# FLOWER POWER PHOTOGRAPHY

*(Un)Conscious Materialities, Collaborative Workshops, & Cows*

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*Figure (1): Cow by Tanya Kreil*
*reposted by @ilfordphoto via Instagram*

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Guard: "The beacon! The beacon of Amon Dîn is lit!"

[Signal beacons light in succession across several peaks]

— J.R.R. Tolkien, Lord of the Rings: *The Return of The King* (2003)

# “MAY I USE FILM IF I AM A VEGAN?”

> “Each shudder of grain comes with the castration of a calf, or every golden-hued light leak is made possible by a half-conscious cow - bleeding out on the slaughterhouse floor. In an ecologically-centred future, the implications of each ‘trans-action’ are unavoidably evident, and the inimitable beauty of film cannot be divorced from the well-documented misery of animal agriculture. Although more distant, the blood drips from our lenses as it does from our forks.”
>
> — Edd Carr, *Ecology of Grain* (2019, p. 56)

It’s spring 2019, I’m 25 years old, back living with my parents in South Wales, three years after graduating from a neoliberal university in Florida with a degree in ‘International Business Studies’ (which ironically only focused on North America), and I’m more than likely going through a depressive episode (again). More specifically, it’s 1 a.m. on a Tuesday morning, and I’m struggling to fall asleep, so I put on a documentary: *Cowspiracy - The Sustainability Secret.*[1] Ninety minutes later, I go vegan.

Fast forward six months, I’m living in the Algarve with my partner, working in golf travel and real estate. Broke, struggling to cover my half of the rent – a global pandemic strikes. The world comes to a halt. A small, truck-like vehicle rolls through the streets of Portimão blaring a looped message in Portuguese, followed by a slow, repeated: *“Stay. At. Home.”* Luckily, at home, there was a camera.

This essay is my attempt to synthesise some of the work I’ve been doing to begin untangling the messiness of my own photography and artistic practice over the past five years, especially the more material systems that exist within. The work began, and continues to evolve through my desire for alternative and experimental photography practices that are grounded in non-human animal rights and more-than-human ethics. This desire is underpinned with a love for the magic and aesthetic of the medium, and a desperation for the slowness that comes with moving away from the digital. However, also therein lies a disgust for the use of gelatine in the practice, a sadness with the violent, unjust status quo, and a fiery anger with the justifications made by industry.

A particular such justification, made by industry-leading German manufacturer of silver halide products: Adox – rests on the argument that the use of photographic film is a philosophical question that they unfortunately cannot answer. But, under a tab on their website titled: *May I use film if I am a vegan?*[2], they seemingly make their case for why the gelatine they purchase and use should not be an issue to vegans, and conclude that they in fact have no responsibility in the matter. As consumers, it’s apparently “your decision” (see figure 2).

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[1] Cowspiracy: *The Sustainability Secret,* dir. Kip Andersen & Keegan Kuhn (2014), film, https://www.cowspiracy.com/

[2] ADOX, ‘*May I use film if I am a vegan?*’, https://www.adox.de/Photo/vegan-info/

# MAY I USE FILM IF I AM A VEGAN?

This is a philosophical question and we cannot answer it for you.
Yes, our films, like any other films, color and black and white, manufactured by whichever company, contain gelatin.
You will not find any coated product in the entire imaging industry, apart from hand-made wet collodion plates, which do not contain gelatin. This also includes inkjet papers.
Gelatin-free films or papers have never existed.
Gelatin is irreplaceable if you want to manufacture a quality product. In the 50ies and 60ies millions of dollars were devoted to research projects trying to find alternatives in the US, Germany, Japan and Russia, but after 20 years everyone gave up with no result.
Gelatin is also the product of choice if you are generally interested in this planet and sustainability.
It is a natural product which is bio degradable and uses water as a natural solvent. This is very ecological.

If you were to use a different colloid, you need to use toxic solvents which then might get released into the environment during product dry-down, and plastics, which add to the pollution of the earth.
Gelatin is manufactured from skeletons of dead animals -yes- but, after all ,animals will die at a certain point and for sure **no animals are killed especially for making gelatin**. Rather they are killed for their meat and byproducts arise in large amounts. Not eating meat really helps in achieving the goals of reducing human kettle raising, but not using film will have no impact at all.

The photographic industry today is so unimportant, that we are using less than 1/1.000.000.000 of the animal byproducts which arise from the meat industry.

Most of this is treated and converted into animal food because there is no better use for it (like manufacturing film gelatin).
Per film the amount of gelatin is very small. We are coating with about 3-9 grams per sqm which equals 16 films.

So the bones of one dead horse can deliver enough gelatin for tens of thousands of films.
It´s your decision.
We cannot do anything else but publishing this info and being honest about the fact that we cannot replace gelatin even if we were given millions of dollars to do so.
ADOX, Germany
Manufacturer of silver halide products.

*Figure (2): "May I use film if I am a vegan?" — ADOX*

This essay will critically interrogate such justifications made by those in the industry like Adox, and propose alternative ways of thinking on the matter; ones that do not simply and poorly disregard any conscious effort to find alternative materials that cause less harm to nonhuman and human animals alike. On another note, this essay seeks to have fewer spelling mistakes and hopefully better grammar than those in the industry – especially regarding "kettle" – the cows sent to slaughter for these so-called "byproducts" deserve this courtesy at the very least. Despite Adox's statement in bold on their website (in figure 2), cows *have* historically, and are continually sent to slaughter for the creation and demand for bovine gelatine.

In practical, theoretical, and ethical terms, the topic of gelatine enables important discussions about the role of photography in broader societal systems. To quote American author Bill Brown, one must "understand the unconscious as material history and history as the unconscious, as the necessarily repressed that can be rendered visible in sites of contradiction or incomplete elision"[3]. In conversation with Brown, Canadian author and English professor Nicole Shukin adds that (bovine) *gelatine* in in fact "among those seemingly negligible but in fact significant points of entry into the *material unconscious* of culture", as it marks a "vanishing point" where "images are both inconspicuously and viscerally contingent on mass animal disassembly". Moreover, against an understanding of animals as "perpetual motion machines" that "live unhistorically", Shukin develops the material unconscious of capitalist modernity as the denied and disavowed historicity of animals and of animal rendering[4]. In other words, encapsulated distinctly by Noëlie Vialles in her book *Animal to Edible*: "The animal disappears in its suspension"[5].

With this in mind, a question that drives this text is:

> **Q**: How can an approach of conscious materiality shape alternative, experimental, and collaborative photography darkroom practices and their material, ethical, and aesthetic outcomes?

While this essay will not be sufficient to offer a complete answer, this can be seen as some key points of entry into my artistic practice and where it's seemed to crack at the seams, where I need to dig in a little deeper to fully understand what my arts practice and research is in this world. So, what follows in this essay is firstly a brief exploration of the issue at hand, as well as an overview of what others have done in the emerging field of ecological alternative and experimental photography. Thereafter, I will introduce the workshop as a collaborative method for exploring sustainable darkroom practices, particularly highlighting how it shifts the focus of the darkroom from motive and product – to process and experience. Finally I will pick up this last strand and share participant accounts of what this experience has meant to them and their photographic practice, concluding with some of my own reflections on where this leaves us and how we hope to collectively move forwards with the project that has been lovingly named: *Flower Power Photography*.

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[3] Bill Brown, *Material Unconscious*, (1996), p. 5

[4] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (2009), pp. 91–92.

[5] Noëlie Vialles, *Animal to Edible*, (1994), p. 87.

# Why Look at Cows

> "To take a photograph is to participate in another person's mortality, vulnerability, mutability."
>
> — Susan Sontag, *On Photography* (1977)

Mortality, as noted by the American writer and critic Susan Sontag[6], and defined as "the state of being subject to death", or "death, especially on a large scale"[7], is so clearly and explicitly seen in photography through its use of gelatine, specifically *bovine* gelatine, that the scale of mortality for the industry alone is truly difficult and heartbreaking to comprehend. Perhaps, this is why the industry is so set on looking away and/or deflecting responsibility. To take a look at why, we need to look at animals[8], *especially* cows, and go back to photography's humble beginnings.

For well over a century, high-grade gelatine created from cow bones known as Type B Ossein Gelatine has been considered required for photographic film and paper. In the late nineteenth century, Dr. R. L. Maddox was the first to discover its for photographic purposes. After attempting to use different plants to achieve the results he was searching for, he tried animal gelatine from a sachet of Nelson's Gelatine Granules and discovered the gelatine to be a successful binding agent in attaching the light-sensitive silver bromide to glass plates in the form of an emulsion, which is now known and commonly referred to as the silver gelatine process. In Maddox's words, the results were "very delicate in detail" and "dried to a brilliant surface"[9] – with this, photography and gelatine were violently solidified in an entangled future, insofar that modern photography would be "unthinkable today without gelatine"[10].

Some in the industry, like Adox, go so far to state that gelatine is in fact, also the "product of choice if you are generally interested in this planet and sustainability". On the contrary, however, choosing a product that actively participates in the slaughter of hundreds of millions of beings every year, and an industry that so negatively and harmfully contributes to our environment, is arguably not the "product of choice" for those "generally" interested in the planet and sustainability. For those generally interested, I'd argue that gelatine is actually a product of *un-sustainability*, horrifically so for a mere binding agent.

To this day, there are no film-stocks or photographic darkroom paper on the market that do not contain gelatine. *Zero* alternatives. The UK artist Edd Carr writes that leading film manufacturers repeatedly confirm that there are no viable plant-based alternatives, as with edible gelatines[11], which is attested by Ilford who states that bovine gelatine has unique characteristics which act as a

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[6] Susan Sontag, *On Photography* (New York: Farrar, Straus and Giroux, 1977).

[7] Oxford English Dictionary, '*mortality*' (2026) https://www.oed.com/ accessed 15 February 2026.

[8] John Berger, *Why Look At Animals* (1980)

[9] R. L. Maddox, '*An Experiment with Gelatino-Bromide', British Journal of Photography* (1871), quoted in Edd Carr, *Ecology of Grain* (2019), p. 28.

[10] Schreiber, Reinhold, and Gareis, Herbert. *Gelatine Handbook: Theory and Industrial Practice*, cited in Carr, *Ecology of Grain*, p. 28.

[11] Edd Carr, Ecology of Grain (2019), p. 31.

membrane matrix for the silver crystals but also interacts with the crystals as they are formed. Adding, substitutes have been attempted such as vegetable substitutes or PVOH, however none perform to the same standard as gelatine, as they are "fragile, slow and have a short life"[12]. A patent report by Ivan Tomka in 1979 attests that bovine gelatine is the only suitable binding agent in both the quality of film, and the cost-efficiency with which it is produced[13]. Therefore, clarifying that the *current* production and use of photographic film, paper, and emulsion is *entirely* dependent on gelatine that is extracted from the bones of slaughtered cattle in the meat industry.

