

News from the Institute

Events

■ In December 2022, Henrike and Craig taught the first two weeks of a two-module course, “Seeing Nature Whole — A Goethean Approach” in Florianopolos, Brazil. In his article, “**Generative Knowing in Education**,” on page 19 of this issue, Craig discusses the kind of phenomenological and artistic exercises used during the course and why they are employed. (The second module in Brazil is scheduled for December 2023.)

■ Our hands-on winter workshop in 2023, “**The Wisdom of Animals — Exploring their Dynamic Forms and Behavior**,” took place over the last weekend in February. Participants in this short course studied how everything within an animal is interconnected and expresses a deep wisdom.



■ Jon McAlice spent a week in Switzerland this past February, mentoring 40 Waldorf school educators on self-directed learning through the grades, and on how to develop and assess school curricula. His consulting work also took him to San Francisco the same month to facilitate a conference on “**The Experience of Meaning in Education**.”

■ Through the online European teacher training website **Lehrerseminar für Waldorfpädagogik**, Craig gave an intensive workshop in February for high school science teachers — from Estonia, Lithuania, Latvia, and Bulgaria — about the content and approach to teaching biology in the 11th and 12th Waldorf grades.

■ Over this past winter and spring, John Gouldthorpe and Henrike Holdrege gave an online seminar, “**Working Through Our Color Experience**,” for 12 current and graduated students in our Foundation Program.

■ At the **15th International Training Week** for Waldorf educators in Kassel, Germany (March 31–April 6, 2023), Craig taught a 5-day course on “Evolution as a Developmental Process” to participants from 8 different countries. He also gave a keynote address for the conference on the topic of “Intelligence in Nature — The Challenge of Forming Living Ideas.”

■ Following up on the success of our drawing course offered last fall, artist Ella Lapointe began teaching a spring session of “**Drawing into Nature**” on April 18. Held at the institute, the class runs Tuesdays from 4:30pm to 6:00pm until June 13 (except on May 23). To counter our tendency to see mainly what we already “know,” we use the act of drawing as a means of pouring our attention into the actual concrete appearances of the world.



Other events, as of this writing, planned for spring and summer 2023 include:

■ A workshop, “**Plant Observation and the Living World**,” facilitated by Craig Holdrege, Henrike Holdrege, and Jon McAlice (April 21–23). We will use the humble plant as a potent teacher to help the human mind become ever more flexible, dynamic, and context-sensitive.

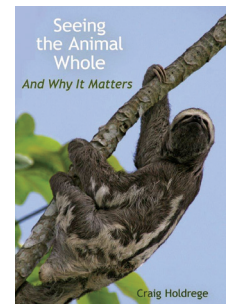
■ A talk at the institute on April 26 by Jon McAlice will address “**Experience, Imagination & the Nature of Meaning**.” The 7pm event is free and open to all.

■ The weekend of May 6–7, Ryan Shea and Craig Holdrege will present “**Seeing and Language: Creative Reading and Writing as a Way to Experience Meaning in Nature**.”



In this workshop, we explore the ways in which a creative language practice can amplify and deepen our immediate experiences and foster new capacities of perceiving.

■ Craig will host a Q&A on June 16 with international students enrolled in an online course called *Goethe and the Language of Holistic Science*. The focus of the session is Craig’s most recent book, *Seeing the Animal Whole — And Why it Matters* (Lindisfarne Books, 2021).



- Participants enrolled in cohort IV of our **Foundation Program in Goethean science** will meet for two weeks at the institute this coming June for the intensive residential phase of the course, culminating in completion of the program, which they began 15 months earlier.
- As part of a two-week professional development program from the **Center for Anthroposophy**, Henrike Holdrege and Craig Holdrege will offer the week-long course “Living in Transformations — Geometry and Plant Study” (July 2–7) for educators, parents, and administrators. Participants will take two complementary and mutually illuminating pathways to help attune themselves to dynamic processes in the world.

Staff News

We’re pleased to announce that **Ryan Shea** has officially joined our staff as a part-time researcher and educator. Ryan brings eight years experience as a teacher at Providence College, where he gave courses in philosophy of science, environmental philosophy, and nature writing. He completed our Foundation Program in 2022. His interests weave together ancient philosophical biology (especially Aristotle), the scientific revolution, phenomenology, German idealism, and Goethean qualitative science. That is, when he’s not busy being a caregiver to his two young children. Welcome Ryan.



