

**COLLECTOR MOBILITIES:
EMBODIMENT PRACTICES, RELATIONALITY AND SENSORIALITY AMONG
SEAWEED COLLECTORS IN SOUTHERN CHILE**

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Abstract

New approaches to mobility studies have arisen in recent years, though most have focused on practices and experiences in metropolitan contexts. This research aims to expand the theoretical framework with its application in an eminently rural and archipelagic environment, where daily mobility responds to space-time frameworks associated with natural cycles, such as collection, shellfish gathering, fishing and agriculture. We propose the concept “collector mobilities” to refer to the set of activities that are developed as a result of the collection of the seaweed *Pyropia spp.* –popularly known as *luche* (nori)– an activity that has expanded in southern Chile’s Los Lagos Region in recent years. Based on in-depth interviews and meetings with women and men engaged in this activity in the municipalities of Ancud and Calbuco, it argues that these “collector mobilities” are an incarnate, relational and sensory practice where experience and knowledge intermingle. The activity is precisely sustained thanks to the positive sensory networks generated by memory and interaction with

nature. While structural factors such as the distance traveled and the time required to collect or sell the seaweed, poor road quality, the lack of transport, poor connectivity or seasonality stand out, it provides a sensitive dimension for these mobilities. Indeed, the body and its performativity, sensoriality, places and non-human beings are some of the elements that shape these collector mobilities.

Keywords: Mobilities; Seaweed collectors; Embodiment practices; Relationality; Sensoriality.

Declaration of Interest statement

The authors are grateful to the ANID for its financing of the Regular Fondecyt 1220762 “Adaptive Mobilities”, FONDEF IT23I0048 and CHIC ANID/BASAL FB210018 Projects, on which part of this work is based. Through these projects this special collaboration between social anthropologists and marine biologists has been possible.

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1. Introduction

Mobility represents a key element in the construction of landscapes and ways of life in a territory (Milbourne & Kitchen, 2014). Mobility is not fixed and immutable, but rather a space of encounter. Based on this premise, Massey (2005) defines mobility as a “constellation of processes rather than a thing” to emphasize the changing nature of movement. New research has focused on subjective and experiential aspects understand mobilities as incarnate frameworks. That is, not just as mere movements, but also as affective, sensory, and assembled records (Lazo & Carvajal, 2017, Lazo & Carvajal, 2018; Lazo et al., 2021). In these cases, mobilities are understood as a flow of people, but also a flow that relates humans with the environment, objects (Lazo & Ther, 2014; Lazo, 2017) and other non-humans (Zunino et al., 2017). Thus, local inhabitants’ experiences gain value, not just as concrete data, but also as embedded emotions that mobilize forms of action (Larsen & Johnson, 2017; Hayfield & Nielsen, 2022).

In the mobilities paradigm, routes and trajectories have and weave meanings for those who follow them (Vannini, 2012; Giucci, 2017). In the case presented below, daily mobility is a fundamental territorial attractor in seaweed collection. The islanders of Chilean insular-rurality –in stark contrast to continental rurality (Ther-Ríos, 2020)– interact with other insularities and with the continent, creating economic-productive distribution, exchange and consumption routes, in addition to sensorial-emotional trajectories associated with the process. These mobility patterns respond to an ancestral coastal tradition that is cataloged as the first stage of the “conquest of the sea,” one in which no hooks are needed and only requires manual and bodily capacity, in addition to the use of tools, which play a fundamental role in collection (Silberman, 2013; Olea, 2023).

Thus, this work proposes understanding seaweed collection as an incarnate and sensory practice in which relations with other non-humans, places and memories are activated. The collection of shellfish and seaweed is a traditional activity that people have carried out along the southern Chilean coasts since pre-Columbian times (Recasens, 2003; Belmar et al., 2021). However, and despite its ancient nature, currently due to the demands of the global market system (Díaz Pla et al., 2019), this practice has mainly been studied for its biological and ecological, bio-economic-productive, and management aspects (Ceballos,

2010). More recently, its governance aspects have been examined (Outeiro et al., 2015), with little known about the more subjective peculiarities associated with collection and even less about the emotional aspects of collectors' experience.

This work focuses specifically on collection of the seaweed *Pyropia spp.*, better known as *luche*. It is an edible seaweed with a variable coloring –ranging between reddish-green and dark red– that grows on the seabed (stones and/or rocks) in the intertidal zone of several regions in Chile. Based on interviews and meetings with collectors of the seaweed from the insular municipalities of Calbuco and Ancud –in southern Chile– it seeks to unveil and explore the sensitive dimension of this collector mobility, delving into the way that bodies are incarnated as well as the relationships that are forged during this practice.

2. “Collector mobilities” as an incarnate, relational and sensory practice

Island studies seek to overcome the conception of islands as remote places disconnected from everything that happens beyond their geographical boundaries. Quite the contrary: the sea, instead of constituting a barrier for island societies, is the sustenance of their economy, culture and identity (Gough et al., 2010). Research on patterns of social mobility is very useful to deepen island studies, as it helps to understand not only the geographical dimension of movement, but also the emotions experienced by subjects in archipelagic environments, where the collective imaginary transcends the boundaries between emerged and submerged lands. In these territories, daily journeys between islands and even between the archipelago and the mainland are constant, giving their inhabitants a very marked maritime identity (Torres & Gómez, 2024). For this reason, Stratford (2013) suggests rethinking archipelagos not as remote and isolated places, but as spaces of connection and mobility.