As a result of this dependency, in combination with a rising resurgence/renaissance of photographic film[14], the demand for bovine gelatine was predicted to rise to 85 kilotons by 2025[15]. If these predictions were correct, consumer film stocks *alone* in 2025 needed **1,164 cows** for bovine gelatine, and the photography industry as a whole needed **9,304,871 cows**[16]. To repeat, that's over *one thousand cows* just for consumer film stocks in 2025, and nearly *ten million cows* for the whole industry. Industry actors justify these statistics by arguing that the gelatine they buy and use is just a mere "byproduct", so no extra animals are "used" in the making[17] – no animals are killed especially for the making of their gelatine[18]. Adox goes further to state that they "honestly" couldn't replace gelatine even if they were given millions of dollars to do so. But, what they "honestly" fail to mention or acknowledge is the fact that animal byproducts contribute *significantly* to the profitability of the meat industry, and assist greatly in the costs of slaughter house operations and profit margins, with 10-15% of an animal's "value" actually being in its "byproducts"[19]. As early as 1906, Upton Sinclair horrifyingly wrote: "They use everything except the squeal."[20] Their screams are the only non-profitable product.

Without the sale of byproducts, the meat industry would likely endure an existential crisis[21], perhaps even collapsing entirely as it industrially operates within late neoliberal capitalism today. Historically, it was only by selling byproducts that "animals actually returned as capital"[22]. Kodak's head of research, Dr. C. E. Kenneth Mees once recounted to a lecture audience: "if cows didn't like

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[12] Ilford Photo, '*Advice for Vegans / Vegan FAQs*', https://www.ilfordphoto.com/faqs/advice-vegans-faqs/accessed 15 February 2026.

[13] Ivan Tomka, '*Photographic Material*', U.S. Patent No. 4,360,590 (1982).

[14] Edd Carr, *Ecology of Grain* (2019), p. 10

[15] Acumen Research and Consulting, *Gelatin Market* (Type: Skin Gelatin, Bone Gelatin, Halal Gelatin Type; Application: Pharmaceutical, Edible, Photographic) – Global Industry Analysis, Market Size, Opportunities and Forecast, 2018 – 2025 (2019), Acumen Research and Consulting, https://www.acumenresearchandconsulting.com/gelatin-marketaccessed 15 February 2026.

[16] Edd Carr, *Ecology of Grain* (2019), pp. 45, 57.

[17] Ilford Photo, '*Advice for Vegans / Vegan FAQs*', https://www.ilfordphoto.com/faqs/advice-vegans-faqs/accessed 15 February 2026.

[18] ADOX, 'May I use film if I am a vegan?', https://www.adox.de/Photo/vegan-info/ accessed 15 February 2026.

[19] A. Irshad and B. D. Sharma, '*Abattoir by-Product Utilization for Sustainable Meat Industry: A Review*', Journal of Animal Production Advances, 5.6 (2015), 681–696.

[20] Upton Sinclair, *The Jungle* (New York: Doubleday, Page & Company, 1906).

[21] Edd Carr, *Ecology of Grain* (2019), p. 44

[22] William Cronon, *Nature's Metropolis: Chicago and the Great West* (1991)

mustard there wouldn't be any movies at all"[23], referencing a conundrum that baffled the industry for many decades before realisation. That being, the cows needed to consume mustard seeds for their gelatine to be fit for photographic mass market production. In her book: *How the Other Half Dies*, Susan George writes: "[the] animals will never touch the ground. They will be bred; suckled and fed to maturity in specially designed pens"[24]. Photographic bovine gelatine isn't a simple and mere byproduct scraped from the floors of slaughterhouses in the meat industry, it is a complex and carefully manufactured *product* that is violently and bloodily extracted from millions of sentient beings — cows.

Informed, or dare I say enraged by the writings above, one key aim of the work I am currently doing is to better understand the use of gelatine in photography practices and explore possible vegan alternatives. For the project: *Flower Power Photography,* this has meant ethically, theoretically, and practically re-imagining the darkroom as a space of experimental processes and collective experiences. For as will become clear throughout this essay, the path of rethinking film photography without gelatine – unthinkable by the largest actors in the industry – is a path best walked together with others. So in the name of not entering this field blind and alone, the following section will look into what has already been explored within the area of ecological photography thus far, and what potential gaps in knowledge my work might speak to.

## The Ecological Turn To Analogue

> Creative Ecologies: "Practices that make new sensible materializations and connections (aesthetic, practical, jurisgenerative) between otherwise discrete realms of experience and knowledge, and that cultivate just worlds to come."
>
> — T. J. Demos, *Beyond the World's End: Arts of Living at the Crossing* (2020, p. 18)

The field of research regarding gelatine in photography is interesting in the fact that there is a large gap time-wise. There are texts from photography's humble beginnings in the 19th century, by the likes of William Henry Fox Talbot and John Herschel, however, as gelatine was solidified in practice, the 20th century saw little to no exploration within the field and was later mostly abandoned due to the expansion of the digital photography sphere. This digital development came with its own array of unconscious materialities and harmful illusions[25], particularly regarding rare-earth materials responsible for a litany of environmental and human rights disasters; often found far away from the glazed neo-colonial eyes of consumer markets in the West; digital black boxed objects so obscured beneath their seemingly straightforward functions[26] that users are mostly or

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[23] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (2009), pp. 68, 109.

[24] Susan George, *How the Other Half Dies: The Real Reasons for World Hunger* (1976)

[25] Edd Carr, *Ecology of Grain* (2019), p. 49

[26] Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (1987)

completely unaware of how they operate and what materials exist within; obscurity, so embedded within the privatised profit-driven industry that manufacturers actively advocate: do not open, do not take apart, do not look inside — do not open this "black box".

For such reasons, since the turn of the century, analogue photography has become an alternative and experimental space where photographers, artists, and activists can explore materialities more proactively and practically, particularly within the fields of ecology, sustainability, more-than-human rights, and environmental and social justice. The term "alternative" here relates to activities that depart from or challenge traditional norms, and they are "experimental" when involving a radically new and/or innovative style[27]. Albeit, the space is currently rather small in number. Even smaller is that of alternatives to bovine gelatine in photography. Yet, these spaces find shared collective passions, values, and a genuine openness to expand knowledge and awareness on the topics, centred particularly around community. This includes the likes of Alternative Photography, Alternative Processes, the Curioso Lab, and Sustainable Darkroom, amongst other individual artists like Esther Urlus and Josephine Ahnelt.

Hannah Fletcher and Edd Carr at the Sustainable Darkroom, with many recent collaborations with Andrés Pardo at the Curioso Lab, have been active and pivotal within the field, having published an array of detailed texts covering different topics within the ecological photography space – in combination with online and in-person workshops focusing on processes such as plant-based developing, cyanotype animation, managing photography waste, salt-based photography fix, and ecologies in planning (just to name a few). In a recent online interview I conducted with Carr, he emphasised how vital it is for them as an organisation to facilitate workshops that are centred around the entangled environmental, socio-political, and economic dimensions within photography today, however noting that it sometimes proves difficult to bring these elements into the workshops as focus can get tied up in the how-to-processes. In their manifesto, Sustainable Darkroom writes: "As habitat loss, species extinction, ocean acidification, industrial toxicity, environmental racism, and more continue to mount - it is essential that we transform our material relationships, in view of more sustainable futures"[28]. Embodying this manifesto, Carr recently explored the material relationships of photographic gelatine more actively, and in light of his recent experimental film *Must Appear Dead*[29], the claim that bovine gelatine is absolutely necessary and irreplaceable in analogue photography/film has been pivotally challenged. In April 2025 he posted a clip of the work online, noting in the caption that he had combined various plant ingredients with silver nitrate, which had effectively created a "plant-based liquid light" (see figures 3 & 4).

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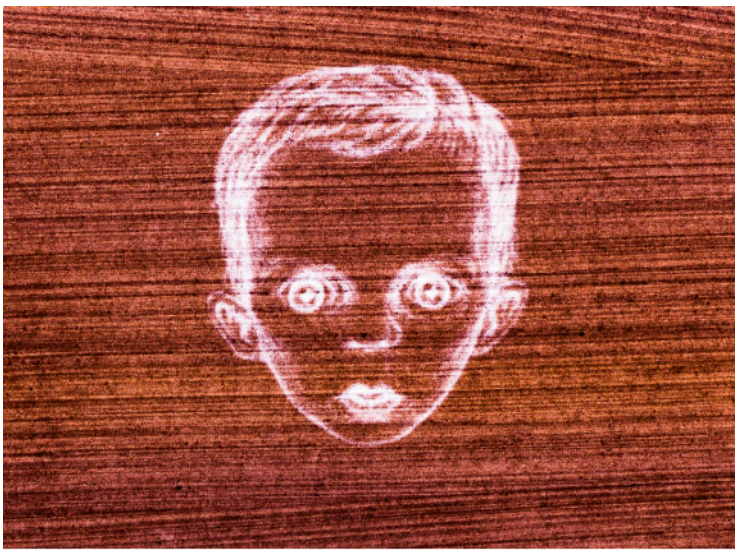
[27] Oxford English Dictionary, '*alternative; experimental*' (2025) https://www.oed.com/ accessed 15 February 2026.

[28] Sustainable Darkroom, *'About'*, https://sustainabledarkroom.com/pages/about accessed 15 February 2026.

[29] Edd Carr, *Must Appear Dead*, https://www.instagram.com/p/DJHJHf4otQf/?img_index=1 accessed 15 February 2026.



*Figures (3) & (4): Must Appear Dead (Frame)*
*& Vegan Plant-Based Gelatine — Edd Carr (2025)*

Presumably, this was the first time in photography's history that plant-based materials were used to create a vegan silver gelatine emulsion for moving image, expanding on previous explorations of non-plant-based vegan silver emulsions by Josephine Ahnelt and Esther Urlus, who generously documented and shared their research via two Youtube videos in 2019 titled: *Vegan Analogue Film - 16mm results & Making of Vlog*[30], in which they successfully exposed vegan silver gelatine emulsion on 16mm film using PVA (polyvinyl alcohol), which is a form of plastic derived from oil. During recent online interviews I conducted with them also, Urlus voiced many concerns in using PVA due to its environmental impact, although Ahnelt stated that she would use the PVA product if it was available for purchase over non-vegan traditional film, or at least until a less harmful one was available – a view we both share on the matter.

[30] Josephine Ahnelt, '*Vegan Analogue Film – Making Of Vlog*' (YouTube video, uploaded by Josephine Ahnelt, 2019), https://www.youtube.com/watch?v=-9oQUugz15M&t=21s accessed 15 February 2026.

*Figure (5): Vegan 16mm Analogue Film*
*By Josephine Ahnelt & Esther Urlus (2019)*

The matter of environmental impact, or sustainability questions, over nonhuman animal rights is sometimes posed and framed in this way, that consumers need to choose one over the other, that we can't have both. Which, considering the case with PVA over bovine gelatine in photography, could be somewhat true. However, hypothetically, if we were to use the same justification framework as the industry, PVA would be considered a mere "byproduct" from the oil industry. A thought to ponder. However, what I'm ultimately arguing for here, like Sustainable Darkroom, is a view of sustainability that encompasses sustainable relations between humans and non-humans equally, an ecosystem that acknowledges not only environmental, but social, political and economic dimensions[31].

Based on what has been done before, there are still practical – not least chemical – elements of gelatine-free darkroom practices to be explored; the search for materials that would make the darkroom a vegan and cruelty free space still remains a dream in its cradle (see appendix for specific darkroom materialities details). Yet rather than addressing this need for further research here, I will turn to another aspect of the ecological photographic processes with which *Flower Power Photography* is concerned: namely that of the darkroom as an embodied collective experience, and how this relates to the notion of conscious materiality. However, before turning to the project itself and the experiences entangled, I would first like to address the relationship between collective experience, unconscious materiality, and our senses – and why these matter in the darkroom.

