

# Interspecies healing through natural history: On Thomas Lowe Fleischner's 'spiral of offering'

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**Thomas Lowe Fleischner has revived the ancient practice of natural history within academia, especially as a teacher of biology. While natural history naturally aligns with biology, its offerings as described by Fleischner are not limited to this scientific discipline alone. In particular, natural history can support teachers and students within interspecies health education in at least three ways. First, by providing a *predisciplinary* grounding of their work, involving a reverent attuning to the more-than-human world unbound by the restrictions and expectations of disciplinary thinking. Second, by helping us move away from an isolated understanding of health to a more holistic conception of reciprocal healing. Third, by helping us to cultivate attentiveness to the more-than-human world alongside (and inseparable from) one's inner self. As Fleischner argued, the practice of natural history honours the interdependence of humans with the more-than-human world, and by becoming a naturalist, possibilities for genuine interspecies healing emerge.**

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Over two decades ago, the journal *Wild Earth* published naturalist Thomas Lowe Fleischner's aptly titled article "Natural history and the spiral of offering". Fleischner needs little more than two pages – embellished with a beautiful pen-and-ink drawing by D. D. Tyler – to lay out his offering and set off any reader to go and rekindle the ancient practice of natural history.

In that article, Fleischner defines natural history as a "practice of intentional, focused attentiveness and receptivity to the more-than-human

world, guided by honesty and accuracy” (2001–2: 11). He argues that the practice of natural history spurs a “spiral of offering” between Earth and naturalists, an ever-deepening of their reciprocal relationship. Fleischner has made natural history an inextricable part of how he teaches biology, taking students on long field trips to be with the more-than-human world. This serves an important scientific purpose, as fieldwork provides the empirical bedrock for theorizing about the workings of nature. But it reaches beyond science into the senses, cultivating both a “sense of place” and a “sense of wonder” (Fleischner, 2017: 2). For Fleischner, science without such senses quickly becomes abstract and reductive – out of touch, both literally and figuratively, with the aliveness of the more-than-human world.

In this article, I explore how Fleischner’s pioneering work can shine a light on higher education of future health professionals. What has natural history to offer these students as well as their teachers? I explore the spiral of offering of natural history within the broader scope of what I call ‘interspecies health education’, which encompasses all higher education geared towards protecting and promoting health, including at least education in medicine, veterinary medicine and the biomedical sciences.

### Before disciplines

One of the first lessons of natural history lies within its own history. Fleischner traces the onset of natural history’s gradual demise to over ten millennia ago, around the dawn of agriculture. Due to this change in the human relationship with the more-than-human world, “[f]armers discovered natural history nuances of a few species, but began to ignore many more. ... As millennia passed, these societies grew ever more specialized, and natural history – which was fundamental for hunting and gathering people – gradually diminished as the foundation for daily life” (Fleischner, 2001–2: 11).

Specialization and ignoring continues until this day. Just a few domesticated species of nonhuman animals attract abundant scientific interest, driven for instance by the desire to ‘optimize’ the process of ‘livestock production’ (Marino, 2017; Nieuwland and Meijboom, 2023). Furthermore, health sciences are rife with siloing despite initiatives for more integrated approaches like One Health (Manlove *et al.*, 2016). To get a grip on the complexity of life, science generates evermore specialized fields, which simultaneously both grows and fragments knowledge (Casadevall and Fang, 2014).

The upsurge of disciplinary-transcending approaches – such as multi-, inter-, and transdisciplinary approaches – reflect an awareness of the disadvantages of monodisciplinary and disconnected ways of understanding nature (Choi and Pak, 2006). In that sense, natural history appears to dovetail with transdisciplinary approaches specifically, as both try to see the bigger picture and put science in the service of real-world concerns.

It would, however, be a mistake to understand natural history as trans-disciplinary. More accurately, natural history is *predisciplinary*. As Fleischner points out, the origins of natural history can be traced back way before the rise of Western science and its recent specialization and fragmentation. Natural history

does not carve up the world into different fragments to begin with, so there is no need to put it back together again.

