

CAN BIODIVERSITY BE A POLITICAL SCIENCE TEACHER?

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Exploring how education emplaced in local biodiversity can deepen values of equality, diversity and inclusivity among human beings

Specially written for Vikalp Sangam



Watching butterflies at Pichanur village. Picture Credit – Aswathi Asokan

A Black-hooded Oriole was hovering and nibbling a half-ripe papaya on a tree, at the center of a brinjal field, and feeding it to its fledgling sitting on a branch. After a while the adult bird flew away to a gooseberry tree nearby and watched the young one with a side glance, as if to see if it would begin feeding on its own.

At the end of October 22', four of us nature educators from Palluyir Trust were in the village of Pichanur, in Coimbatore, Tamil Nadu, for two full days of activities with the local children. The previous day we had gone birding (when we watched the behavior of the black hooded oriole closely), did a nature journaling exercise and played a few games in the afternoon. Around 50 children had come, some from Pichanur and adjacent villages, and others from a tribal settlement located a little outside the village. The fact that caste segregation ran deep in this landscape, even among children, was only slightly apparent to me as an outsider. But its back blatantly breached the water in how the children sat separately to eat lunch. And in how some children did not

budge, or come together, when I tried to get them into small groups, which then I left to the teacher to make.

Next day on children's popular request it was half-a-day of butterflies. In the morning we went on a long walk in the village outskirts, field guides and observation tables in hand searching for butterflies. We saw Common Banded Peacock butterflies (*Mayil Azhagi* in Tamil) mud-puddling on a heap of wet red soil. A Southern Birdwing (*Ponnazhagi*) patrolled over the coconut plantations bringing much excitement and yelling each time it passed overhead. Along the waysides between plantations and fallow lands Four-rings (*Nangu Valaiyan*) were plentiful with their slow flutter low over the verge grasses. We also saw the full life cycles of the Plain tiger (*Vendhaya Variyan*) and the Lime butterfly (*Elumicchai Azhagi*) on a Calotropis and a Lime plant respectively. At the end we sat on the banks of the Kumittipathi river to share our findings, observations and questions, and listen to each other. Some children had spotted over 25 species. Later in the day, Sandhya, one of their teachers shared with us rather movingly that somehow during the activity the children had gradually started interacting, and by midway they were freely talking to one another, helping each other find, identify and observe. This was something she said she struggles to bring about on a daily basis, given the socio-political setting of that place.

This occurrence left me thinking for several days after we returned to Chennai. What was in the nature of watching butterflies or birds or trees that was able to erase, if only for a few hours, such deep social segregation? Was it simply that while watching a butterfly together, caste was irrelevant? Or even more significantly, to pay attention, to wonder and to raise questions, one had to drop away social constructs, if not bring those constructs also into observation, and be on a humanely equal plane? Something or several things, about observing deeply and connecting to other beings, could connect human beings too.

I was presenting to teachers of Abacus Montessori school, a month later, possible ways of integrating climate literacy as a core aspect of school education. During the end-discussion, my colleague Kaveri, a teacher of humanities and political science, said something deeply intriguing. Her grade 9 children, she shared, who had been through the 'Farm, Environment and Society programme' (which I co-design with the teachers) since elementary school, were far more political, active discussants and self-thinking than other classes she had experienced. Somehow this seemed to transfer – from the nature-based learning pedagogy they experienced during the last three years in which most modules focused on observing biodiversity in Chennai – into other areas of life. She too independently echoed that "something about practicing the skills of observing keenly for oneself" extrapolated into their engagements and thinking around society and history too. Later in December, on the stage of the second Green Literature Festival at Bangalore, I heard Professor Mahesh Rangarajan, among India's eminent environmental historians, say – observing other species, with their diversity and different ecological needs living together, 'makes the human being sensitive to all kinds of otherness'.

What are the ways in which biodiversity is a political science teacher? People have been finding numerous transformative political ideas from other species. Alexis Pauline Gumbs finds profound teachings of resistance and ways of shattering capitalism from whales, dolphins and seals – in her

utterly brilliant book ‘Undrowned’ – black feminist lessons from marine mammals. Jean Paul Gagnon in his three part essay explores the question of Non-human democracy, and uses ‘interspecies-thinking’ to draw operative democratic lessons from bees, bonobos, termites and microbes deeply applicable in human society, as well as provoking ideas for what a multispecies democracy might seem like. In the book ‘Evolution’s Rainbow’ – Joan Roughgarden tells us ways in which other species from insects to fishes can teach us to live in a diverse society, especially a gender diverse one. That nature is profoundly queer. That binary, polarized nature is hard to come by.

But at a more simpler level for a child – how does and what kind of subtle political learnings happen through the regular practice of observing nature?

