



◀ **FIGURE 1.** *My Local Plant* in the exhibition. Photograph: Elina Luiro, 2024.

Natural Dyeing of Wool

Reviving Connections to Land, History and Heritage

Fabiola Hernández Cervantes, Maria Huhmarniemi, Tatiana Kravtsov, Minna Kovero and Elina Luiro

Natural dyeing of wool reconnects textile practice with Land, heritage, and ecological responsibility. Rooted in local ecologies yet open to global material flows, plant-based natural dyeing becomes a form of ecocultural learning that links craft and sustainability. Through shared practices and situated experimentation, natural dyes revive relationships between people, places, histories, and living environments.

Traditionally, wool yarns have been dyed using natural colour sources such as plants, mushrooms, bark, leaves, and roots. Across cultures, natural dyeing has been embedded in local ecologies, seasonal rhythms, and everyday life. Engaging in natural dyeing today offers a way to reconnect with Land,

place, and cultural memory, reflecting reciprocal relationships between craft traditions and ecological systems.

In the VillaInno context, wool dyeing is approached both as a material practice and as situated, land-based learning (Hernández Cervantes, 2025). Dyeing sessions combine the study of historical dye sources and methods with hands-on experimentation (Hernández Cervantes & Huhmarniemi, 2023). Practices alternate between collaborative and individual work, with results shared collectively; this exchange of experiences and outcomes is central to the process.

The work primarily uses locally available colour sources – flowers, leaves, roots, and mushrooms – collected with ecological care. Contemporary materials such as avocado peels, stones, and black beans are also included, acknowledging the global circulation of everyday resources. Edible materials are not wasted, and rare species are avoided. Through these choices, natural dyeing becomes a practice of



FIGURE 2.
Samples of the
naturally dyed wool
and whipcord braiding
technique. Photographs:
Minna Kovero, 2024 (left);
Fabiola Hernández
Cervantes, 2024
(right).

environmental responsibility, cultural awareness, and collective care.

Ecocultural practices like natural dyeing are dynamic and respond to environmental change and growing ecological awareness (Huhmarniemi, forthcoming). Climate change and biodiversity loss increasingly limit access to traditional dye plants and fungi, requiring the discontinuation of some historical sources. Likewise, minerals and acids that were once commonly used are now avoided due to environmental and health concerns. A wide range of hues is achieved by dyeing various wool qualities in the same dye bath and reusing it multiple times. This highlights how colour variation emerges through material interaction, while supporting sustainable methods by maximising each dye bath and reducing waste. Thus, sustainability concerns the revitalisation of natural dyeing.

My Local Plant

Four designers, Fabiola Hernández Cervantes, Tatiana Kravtsov, Minna Kovero and Elina Luiro,

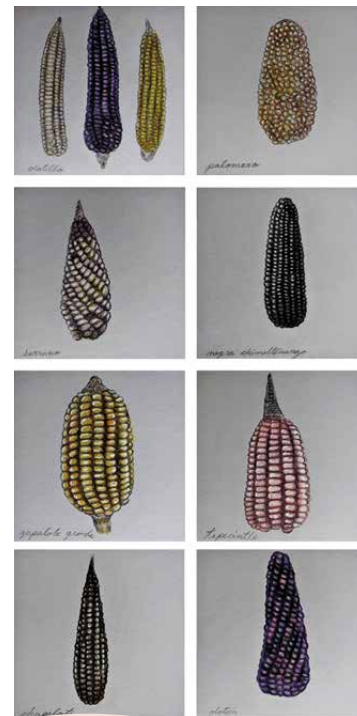
explored wool dyeing as a way to revive and re-establish connections to Land and ecocultures through plant-based colour sources. Each dye material carried distinct cultural and ecological meanings.

Purple corn, rooted in Indigenous American heritage, represents ancient agricultural knowledge and continuity. Madder root evokes one of the most historically significant red dyes in European textile traditions. Birch bark, widely used in Northern cultures as a source of tannins, provides muted brown, yellow, and grey tones in wool, leather, and other everyday textiles. Tansy, known for its vivid yellow hues and potent scent, connects Eurasian traditions and ancient Mediterranean herbal medicine. Together, these dyeing processes highlight the coexistence of multiple cultural narratives and demonstrate the potential of craft in renewing relationships with the places and ecocultures we inhabit.

During the autumn of 2024, the designers collaborated on a craft-based artwork titled *My Local Plant* (Figure 1–2). It was created in situ as a collective work within the art exhibition *Relate North 2024: New Genre Arctic Art Education*, showcasing selected natural colours and dyeing processes through posters, dye baths, and hand-dyed wool yarns. One woollen piece was created using the whipcord braid technique. The wools were dyed with four plant sources from various parts of the world – corn, madder root, birch bark, and tansy –



▲ **FIGURE 2.** Colouring wool with native purple corn and corn drawings. Photographs and drawings: Fabiola Hernández Cervantes, 2018–2024.



and the braiding itself brought these diverse ecocultural lineages into dialogue through material practice.

The artwork interprets the idea of local plants through a multicultural and situated perspective. Rather than defining locality as a fixed geographical category, the process reconnects each designer to the cultural and ecological heritage embedded in their places of origin. The work unfolded through interconnected stages: background research, ethical gathering of dye materials, experimentation with dyeing methods, careful documentation, and, finally, the textile process itself.