Due to the isolation of islands, their inhabitants are dependent on migration and mobility (King & Cornell, 1999). As a result, island societies belong to a territory much larger than the one where their home or settlement is located. Currently, as a consequence of globalization, populations tend to move to cities, incorporate urban habits and adapt to new services, which reduces the frequency of movements between islands and shortens the distances of internal journeys (Joseph, 2021; Clendenning, 2023). In parallel, the opposite is happening in more traditional coastal societies: as technological modernization

transforms means of communication, the extent of lived space expands (Christensen & Gough, 2012).

Vannini has pioneered work on island and archipelagic studies, developing mobility studies focusing on British Columbia (2011; 2012; 2016; 2018; 2020). This author has focused not only on displacement, but also on the feelings and affections linked to the routes and trips that islanders take very day, with special emphasis on understanding how “people, places, times and objects are actors united by openness and the willingness to change, more than by limitation and permanence, who evolve organically and continuously” (Vannini, 2012: 39). This ensemble of elements to study mobility involves integrating the material, experiential and affective dimensions of mobility.

Following the arguments of Latour (1993) and Ingold (2000, 2004, 2014), from this perspective mobilities are understood as tangled webs of human and non-human actors. In the field of island studies, the role played by technologies (boats, ferries, or mobile devices) is highlighted as elements that enable or hinder mobility possible. This perspective places strong emphasis on what it means to be an islander and how sea and land travel are part of a ritualized, creative, and adaptive incorporation of mobility. Vannini's work (2012) is enlightening, as it integrates dimensions of island life and mobility that until then had been considered separately, adopting a relational approach to the study of mobilities, the associated waiting times, collective constructs, and the territorial experiences they represent. Thus, movement is not just produced by human associations, but also by the objects and materialities that surround them (Lazo, 2017).

Material places like the docks and boats evoke affections and emotions in those who travel. The contemplation of the landscape itself –as a non-human actant– conditions the travel experience by producing “affective atmospheres” (Bissell, 2009). Incarnate experiences arise in mobility, which is equivalent to saying that the body is a relevant agent within the experiential (Lazo & Carvajal, 2017), in a network of performative relationships with infrastructures and socio-technical infrastructures and ensembles (Tironi & Valderrama, 2016). The experiential and relational is accentuated in these contexts, as bodies weave places. Moreover, the mobilities of men, women and children are intertwined with climatic difficulties that force the subjects to deploy their bodies in particular ways, planning their

mobilities according to their bodily abilities, which act in the face of a series of contingencies, many of them unpredictable (Lazo & Ther, 2014; Lazo & Carvajal, 2017, 2018; Lazo et al., 2021).

While islands can be challenging places to move to –due to the distance, lack of transportation, and inclement weather– many choose to remain for cultural reasons (Hayfield & Pristed, 2022). This sense of belonging to a particular place is being lost as a result of increased mobility to more densely populated areas. In sectors where traditional activities –such as small-scale fishing and shellfishing or seaweed collection– continue to be preserved, the mobility patterns characteristic of island or archipelagic populations are maintained (Arp et al., 2013).

Other research groups have also highlighted the interrelations between humans and non-humans, albeit focusing on rural-continental contexts, as an important aspect to mobilities in these territories (Mellado et al., 2019; Lazo et al., 2020; Salazar et al., 2020). Along these lines, certain work addressing the sensitive and sensory dimensions of the human experience are also recognized. While these works do not address mobilities in and of themselves, we believe they make an important contribution. In particular, the work by David Howes (2014) emphasizes that we learn to feel the world on three levels (micro, meso and macro), which are related to an experiential and individual biography with the communities that participate in the culturally established sensory regimes. Thus, shared ways of giving meaning arise, which gradually settles a knowledge that guides bodily dispositions and, by extrapolation, everyday routes and mobilities.

For her part, Sabido (2020) establishes that the acquisition of knowledge of the world takes place within a network of relationships from which perception and learning processes emerge. This observation introduces the importance of mediations for sensoriality, which consolidates the forms of knowledge present in communities. Papacharalampous (2020) studies the symbiosis between Norwegian fishermen and Skeri (the fish god), revealing a connection that supposes going beyond anthropocentric arguments to move toward the understanding of multi-species agencies that lend identity and meaning to this community. In the same line of research, Nahum-Claudel (2017) recognizes an everyday “vital diplomacy” sustaining the experience of Amazonian indigenous people to engage in daily

rituals to recompose, reconcile and coordinate relations between genders, with spirits and with the river's resources.

In the area of research on fishing communities, Wright's (2021) work on men and women navigators' feelings toward the sea is relevant to what is discussed here. It concludes that while for men the sea represents a space free of terrestrial rules, for women it is also a simpler way of life, where they are not pressured by consumption. Regarding the way in which experience becomes knowledge, the work by Florido (2002) and Peláez González (2019) sheds light on the construction of sensitive and bodily regimes.

In relation to Andalusian fishermen in Spain, Florido (2020) establishes the importance of the senses and use of the body to seduce the sea. Exercising the fishing trade activates collective memory, where identitarian, social and political aspects intersect and a specific body use (or a physiological technology in the author's words) is developed for appropriation of the maritime space. This knowledge includes perceptive qualities and sensitive skills. Along these same lines, in the case of Mexican fishermen, Peláez González (2019) discusses how artisanal fishing gives shape to a learning system that is sustained through bodily, emotional and sensory knowledge. These records are transmitted in the experience itself and bring bodily adaptations with them (such as not getting seasick), control of emotional impulses (such as frustration or exhaustion) and a system of relationships where human and non-human agents and artifacts converge, particularizing the trade at sea. This way of revealing knowledge with skills and, in relation to time and space, leads to what has been called "haptic knowledge," understood as a network of sensory relationships immersed in different geographical formations, which implies a sensitive process for coordinating this diversity (Peláez González, 2020).