Moreover, natural history sets itself apart from transdisciplinary approaches in the way that naturalists devote themselves to the natural world. As Fleischner puts it, in explaining his use of the phrase “the spiral of offering”:

*We naturalists ... undertake the practice of natural history in tribute to the world, as a token of esteem for the world, in gratitude for the gift of living in a world that is inestimably more diverse and gorgeous than it might have been. All natural history is informed and motivated at some level by this sense of gratitude and awe (2001-2: 12).*

In contrast to what Fleischner termed “natural-history-as-devotion” (2001-2: 12), transdisciplinary approaches could be undertaken without any such sense of gratitude and awe, and might quickly overlook nature herself. In other words, transdisciplinary approaches change our ways of knowing but not necessarily our ways of being. While natural history makes one inquire into the workings of nature, it does so with a sense of reverence and humility, serving as a constant reminder of both the sacredness of nature and the limitations of our understanding.

Of course, natural history is not adisciplinary either, with Fleischner’s own educational practice a case in point. The practice of natural history provides the necessary fertile soil for a diverse range of disciplinary assemblages and other foliage to flourish. In doing so, natural history provides an antidote to what Vandana Shiva (1993) has called the “monocultures of the mind”, as it fosters a kaleidoscopic, holistic view of the more-than-human world that cannot be grasped through the siloed visions of highly specialized scientific disciplines alone.

Above all, natural history requires a reverent attuning to the more-than-human world unbound by the restrictions and expectations of disciplinary thinking. A naturalist engages in the practice of being a humble student – and member – of the socio-ecological web she finds herself in, learning and adjusting every step of the way. Any disciplinary understanding of interspecies health adds to rather than replaces a naturalist appreciation of a place and all those species living there.

## Reciprocal healing

Another lesson of natural history pertains to interspecies health and healing. The spiral of offering involves an ever-deepening reciprocal relationship between the Earth and the naturalist. Such reciprocity pushes back against the perception of nature “as a *resource* for human healing, without giving in return, without concern for the health of natural ecological relationships of the more-than-human others” (Fleischner and Sewall, 2020: 159; emphasis in the original). Reciprocal healing asks the question of how humans and the more-than-human world might heal each other. Here, healing involves more than an individualized, frozen-in-time, free-from-disease understanding of health that requires an individual organism to return to a set of species-specific

biophysical reference points (Boorse, 1977). Rather, healing involves an ongoing and wide-ranging process of striving “to make the individual, the collective self and the wider, more-than-human world whole again” (Fleischner and Sewall, 2020: 159).

In many ways, human health is a *gift* from the more-than-human world – not something to be taken for granted. As naturalists, we strive to enrich our understanding about the intricate interrelations between humans and the more-than human world, and how the interplay between these affects the health of oneself and others. By doing so, if we are honest with ourselves, we uncover the many ways in which humans squander the gifts of the more-than-human world. Faith in technological innovation upholds inherently unsustainable standards of living (Rees, 2019). Ecological disruption and loss endanger health and engender disease across geographical borders and species, with potentially wide-ranging implications – and, in general, inflict profound harm in unequally distributed and unjust ways (Acevedo-Whitehouse and Duffus, 2009; Ilea, 2009; Myers and Patz, 2009; Crighton, Gordon and Barakat-Haddad, 2018; Bambra, 2022).

Natural history allows for reciprocal healing through various means. As naturalists become humble students of their own ecological embeddedness, being taught by the more-than-human world, they might shed some (or many) beliefs of how places and species should conform to conventional human practices, or come to recognize the various ways in which the more-than-human world has been overlooked in health education. This open mind allows both for an honest diagnosis and helpful understanding of what interspecies healing might involve (Fleischner and Sewall, 2020).

Moreover, being devoted to the more-than-human world – as we have seen, the heart of natural history – helps to restructure and develop human–nonhuman interactions and relationships that work towards interspecies healing. If health professionals engage with other species as naturalists, this profoundly shapes their ability not only to recognize but also foster the health of the more-than-human world as part of their own profession.