Steve Talbott Transitions to Emeritus Status

Steve Talbott joined the work of The Nature Institute 25 years ago, soon after its founding in 1995. As a writer and editor, Steve was instrumental in bringing our efforts to a broad international audience through *In Context* and through our website. We began publishing *In Context* in 1999, and Steve was its editor for 44 issues; it now reaches people in 63 countries. Our website was launched in 2004 and Steve was the webmaster until 2020. This technical work was always going on in the background as Steve researched, wrote, and participated in many spirited conversations during our weekly research meetings. In the first decade, Steve engaged mainly with topics related to technology. He published 126 issues of *NetFuture: Technology and Human Responsibility* (netfuture.org) between 1998 and 2013. Around 2009, the focus of Steve’s work shifted to the study of genetics, epigenetics, and evolution. This culminated in the 25 chapters of his recently completed



online book, *Organisms and their Evolution — Agency and Meaning in the Drama of Life* (see the Preface to the book on page 3, or go to bwo.life/bk for the full text). Steve has been immensely productive.

Now, in 2023, he is an emeritus researcher at the institute. This means he is free to pursue — or not! — any topics he wants to. He has no day-to-day obligations except for those he sets for himself. As I know Steve, he will never stop working. And what I mean by “working” is his life pursuit to understand *meaning* in the world more deeply and to wrestle with the riddle of humanity’s place in the larger context of life on earth.

We celebrate (quietly; Steve is not big on celebrations) his 25 years of work for The Nature Institute. The institute would not be what it is today without his manifold contributions. We wish him much breathing room, energizing walks, continued dialogue, and the lovely freedom from deadlines that an emeritus researcher can enjoy. CH

Recent Podcast Episodes

You can find our podcast on the institute's website (<https://www.natureinstitute.org/podcast/in-dialogue-with-nature>) or wherever you access podcasts.

■ Our most recent podcast is comprised of two parts. First, we share a recording of Craig Holdrege reading his essay, “**Where Do Organisms End?**” (which first appeared in our third issue of *In Context*). Following this, our podcast host, John Gouldthorpe engages Craig in a conversation about the reading and its intent: to challenge our habitual way of making sense of living beings through their physical characteristics, and instead by way of their relationships.

■ In Jon McAlice's talk “**Appreciating Barry Lopez,**” recorded at the institute at the end of 2022, we hear about the biography and works of award-winning writer Barry Lopez, whose life was defined by a profound connection to the more-than-human world. Lopez died in 2020, bequeathing a trove of writings that invite us all to understand and enjoy nature as he did — as alive and responsive.

And a NEW VIDEO

Last September, Henrike Holdrege gave a lecture and slideshow at the institute on “**Gestures in the Work of Artist Ernst Barlach.**” We've

created a video of Henrike's one-of-a-kind presentation that features some of the remarkable work produced by Ernst Barlach (1870–1938), a German sculptor, visual artist, and playwright. You can view the video at natureinstitute.org/videos.



Spring Matching Grant

One of our generous supporters has offered a \$5000 matching grant for donations made to The Nature Institute this spring. This allows us to potentially raise as much as \$10,000 this season to support our education programs and provide scholarships to our intensive courses. Such grassroots support also shows that our work has a large and dedicated following. You can give to the institute by check or credit card using the envelope inserted in this issue, or give by credit card at our website (natureinstitute.org/friend).

Thank you for your caring support.

From Our Mailbox

Dear Craig,

I wanted to share that I found the workshop immensely fruitful and I'm still recounting the concepts we learned with friends and family. Particularly salient were the illustrations of how human bones change over time, driving home the concept of living bones, and the adaptability/responsiveness of all animal bodies to our environment and behaviors. Also, the activity of placing our own bodies into the shape of a lion's crouch, followed by looking at the bones of the legs of different animals to identify the different placements of toes, heels, and knees. This was very effective.

— Leslie Ruckman

Dear Henrike,

I wanted to let you know how very much I appreciated your inspiring presentation of Barlach's work! I loved it so much. I do wish I could have been there in person, but I am honored and inspired to have seen it in this form. I have watched it over the last 3 days, and it is one of the most inspiring art experiences I have ever had. It is how you wove it together with his pieces and with his writing, speaking of his creation process, like life itself. A great gift; thank you.

