

Searching for “Origins”

In late October at The Nature Institute, Craig guided a day-long workshop for biology teachers and people interested in the topic of human evolution. To bring us into the subject, Craig used a “kit” he developed that consists of 30 hand-drawn images of skulls, in profile and drawn to scale (allowing for easy comparison). These skulls are a representative selection of the hominid fossils that scientists have discovered over the last century. They represent the concrete phenomena that scientists have studied and puzzled over in an attempt to answer the riddle “Where do we come from?”

Normally, students are simply taught the varying results of that investigation. They are given answers that scientists have offered. But they are not given space to *ask* the question themselves, to experience the phenomena directly, to observe it and form their own ideas. These skulls, even though only two-dimensional images, provide this opportunity. They begin to bring us into the act of discovery.

How do they do this? I can only share my own experience. To do so, I’ll have to take you through the process.

Craig split us up into groups of three or four people, and gave each group a packet of the skull images. He then asked us to order them.

Initially, my group clustered them according to their visible features: a stronger brow, a larger jaw, a rounder head, a ridge along the top of the head.... Then, once we had them in little clusters, we guessed their relative age and proceeded to order them in a linear sequence from oldest to youngest.

When we were finished, we went around and saw how the other groups had ordered them and heard their observations and thoughts. Then Craig gave us a handout with more details about the skulls. We learned where they were found, the exact size of the cranial capacity, and an important discovery—their likely geological age. With these new discoveries in hand, we again took up the skulls and came to a new understanding and order.

We realized that our initial activity of clustering the skulls made more sense than the linear sequence we later put them in. Of course these beings had not all lived one after the other in a straight line! — even though this is how it’s so often depicted in the ubiquitous image of the transformation from bent-over ape to upright man. Some of the hominids with quite different characteristics had lived at the same time. And some of them died off and had no direct hereditary connection to modern human beings.



Although many of us had a background in teaching science, nonetheless almost everyone assumed the skulls would line up in a nice linear sequence. We forget that that’s not how nature presents itself. Instead of a simple line of causality, we see a rich tapestry of being and becoming. This was an interesting insight. By entering more into the actual experience of scientific inquiry, discovering the skulls much like the scientists themselves had, we came to a far fuller picture of the life of our ancestors on earth.

In addition, I found the process also made it possible to catch a glimpse *behind* the question, “Where do we come from?” Usually when we try to answer this question, I think we’re just looking for some original forebear—a “missing link” of which we can say “we came from that.” Such an answer, if it’s to be found at all, doesn’t shed much light on what it means to be human today. But in the act of discovery, of really looking at these skulls and puzzling over their different features, I found there was a strong *aesthetic* experience that did shed light on this deeper question.

By “aesthetic,” I don’t mean that I became engaged artistically (though I could imagine it being very fruitful for

New Videos

This winter, we uploaded two of Craig's recent presentations onto our YouTube channel. The first—"Where Do We Come From? The Question of Origins and Ancestors"—was a talk that Craig gave in late October to a packed house at The Nature Institute. The second—"Giving Living Beings a Voice"—was a presentation he delivered in November at a conference on synthetic biology in Toronto, Canada. We hope you will find them thought-provoking. They can be found in the new "Other Media" section of our website (<http://natureinstitute.org/media>).

students to draw the skulls!), but that the diverse skull forms became ever more *expressive* as we worked with them. In time, the manifold features became more recognizable and more pronounced. They began to speak.

If we hadn't lovingly given our attention to them, if we had ignored all the "offshoots" and sought instead only the one "truly human lineage," then the different skulls couldn't have created a contrast for each other. In the end, it was this movement *between* them that was the most interesting—a picture of "humanness" itself, in all its various aspects, that began to emerge. And, ultimately, *that* is the reality of our origin, where we've come from and where we continue to come from. *Seth Jordan*

At Home and Abroad

This fall and winter have been a busy time at the Institute with numerous talks and workshops. But this hasn't stopped Institute staff from an equally busy schedule on the road.