Finally, it is itself healing to immerse oneself in a place vibrant with life. Various scientific studies on the human health benefits of ‘being in nature’ (e.g. Maller *et al.*, 2006; Kotera *et al.*, 2022; Shanahan *et al.*, 2016) confirm Fleischner’s idea of reciprocal healing, of simply offering attentiveness and receptivity to the more-than-human world and receiving healing gifts in return (*cf.* Fleischner, 2025). For health professionals, turning towards the more-than-human world might help not only to benefit nonhuman species but also to find ways to care for themselves and other human beings as part of a movement towards genuine sustainable health care.

### Being (with) the more-than-human world

Natural history brings into relief the transformative potential of being attentive to the more-than-human world. Fleischner is quick to recognize and reassert the kinship between natural history and contemplative practices found across religious and spiritual traditions (2001–2: 11; Fleischner, 2011; Fleischner,

2025). Both practices honour a way of being present, and experiencing reality, that eludes the discursive mind (Brandmeyer and Delorme, 2021).

In that sense, natural history aligns with contemplative pedagogy, as both revolve around attentiveness. Contemplative pedagogy emerged just before the start of this century as a movement to foster 'complete attentiveness' within higher education (Zajonc, 2013: 91). Its roots run perhaps just as deep as those of natural history, spanning across millennia throughout the world, with contemplative practices venerated within a wide variety of spiritual and religious traditions. In higher education, contemplative pedagogy involves a respectful exploration (being careful of the risks of appropriation) of various contemplative practices to cultivate attentiveness, mindfulness, insight, love and compassion (Zajonc, 2013).

Interestingly, both natural history and contemplative pedagogy include field trips as part of their practice (Fleischner, 2017; Barbezat and Bush, 2014). Moreover, both understand attentiveness and receptivity as a step towards a larger self – an understanding of oneself as part of something more encompassing (Fleischner, 2001–2: 11; Zajonc, 2013). In joining natural history with contemplative pedagogy, an old bond is restored.

While similar in spirit, an important but subtle difference remains between natural history and contemplative pedagogy – a difference that, as Fleischner points out, allows for a symbiotic relationship between natural history's emphasis on the *outside* and mindfulness's emphasis on the *inside* (Fleischner, 2011, 2025). On the one hand, natural history invites students to become naturalists, to go out and pay attention to the interspecies fabric of life in which they find themselves embedded. In doing so, natural history shifts attention outside oneself to create a broader conception of self (Fleischner, 2011; Fleischner, 2025). On the other hand, contemplative pedagogy turns inside to tend to the inner work required to open to a broader conception of self.

## Interspecies healing

Fleischner's plea for natural history reinvigorates not only attentiveness but also various affective states – such as gratitude, awe, reverence, humility and love – in relation to the more-than-human world; ways of attuning that have become rather dormant in modern industrial societies (Plumwood 2012; Kingsnorth, 2017; Nieuwland, 2022). The practice of natural history invites one to become familiar again with one's more-than-human kin, a lifetime commitment to finding one's place within the larger ecological fabric of life (Fleischner, 2019). In doing so, natural history helps us to see the wisdom of predisciplinary thinking and how this might serve as a foundation for any scientific approach, whether these are mono-, multi-, cross-, inter- or transdisciplinary. We need not only to transcend disciplines, but also to transcend our desire to only grasp the more-than-human world in scientific terms.

Natural history enriches interspecies health education by cultivating an awareness and appreciation of the wider ecological aliveness that supports the health of individual humans, animals and organisms. It makes apparent any narrow focal points of attention and fosters wonder, admiration and care for

the wider interspecies collective with whom humans share this biosphere. In doing so, natural history shifts the attention from health to healing, inviting students to critically examine how they as health professionals could engage with the more-than-human world to serve reciprocal healing.

To end with Fleischner's foundational insight: in a world full of abstractions and distractions, education should cultivate attentiveness to the spirited lives of other species. Natural history joins contemplative pedagogy in honouring attentiveness and receptiveness as doorways into the self and its interdependence with the more-than-human world. Through these doors one will find the beginnings of critically important – and nowadays too seldom taken – pathways to interspecies healing.

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