Therefore, and based on the aforementioned studies, one can state that the haptic knowledge of small-scale fishermen is nourished by the knowledge acquired and cultivated during perception, from which they manage to understand their activity's connections with geography and the different animate and inanimate elements that intervene. In this sense, relationality –or active linkage– helps to link the set of sensory, material, geographic and identity values that are part of the mobility processes.

All the works presented in this section explore the socio-spatial and sensory relationships that occur in island environments of an eminently coastal nature. This geographical condition, in which land and sea merge, gives rise to a territory whose socio-ecological complexity depends on multiple non-human (geomorphology, climatology, hydrography, biogeography, etc.) and human factors (population, urbanization, economic activities, pollution, etc.). As will be seen in the following section, the study area in which this research is based shares the geographical characteristics of the archipelagic coastal areas referred to in island studies focused on mobility.

In southern Chile, the collection of seaweed such as *luche* (*Pyropia spp.*) is a practice that not only includes biological aspects but has a strong cultural legacy and sensitivity. In this regard, luche collectors participate in a sensory community linked to a sensitive memory, adapted corporalities and territorial appropriation strategies during collection, and the mediations with which they engage in their trade. Based on this background, this research proposes the concept of “collector mobilities,” which can be defined as the set of practices, artifacts, expressions, emotions, rituals and experiences that are part of the movements associated with seaweed collection. As mentioned above, inanimate elements are also part of the embodied, relational and sensorial register of those who execute these collector mobilities.

The reasons that explain the interest in learning about the experiences of collector mobilities can be found in phenomenology, insofar as it approaches human experience not as an object (reducing it to economic or biological factors), but as the experience of subjects who endow it with meaning. In other words, this approach seeks to reconstruct the experience as the people involved live it and give it meaning, refraining from any judgment about the veracity of their convictions. Thus, phenomenological studies privilege certain techniques—such as semi-structured interviews, life histories or focus groups—over purely objectivist quantitative methodologies (Berger & Luckman, 1971; Schütz, 2003).

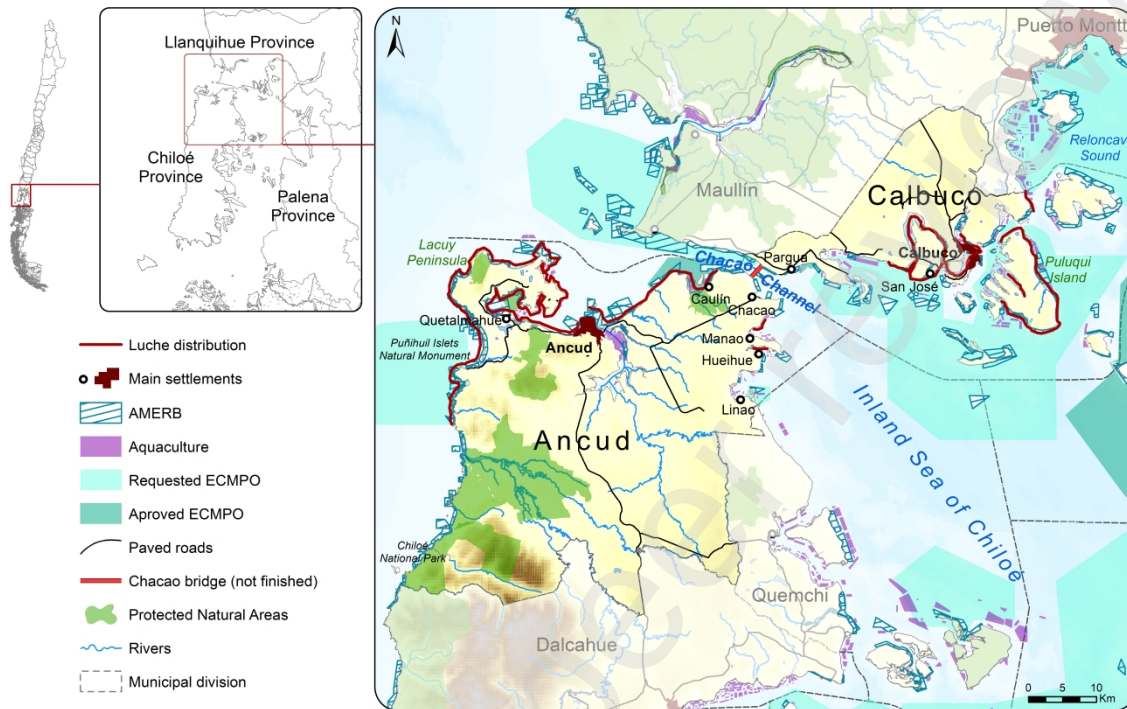
Mobility is a substantial element in the culture and sense of belonging of island populations, especially when we refer to actors whose life rhythms depend on movement to other places, as is the case with seaweed harvesters. From a geographic perspective, the conception of space is subjective and to a large extent depends on the emotions that places

arouse in local actors (Hayfield & Pristed, 2022). It is important to recognize the elements that shape collector mobilities not only to better understand the complexity of the activity and the subjectivities of the islanders who practice them, but also to safeguard them from political, economic and cultural changes. Previous work (Álvarez et al., 2019; Miller, 2021; Vázquez & Barragán, 2024) warns of the degradation of cultural services in southern Chile as a result of pressures from the industrialization of aquaculture, tourism or marine pollution.