Corn

Dyeing wool with native corn was a ritual of heritage and rootedness for Cervantes (Figure 2). Corn is an ancestral treasure for Mexican cultures; an integral plant in the history and culture of Mexico and its peoples for millennia. For Cervantes, the use of ancestral corn in dye wool fibres establishes

“Native plants are crucial for ecosystems as they have co-evolved for thousands (if not millions) of years, working together with other species to sustain life. We wear plants, and we eat plants; they represent food, medicine, beauty, and life. Early humans relied on their knowledge of plants not only for sustenance but also for medicinal purposes and spiritual practices. There is a whole spectrum of people-plant interactions that we take for granted in this fast-paced contemporary living.”

– Lola Cervantes, IG post, Nov. 2024

a personal dialogue that connects the ancient rituals of the Mesoamerican *milpa* with the modern right for humans to exist in harmony with the earth that sustains us. The corn-colouring experiments led Cervantes to obtain various shades of purple and light grey. Through these colouring processes, she reclaims the language of the plants that nourished her ancestors. From the Maya to the Aztecs, to contemporary cultures, corn has been, and always will be, sacred, thereby transforming the act of colouring wool into a revitalisation practice that revives ancestral knowledge.



▲ **FIGURE 3.** Experimental dyeing process in fermented tannin bath made with birch bark and ash lye, wool yarn dyed in the tannin bath. Photographs: Tatiana Kravtsov, 2024.

Birch bark

While working with birch bark as a weaving material, Kravtsov encountered the term *barking*, which led her to begin dyeing experiments (Figure 3). Historically, in Arctic and sub-Arctic fishing communities, tannin-rich barking baths were used to dye and strengthen textiles and nets, protecting them from water, sun, and decay. Barking was also used to tan seal skins for boots and to darken coats. Vajanto's (2016) research further inspired this exploration, featuring bark materials, including silver birch bark, as a local dye source in Finland for fermented tannin baths. Producing reddish-brown tones, tannin baths were often symbolically associated with blood. Tannins strengthened the yarns, which was important for warp-weighted loom weaving. Approaching dyeing as an open-ended experiment, Kravtsov used dried birch bark and ash lye in a room-temperature fermentation process. The dyeing results were soft beige and subtle pink tones. The exploration sought to reconnect material practice with northern traditions.



► **FIGURE 4.** Tansy dyeing process carried out outdoors to ensure ventilation, and protective gloves used when handling the plant. Photographs: Elina Luiro, 2024.



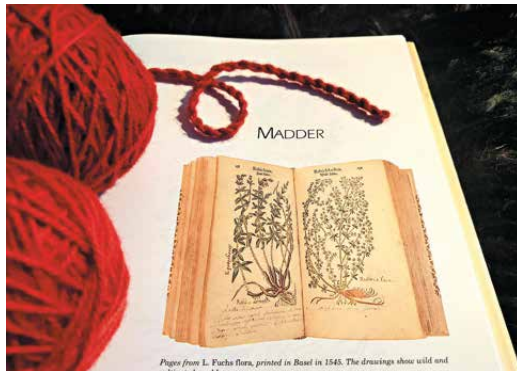
Tansy

Tansy, *Tanacetum vulgare*, is a widely distributed Eurasian plant historically used as spice, medicine and for decorations. It has a strong scent and is also known to repel insects, making it useful for protecting stored foods. As a dye source, tansy produces brilliant yellow and yellow-green tones with excellent lightfastness, but its toxicity from *thujone* requires careful handling and good ventilation during dyeing. Growing plentifully close to Luiro's home, tansy has become her local dye plant (Figure 4). For the craft-based artwork created with the VillalInno team, she gathered an abundance of flower clusters and experimented with them to dye natural white to medium grey wool. The results were vibrant yellow shades and a range of subtle green variations.

Madder

Karelian roots inspired Kovero to explore the region's traditional colours. The inquiry began with a simple question: *What is the original red in Karelian käspaikka ritual towel embroideries?* Seeking answers led to a deeper engagement with European cultural history and the traditional use of natural dyes, complemented by Kovero's own experimental dyeing with madder root. Madder red is common in Karelian folk costumes and embroidery. Dyes were derived from local bedstraw roots – northern bedstraw (*Galium boreale*) and lady's bedstraw (*Galium verum*) – as well as *Rubia tinctorum*

rum, imported dyer's madder (Räisänen, 2006). In Northern Europe, its use reflects medieval Central European traditions, where dyer's madder was the primary red dye. Originating in the eastern Mediterranean and Central Asia, and possibly first used in Persia, madder dyeing spread widely across the Middle East and Eastern Europe (Sandberg, 1997). Textile crafts in Slavic and Eastern European regions are often closely associated with the red of madder: this vibrant hue appears on many textiles, particularly in embroidered works. *Rubia tinctorum* is the most widely cultivated and used madder, and it contains the richest dyes. It produces multiple pigments – red, yellow, and blue – creating complex hues. As Finlay (2002) notes, a magnified piece of madder appears orange and blue and red, like a kingfisher's wings. Kovero's dyeing experiments aimed for bright red; the closest result was achieved with dyer's madder by simmering alum-mordanted wool yarn with madder root pieces below 60°C. The whole process was deeply inspiring, as reflecting on the past through madder revealed an insightful perspective on cultural history and its connection to our contemporary use of colour (Figure 5).



◀ **FIGURE 5.** The process with madder included studying from books and conducting experiments. Photographs: Minna Kovero, 2024.



The four distinct dyeing processes, along with the collaborative process of creating the *My Local Plant* piece, demonstrate how natural dyeing and textile techniques travel across cultures whilst remaining rooted in specific ecologies. The work positions craft as a space for ecological awareness, cultural memory, and relational making, where diverse traditions coexist and give rise to new forms of ecocultural understanding.

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