[31] Sustainable Darkroom, *Back to Basics Volume II* (2025), p. 6.

# Smells like Suffering, and Death

> "If a being suffers there can be no moral justification for refusing to take that suffering into consideration."
>
> — Peter Singer: *Animal Liberation* (1975, p. 8)

It's impossible to avoid the enormous microscopic impact of mundane individual actions, such as using a roll of film[32]. To paraphrase T. J. Demos: art, in its most ambitious and far ranging sense, *must* present new ways of comprehending ourselves and our relation to the world that depart from the destructive traditions of colonising nature, as seen in capitalist models[33]. Art's materiality is the crucial but often neglected element of any process of artistic representation, and artists must pay rigorous attention to the form of process as they are collaborating with nonhuman actors – if the process causes harm to said actors, or damages life-sustaining ecosystems, then it must be considered a medium in need of "ecological transformation"[34].

The photographic medium can, should, and must be considered one in need of ecological transformation, gelatine and the suffering caused by its use explicitly reveals this. If creators are encouraged to see their "materials as collaborators", the disparity between ecological content and form in the artistic sphere might very well be confronted, which in turn may contribute to an "ecocentric ethic of artistic production"[35]. This would of course require artists to become *conscious* of all the materials that they are using and collaborating with,  and if there's any suffering involved in those materials then it must be taken into consideration[36], and actively worked against to reduce that suffering.

Unfortunately, when life becomes the sovereign vanishing-point in relation to which power is oriented[37], the proposition posed above is not as simple as it might seem. The hidden structures of the animal, its buried organs and "invisible functions" emerge as biological ciphers of power. Shukin proposes that one task of the critic of animals as any form of capital, then, is not only to become conscious of the materials, but to also make them *visible*[38]. In his text: *The Material Unconscious*, Brown invokes Walter Benjamin's notion of the "mimetic shock" that illuminates history as unsettled fragments up for revision under the messianic heat of a backward glance[39]. He writes that alternate, undeveloped histories hang as suspended sub imprints of photography and film, awaiting future developers who might make them *materialise*. Adding, that the material

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[32] Edd Carr, *Ecology of Grain* (2019), p. 20

[33] T. J. Demos, *Decolonizing Nature: Contemporary Art and the Politics of Ecology* (2016), p. 1.

[34] Katve-Kaisa Kontturi, *Ways of Following: Art, Materiality, Collaboration* (2014), p. 48, cited in Edd Carr, *Ecology of Grain* (2019), p. 21.

[35] Edd Carr, *Ecology of Grain* (2019), p. 21

[36] Peter Singer, *Animal Liberation* (1975), p. 8.

[37] Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings 1972–1977* (1980).

[38] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (2009), pp. 8, 24

[39] Bill Brown, *The Material Unconscious*, Representations, 53 (1996), p. 5.

unconscious is a historical negative that requires active development to appear — to become visible.

Here is where I argue that an important relationship emerges between our experiences in the darkroom, the ethical implications of these experiences, and how these are tied to our senses. Due to mimetic identification, smell can play a key role in the active development of materials to become "visible" – the control of smell is highly suggestive, especially regarding the containment and management of affect aroused by a potential identification with animal others subject to sacrifice – integral to the inconspicuous "no-place" of public secrecy, within which industries such as modern rendering have achieved paramount invisibility[40][41][42]. Smell's management has enabled public culture in "knowing what not to know" about the "anonymous flesh" used and consumed on a daily basis, removing any risk of being offended by reminders of a "grisly business exiled to the margins of public consciousness"[43]. However, when toxic smells that have been normalised are removed, and replaced with fonder, plant-based smells for example, what was once unconscious and invisible, can become visible and conscious through the senses, which will be reflected with participants' reactions later in the text.

But, it's pivotal to add, even if materials become "visible", as long as it's institutionally taken for granted that it's acceptable, or even necessary to systematically exploit and kill nonhuman animals because of their species, the humanist discourse of species will always be available for use, even by some humans against other humans[44]. Explicitly seen in light of recent pushes for legislation that actively and forcefully restrict access to rendering facilities, and prohibits the taking of any unauthorised images, under the threat of prosecution labeled "domestic terrorism"[45]. Highly ironic, given the materials produced within the prohibited industry are then sent and used within the imaging industry – even justified as "sustainably and ethically sourced".

Violence enacted against one, will always spill over to others, even those within the same species[46]. We must collectively resist the humanist discourse of species, while simultaneously fighting for visibility and conscious materialities through collective experience. This is where *Flower Power Photography* enters centre stage.

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[40] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (2009), pp. 63.

[41] Walter Benjamin, *'Surrealism: The Last Snapshot of the European Intelligentsia'* (1929).

[42] Adorno & Horkheimer, *Dialectic of Enlightenment* (1947).

[43] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (2009), p. 63

[44] Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (2003). p. 8

[45] Anat Pick, *Why not look at animals?* (2015).

[46] Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (2003). p. 8

# Flower Power

> "Flower Power [flou-er pou-er] noun: "a slogan used by and associated with flower children of the 1960s and 1970s as representative of a movement for nonviolence, passive resistance, and universal love."
>
> — dictionary.com (2025)

Born out of a contempt for the current status-quo, a burning sense of injustice, and a curiosity for what might be otherwise possible – *Flower Power Photography* is an artistic-ecological practice based inquiry into nonviolence, collective resistance, and environmental and social justice through alternative and experimental photography. The seeds of the project first sprouted in October 2024 when Lasse Lindqvist, a senior lecturer in photography at HDK-Valand, and I were introduced to each other. Our shared curiosity for the topic instantaneously sparked and gave life to the ongoing, passionate work-in-progress. Gratefully, Lasse had decades of practical analogue photography knowledge in combination with pedagogical experience to draw from and bring to the project, an area where I had very little at the time, whereas I brought to the table my drive/enthusiasm for multi-species theory and justice. He jokes and enjoys calling himself "the muscle" of *Flower Power Photography*, and that I am "the brain" – reminding me of the animated mice duo: Pinky and The Brain[47]. Given his incredible DIY skills on top of this, I certainly cannot disagree. Anyway, I digress.

So far, the inquiry has primarily been conducted through the method of collaborative workshops at HDK-Valand in Gothenburg, through a framework called: *Practical Fridays* (PF). In 2025, seven workshops were facilitated by Lasse and I in various alternative and experimental analogue processes, six through PF, and one during the PARSE (Platform for Artistic Research Sweden) conference. In order, the workshops were: (1) Plant-based developing photographic film and paper developing (2) Cyanotypes and plant-based toning (3) Anthotypes (4) Iron-based developing (5) Photographic vegan gelatine handmade emulsion (6) Ecological photochemistry / Waste material developing – PARSE (7) Plant-based/Natural dye photography colouring – in collaboration with Nanna Hammer Tiittanen (see appendix for all the nitty-gritty details of each and every workshop in 2025).

PF was started by Lasse around ten years ago, and originally did take place on Fridays, however due to some scheduling issues, they now (ironically) rarely, if ever take place on Fridays. Lasse likes to re-iterate that PF is a "state of mind", one that is "free" from such constraints of capitalist western ideas of time and Gregorian calendars, a holistic and spiritual approach to the practicalities of photography today (which typically receives a warm reception). In collaboration with *Flower Power Photography*, PF has become a place where others who are curious about the development of a more just and nonviolent photography can come together, share thoughts and ideas openly, and explore materialities and newfound processes in a practical way. It has further become the space in which the collective experiences needed for re-imagining darkroom practices through conscious materiality has not only been enabled, but celebrated and appreciated. Before looking into what these experiences have yielded, it's important to briefly and clearly define what exactly is meant by "workshop".

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[47] Tom Ruegger, *Pinky and the Brain*, animated television series, Warner Bros. Animation, 1995–1998.

# World of Workshop

> "Workshop is not a given, not simply because of the vastness of arrays of intersection, life-worlds that make it what it is. It resists because such worlds are unanticipatedly arriving."
>
> — David Jardine (1999)

In *Workshop: The Art of Creative Inquiry*, workshop artists Warren Linds and Tony Gee state it's essential that we develop participatory ways to learn and gain knowledge, as well as deepen our understanding of what exactly is a "workshop". They both equally propose a definition:

(1) Workshop: an imaginative, participatory environment with a facilitated porous structure, which aims to guide a group through an inquiry into a process or skill so that they reinvent their story and discover something new

(2) Workshop: an approach to arts-based inquiry that enables the stories of participants' experiences to emerge through multiple senses. It provides the conditions for creativity and imagination that guides the group through a theme, process, or skill so they can both individually and collectively tell the stories that emerge

Both definitions are useful when looking at different aspects of *Flower Power Photography*, particularly around "senses" and "porous" structures. Linds & Gee justify that workshops matter because they combine creative and collective processes so that what emerges and becomes manifest "enhances our humanity in inquiries into the how-to and why and wherefore of the topic, skill, or process at hand"[48]. They pivotally enable the emergence of a "community-in-the-making" where worlds are invented inside the workshop bubble so that participants can reinvent the world outside that bubble[49]. Moreover, during the process of creative production there is always an element of research and inquiry – the materials used are investigated, and the relationship between them is explored[50].

There is co-incidence, as everyone in the workshop engages with our most imminent ecology: "each other"[51]. Workshop is a pedagogy of not-knowing – it has to deal with uncertainty. But this cannot be taken for granted, the practice only takes care of itself when the facilitator takes care of the process – requiring specific skills, clear intention, and rigorous preparation. – in the process creating a system "that has the ability to respond to itself as it unfolds and to make and allow productive change to emerge"[52]. Perhaps, in the case of this study, beyond *only* image making entirely.

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[48] Linds & Gee, *Workshop: The Art of Creative Inquiry* (2023) p. 13

[49] Linds & Gee, *Workshop: The Art of Creative Inquiry* (2023) p. 16

[50] Linds & Gee, *Workshop: The Art of Creative Inquiry* (2023) p. 23

[51] Linds & Gee, *Workshop: The Art of Creative Inquiry* (2023) p. 18

[52] Linds & Gee, *Workshop: The Art of Creative Inquiry* (2023) p. 25

# Beyond “Just Image-Making”

“Smells so nice in here!”

— Workshop participants & passers-by

Rather than describing exactly what happens in each workshop (see appendix for these details), my focus will now turn to something that lies beyond the images produced in the darkroom. Following the discussions outlined above, I will share some accounts of collective experiences that have felt particularly relevant to the processes of *Flower Power Photography*. The importance of listening to the accounts generously shared by workshop participants and fellow students in this section cannot be understated.