3. Methodology

To learn about collector mobilities, the research methodology followed consisted of an ethnographic work of observation, in-depth interviews and meetings with women and men engaged in this activity in both continental as well as insular areas of the Los Lagos Region to discover these collector mobilities. Specifically, the municipalities of Ancud and Calbuco were chosen because they are the most representative cases of *luche* extraction and sale. Twenty women over 60 years of age who were engaged in the activity of open-sea collection in the Gaubún and Huapilacuy sectors of the municipality of Ancud were interviewed twenty women over 60 years of age who were engaged in the activity of open-sea collection. In the continental part of the region, we interviewed ten middle-aged male *luche* collectors in Calbuco. In addition, a focus group was held with the women members of the Puluqui Island collectors' union.

Figure 1. Spatial location of *luche* collection sites in the northern zone of the Los Lagos Region, Chile



Source: own elaboration.

On the other hand, it is important to mention that this research integrates information from surveys on the characterization of *luche* collectors carried out within the framework of the project entitled “Innovation in the production of *luche* (*Pyropia spp.*) through natural collection, improvement of the value chain and the articulation of small-scale producers in the Los Lagos Region” (FONDEF IT23I0048), which served as input to contextualize the problems related to mobility and transport.

Lastly, it is worth mentioning that the in-depth interviews covered three dimensions: corporality, relationships and memory of the practice of collection. The interviews took place in the collectors’ homes as well as during the work itself, except for the group interview with the union, which took place in the community center. The contents of these

interviews were organized using SPSS and four analysis categories emerged: a) embodiment practices, b) places and sensorialities; c) relationships and materialities; and d) sensorial collection memories. All these categories will be described in the light of the testimonies collected in the fieldwork.

4. Results

4.1. *Luche* collection as incarnate practice

An important aspect of collector mobilities is how they are carried out and the movements it requires, i.e., how the activities are organized and subsequently executed. In general terms, most interviewees report that the timetables of *luche* collection depend on the tide, so planning is the first step to developing the activity. To do so, they begin with checking the tide tables by consulting them on the Internet, the radio or with the help of a calendar. Afterwards, the necessary implements are gathered (sacks, boots and shoes) and the tasks are organized individually or collectively, if they belong to a union. Once in the field, they walk and collect the seaweed in nets before placing it in sacks weighing around 30 kilos, which requires being in good physical condition. The collection task can last from two to three hours on the beach, after which they return –generally on foot– to the plant or their homes to drop off the collected material. Generally, and following tidal fluctuations, they work half a day.

Processing begins when they return from collecting the seaweed, around noon. After arriving from the beach, the *luche* is washed with fresh water at least three times to remove the sand and is then left in trays. The harvest is subsequently stored in nets on the roof of the house or the processing plant owned by the union for one sunny day or two cloudy days. The dry seaweed is then taken off the roof and left in plastic boxes that have been used as organizers, where it can be stored for three to four years. A variety of products are made with the seaweed in the processing plant and then sold, such as ground *luche*, whole *luche*, candied *luche* and *luche* vinaigrette. The price of these products –including taxes– is not very high and ranges between USD 1.20 and 3.50. They are usually sold in supermarkets, farmer's markets or to private individuals.

The development of this activity, with its established stages and moments, is shared by a community that not only has common sensitive skills that have become knowledge, but

also a physical-bodily technology that is gradually embodies the trade, developing bodily adaptations and controls that coordinate experience with knowledge of collection, making it possible. Thus, a collector's body finds a position and disposition that mimics the very action of collecting.

A: Always bent over because it's the only way you can get it. Because if you worked standing up or sitting down you wouldn't do anything.

A: It's always been the same position. That hasn't changed since the old days; it's always been the same position. For the old folks, for the men and women; this is how it's always been done.

Collection takes place with a corporality near the rocks, bent over and noting *luche*'s subtleties and its characteristics. This position, universally recognized by collectors, gives account of a learning process that occurs from the body to materiality, adopting a position in which body skills tell of a biography and a reproduced memory. The way in which the body functions in space has been part of the collector mobilities since ancient times, and is therefore a living heritage element that expresses itself through the participants (Burkitt, 2002; Svašek, 2010). Moreover, the people interviewed mention that these postures, which can be difficult to adopt as a result of repetition, do not present gender distinctions.

M: You pull it off, pull it off; you have the *luche* in your hand and then you start to squeeze it before putting it in the sack, or else in the net.

This bodily form of closeness to the *luche*, bent over with hands on the rocks and the gaze fixed on the seaweed, makes touch a sensitive skill during collection, which is also coherent with the seaweed's delicacy. In this sense, the *luche* is harvested by hand, in a pattern like that of agriculture, only in this case there is a pressure that squeezes the excess water from the seaweed. Despite the constant technological revolution, this exercise continues to be practiced manually, without any type of machinery, using only sacks and nets as utensils in the process. This peculiarity differentiates collector mobilities from those which occur in other traditional activities, such as small-scale fishing, where the boats have in many cases undergone modifications to allow them to cover longer distances (Álvarez et al., 2019). Of course, and as will be seen below, modernity has also been noticeable in harvesting, but only in the use of new tools to store seaweed.

M: Everything by hand, that's it. I would take everything...put it on my shoulder and climb up the ravine with it. I'd bring it all up with two or three rests...

This action can well be established as part of an accumulated learning process associated with transporting the seaweed in semi-humid state, unlike in the past when the entire process took place on the beach. In this case, strength is not associated with masculinity, but instead the collectors' bodies also adapt to the needs of the trade regardless of whether they are men or women, including rest paces that facilitate the carrying of sacks. Thus, the autonomy with which collection occurs is part of it, where the people who adopted and incorporated it accept that one aspect of the practice is carrying their seaweed on their shoulders.

