

# listening to plants with modern biology

MAY 23, 2024



modern biology, aka tarun nayar, plugs into mushrooms and he wants us to listen. by sending a small electric current through mushrooms and plants (anything with a bioelectric pulse) he creates ambient soundscapes conducted by nature, inviting us to join him in paying attention to the life that is pulsing all around us.



TARUN NAYAR, AKA MODERN BIOLOGY (PHOTO BY JOHANNA ROBERTSON)

"this approach grew out of 'the secret life of plants', a seminal book from 1973. the first chapter focused on this guy called cleve backster, who was at the time the cia's top lie detector expert. he got to doing these crazy experiments with plants, where he basically was using lie detectors on plants to see if they could tell whether he was telling the truth or not. in a lie detector, you have this little sensor which basically allows your thumb to connect a circuit, and as you get nervous, as you lie, you get sweaty and the connectivity increases. so with the plants, all you're doing is placing the electrodes, with a tiny current running between them, and as that current jumps up and down due to natural bioelectric processes in the plant or the mushroom, that's when the notes go up and down."

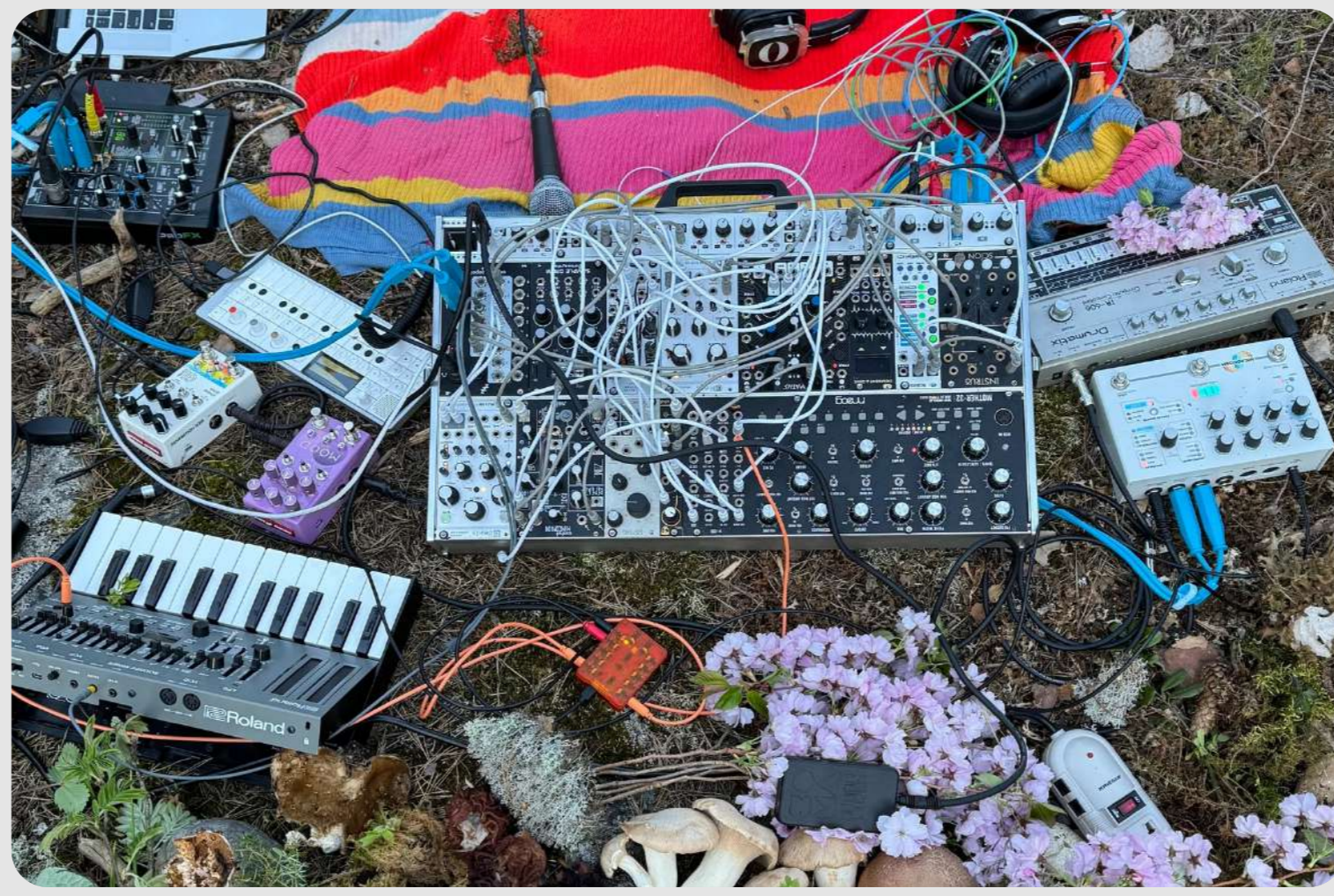
nayar uses a device which converts these impedance changes into control voltage and gate signals that can be used as a generative source on a modular synthesizer. he then riffs off this randomized composition, running the notes through his synthesizers of choice, often an OP-1, adding effects to create ambient soundscapes.