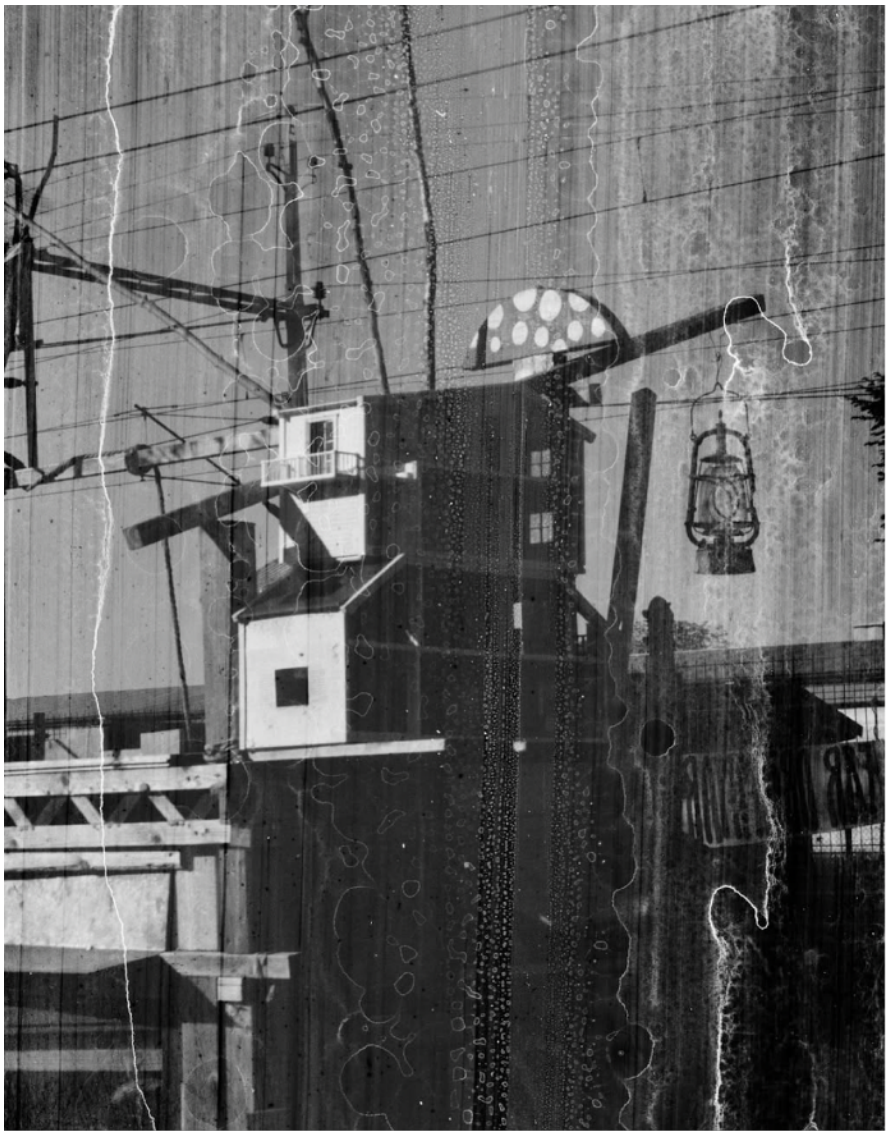

*Figure (6):“Analoga experiment med näring och ogräs”*
*— @samvvild via instagram*

To begin, we turn to the very first workshop Lasse and I facilitated together: Plant-based photographic film and paper developing – looking back, it really did smell so nice in there! During the workshop, it was enlightening to hear and see participants' reactions to newfound aroma's present in the darkroom due to the plant-based materials (e.g. rosemary, oregano, sage, flowers from Lasse's garden etc.). The reactions reflected the unusualness of fonder smells in the space, as well as the normalisation of other more toxic chemical smells associated with traditional analogue photography. One of the participants in the workshop expressed to us that the more toxic chemical processes had kept them away from the (darkroom) space before, and they were really happy to explore and engage with it (analogue photography) in this way, as the processes felt closer to their values and lifestyle. Afterwards, they even continued experimenting with plant-based developers, later posting on social media that they'd experimented with "näring och ogräs" – "nutrition and weeds" (see figure 6 above).

Seeing the image posted was a wonderful realisation of the potentially lasting effect and impact that the workshops can have, it also exemplified how beautiful the aesthetics of plant-based processes can be – a magic lies therein – the uncertainty inevitably always involved within these processes allow space for this. The magic is seen and experienced every time a participant takes their film roll out of the plant-based developing tank, especially for the first time (see figure 7 below).

*Figure (7): 35mm film image from the workshop (scanned)*
*— Ilford HP5 400 developed with ascorbate & sage*
*(40g fresh, 18 mins, at 21 degrees celsius)*

However, as Carr stated in our interview, the workshops can sometimes get a little tied up in the how-to-processes, so to gain some further reflections, Lasse and I decided to organise a dinner – lightly named in the email: *The Flower Power Photography Dinner*, and invited every single participant that had joined at least one workshop. The dinner served up wonderful company, interesting conversation, and a truly delicious vegan leek and potato soup with freshly baked bread (kindly prepared by Lasse's partner Anneli). The fifteen participants present generously shared that the collaborative aspects of the project, particularly between Lasse and I, was integral to the project and workshops – stating that the energy and passion that we bring was a big part of the experience and decision to join/participate. They also emphasised how they were grateful to see that there were other ways of engaging with photography – that the medium doesn't have to be done in a certain way – it can actually be done in a less harmful and less violent way, centred around a different ethics that they would like to pursue. Adding, they probably never would have tried similar processes without the workshops, even if some had prior knowledge through following Sustainable Darkroom's work. One of the key reasons being: lack of access. Unfortunately, access to the PF framework and the darkroom space at HDK-Valand is limited to people who hold a darkroom license, which is mostly photography students. The workshop at the PARSE conference, which involved students across other disciplines at the university, as well as others from outside the institution, reiterated this – that lack of access to the workshops and spaces was a view shared by many. The more workshops we facilitated, the clearer it became that many would like to engage with these processes and materials, whether that's during other workshops or on their own, which is a notion at the top of our agenda moving forwards with the work.

The dinner illustrated how important community feeling and building is in the project, reflected in the participation of participants, with the majority of them attending at least two or more workshops. One, who attended six out of the seven workshops, consistently emphasised that the community feeling/building was one of the key reasons for their attendance, and the workshops were said (by a recent graduate) to have created a safe place to explore photographic materialities together with others, which they now miss given they have graduated and don't have access to the workshops – again linking back to (lack of) access.

Curious to see whether any of the thoughts and/or feelings had transferred to actions outside the workshop bubble, particularly regarding relationships to nonhuman animals and vegan lifestyles – I put it to the table. Responding, after some thought, a few replied that their lifestyles had not changed so much as such, but they were more aware of materialities, and now thought of the project whenever they looked at cows in particular. Interestingly, one stated that their social media algorithm is now "full of cows" and sees them in a whole new light. Another mentioned the workshops might not have changed their lifestyle as of yet, but an artwork I recently exhibited based on this research, titled: *Bovine #1164* (details in appendix), did have an impact and motivated them greatly to transition from vegetarian to vegan. These accounts can on the one hand reveal the limitations of the workshops, yet on the other it highlights how entangled our worlds are with the materialities they inhabit, and how changes in our consciousness of those materialities in one space may spread to other areas of our lives as well - however small, these changes may each be a ripple on the water.

To provide some further reflection we turn to MA students in the ecology elective at HDK-Valand, who provided generous insight when presented with the work. Not having attended any workshops themselves, they were able to provide some alternative perspectives, having followed the progress of the project during the spring semester of 2025. Maybe not surprisingly, being mostly closed to a

specific student group at the university, they also noted access as a "blind spot" with the workshops, and if *Flower Power Photography* was to engage with questions of "justice" then this would be a good place practically and locally to engage. Given that the students were from a variety of other artistic disciplines, other than photography, they provided much value and expressed interest and enjoyment in being introduced to the world of ecological analogue photographic process, noting that more methods like this were needed to resist a fast paced digital future. Perhaps drawing from traditional perspectives regarding motifs, they reflected upon what stories the aesthetics and subsequent photographs could tell/share about the issues the project is attempting to address, questioning if the visuals might be difficult to achieve with traditional analogue photography, which could be an aspect to lean into. Concluding, the processes (e.g. cyanotypes and anthotypes) could be a technique accessible for many people, safe for adults and children alike to experiment, experience, and engage with the materialities and experiences of analogue photography.

There were of course many reflections that unfortunately didn't make it into this section, particularly regarding notions around "uncertainty" and getting "thrown into a context where the outcome was as unfamiliar as the process itself", and the effects of this. Thankfully, they provide incredible value for the work moving forwards, and perhaps lay a "teaser" for the next piece of writing.

Our deepest thanks goes to all the incredible people who have been a part of this project thus far, we couldn't have come to this point without you. To re-iterate and paraphrase a very kind participant email reply: thank you for everything – the little, and the big stuff – all of it mattered! The short period of time in which the project has emerged and grown into the collectively oriented project it is now, has to me felt like scratching the surface of a differently imagined world entirely. Before moving on, there's one last participant reflection to look at, one who beautifully captured the essence of the project:

> "I think your Flower Power Project shifts the understanding of photography *beyond just image-making*. Your mentioning of sustainable darkroom techniques and experimental methods signals a departure from conventional practices, it is a timely space for reconsidering how it engages with materials, time, and place, particularly in the context of the Nordic countries as well (...) It's great to see how this work has sparked curiosity and action towards the workshop, that *ripple effect* is powerful, it's not only questioning materials and methods, but also critical in questioning the space for others to take part in knowledge making – exploring ecological alternatives together."
>
> — F, Ecology & MFA Student

The darkroom was once a place for photographers to come together, collaborate, and share ideas "beyond just image-making" – *Flower Power Photography* embodies these historical darkroom practices and experiences, while bringing in a new dimension to the space, one that proposes a different photographic future altogether moving forwards.

# An Alternative Photographic Future

> "Following research should envision a radical artistic future - potentially departing from photography entirely - or striving to imagine how photography may avoid egregious environmental and nonhuman harms. Artistic endeavor has the ability to shape society where other institutions cannot, and so to raise an idealistic torch of sustainability and ecology would not be a hindrance, but another string to its culturally-momentous bow."
>
> — Edd Carr, Ecology of Grain (2019, p. 69)

In an attempt to somewhat conclude this ongoing, work-in-progress, collaborative, messy, uncertain, incredibly fulfilling project: *Flower Power Photography* proposes a process-oriented, collective, experiential, ethically oriented approach and sensory understanding of photography in opposition to those in the industry today. It's not only a question of how the final product of photography differs, but helps us ask questions about what photography as an artistic practice in this world can be. An approach of conscious materiality changes the very nature of photographic practices seen today within capitalism's endless destruction, greed, and constant pursuit of profit – in many ways going back to photography's humble experimental and experiential beginnings. It becomes a shared subtle progress towards consciousness, a collectively oriented experience, a re-imagining of a more ethical world.

Like the warning beacons of Gondor[53], which foregrounded the introduction to this essay, this text serves to light its own metaphorical fire high above, in the hope of passing on the initial warning messages lit by the brave beings referenced in this text. A fire that soars so brightly amidst the murky photographic abyss that even the cows on distant farms, rendering plants, and slaughterhouse floors might be able to see that they are not alone, and we are fighting for them. But the fire comes with a critical message: *more fires need to be lit* – we cannot do it alone. We must think beyond our current limits, in the process creating a renaissance of an ecological - not only analogue kind[54]. One centred around nonviolence, community resistance, and environmental and social justice for all — humans and nonhuman animals equally.