A: Yes, let's say that you go down for two hours, but of those two hours you work for like an hour, an hour and a quarter. You can't go *luche-ing* for longer than that. The rest of the time you walk and stretch.

It is striking that the interviewee disassociates travel to the beach from work, identifying the latter with the mere act of collecting seaweed. Not in vain does the walk to and along the beach constitute the basis of collector mobility, in the sense that it represents the movements that must be made to engage in the activity. In this context, different sensitivities and sensorialities arise in their trajectories, which are activated and become body. An expression of the above is how the noun becomes a verb, giving account of how the activity adopts a corporeality, temporality and a specific disposition.

V: Yes, you can feel it. Rougher hands.

M: Yes, my hands hurt. Like my fingers become delicate.

E: That's the rubbing of the seaweed with the rock.

V: Or with the finger and *piure* [a tunicate of the Pyuridae family].

M: Because I think that *luche* gives off like a sort of iodine, because it burns. Like it's burned these fingertips. That's happened to me.

E: And how do your legs and arms feel?

M: Tired, my legs too. You go down the ravine and you go back up.

V: More going up than going down.

M: Yes, you get tired.

R: Yes, because when you've been collecting shellfish for many years you get into it. But then it's hard to bring it up.

An associated registry of ailments and therapeutic methods participates in this bodily regime. Regarding the former, they give account of how the body suffers from the activity, where the handling of textures and weight are part of the body uses and the way in which the body becomes a work tool within this community.

A: Yes, *luche* is easy to harvest; it's a good job for the mind.

E: Why do you say that?

A: It's very relaxing. It's not like being shut up at home or in a vegetable garden all day. No, it's nice; it's good.

Of the therapeutic methods, collectors recognize a sea-therapy, a relationship between the body and a positive emotion from being in contact with water and the open air, evidencing the sensitivity networks that sustain this trade. In this sense, the bodily dispositions are also interwoven with sensory and affective connections. This latter point is related to the trade's corporealization, turning these sensitive records into forms of mobilization and connection with the surrounding environment. In a certain way, the subjects feel that the repetitive effort and the ailments they suffer during the harvest are compensated not so much by the material benefits they can obtain from the activity, but by the experience itself, the sense of freedom and the connection with nature.

4.2. Places and sensorialities as guides of action

In contrast with farming, where one knows exactly where the harvest will take place, in the case of *luche* collectors, this work involves a search and reading of a series of spatial milestones that guide movement. Collection is not a static activity that happens in a single

place. It occurs in and with movement and following the seaweed's times and seasonality. Inclement weather can affect the mobility and emotions of those who practice the activity (Conkling, 2007; Olsen et al., 2020; Santos & Morais, 2022). In adverse weather, collectors must remain still and expectant in their homes to see if conditions improve and then go out to work on the beaches. Accordingly, geographical orientations, sensorialities and body dispositions that guide collection are triggered during the activity.

A: On shore, yes, collecting seaweed, *luche* and *cochayuyo* [*Durvillaea antarctica*].

E: So you don't go collecting all year round, but just in certain months?

A: No, temporary, y'know? It's a season; four or five months.

E: And when does that season begin, more or less?

A: From November onwards.

E: So, it lasts from November through December, January, February and until March?

A: Yes, March; March, April.

A continuity between collecting bodies and perception of the environment is linked to *luche*'s seasonal nature, which tends to proliferate more abundantly during the summer season. Following an adaptive strategy associated with geo-sensitivity, *luche* collection takes place seasonally within a biocultural calendar that ensures the seaweed's rest between collection cycles (Rozzi et al., 2023). Thus, a sensitive coordination takes place between the people and the activity they engage in, where continuity of the activity is privileged over extraction that is disconnected from biological rhythms.

A: Because there have also been years when there has not been any *luche*. Like they rotate years. But at least last year there was and this year you can see that it has been growing nicely.

However, seasonality does not happen precisely and predictably. It is not immune to the productive and cultural changes around it. Within the sensitivity developed by *luche*, a floating affectivity can be observed, which is always present even when the activity is not

constantly being carried out. According to Burkitt (2002), these emotions are the result of the interaction between people and the environment that surrounds them.

E: And what about the tides? Did everyone know that good tides were coming? Or were you letting each other know.

L: Nope, everyone knew; they were watching it from the edge of their ravine. They were watching the tide and already knew there was a good tide.

E: And did they look at the moon or was it more about watching the sea?

L: They watched the sea.

As a floating practice, *luche* collection is anchored in watching the horizon. While science has documented the moon's role on the behavior of the sea, in the experience of some collectors, the old-timers would watch the tidal line as the place where knowledge of their surroundings was acquired. Thus, they looked forward to scheduling the collection, which gives account of a bodily practice associated with the place from which one perceives the world, following the point that organized experiences at the level of the water.

E: Was there any sign on the shore of the beach indicating that there would be tide for collecting? A rock?

H: The Lile rock.

R: Oh yes, where Lile is.

M: Lile rock, yes. Because there's *luche* there too.

H: The other one; I'm not sure if it has a name, la Tranca.

M: La Tranca, that's what they call that one. When we say we're going shellfish collecting, but with La Tranca, it's because there's a lot of shellfish there.

H: Over here there's another one they call Caballo.

M: Yeah, Caballo. Over that way.

H: There are some big rocks over there.

M: And where I would go down to collect shellfish over on this side, which as I told you my mother showed me, there was a rock they that she called La Picuta. A big rock that sticks out; that's the La Picuta rock.