— Helen Walker

Publications

■ **The Biodynamic Federation/Demeter International** asked Craig to contribute a chapter to a new training manual for biodynamic farmers and agriculturalists. The focus of the manual is on presenting experiential exercises that encourage a more profound and lively experience of the biodynamic curriculum and a deeper connection with nature and its formative forces. (The online manual was not yet complete as of this writing.)

■ At the close of 2022, institute senior researcher Steve Talbott published the final online installment of chapters in his book project that aims “*to recapture the drama of life in the place where it actually occurs — in organisms themselves — and to lay bare as clearly as possible the failure of reigning evolutionary theory to explain the special qualities of that drama.*” After more than a decade in development, his 25-chapter book, **Organisms and their Evolution — Agency and Meaning in the Drama of Life** is now a highly original resource and thought-provoking publication. You can read individual chapters and download the whole book, free-of-charge, at our adjunct website, bwo.life/bk.

A Remarkable Transformation: Urban Composting

ALINE CARVALHO

Aline Carvalho completed the institute's 15-month Foundation Program in Goethean Science last summer. For her independent project during the course, she chose to experiment with a technique of indoor composting that would work easily and inexpensively for urban dwellers without access to a yard. She presented her successful results — rich, healthy compost produced in simple buckets by a thriving worm population — at the end of the program. Having created this portable system, Aline was able to demonstrate composting in several public schools around Boston and Cambridge, where she lives.

Here is a recap of her presentation.

Observing and learning from nature fascinates me and composting is one of the processes I admire most. It's amazing to see up-close the transformation of organic matter into soil. From my observations and studies, I've come to realize that earthworms may be one of the most important organisms on our planet. They are directly connected to the cycle of organic matter, in addition to assisting in soil oxygenation — all of which is critical to healthy plant life. So before explaining the technical process of composting, I'd like to inspire an appreciation of earthworms with some remarkable facts. Some of these details also explain why there are best practices for managing a compost bin:

- Earthworms breathe through their skin.
- They don't have eyes, but they can feel light and dark.
- They have five hearts.
- They are relatively stronger than a horse; an earth worm can lift 50 times the weight of their own body.
- They can dig more than 16 feet deep.
- They have population control, reproducing according to the amount of food they receive daily.
- They are hermaphrodites.
- They lay eggs.

The most recommended worm for composting is the red wiggler worm. I tried using worms I found in the garden but

they died in captivity or escaped, so I bought red wiggler worms from a pet shop. They'd been stored in a refrigerator and appeared whitish to almost ashy; within a week in the compost, however, they changed to a deep red and doubled in size!

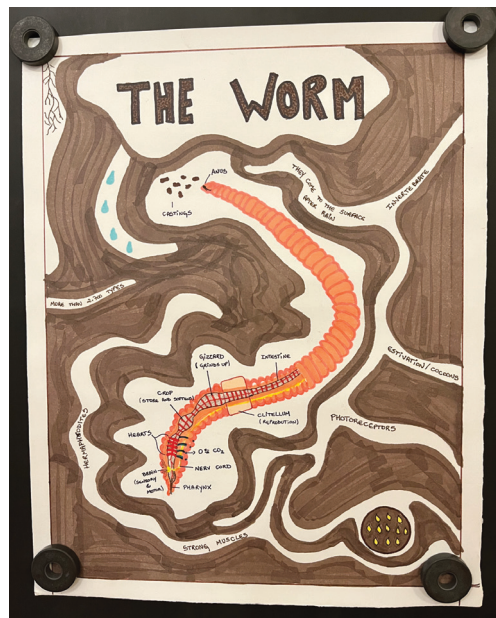
To start my urban composting project, I created a do-it-yourself compost bin that was space-saving and inexpensive. Nowadays it is possible to buy many compost bins online, but I find these are usually costly and large. Instead, I repurposed three five-gallon industrial paint buckets (water-based). Because the natural environment of earthworms is dark, the buckets should be opaque so you can replicate their habitat as much as possible.

My composting system consists of these buckets stacked, with the top and middle buckets having small holes drilled in the bottom to allow for air

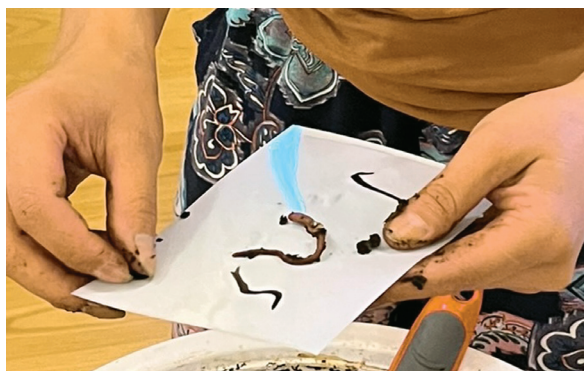
flow. This is also true for the top lid, where I drilled holes with the smallest drill bit I could find (to prevent worms from escaping). If these tools are not available, it's possible to hammer a heated nail into the plastic to make small holes. (The middle bucket does not have a lid since it is covered instead by the first bucket stacked above it.)