In 2019, Edd Carr envisioned a radical artistic future that departs from photography as we know it today entirely[55]. It is my hope that our continuing work with *Flower Power Photography* may be a small but meaningful step towards this radical, alternative future.

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[53] J. R. R. Tolkien, *The Lord of the Rings: The Fellowship of the Ring* (1954)

[54] Edd Carr, *Ecology of Grain* (2019), p. 69.

[55] Edd Carr, *Ecology of Grain* (2019), p. 69.

*For the cows* ♥

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## ***Figures***

Figure (1): Tanya Kreil, *Cow*, photograph, reposted by @ilfordphoto on Instagram (camera: Nikon FM2; lens: 135mm f/2.8 AIS; film: Kentmere Pan 200; developer: Kodak D-76 (stock)), Instagram post, https://www.instagram.com/p/DUBtoNYF0AJ/ accessed 15 February 2026.

Figure (2): ADOX, *'May I use film if I am a vegan?'*, web page, https://www.adox.de/Photo/vegan-info/ accessed 15 February 2026.

Figure (3): Edd Carr, *Must Appear Dead* (frame), still image, Instagram post (2025), https://www.instagram.com/p/DJHJHf4otQf/?img_index=1 accessed 15 February 2026.

Figure (4): Edd Carr, *Vegan Plant-Based Gelatine*, Instagram post (2025), https://www.instagram.com/p/DJHJHf4otQf/?img_index=1 accessed 15 February 2026.

Figure (5): Josephine Ahnelt, *'A Venture into Vegan Filmmaking'* (2019), web page, https://www.josephineahnelt.com/a-venture-into-vegan-filmmaking-2019 accessed 15 February 2026.

Figure (7): @samvvild, *'Analoga experiment med näring och ogräs',* Instagram post, https://www.instagram.com/p/DQPDUclDHPg/?img_index=1 accessed 15 February 2026.

Figure (8): Samuel Ian McCarthy & Lasse Lindqvist, *35mm film image from workshop* (scanned) (film: Ilford HP5 Plus 400; developer: ascorbate & sage (40g fresh), 18 mins at 21°C), 2025

## ***Appendices***

*Still frame of cow*
*Bovine #1164 cyanotype animation*

*Bovine #1164*
Cyanotype Animation on Watercolour Paper (2025)
1,164 Cyanotype Moving Images

"To take a photograph is to participate in another person's *mortality,* vulnerability, mutability."
— Susan Sontag, On Photography (1973)

To this day, there are no film-stocks on the market that do not contain gelatine, *zero* alternatives, illustrating that modern photography would be unthinkable without gelatine—specifically bovine gelatine. The demand for photographic gelatine was predicted to rise to 85 kilotons by 2025 (Carr, 2019), and if these predictions were correct, consumer film stocks this year alone will need 1,164 cows. That's more than 3 beings slaughtered every single day – for a mere binding agent – for a mere roll of film.

Using the Swedish Kosläpp as a case study, Bovine #1164 invites the viewer to look at cows, and question our relationship with them today, as well as interrogate how non-human animal products are unconsciously used in our daily life, often hidden and justified as simply "by-products" – seen explicitly through the photographic industry's violent historical entanglement with bovine gelatine.

The 1,164 cyanotypes created for this animation are a small tribute in honour of every sentient being who lost their life in 2025 to bind a gelatinous image onto a roll of film.

* Link to short clip: https://www.instagram.com/p/DRmjAUkDJJT/

*Flower Power Photography Workshops 2025*
*By Sam McCarthy in collaboration with Lasse Lindqvist*
↓

*Ilford HP5 400 developed with ascorbate & sage*
*Ecological photochemistry*

# (1) Plant Based Ecological Photographic Film and Paper Developing

> *"Plant-based developers have been used for many years … to develop silver gelatin negatives …The base developing formula used was Caffenol CM. Caffenol is currently the most famous and frequently used eco-friendly developer."*
>
> - Andrés Pardo (2020) alternativephotography.com

*35mm film image from the workshop (scanned)*
*— Ilford HP5 400 developed with ascorbate & sage*
*(40g fresh, 18 mins, at 21 degrees celsius)*

**Date**: 02.04.25
**Number** of Participants: 6
**Location**: Black & White Photography Darkroom, HDK-Valand Gothenburg
**Purpose / Aim**: Share knowledge together and explore how plants in combination with less toxic alternatives to traditional developers can be used to develop photographic film and paper
**Planning / Preparation:** Developed 5 x 35mm Ilford HP5 film rolls — allium (40g, 22.5 min), coffee (80g, 19 min), rosemary (25g, 22 min), plus without any plant material (25 min)
**Results:** 6 x 35mm ilford HP5 400 film (see image above) developed in various plants (used coffee, rosemary, allium, oregano), plus negatives then exposed on photographic paper and developed with the used plant-based developers

## Logbook

*Quotes / Notes:*

> "The older and more toxic chemical processes had kept me away from the (darkroom) space before … happy to explore and engage with it (analogue photography) in this way … feels closer to my values and lifestyle"
>
> — Sam, participant in the workshop

> "Smells so nice in here!"
>
> — Multiple participants & passers-by

- The aroma showed the unusualness of fonder smells and the normalisation of the usual strong chemicals
- Many beautiful images were developed and printed — one participant developed a print with strong contrast and sharpness which was particularly striking (film roll first developed in sage then paper developed with a mix of plants, 18-22 degrees, between 10-15 minutes)

*Questions that arose:*

- What chemical process does the plant developer actually do to the film? — Hendrik Z

*Reflections:*

- How can we engage more with concepts of sustainability, decolonisation, and justice in these workshops and practice? How can we get people to think differently / sustainably / ecologically / decolonial through ecological photography practices?
- How are we going to create any potential change and active communication for social change?
- What do we want the students to be more aware of exactly?
- What do we want to give the students? How do we do that? Why?
- Photography is historically heavily motif driven — we are shifting the focus to the process — what does this facilitate?
- How can we break down hierarchies and collaborate more horizontally with participants?
- How can we build a community of resistance to violent industry norms?
- How can we expand this outside the framework of hdk-valand? Justice through access?
- Can this research be transcontinental?
- Can we propose / engage with alternative ecological imaginaries through the photographic practices?
- How can we involve voices from the Global South?

## Technical Guide & Materials

** Most information below retrieved from Sustainable Darkroom via online plant-based developing workshop — https://sustainabledarkroom.com/products/developers_video*

*Materials:*

- Plant matter (20g dried / 40g fresh per 300ml) | Extraction: 6-7 mins microwave / 10-11 mins boiling / 8-12 hours steeping (chop finely for best results and use plants with high phenolic content for largest tonal range)
- Sodium carbonate (anhydrous 20g per 300ml / decahydrate 54g per 300ml) — search online for the "MSDS sheet" if unable to find on the label
- Pure powdered vitamin C (5g per 300ml) — holistic optional
- pH paper
- Photographic fix as usual / salt fix (slower but more ecological / less toxic)

*Equipment:*

- Scissors / kitchen knife and chopping board
- 2 x measuring cylinders
- Muslin cloth or fine sieve
- Weighing scales
- Thermometer
- Spoon
- Heat proof container
- Used plastic bottle for storing chemistry

*Additional:*

- Ideal developing temperature 22-26 degrees (higher temperature will develop faster but lead to more staining)
- Vitamin C is the “driver” (contrast)
- Plants are the “character” (tonal range / grain / life of developer / speed)
- Need Ph10 MINIMUM (sodium carbonate is the alkaline substance / can depend on water and where things are from can be different each time)
- Sodium ascorbate combination is the main developer
- Developing time usually around 15-20 mins (execute the “drop test” on the tail-end of the cut film for best results - less fogging)

*35mm film images from the workshop (scanned)*
*— Ilford HP5 400 developed with ascorbate & sage*
*(40g fresh, 18 mins, at 21 degrees celsius)*

# (2) Cyanotypes & Plant Based Toning

> *"Cyanotype printing is a contact printing process that produces stunning blue and white images using UV light and two simple chemicals: ferric ammonium citrate and potassium ferricyanide."*
>
> — Chiara Salvi (2024) alternativeprocesses.com

*Digital image from the preparation — Fujifilm x-t5 35mm f/2*

**Date**: 08.05.25
**Number of Participants**: 4
**Where**: Black & White Photography Darkroom & Courtyard, HDK-Valand Gothenburg
**Purpose/Aim**: To explore the low toxic early photographic process of cyanotype in combination with toning using different tannins from plants
**Planning / Preparation:** Experimented with cyanotypes of local flora using natural UV light / sunlight (see image above) plus with digital negatives printed on acetate
**Results:** 10-15 cyanotypes created using digital negatives as well as local flora, later toned with plants (Coffee, black tea, wine)

## Logbook

*Quotes / Notes:*

“Using plants as pigments is very interesting, it reminds me of a technique called “tie-dye”. Did you discuss ecological issues with others during the project? How can you get more people involved? Interact with other people who are interested?”

“The developments are beautiful. I wonder how you could present the outcomes for the final presentation? A book? How could you give value to your work by the way you present it?”

“Really nice to focus on both the technique and process, as well as the social/communal aspect of the workshop. I would really like the final presentation to include reflections on both. Could you make your own darkroom?”

— Ecology class feedback (May 2025)

“Is the expression something that comes with the choice of the material? In a wider perspective is that flexibility something one could attract more people to be open for a sustainable approach to photography. I think the blind spot is that the workshops are closed to a specific student group of Valand.” — Cornelia, Ecology & MFA Student

“Thank you for inviting us into the world of analogue processes. I do believe methods like yours is what we need more of when we go forward into this fast paced digital future … there’s pedagogical opportunities for you to explore and I can really see you taking on that role. I’ll attach a text by the Norwegian artist And Hjort Guttu, writing about hierarchies within pedagogy and stretching the idea of what an exhibition can be, maybe you find something interesting there - https://files.cargocollective.com/648295/Nature_Exhibition_web.compressed.pdf" — Carina, Ecology & MFA Student

“It might also tie in well with degrowth and aesthetics … what stories can these photographs tell about the issues you're addressing with this enquiry? Maybe leaning into this flower-power style (and related ideologies) even stronger? I would also be curious how you could further highlight the advantages and the potential of these techniques. I'm thinking these kinds of visuals might be difficult to achieve with traditional analogue photography, and this might also be a more accessible technique for a lot of people (e.g. children).” — Kata, Ecology & MFA Student

> “I think your Flower Power Project shifts the understanding of photography beyond just image-making. Your mentioning of sustainable darkroom techniques and experimental methods signals a departure from conventional practices, it is a timely space for reconsidering how it engages with materials, time, and place, particularly in the context of the Nordic countries as well. At the same time, I sense that the project and you carefully navigate the tensions between sustainability, decoloniality, and justice through alternative/experimental photographic practices. These practices challenge traditional photographic norms, but they also prompt questions: how does this project frame sustainability here? Without idealising a “simpler” or “natural” past? Especially in the context of decoloniality? I see you’re already reflecting on this in the title, but I encourage a deeper exploration of how these concepts relate, and their tension to one another. How do they inform these tensions, and as the project moves into institutional settings, how can these practices be accessible, grounded in the diverse contexts from which they emerge? There is great potential for this work in also nuancing relational ways of being, ways that are responsive to the world around us.” — Fey, Ecology & MFA Student