I realize, from experience and reviewing research, that the most simplest and formative political value direct engagement with the rest of nature is able to offer is an immersive exposure to ‘diversity’. Children meet and learn implicitly that there is never just one voice, one narrative, one story in the profoundly non-binary multi-species world. One need not even highlight this truth as an educator. ‘Difference yet coexistence’ is the lens through which the living world lets itself be seen. Other beings speak to us subliminally. They tell us plainly what theologian Catherine Keller articulates – “for difference itself is relation; we exist only in the relationality of our differences”. Observing biodiversity can shift us from the consumer/recipient location capitalist culture has cornered most human beings into. Direct observation makes us active foragers of deeper meanings and purposes – which by itself is politically countercurrent. Gregory Cajete, a Tewa elder and educator writes in his book ‘Look to the Mountain’ – “Observing how things happen in the natural world is the basis of some of the most ancient and spiritually profound teachings of Indigenous cultures. Nature is the first teacher and model of process. Learning how to see Nature enhances our capacity to see other things”.

My team-mates and bold young nature educators Nikkitha and Charlotte shared with me, when I discussed this question with them, how they and their friends have naturally developed a daily practice of looking – in the waysides, shrubs, grasses – especially for ‘what is not easily seen’. This they felt was the beginning of critical thinking, which transferred to other areas of their life, and interactions with people too. The perpetual effort to look for the invisible or the invisibilized. Surendhar Boobalan, a friend and fellow nature-educator in Pondicherry shared another aspect of equity which emerges when he takes his primary children for birding. That he no longer is able to notice the distinction of studious and unstudious, bright and dull children – which a confined classroom sometimes forces him into.

The political-pedagogical processes one follows as a nature educator is also vastly different from traditional classroom instruction – where power and spotlight is concentrated into one person – what I’ve begun calling a ‘pedagogy of control’. In a marshland or a park, if a frog or a heron decides to show/teach something else, and the learners’ energies flow in a different direction other than my own plan, I am always learning to leave space for it – for nature to directly be the teacher – aware of the fact that I am always both educator and learner in that setting as is everybody else. When the learning space is the real world, the educator has little choice but to drop control and evolve a ‘cooperative pedagogy’ – where power, knowledge and focus is beautifully, sometimes equally, distributed multi-people, multi-species. These multi-species

values are already present and practiced in several Adivasi cosmologies – the Idu Mishmi, the Santhal, the Jenu Kurubas and Kattunayakans, to name a few.



Blue buttons beached along Chennai's coast. Picture Credit – Yuvan Aves

Through Palluyir trust (*Palluyir* in Tamil means biodiversity/multispecies/all of life), and in collaboration with Pudiyaador (an organization which works to empower marginalized communities across Chennai through education) – we run the Youth Climate Internship – a programme for youth from three climate vulnerable communities – Urur-Olcott kuppam, Ramapuram, and Kakkan colony. Through the programme we make 10 field trips to deeply observe and understand the ecology and socio-political landscape of Chennai. We learn advocacy tools and the law, we study other species and habitats in our neighborhoods and the youth engage the people in their locality in walks and activities. This December, on a cold Sunday morning at Urur kuppam, we had a half-a-day module on ‘questioning’. In the morning we did a ‘curiosity map’, an exercise to actively strengthen our muscles of wonder and curiosity. All through that week, Blue buttons (coin-sized jellyfish-like creatures which float on the ocean’s surface) were washing ashore along the city’s coast – a phenomenon which happens two or three times a year, sometimes due to strong landward winds/seismic events, and at other times unexplainably. We pondered about the recent Blue button beaching, then asked questions about it – covering which, when, what, why, how, and who, and some questions beyond the purview of these words. We made sure we asked questions past what the mind could easily think of and across the threshold of comfort, consciously challenging our capacity to wonder. Then we headed out onto the beach to each make a curiosity map of our own. The winter sun was two fist-spans over the ocean and pleasantly warm. Some fisherboats were coming back, having cast crab-nets early in the morning. An Olive ridley sea turtle had washed ashore dead, with an impact injury on the right bottom of its shell, possibly from a trawler strike. Among the sixteen of us, we each chose one creature or

scene on the coast and exercised our curiosity. Drew and coloured, then made a map of questions, consciously pushing our wonder beyond its zone of comfort. Decorator worms, Tower shells, Crows, Ark shells, Ghost crabs, Goose barnacles, a sand star and the sea turtle helped us exercise our wonder. “How do barnacle shells form under the sea?” “How does a clam make the inside of its shell soft and the outside rough?” “How far can a turtle see inside water?”, “How does it help a tower snail to be shaped like a screw?”, “What happened to the creatures inside these empty shells?”, “Can turtles dream?”. To wonder, to question as a daily practice of living is a radical political act. They help change age-old, often obsolete, social constructs and myths holding in place structural inequalities and patterns of capitalist existence on the Earth. Wonder will keep alive constant reimagination – political, cultural, spiritual, which is perhaps the mark of a sapient species.

Hindi Translation Published in SANDARBH issue 151, March-April, 2024

Originally Published in Vikalpsangam 30 Jan 2023, in English.

<https://vikalpsangam.org/article/can-biodiversity-be-a-political-science-teacher/>

sSandarbhb is a bimonthly resource magazine published by Eklavya Fonudantion