Beginning from the top down, Bucket 1 is where the process starts. This is where you put your worms, some wet organic matter (food scraps) and dry organic matter (leaves, plain cardboard, roll tubes, newspaper, twigs, saw dust). I started with just five worms initially. After several months of composting, my worm population grew to more than a hundred. Every time you add food scraps, it is important to add dry organic matter and then stir. Mixing the dry and wet organic materials will help control water in the process and stirring increases oxygen.

After about three months, I had completely filled Bucket 1 with wet and dry organic matter. At this point, my mixture needed to rest to allow the full decomposition to happen, resulting in soil. So my empty Bucket 2, in the middle, then became the top bucket for food scraps and dry matter, while Bucket 1 moved to the middle of the stack. A handful of worms from the first bucket acts as your "starter" for the next bucket of scraps.



Bucket 3 is reserved for slurry collection — the liquid resulting from organic matter decomposition. While this collection is optional, the benefit of collecting the slurry is that it makes an excellent biofertilizer when diluted with nine parts water. The liquid has no unpleasant odor, unless a worm falls into it and dies. To prevent this from happening, you can put a clay pot upside down in the bucket, which allows a worm to climb onto that pot and avoid drowning in the liquid. (The smaller the holes in the bottom of Bucket 2, the less likely earthworms will fall into Bucket 3.)



Some of the red worms that drive the compost cycle

The time for full decomposition varies depending on the amount of materials added, but I found that usually it takes three months to fill the first bucket, and three months (undisturbed) for organic decomposition, so you'll have the first soil ready for use about six months after starting. You can place the soil and worms directly on the earth or in the garden; if you want to use the soil indoors for planting, filter out the worms by passing the mixture through a screen.

You can locate this composting system anywhere that is protected from rain and direct sunlight. I keep mine in a basement. During the winter, I noticed that earthworms' metabolism slows down, so I had to be more attentive that the humidity and temperature were not too low.

The benefits of composting are not just for gardeners. In addition to being able to observe a remarkable transformation, by composting you also significantly reduce the environmental impact of man-made waste. Approximately



51% of the waste that is generated in US homes could be composted. After starting my compost I reduced the quantity of trash bags (in a house with two people) from one bag of trash a week to one bag of trash every two or three weeks. The results are immediate.

Some Trouble-Shooting Tips

- **Worms escape from the container**

This is often caused by too much sun, or a toxic element, such as citrus, for example. To remedy, change the location, remove the 'element', and leave the container uncovered for a few hours to observe.

- **Worms on the lid and walls of the buckets**

Excessive water is usually the cause of worms migrating away from the organic matter. Add sawdust, hay, or straw to reduce the proportion of water.

- **Flies**

Uncovered food scraps, and excessive water or citrus can attract flies. Add sawdust, hay or straw, remove the citrus if present, and capture the flies using a mixture of ½ cup of apple cider vinegar, 2 tablespoons of sugar, and 2 tablespoons dish soap.

- **Smelly compost**

A strong odor can be caused by a lack of oxygen, too much water, or the wrong food scraps. To treat it, turn the compost regularly, add dry materials and/or remove the offensive food scraps.

What Scraps Go in the Compost Bin?

You want about 70% of your food scraps to be fresh plant material: fruit and vegetable peels and cores, seeds, coffee grinds, egg shells, tea leaves and bags, grass, fallen leaves, flowers, nuts, bread, cooked food (without any meat, fish, dairy, or hot spice), herbs, onion, and garlic. All these scraps have water in their composition and so are the "wet" matter for your compost.

The remaining 30% could be cardboard, roll tubes, newspapers (not magazines), twigs, saw dust, hay, and straw. These materials have no water and are the "dry" matter in the decomposition process.

Do not add any of these to your compost: Oil, fish, meat and bones, processed foods, animal litter, dairy products, salt, lemon and lime, spices, and diseased plants.