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## Technical Guide & Materials

* *Most information below retrieved from Edd Carr at The Sustainable Darkroom via online cyanotype animation workshop*

*Chemistry:*

- 25g Ammonium Ferric Citrate + Water up to 100ml
- 12g Potassium Ferricyanide + Water up to 100ml

> "The most standard(!) - an oxymoron since there's no standard Ammonium Iron(III) Citrate to begin with...formula is 20% Ammonium Iron(III) Citrate for A and 8% Potassium Ferricyanide for B. On the other hand, 25% for A and 12% for B will yield a much stronger/denser image, but with a considerable speed loss (2/3 - 1 stop). Mix small amount of each variation and see which one works best for you.” — Photrio (2025)

- Cyanotype is UV sensitive once parts A and B are mixed together. So store in a dark bottle or only mix when required, and coat surfaces outside of UV. Mixed solution will store well but may grow mould over a long period, so if stored for a long time, filter with a coffee filter or strainer before application. Or add a drop of pure alcohol to prevent mould.
- Mike Ware's New Cyanotype formula can be quicker and achieve a better image, but is substantially more toxic. Read here for more: https://www.mikeware.co.uk/mikeware/New_Cyanotype_Process.html
- Nettle vertotype: https://drive.google.com/file/d/1oUDyZ7t--QOVgrIRf2TDiGKoVpnDw2cz/view

*Surface Choice:*

- Acid-free pH neutral watercolour paper is recommended
- Some advocate the pre-treating of papers that may be too alkali due to impurities. Here is a forum thread: https://www.photrio.com/forum/threads/on-the-acidification-of-paper-for-traditional-cyanotype.176816/
- Thread on cyanotype and sizing: https://www.photrio.com/forum/threads/cyanotype-and-gesso.35770/
- For glass: https://cyanotyp.es/technique/cyanotype-on-glass-history-processes-variations/
- Recipe for coating on glass using Agar and Gum Arabic: 3g of Agar Agar and one spoon of Gum Arabic, with 240ml boiling water cooked until thick then poured over glass while still hot. Allow to cool, then coat with cyanotype and dry
- Be wary of drying your prints in humid conditions
- Some folks add a drop of vinegar to their emulsion (not their wash) to improve speed and mid-tones

*Exposure:*

- UV light is needed for cyanotype. If lacking in Sun, you can use artificial UV light or Metal Halide lamps used for growing plants. Avoid UVC sterilisation lamps as there is an increased risk of skin cancer and blindness. Avoid general UV exposure when exposing also
- Article on doing step-test when exposing: https://jonahcalinawan.com/blog/nail-your-base-exposure-time-for-cyanotype/
- Here is a thread on UV light: https://www.photrio.com/forum/threads/possible-light-for-cyanotype.142536/
- LCD screen to remove the need for printing contact prints: https://www.photrio.com/forum/threads/using-an-lcd-screen-as-a-digital-negative-in-alt-process-contact-prints.207526/
- If you want to use a projector, use a DLP projector, not LED.

*Washing:*

- Cyanotypes are washed in water as standard. The standard setup is two static washes, one with added white vinegar (suggested ratio 1:10 but a splash is ok!), with a gentle rinse in between baths using a spray bottle. Here is a forum article on it: https://www.photrio.com/forum/threads/the-effect-of-acid-in-the-washing-of-traditional-cyanotypes.177366/

> *"I use two standing trays, gently rinsing between transferring exposed paper from the first tray to the second to avoid staining. The first tray contains tap water with a small amount of white vinegar or citric acid added. Since my tap water has a high alkaline level, the addition of vinegar or citric acid helps to acidify it. The first rinse quickly becomes saturated with excess solution, which can stain white areas. Before moving to the second bath, the paper is laid on a piece of plexiglass set up horizontally over the sink, and then gently sprayed until the water runs clear. The exposed paper is then placed in a tray with a splash of hydrogen peroxide to speed up oxidation. I use washi papers that will stain easily."*
>
> — Sustainable Darkroom Discord Channel (2025)

*Bleaching and Toning:*

- Introduction to toning cyanotypes: https://mpaulphotography.wordpress.com/2011/04/01/cyanotype-toning-the-basics/
- Book by Annette Golaz: https://amzn.eu/d/6CqDLHu
- Melanie king on toning: https://www.youtube.com/watch?v=SnxwBVUkOPY

*Drying:*

- If your prints dry curled, attempt to flatten before digitisation
- Horizontal drying improves flatness
- Make sure coated papers are completely dry before exposure!

*Waste Disposal:*

- Try evaporating or extracting the cyanotype waste salts from your waste water for a pigment using a homemade filtration system: https://www.instagram.com/p/CbkHEebsdTK/?img_index=1
- Michaela's research: https://drive.google.com/file/d/17hDqhoikhSd6czMXbC9xtyXMQzuEakgF/view

*Digital image from the workshop — Fujifilm x-t5 35mm f/2*
*Traditional Cyanotypes & Coffee Toned Cyanotype*

## (3) Anthotypes

> *"Anthotype is a very delicate photographic process and an environmentally friendly way of making prints using nothing other than the photosensitive material of plants found in the garden, the flower market or in the wild. All you need to add is water, sunshine, inspiration and patience – a lot of patience!"*
>
> — Malin Fabbri (2021) alternativephotography.com

*Digital image from the workshop — Fujifilm x-t5 35mm f/2*
*Beetroot anthotype with local flora*

**Date**: 13.05.25
**Number of Participants**: 6
**Where**: Photography & Film MA Kitchen, HDK-Valand Gothenburg
**Purpose/Aim**: Explore and share the most ecological way to create photographic images, creating UV sensitive photographic emulsions using plants only (Eg. Beetroot, carrot, avocado, grape, spinach, turmeric) — later using the leftover plants to share a meal together
**Planning / Preparation:** A turmeric anthotype was attempted however without much success, went into the workshop with the aim to explore the failure and see what we could learn together through the process
**Results:** A dozen or so anthotypes were created and placed in a window at the university for a couple of weeks — results were faint as the contact with the negatives in combination with sunlight wasn't ideal.

## Logbook

*Quotes / Notes:*

"It was interesting to hear about the collaboration between you and Lasse, how your different expertise is becoming this super tool, a new way of approaching photography in a eco-friendly way. After your presentation we talked about new possibilities of working with nature, and how the textile natural dying could be a path to look in on. If you want nerdy expertise about natural dying you should talk to Helena Henning at HDK print workshop. We did also talk about the time aspect of this methods, and I believe you can find a lot of references and reflection in books about craft and craftsmanship. Check out *Craft Reader* I think you can find it at the library.
Really good work Samuel, looking forward to see how the workshops will develop!"
— Cornelia, Ecology & MFA Student

"The interplay between your different skill sets is producing something quite sweet here! The idea of involving textile based natural dyeing could be a valuable extension, especially in dialogue with the slower rhythms of nature and craft. It's great to see how this work has sparked curiosity and action towards the workshop, that ripple effect is powerful, it's not only questioning materials and methods, but also critical in questioning the space for others to take part of knowledge making and explore ecological alternatives together. Looking forward to seeing how this play and important work for you and participants continues to unfold." — Fey, Ecology & MFA Student

"It seems to me that you through this exploration of "friendly" methods in photography both manage to illustrate and illuminate your care for animals in a materialised process. I think it's a beautiful and concrete way of taking action for something you believe in. The way you are driven by collectiveness and to invite and inspire others is great, It seems to suit you and I'm glad you have found Lasse to team up with. As I mentioned it would be really interesting seeing other portraits of cows, to try to invite them in actually taking part in the photographic processes, I think it can be a more abstract way for you to work with if your interested in that. Catching the shadows or souls of the creatures :-)"
— Carina, Ecology & MFA Student

## Practical Guide & Materials

* *Most information below retrieved from the ebook by Malin Fabbri — Anthotypes: Explore the darkroom in your garden and make photographs using plants (2012)*

*What you need:*

- Petals from a colourful flower, berries or other plant
- Mortar and pestle or electric food blender
- Glass container or ceramic bowl for mixing ingredients
- Water (distilled if possible) or alcohol
- Cheesecloth, coffee filter, cotton cloth or very fine masked strainer
- Brush
- Art paper
- Glass clip frame or a contact print frame
- A large size positive (not negative) or items to make photograms
- Sunshine

*Good to have:*

- Newspaper to cover work surface
- Scissors
- Rubber gloves
- Apron or an old shirt
- Cleaning cloth

*The anthotype process:*

- Grind, mash or mix the plant
- Strain the mix to get a clean emulsion
- Paper, card, textiles or any other naturally absorbent material is coated with the emulsion and dried in the dark
- Objects or positives are placed on the material to make a print
- The anthotype is printed in the sun for a few days or several weeks
- No further processing is needed :)

*Digital image from the workshop — Fujifilm x-t5 35mm f/2*
*Beetroot anthotype emulsion*

## (4) Plant & Iron Based Photographic Film Developing

> *"Many chemicals can convert silver halides into metallic silver, but not all can delineate between exposed and unexposed silver halides. Iron can do both. It is the only inorganic film developer that is still in use. It can be mixed with any ascorbate or phenol developer, turning them into a more powerful and long-lasting solution based on the iron's ability to bond with the other developer agents and work in conjunction. Like other metals, iron is essential for life but can be toxic in high concentrations. Once again, method is key. Paraphrasing Timothy Morton: the whole is more important than the individual."*
>
> — Andrés Pardo, Back To Basics Volume 2 (2025)

*Digital image from the preparation — iPhone 8+*
*Rusty developing tank in the research lab*

**Date**: 23.09.25
**Number of Participants**: 8
**Where**: Black & White Darkroom, HDK-Valand Gothenburg
**Purpose/Aim**: To develop photographic film using iron waste material with a lower carbon footprint compared to plant-based developing
**Planning / Preparation:** We went into this workshop a little blind as we hadn't succeeded in developing film in iron beforehand — however it provided an opportunity to try out and learn together
**Results:** Scattered / mixed results — developing was weak and needed more experimentation — unique aesthetic which was intriguing

## Logbook

*Notes:*

- Plants worked great as usual
- But iron sulphate powder didn't work
- Iron acetate worked a little (had amazing line of rust stain on it) — participant scans came out great though! They loved the aesthetic :)
- Participants liked the task of going to shoot for an hour — then developing right away
- More caution and safety needed as the developing mixture can froth quickly — unlike with plant-based developer

*Materialities & Experimental Aesthetics Research Cluster Feedback:*

- Photographic garden collaboration with campus steneby + workshops — have a greenhouse plus lots of land — dispute with copper mine
- Folkhogskola workshops
- Narrative Approaches within Arts-based Environmental Education Theoretical and Practical Applications for Alternative Futures By Margaretha Häggström
- Julian Rosefeldt — narrative approaches within environmental arts methods
- Flower Power Photography Symposium in 2026
- Write Flower Power Photography Manifesto