- In November **Craig Holdrege** went to Toronto, Canada, and presented at a conference on synthetic biology. (That presentation is available on our YouTube channel, as mentioned in the *New Videos* announcement.) Then, in February, Craig gave four talks to science educators at the "Phenomena to Insight Conference" in Santa Rosa, California. In March, he taught at the Pfeiffer Center in Spring Valley, NY. Later that same month, Craig traveled to Long Island, NY, where he spoke on the sloth to the whole Garden City Waldorf High School and worked with the faculty there. Also on Long Island, he gave the keynote talk at a conference on "Caring for the Earth" organized by the Winkler Center for Adult Education.
- In November **Bruno Follador** spoke at the "Soil and Nutrition Conference" in Southbridge, MA. Then in December he traveled to Brazil and spoke at the University of São Paulo. Bruno spent early March in England: he gave a workshop at the Field Center-Ruskin Mill Land Trust, and spoke numerous times at Emerson College, where he worked with the post-graduate students of the Crossfields Institute.

- Besides working intensively with math teachers at The Nature Institute's annual "Mathematics Alive!" workshop, **Henrike Holdrege** also gave a talk on Cassini Curves in November at a conference in Ann Arbor, Michigan, and spoke about astronomy and about light at nearby Camphill Ghent.

Still ahead

- Bruno will be giving an **Earth Day talk** at the Institute on April 19, entitled "If Only the Earth Could Speak: Reflections on the Language of Nature and the Human Word."
- In July, we will be joined by twenty-three people for the first session of our new, year-long foundation course in experience-based science, "**Encountering Nature and the Nature of Things.**" We were surprised and heartened by the amount of enthusiastic interest in this new program.
- We will also be doing a week-long course in June called "**Let the Phenomena Speak!**" More information can be found on the back cover.

A Challenge Grant: *Helping the Work to Grow*

In our adult education programs and publications, we strive to foster a transformation of human consciousness that allows the wisdom of nature to speak more strongly in our perceptions, thoughts, feelings, and actions. We have learned much in our twenty years of activity and, with much still to be accomplished, we look forward to the next twenty!

To support this work, a Nature Institute friend has generously offered to donate up to \$5,000 as a matching gift. Every dollar you donate to The Nature Institute by June 30 will be matched, up to \$5,000. You can make a gift by check or credit card using the enclosed envelope, or by credit card through our website.

(<http://natureinstitute.org/friend>)

Thank You!



Math teachers working over a problem at the 2018 Mathematics Alive! workshop.



Observing fruit and vegetable morphology at the February 2018 Winter Course for farmers and gardeners.

Farewell to Bruno

Bruno Follador, the director of our Living Soils program, is moving back to his Brazilian homeland this June. During his nearly four years at The Nature Institute, Bruno has endeavored to foster not only a shift in agricultural practices, but also in human consciousness, exploring what is for him a central question: How does our way of seeing, speaking, and thinking contribute to the creation of our agricultural reality, for better or for worse?

During his time with us, this question has shaped his work. Bruno has traveled throughout Europe and the Americas giving workshops, courses, lectures, and farm consultations. He has written a number of articles for *In Context*, as well as for magazines and journals in the US, Canada, England, Australia, and Germany. In 2015, he was recognized by the organization Food Tank as one of the top twenty innovators protecting the planet. Clearly, his approach to agriculture has aroused enthusiasm wherever he has traveled.



Bruno returns to Brazil together with his wife Bruna and their young son Manuel, where he plans to continue teaching, consulting, writing, and doing qualitative soil and compost research. We're very sad to see him go, but we also look forward to future work together. He will be an affiliate researcher of The Nature Institute, and we imagine our paths will cross often as Craig and Henrike continue to teach in Brazil, and Bruno continues to teach and consult in the USA.

Thank you for your great work, Bruno!