Further evidence of the ways in which *luche* collection is present—even when it is not being exercised directly—has to do with the organization of space through cultural or morphological landmarks. The toponyms of these features (*Lile*, *Tranca*, *Caballo* and *Picuta*) do not appear on official maps and are passed down from generation to generation. The arrangement of these landmarks according to the tidal intervals is the basis of collector mobilities. It is, once again, a matter of knowledge acquired through experience and wisdom that comes from the elders. In addition, the sharing of skills and knowledge within the collector mobilities between generations forges close ties of familiarity among those who practice the activity that feed the positive sensorialities towards the work.

L: Manao is over here. That's its name. Because the old-timers used to give all the beaches names. Yeah, my grandparents had names for all the beaches over here.

This reveals the refinement of perceptive qualities for appropriating the sea, building networks of continuity for seaweed collection around geographical markers/landmarks. These markers are an expression of the trade's characteristics, where the mental organization of the waterfront extends a sensory community in the territory. In this sense, there is a community reference in the name of sectors and beaches, to the extent that the waterfront convenes communities. At the same time, the rocks are marks on the earth of different forms of life. This experience of the place gives account of the interconnection between elements of different orders, linking doing with knowing-remembering, with being and feeling.

A: Yeah, sure, and like surnames are respected. Because today they say: were going *luche-ing* over by the Díazes, over by the Díazes there's plenty; a lot is coming out over by the Hernándezes.

As a result of the naming of beaches, the incorporation of the place through the very experience of collector mobility takes place, an action that for collectors is closely linked to the place where they collect. Walking along the beach in search of seaweed and carrying it

for subsequent processing transforms the action of walking into a veritable new *locus* of body memory and, as such, the need to name and differentiate areas from each other is always feasible, relevant and current (Di Masso et al., 2019; Nuga et al., 2023). Identification guides the body and facilitates a practice that has physical costs. In this sense, there is a triangulation between the senses of the place, the body's oralities and the environment where collection takes place. The beaches, roads and climbs up and down are not just a scenario but are present in the memory as participants in the process capable of modulating and inscribing themselves in collectors' bodies.

A: Yes. Just as I would come down here, I would walk along the beach from here and collect seaweed. I would fill my sack and leave it nice and full. Full. I would take it along with me down the beach itself. And in that way, I would reach Cheumán.

According to the above, analyzing the practices of *luche* collection from a sensitive regime involves going beyond the cultural and ecological and moving toward the way in which both become and are expressed in people's bodies (Mondada, 2016). Thus, collector mobilities become continuous perception and action, living knowledge in which involvement with the place and its sensorialities is a substantial part of collectors' strategies to adapt to their environment, where having the extraction and conservation tools and techniques does is insufficient without the place's dynamics and rhythms. Hence, collection arises on the path that the map of experience has drawn up. These living maps of sorts are not just geographical and administrative, but above all bodily; they are incarnate. They contain an entire series of landmarks and indications to resolve collection in the best way possible. The weight of having to move along the coast collecting *luche* is dimensioned around these considerations. Thus, the frameworks sustaining this sensory regime related to collection arise in an integrated manner.

4.3. Rationalities and materialities of collector mobilities

Like any practical trade, a network of relationships participates in *luche* collection to sustain the activity. These associations include artifacts and non-human entities that participate in, condition and even rub against perception. These mediators play the role of linking the perception between bodies and the environment, from whose encounter a bodily

and cognitive knowledge arises. In addition, the objects used by the collectors, formerly employed by their parents and grandparents, are part of the identity that gives meaning to the perceptions of those who practice the activity.

A: We did not use to say, we're going to go get a *luche* sack or anything like that. Now it's the *luche* sack, but in the old days we would say baskets, clothes baskets, we'd call them clothes baskets. We did not carry it in sacks or anything, because sacks were not so common before. Or they would be called *arpillas* these things they would weave, that's how they made them. We used to collect shellfish with a *cunquillo* [*Juncus procerus* E. Mey] basket.

E: And the fabric?

A: Woven *cunquillo*.

E: And what about the clothes basket you mentioned; that big basket...

A: That was made of *quila* (*Chusquea quila*). It's been disappearing because nowadays you go shellfish collecting with pails, with more...more modern things, of course.

The tools for collection include reed baskets (the smaller ones) and wicker ones (the bigger baskets), sacks, buckets, boots and wheelbarrows. All the objects transported during *luche* collection are used to support the operation. While these items have not changed over the years, the variation in materialities indicates the transformation of cultural and sensorial aspects, reorganizing the relationships that participate in collection.

E: And would you dry the *luche* down on the beach itself or would you dry it up at your house?

A: No, we'd dry it in the pampas, or we would make a drying rack like a pompom. That's what my old grandparents would do. On a rack like this so it could dry well or to drain the water from the *luche*. And after that it was sprayed with water again so it would stick. To compress it.

E: And that spraying was done with fresh water?

A: Fresh water, fresh water. Because the *luche* would start to swell. Because *luche* swells with fresh water.

Basic elements of life like water, heat and wind participate in this system of relationships. While the presence of these items has varied over time due to innovations in the trade, dependence remains on what this fabric induces in the behavior of *luche* and, as such, in the activation of its potentialities.

A: Because I'm telling you: collecting the *luche* on the beach is not so hard, cooking it is the hard part. Because you must be patient; sometimes I have to make myself a hard-boiled egg, a mate or anything because I burned a bread; I'm already having the other, and I get another one out and get another one out.