*Digital image from preparation — iPhone X*
*Cut rusty Iron*

> *"Iron, as a developing agent, was left aside during the early years of photography because it reduces the speed of the film or plate by two stops or more. In the previous era of slow plates, having a developer that reduces the speed was problematic, so when organic developers were tested and shown to preserve full speed, iron was disregarded. Today, overexposing a shot by two stops to use an iron developer is not a problem with modern films. This is the key to working with iron as a developer: exposure must be two stops over."*
>
> — Andrés Pardo, Back To Basics Volume 2 (2025)

* *Most information below retrieved from Back to Basics Volume 2 by The Sustainable Darkroom*

*How to prepare an iron starter solution and developer:*

Iron Acetate:

- Add 500ml of white vinegar to a pot (60-80 degrees celsius) — add and soak as much rusty iron as possible
- If keep temperature above 26 degrees — 48 hours to complete reaction
- If inconsistent temperature — 4-5 days to complete reaction
- Once complete — 250ml iron acetate solution + 50ml water + 20g sodium bicarbonate + 20g sodium carbonate — then develop as with plant-based developer (+ drop test)

Iron Citrate:

- Add 50g of citric acid to 500ml of hot water (60-80 degrees celsius) — add and soak as much rusty iron as possible
- If keep temperature above 26 degrees — 48 hours to complete reaction
- If inconsistent temperature — 4-5 days to complete reaction
- Once complete — 250ml iron citrate solution + 50ml water + 20g sodium bicarbonate + 20g sodium carbonate — then develop as with plant-based developer (+ drop test)

* Can also use Iron Sulphate — however we only had success with Iron Acetate & Citrate

*Digital image from preparation — iPhone X*
*Lasse cutting found / waste iron*

## (5) Photographic Vegan Gelatine Emulsion

> *"For film, high-grade gelatin created from cow bones is required - known as Type B ossein gelatin … in 2017, photographic products swallowed a weighty 60 kilotonnes (kT) - predicted to rise to 85kT by 2025.15 That's roughly 6719 London double-decker buses in weight by 2025, for perspective."*
>
> — Edd Carr, Ecology of Grain (2019)

*Digital Image from Preparation — Fujifilm x-t5 35mm f/2*
*Agar agar & carrageen emulsion*

**Date**: 21.10.25
**Number of Participants**: 8
**Where**: Black & White Darkroom, HDK-Valand Gothenburg
**Purpose/Aim**: To explore if a vegan alternative was possible and compare the emulsion to traditional bovine gelatine emulsion
**Planning / Preparation:** Created a vegan photo emulsion using Agar Agar, Carrageen, Potassium Bromide, and Silver Nitrate
**Results:** The emulsion was light sensitive however too much so (intense fogging) — more experimentation is needed to produce an image traditionally — promising but probably agar agar isn't the way to go — maybe with arrowroot

## Logbook

*Notes:*

- Interesting to explore salt printing with arrowroot further as without gelatine use
- Carrageen & Agar Agar = 1:3
- Completely fogged we think … possibly need more washing …
- The vegan one didn't work with lumen or super weak developer … maybe it's completely fogged or even cooked/fried/spent
- Around "unconscious materiality" (Nicole Shukin) — hidden / secrets — me and lasse being the "experts" with the knowledge — very hierarchical / old school pedagogy thinking — How can we facilitate more of a horizontal co-learning environment?
- Lisa Nyberg — radical pedagogy of the unknown — more present together — guided / facilitated / grounded with the senses to help with learning / awareness
- Also gender roles — how we are both males taking on the patriarchal traditional role of being the person in charge

*Esther Urlus Interview:*

- Nicole Shukin, Animal Capital
- https://www.processreversal.org/public/text/Urlus_reInventing_pioneers.pdf — Esther's text on emulsion
- George Eastman book
- Running water might be needed to wash the emulsion
- Wet plate is a good go to if don't want to use gelatine — Esther was skeptical about alternatives like agar — pretty much said it was impossible from her readings
- Robert Schaller — vegan biochemist — handmade film site: https://www.robertschaller.org/contact.html
- Mark Osterman — historian of early photo processes like wet plate if have questions -— markosterman@icloud.com / sculloster@gmail.com & https://www.facebook.com/mark.osterman.3
- For wet plate — https://www.collodion.org/basic-collodion-manual
- Esther seemed to be more optimistic about glass than paper
- This question of being vegan but more toxic? More harmful in a way? What about roadkill? Dogs being put down? Sounds very morbid and dark but is it any different from what we do to cows for the gelatine?

## Practical Guide & Materials

* Most information below retrieved from handmadefilm.org (adapted to be be vegan)

*Silver Vegan Gelatine Emulsion:*

Basic Recipe — Unwashed Emulsion:

- Simple but effective recipe — produces a very slow emulsion (ISO 4 - 12)
- Works well for contact printing, or use in a camera in full sun — seems to have a sensitivity rather like Kodak 7363, or HiCon
- The usual advice about using slow films applies: if use in camera, bear in mind that it seems to work optimally in sunlight, and the equivalent amount of tungsten light probably won't work
- For everything that follows, use distilled water, and rinse all implements with distilled water before use. Cleanliness is essential!

Mix separately (in normal room light):

| **Solution A** | | |
|---|---|---|
| | Vegan Gelatine Solution | 10g |
| | Potassium Bromide | 8g |
| | Distilled Water | 62.5 ml |
| | Add the (vegan) gelatine to the water and allow to swell. Put the container (preferably stainless steel, like a 2-reel still film developing tank) into a water bath and raise the temperature to 50°C. Add the potassium bromide and stir or swirl continuously until both ingredients are dissolved. | |
| **Solution B** | | |
| | Silver Nitrate | 10g |
| | Distilled Water | 62.5 ml |
| | Dissolve the silver nitrate in the water by stirring or swirling, again, in a stainless steel container (a processing can for 35mm still film is ideal), and raise it's temperature to 40°C in a water bath. | |

The next steps must be conducted under a red or amber safelight:

- Stirring continuously, add solution B to solution A in small, regular quantities, so that the addition takes 10 minutes to complete — about 5ml every 30 seconds. Can filter the finished mixture through cotton or glass wool or a loosely woven cloth like cheese cloth (making sure to thoroughly rinse the filter material with distilled water first) — but can do without
- The emulsion is now finished and ready to use! Store it in a light-tight container — a daylight spool box works well. Make sure to label it so as not to open it accidentally. To use, heat so that the vegan gelatine melts — 35°C might be a good starting point, but the consistency will depend on the temperature, and so this will be a matter of personal preference. Refrigerate in the meantime.

Coating:

- Acid free pH neutral watercolour paper recommended to try first
- Can try on cleared acetate film also — however more difficult — especially with vegan gelatine
- Dry in total darkness, and be aware that it is light-sensitive film
- Can use a very soft brush that picks up a lot of emulsion, and to re-dip it frequently. Multiple coats are fine, and help build up enough thickness so that the maximum density of the final image is extremely high.
- Be aware — too much thickness can make the film impossible to fix completely

Exposing:

- Expose generously — either outside in the sun if you're using it in a camera
- It will require some testing to figure out what the right exposure should be, but if you keep the development time constant, this will be the only variable

Developing:

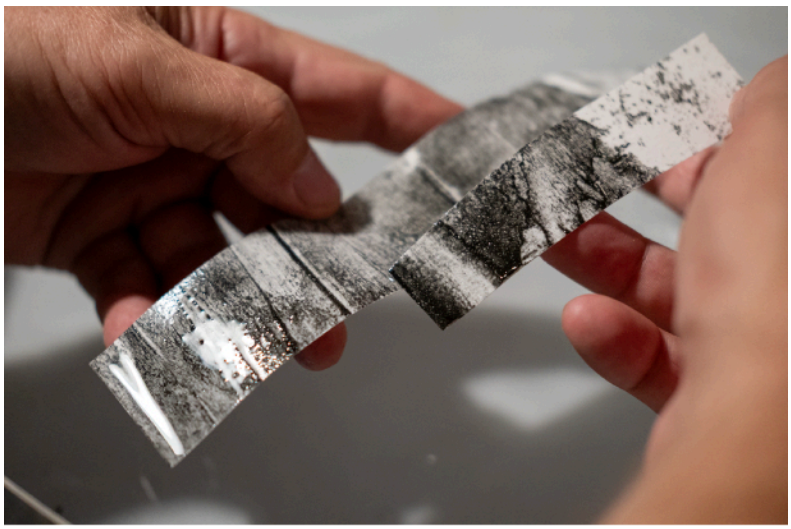
- Can develop in a standard developer and fixer — also can try ascorbate & plant based developer
- Use cold water for rinses, and make sure no solutions are over 20°C — otherwise the emulsion might come off
- Bear in mind that the wet emulsion is very fragile and scratches easily — it is susceptible to veiling, running, and reticulation
- Use a hypo-clearing agent at the end, as it is a silver image and will degrade if left contaminated with fixer, but the longer it's in any solution, the greater the risk of falling off, so use own judgement. If using it as an image source from which to print back onto regular film, this isn't an issue

One (traditional) developing method might be:

| | | |
|---|---|---|
| Developer D-19 | 20°C | 3 minutes |
| rinse | <20°C | 15 seconds |
| any standard acid hardening or non-hardening fixer | ~20°C | until all milky areas are gone (or as gone as possible); ~2 minutes? |
| rinse | <20°C | 1 minute |
| any Hypoclearing agent | 20°C | 2 minutes, if you dare! |
| final rinse | <20°C | 5 minutes, or as long as you're willing to risk it. |

Hang to dry :)

* For DIY silver production see: https://zebradryplates.com/a-new-and-probably-the-cheapest-way-to-make-silver-gelatin-emulsion-elios-story-and-full-step-by-step-tutorial/



*Digital Images from Preparation — Fujifilm x-t5 35mm f/2*
*Vegan Photographic Gelatine Emulsion Test*

# (6) PARSE: Some Like it Hot — Ecological Photochemistry / Waste Material Developing

> *"In an era of escalating ecological crises and ever-increasing intensities, heat has global but unequal impacts. Driven by advanced capitalism, fossil-fuel dependency, and digital consumption, heat is a literal threat to the lives of many. Yet heat can also be the manifestation of embodied exuberance, generative pressure, and a catalyst for transformation. As such, heat is a tangible warning, a symbol of urgency, an ingredient of change, and an attribute of pleasure."*
>
> — PARSE (2025) https://parsejournal.com/event/some-like-it-hot/


*Image from the workshop — By Samira (participant)*
*Ilford HP5 400 developed with ascorbate & dried rosemary*

**Date**: 14.11.25
**Number of Participants**: 10
**Where**: Black & White Darkroom, HDK-Valand Gothenburg
**Purpose/Aim**: to develop participants film images with conference waste materials centred around the theme of HEAT — particularly resistance, nonviolence, and justice
**Planning / Preparation:** Collect conference waste — plant based food, coffee, & rusty iron
**Results:** successfully developed 10 film rolls with food waste, coffee, iron, and participants plant materials from home

## Logbook

*Notes:*

RQ: *How can the material costs of the digital be exposed and re-imagined through plant-based alternatives in photography?*

- "Black-boxed object" (Latour, 1987) — Technology in late-neoliberal-capitalism — Extractivism, Colonialism, Imperialism, Patriarchy
- Degrowth — back to the earliest photographic process — many using plant based materials
- Grief in the photographic field — something inherently sad about photography — always promising and disappointing
- Motif — stepping into photography as a process

