a letter that corresponds to the territory the interview is attached to (M for Mercantour, Q for Queyras, U for Ubaye) and a unique number.
5. The word ‘territory’ here refers to the concept of *territoire* used by French-speaking geographers: details about the particularities of this word can be found in Pachoud *et al.*, 2022.

ABSTRACTS

The objectives that motivate the harvesting of wild plants are diverse, and range from economic to symbolic reasons. However, the sensitivity of many harvested species makes the regulation of such practices necessary, hence harvesters have to compose with different regulations by adapting (or not) their practices.

In the study presented here, we focused on g n pi harvesting in the Southern Alps, where we conducted semi-structured interviews with amateur harvesters. We examined and classified harvesting steps to identify the main motivations of harvesters, the diversity of their practices, and their interaction with regulations.

Five main profiles were identified, based on (i) the place (mountain environment), (ii) the practice (harvesting), (iii) the resource (the plant and its uses), and a combination of these three elements. All harvesters do not comply with regulations but they define ‘good practices’, that can be linked to different forms of attachment. Highlighting the diversity of practices and attachments provides insights into how to favour sustainable harvesting practices and thus participate in the conservation of g n pis, species that are emblems of high-mountain areas

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Keywords: Southern Alps, harvesters, motivations, regulations, territory

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