The relationship with fire is part of this and takes place during the process of cooking the seaweed, a procedure that does not require great physical effort –as is the case with seaweed extraction on beaches– but is more complex. Like the drying process, processing currently takes place at the domestic level and this moment is impregnated with a culinary and patient sensitivity, mainly supported by dryers, ovens and tin molds. This stage tends to be in the hands of women, which in the collectors' words is associated with an ability to manage the wait. In other words, unlike harvesting –in which both men and women perform the same functions– there is gender differentiation in handling the seaweed.

A: It can't get wet; you can't let it get wet again. Because it can't get wet again once it's cooked because, like, it comes apart. It can no longer be compacted. *Luche* can't come into contact with fresh water. It spoils, it rots. It can't be exposed any more because that's where its gelatinous part comes from. Because the *luche* already died because it's cooked. The *luche* already died; it already lost its life.

As noted, the *luche* must be kept away from fresh water once it has been cooked/processed. This moment, described as a “biological death,” is supported by a sensoriality that transforms, one in which the seaweed releases a vital gelatin, similar to the expulsion of its entrails. However, this process gives the collectors greater responsibility, as they must now prevent fresh water from coming back into contact with the *luche*. This observation brings

attention to the registry of agencies with those the collectors interact with, identifying a network of relationships that emerges during the exercise of this activity.

A: But of course there are rocks with life. There are living rocks and dead rocks. It is very hard to remove *luche* that is stuck to a living rock.

E: And what is the living rock?

A: It's a rock like any other, but when you try to take a... It's difficult, you pull at it, you cut your hand and it gets tired.

E: It doesn't let it go.

A: Nope, that's right. That's why they say that living rocks, like they trap the...

E: And how do they identify them?

A: There are very few of them. They are very smooth. It's a rock that you... It's hard, not like the other rocks, which if you hit them, they may fall apart.

Thus, *luche* collectors also deal with other-than-humans, beings whose agency affects collection. Among these agencies, one can mention the so-called “living rocks,” which are identified as places that hold high-quality *luche*. However, the rock holds onto the *luche* as if its extraction were a challenge to the collector.

L: The best *luche* comes from the living rock. And that's the clean *luche*.

L: Those rocks have these like strips on top, like strips at the top. That's where the *luche* grows. It all ends up super long. Over back there I had a rock that I used to go to, at the end; you could find those there. But it was like hard to get it out, but long, a tremendously long *luche*. And it's good; it's delicious.

An interesting aspect of the rocks with life is that they indicate how “*culturalaleza*” or culture-nature (Florido, 2019) unfolds, a relationality that goes beyond the dichotomous separations between culture and nature. Thus, a socio-ecological continuity is experienced, which situates collection as an act that transcends extraction. This recognition contains an overflow of relations between subjects and objects and configures a sort of living relationship between all agents participating in collection. A gratifying emotion emerges

from this encounter, where managing to extract this *luche* ensures cleanliness and flavor. These are all characteristics that participate in the regime of the sensorial community's senses, which at the same time endow these rocks with value.

4.4. Sensory memories of collection

The interconnection between the land and the sea generates a scenario conducive to the formation of a sense of island identity and emotions intrinsically linked to mobility (Hayward, 2012; Hayfield & Pristed, 2022). Sensitive memories of collection are also part of the imagery surrounding these mobilities. It is a narrative lived by family generations that configures a timeline, a living story of collection over time. The common narrative revolves around the figures of grandparents and their mobilities as transmitters of the collection trade.

A: My grandparents say that when they would go to the island or over here, there was more *luche* and that the *luche* there could be obtained by the sack. They would bring back eight or 10 sacks, easily.

Thus, a memory related to abundance of the resource and social ties is habitual among collectors, where the amount of *luche* required a workforce on the family level, mobilizing the group to undertake the process. This same impression is illustrated in other traditional activities in the study area, such as small-scale fishing. As the overexploitation of marine resources and the expansion of the aquaculture industry have grown in recent decades, the availability of commercial species close to the coasts has been drastically reduced. As a consequence of these changes, seaweed harvesters or small-scale fishermen must seek alternatives to safeguard their economic and cultural livelihoods (Barton & Román, 2016).

A: Of course, now it's all on your own. In the old days I would work; I would go shellfish gathering with oxcarts; I'd stop to pick up the neighbor collecting shellfish nearby and say, "Hey, let me give you a lift." Now it's just you; it's more personal.

There is an emotional and affective memory that connects with this sensory community. The collection and processing of *luche* is not just a productive act, but also an activity that provokes encounter. This association between collection and family leads to an accumulated feeling and brings a nostalgic component that acts on this practice to the

present. Meanwhile, globalization has meant a drastic transition from the communitarian and collaborative sense that prevailed in the past to a more individualistic one, endangering the survival of traditions such as the *minga*, understood as the system of collaboration and exchange among the members of a community to develop an activity (Bravo, 2004).

L: I learned to make *luche* bread. That is, I'd watch my granny when she made *luche*. And when I grew up, I learned and would make it myself. I'd go fishing at the beach and make *luche* breads that I'd take to Ancud.

The existence of this nostalgic feeling means that not only was there an oral transmission, but also that *luche* collection has occurred sensorially, with the senses becoming the channels through which this memory flows. Among these, sight, or learning from watching, reveals networks of repetition among *luche* collectors, through which connections are configured that are part of an observationally accumulated learning empirically.

E: And was the old *luche* different from the new *luche*?

L: Yes, because the old one would become kind of bleached.

E: Ah, it became bleached.

L: As if... More dyed than black. When it's new it is black, really black. It's like a... Like a... Long in part and part clumps. A kind of curly *luche*.