RQ: *Is it possible to de-grow/re-use/re-purpose in experimental photography practices? If so, what material costs come with this however?*

- Re-using materials at hand — analogue photography abundance — Parse Workshop WASTE
- However = not a perfect system — not inherently "sustainable" — still using many harmful materials (eg. pharmaceutical chemicals, silver, PVA)
- Are we trying to leave harmful chemicals behind? Ideally = Yes
- Awareness through seeing, feeling, smelling — capitalism hides — about becoming more conscious / aware of the SMOKESCREENS in our society

RQ: *What are the current transformations triggered by HEAT in photography? How can they be re-imagined?*

- The banal = obvious in the chemical reactions
- Fragility — Planetary boundaries — how one degree of change can make such a difference — will exceed the 1.5 degree Paris Agreement — Photography can exemplify how much can happen with small changes in temperature
- Steam — Photography is such an important factor / pressure in our capitalist system — images are everywhere and ever increasing — tool of historical unprecedented oppression — pressure on us all — violent
- Re-imagined through care, co-learning, community, and collective

RQ: *How are by-products of HEAT entangled within photographic practices and what are the smokescreens that justify/ hide them?*

- Case Study: Bovine Gelatine (Carr, 2019) — Animal agriculture's vast smokescreens and legal manoeuvring — justification as a mere "by-product" — lack of awareness in its entanglement with photography — wouldn't exist as it does today without gelatine
- Silver - very toxic — becomes a secondary by-product in the fix
- Chemical waste — Hydroquinone
- Safety Processes

RQ: *Can the experimental workshop become a speakeasy of our time/practice? If so, can it ultimately trigger larger resistance and social change?*

- Place to bring awareness, form resistance, and speak freely
- Photography can be a lonely practice — community needed — place to come together — object-subject
- The UK 'pub' = public — however not public in our case — access & justice need to be critically addressed — this conference is a step
- "Lasse's Speakeasy" — embodied in the essence of Practical Fridays

RQ: *How are love and lust ultimately involved and entangled in photography? Do they act as manifestations of violence and injustice within the practice?*

- Love/lust for the aesthetic — Grain — especially away from the digital — ads for digital gear that re-creates the analogue aesthetic
- Digital used to be a way to escape reality — but now reality is a away to escape the internet — RELIEF — humans need for relief in our society today — hope
- Masochism as escape from the self — is analogue photography like this? Some kind of escape but harmful to the self? Why do we want to go back? Why do we want to harm ourselves? Gets in contact with other parts of ourselves? Helps us to FEEL SOMETHING — Potentially resistance against numbing — away from individualism

*Further Reflections:*

- Curious about the workshop as a research method more — and specifically the photography workshop and what this facilitates with people — What can the photography workshop facilitate and what can it generate around notions of resistance, nonviolence, and justice?
- Also access came up a lot again — need to open up to at least all programs at school
- (Practical) Fridays for Future — Could this be expanded on with Photographers for Future?

## Practical Guide & Materials

** Most information below retrieved from Sustainable Darkroom via online plant-based developing workshop — https://sustainabledarkroom.com/products/developers_video — Also Back to Basics Volume 2 by The Sustainable Darkroom*

*Plant Based Waste Developer:*

- Plant matter (20g dried / 40g fresh per 300ml) | Extraction: 6-7 mins microwave / 10-11 mins boiling / 8-12 hours steeping (chop finely for best results and use plants with high phenolic content for largest tonal range)
- Sodium carbonate (anhydrous 20g per 300ml / decahydrate 54g per 300ml) — search online for the "MSDS sheet" if unable to find on the label
- Pure powdered vitamin C (5g per 300ml) — holistic optional
- pH paper
- Photographic fix as usual / salt fix (slower but more ecological / less toxic)

*Iron Based Waste Developer:*

Iron Acetate:

- Add 500ml of white vinegar to a pot (60-80 degrees celsius) — add and soak as much rusty iron as possible
- If keep temperature above 26 degrees — 48 hours to complete reaction
- If inconsistent temperature — 4-5 days to complete reaction
- Once complete — 250ml iron acetate solution + 50ml water + 20g sodium bicarbonate + 20g sodium carbonate — then develop as with plant-based developer (+ drop test)

Iron Citrate:

- Add 50g of citric acid to 500ml of hot water (60-80 degrees celsius) — add and soak as much rusty iron as possible
- If keep temperature above 26 degrees — 48 hours to complete reaction
- If inconsistent temperature — 4-5 days to complete reaction
- Once complete — 250ml iron citrate solution + 50ml water + 20g sodium bicarbonate + 20g sodium carbonate — then develop as with plant-based developer (+ drop test)

* Can also use Iron Sulphate — however we only had success with Iron Acetate & Citrate


*Social media post — by workshop participant*
*Developing with PARSE food waste*

## (7) Plant Based Colouring — *In Collaboration with Nanna Hammer Tiittanen*

> *"Artisans have added colour to cloth for thousands of years. It is only recently (the first artificial dye was invented in 1857) that the textile industry has turned to synthetic dyes. Today, many craftspeople are rediscovering the joy of achieving colour through the use of renewable, non-toxic, natural sources."*
>
> — https://naturaldyes.ca/instructions

*Digital image from the workshop with Nanna — iPhone 8+*

**Date**: 25.11.25
**Number of Participants**: 6
**Where**: Photo Studio, HDK-Valand Gothenburg
**Purpose/Aim**: to explore different ways to hand-colour analogue and digital photographs with ecological and natural sources
**Planning / Preparation:** Sourcing a mix of natural dyes from Helena Henning in the textile department at HDK-Valand
**Results:** Many analogue prints successfully coloured with natural dyes

## Logbook

*Notes:*

- Relational aesthetics — Moderna Museet Malmo — look more into this and its relevant - https://www.modernamuseet.se/malmo/en/exhibitions/lee-mingwei/
- We are saying how the motif isn't so important — but then do we do an exhibition?
- If want to "feel" the result then come to the workshop — but what is our "results"?
- Can we play with the co-learning — "mess" up the typical photo systems — has to be collaborative
- Giving different roles of power?
- Assignment — give an assignment but we as researchers are not looking at that necessarily — looking at the interaction and what happens as a result of being together in this space doing this
- Can the exhibition be like a performance? How do we involve participants? Again not about the motif — all about the process — away from the white cube?
- What is the difference between a workshop and exhibition? Can we play with this?

*Reflections:*

- Was lovely to facilitate and invite someone else in to the structure / workshops
- Different atmosphere and rhythm
- Slow and cozy vibe with the music on and everyone colouring
- Felt at ease to experiment with the natural dyes from Helena

## Practical Guide & Materials

*Natural Dyes:*

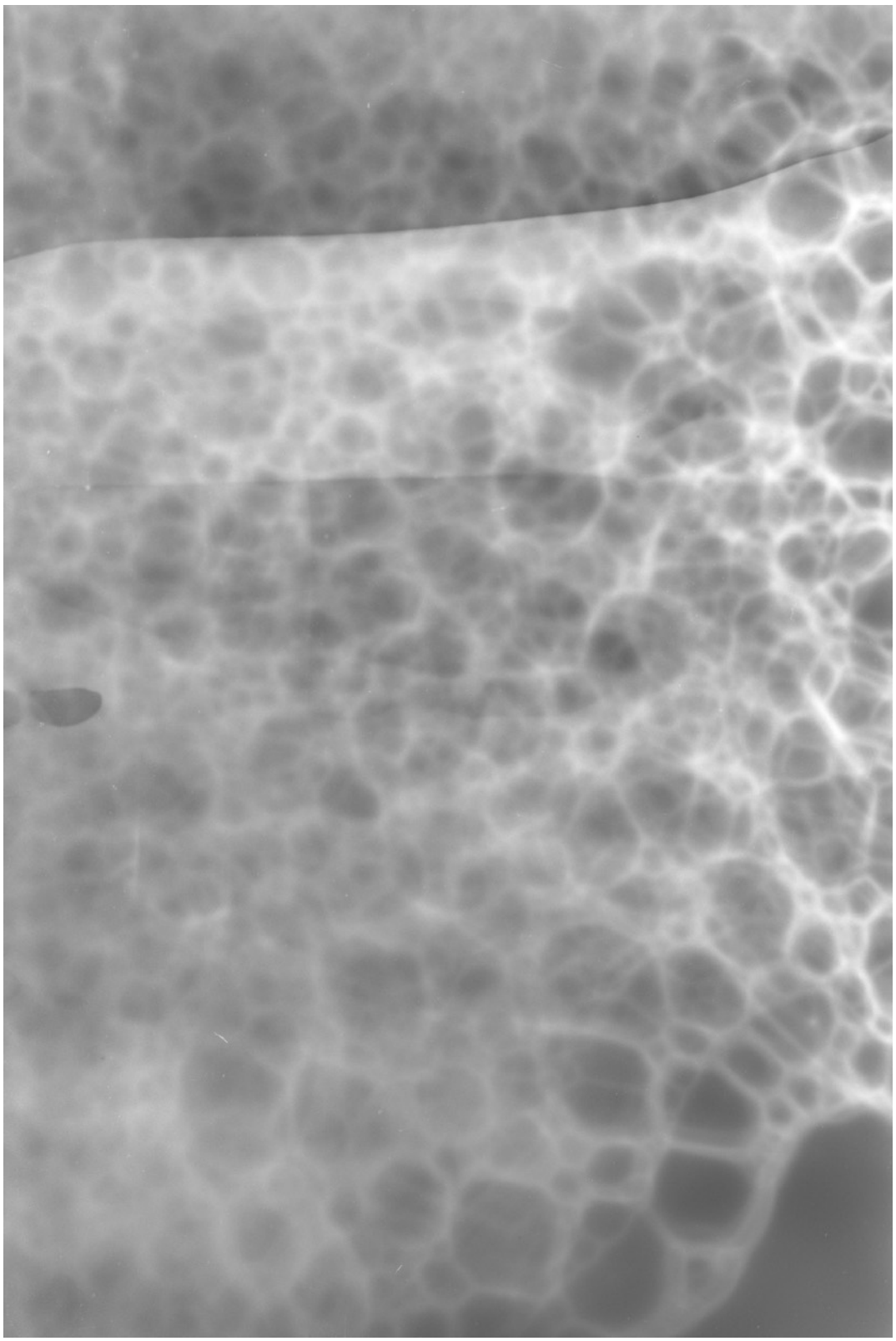
Woad — blue
Indigo — strong blue
Vau / Reseda — yellow
Krapp — red

*Helena Henning (HDK-Valand Textile Department) Comments:*

- Yellow is almost every plant - but comes in different strength
- Lichen — purple — however animal product — live on cactus in Mexico — tried to grow in Sweden a while back
- Birch can be used
- Tannins are needed for toning — whereas dyes are for printing and colouring — most need to be combined with other things like egg white / aquafaba and other chemicals
- The Art & Science of Natural Dyes by Joy Boutrup & Catherine Ellis


*Digital image from preparation — iPhone 8+*
*Helena's box of natural dye material*

*Digital image from workshop — iPhone 8+*
*b&w silver gelatine print coloured with indigo, vau, and krapp*
*by Katarzyna (participant)*



*Ilford HP5 400 developed with ascorbate & dried rosemary*
*Parse participant image — resistance, nonviolence, justice*

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