WATCH AND LISTEN TO MODERN BIOLOGY CREATE MUSHROOM MUSIC WITH OP-1.

"[the sensor device] is something that you can build for 25 bucks. i'm using a 'scion' at the moment, from a scottish synth company. i've been drawn to the way that these scottish guys have done it, i think it's the most elegant and musical interpretation, but you can build your own [sensor] with an arduino or a raspberry pi."

nayar is just one in a field of like minded artists who have turned their attention to the natural world as a source of direct inspiration – the seed of which is often attributed to the demanhur foundation with the release of the record "music of the plants" in the 1970s.



A MODERN BIOLOGY FIELD TRIP FEATURING OP-1 FIELD

growing up playing indian classical music, nayar focussed on the tabla (wooden hand drums), which he played in the band 'delhi 2 dublin', before adding synths to the lineup. "i'd always been fascinated with synthesizers because they were like the easiest way to create harmony and melody for somebody who didn't play a melodic instrument."

"i was up on this little island north of [my home in] vancouver for most of the pandemic, surrounded by nature with all of my synths. one of my friends brought over... a plant bioelectricity converter, and we plugged it into the modular synthesizer."

already far down the road of generative synthesis, nayar connected his first plant, a salmonberry bush, and understood that he "could use the natural world as the source for generative information"



MODERN BIOLOGY IN STOCKHOLM (PHOTO BY BETSEY GUSMAN @BETSEYPH)

since then, nayar has performed around the world in forests (what he calls "field trips"), and more conventional venues. he often begins by asking his audience to take in their surroundings and forage for a sound source.

when we join nayar on his field trip in stockholm, it's early spring so we are low on mushrooms, but flush with fresh foliage. he plugs into a cherry blossom, which he picked up in town earlier in the day, and it begins to pulse. what follows is a meditative experience that draws our attention to our bodies and the environment.

"i've chosen to do these events outside with silent disco style headphones,...there's something about the field trips itself with headphones, where you're outside in community, but you're sort of in your own zone, and it's really a prompt to connect with nature in a way that feels good for you."

"i think that there is this kind of ineffable magic that happens, and i think everyone's experience is quite personal."



MODERN BIOLOGY IN STOCKHOLM (PHOTO BY BETSEY GUSMAN @BETSEYPH)

"i do appreciate the movement that i've seen at the moment amongst synth makers and designers, making stuff more portable, because i think that really opens [things] up... just being out in nature gives rise to a whole other set of creative possibilities, and having people thinking about that when they're designing instruments is very helpful."

out on our field trip, a few kids get up to facilitate the electrical circuit by holding hands, before a "mushroom tickler" is called upon to activate some energy in a stone morel mushroom (poisonous but they eat them in finland). nearby, a man stands in the middle of a clearing and faces the sun, catching the day's last light.



explore OP-1 field



pocket operator modular 400