In an initial approach to the exercise of collection, observation is a fundamental pillar for recognizing the seaweed and knowing its condition. Thus, the sensory regime includes an acquired textural and visual literacy, which is registered as knowledge acquired through the experience of working with *luche*. The changes in color indicate the passage of time, where there is a correspondence between tarnishing of the seaweed and its age. In terms of textures, descriptions of *luche* range from curly to smooth or hard. Its different textures are linked to the passage of time and reinforce association networks for the trade, fine-tuned with experience and sensorialities.

A: Well, I'm always a bit attentive and if I hear a noise I look to see if a swell is coming.

Another sense worked on is the soundscape that accompanies collection, on this occasion as an alarm signal for the occurrence of tidal waves. While the sounds of birds or dogs are recognized, *luche* collectors tend to pay attention to what the entities present on the coast sound like. Thus, decoding the sea and the wind are care knowledges inherent to the practice, to the extent that both have agency to transform the act of collection. For this reason, collectors are aware of the existence of these signs while engaged in their work on the beach, and their ears are alert to emergencies and the interpretation of certain sounds as they work looking at the rocks. Following Hincks & Johnston's (2022) thesis, it could be said that sounds act as a channel for experiencing emotions and feelings.

A: Oh yes, of that smoking. You had to leave it at least half an hour to be able to see the *luche* because it was giving off so much steam. And the smell was great; the smell was of a compact seaweed but tasty. You could taste it from the smell.

Once collection finishes, the drying process before processing begins. The smoke is part of this moment, as the *luche* used to be heated on hot rocks to smoke it. This technique used to smoke food in southern Chile is known as *curantear*. This reference is another sensitive memory associated with *luche*, which while having varied with processing at home, has maintained dehydration as an image of its cooking, sustaining kinesthetic association networks in which the olfactory activates the palate. This bridge between the two is linked to a memory of taste, where the cooking-food relationship is embodied.

L: But I already know when they're ready...by sight and nothing else.

According to the above, within the sensory community of *luche* collection, a naturalist method is practiced in which experience is an engine from which the system of knowledge and practice of this trade is derived. The "eyeball" unit of measure is nothing other than the application of an approximate record that depends on the observer, where the attributes are determined more by qualities ("a browner color") than by times. In this sense, one can well imagine that the result is never the same, as *luche* collection is a dynamic process even when it is determined by a baggage and accumulated experience. Thus, the method is always in dialog with present conditions, which validates the permanent updating of this community.

5. Conclusion: moving collector

Based on the experiences of *luche* collectors, this article proposes the notion of *collector mobilities* as an embedded and incarnate disposition of the movement that is constituted in the trade of seaweed collection, and which provides a sensitive record to guide ways of inhabiting the coastal environment. We suggest that, in the tracks of *luche* collection, we not only find mental models or eco-political structures, but also sensory regimes that operate during the journey, modeling the body, memory and sensorialities, and shape the places where this trade is practiced.

In this context, we stress the importance of understanding *luche* collection beyond the individual aspect or the seaweed collected and as a spatial and incarnate bodily practice that resorts to a series of spatial arrangements (Politis, 1996) to expand the horizons of its actions (Recasens, 2003). Understood in this way, collector mobilities are a practice whose mobility is incarnate in an assembly with places, materialities and other non-humans, sensorialities, the body and memory. Thus, collector mobilities integrate knowledge and skills in which all senses come into play: vision to locate the seaweed and check the weather conditions, touch to feel the textures of the resource that settles on the stones, hearing to detect swells, smell is used during the smoking of the *luche*, and taste is activated after its preparation.

For collectors, their trade is a living experience in which the seaweed is –above all else– an active and moving being. In the same way, when they age and are faced with the impossibility of going to the beach to collect on their own due to the very ailments that the practice and years of work caused, a nostalgic and self-absorbed emotion inherent to the feeling of loss in the fragmentation of their collection activity arises. In this sense, the proposed notion of collector mobilities invites one to rethink how a sensory and floating community that shares an atmospheric affectivity (Lazo, 2017) is favored with the attunement among material, human and non-human agencies. In this way, the emergence of a network that connects the different collectors sensorially emerges, sharing not only a way of doing, but also of being the territory.

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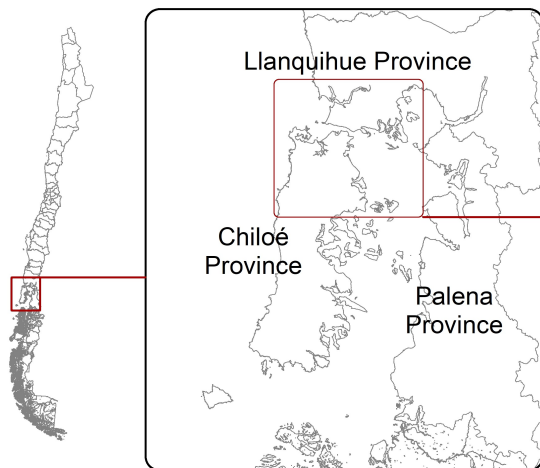
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	Los Lagos Region	Chile
2012	0	89
2013	0	90
2014	4	132
2015	1	176
2016	11	105
2017	10	158
2018	108	235
2019	149	319
2020	67	230
2021	155	426
2022	207	305
2023	72	181



- Luche distribution
- ■ Main settlements
- ▨ AMERB
- Aquaculture
- Requested ECMPO
- Aproved ECMPO
- Paved roads
- Chacao bridge (not finished)
- Protected Natural Areas
- ~ Rivers
- - - Municipal division

