Prototypes for a Shifting Baseline

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Prototypes for a Shifting Baseline

Miriam Simun

The idea of "shifting baseline syndrome" emerged in the 1990s to describe the slipping definition of a "healthy" ecosystem. Daniel Pauly was the first among ecologists to describe the phenomenon. He observed that each generation of marine scientists tended to accept the biological stock size and species composition at the beginning of their career as the baseline for a healthy ecosystem, assuming inadequate data for previous periods. As subsequent generations of scientists used a diminished number of species to evaluate subsequent changes, a gradual shift of baseline perception in defining a "healthy" or "natural" ecosystem occurred.

This tendency only exacerbated as science adopted ever-more sophisticated modeling techniques that required ever-more detailed data. As our fellow species decline, our tools for finding and counting them improve.

How does one apply precise calculations to the sound of a sea full of turtles knocking so regularly against Columbus' ships that the sailors were kept awake all night? As we continue to rely more heavily on data and model-calculated evidence in order to understand ecological realities, how do we account for what came before the model, for baselines from the past?

The phrase "shifting baseline syndrome" uses terminology reminiscent of illness in order to describe our consistent accommodation to the creeping disappearance of species on earth. The chief symptom associated with this condition is our propensity to develop what ecologists call "inappropriate reference points" for evaluating losses and identifying targets for rehabilitation measures. In other words, if we aren't able to determine how it all "once was," how will we ever get back to it?

Shifting baseline syndrome throws a wrench in the works, making it difficult to return to the nostalgic "nature" we pine for. In truth, natural systems are always changing, and humans have been impacting ecosystems for millennia. The ability to pinpoint "natural" or "untouched" starting points for ecosystems is a romantic impossibility.

Yamamayaa Petting Ring
image courtesy of Miriam Simun

The *yamamayaa* ("the cat in the mountain"), also known as the Iriomote cat (Prionailurus bengalensis iriomotensis), is a subspecies of the leopard cat that lives exclusively on the Japanese island of Iriomotejima. There are fewer than 100 yamamayaas left on earth. Key threats include habitat degradation, increased tourism, and traffic accidents.

A discarded clump of Yamamayaa is transformed into a petting ring.

GhostFood
image courtesy of Miriam Simun and Miriam Songster

GhostFood serves simulated "taste experiences" of species threatened by climate change. Scents of threatened foods are delivered via the *Direct Olfactory Stimulation Device* (DOSD), paired with edible textural substitutes made from climate change-resilient foodstuffs. The scent–texture combination provides taste illusions of foods that may soon be no longer available to eat. *GhostFood* staff serve the public, guiding visitors through pre-nostalgic ephemeral experiences, and engaging dialogue.


STFOOD

And yet, the reality is documented and difficult: Species extinction continues to increase at alarming rates due to changing climates and human populations extending over every corner of our earth. Putting a numerical stake in the ground feels ever more necessary if we are to manage and slow down rates of extinction. Welcome to the Anthropocene, where humans are the dominant environmental force on earth. As one habitat ecologist told me, “We are god now, so we might as well get good at it.”

Even gods can forget across generations. How can we remember what is missing? And how do we engage with what is to come?

The *Prototypes for a Shifting Baseline* series seeks to secure ghostly traces of earthly species that may vanish during the Anthropocene. It captures what might soon be lost—not in terms of images, text or data points—but through sensory and embodied experience. These devices stage, in tangible fragments, versions of the human experience of threatened species. Through an array of sensory s(t)imulations that include smell, taste and touch, these devices appeal to our bodies in coping with, and responding to, this loss. Through tactile engagement we recall, reconnect and mourn; or perhaps we understand ourselves to be ready to forget, and move on, ever onwards.

Direct Olfactory Stimulation Device (DOSD)
image courtesy of Miriam Simun

The *Direct Olfactory Stimulation Device* (DOSD) adapts human physiology to enable the taste of unavailable species by creating flavor illusions through the use of scent. Inspired by insect physiology (insects use their antennae to smell and thus navigate their world) and long-standing human traditions of technological extension of the senses, the device integrates direct olfactory stimulation into the eating experience.