

From Freedom to Boxes: A Journey Unchecked

I came across a pinned exotic beetle I had never seen before—a Titan Beetle¹. Pinned insects often have a scientific label indicating where they were collected². This one did not. I could not determine where its home was. It left me with a growing suspicion that this beetle's journey had been unchecked, like many other insects that end up in the illegal trade. Insects remain the peripheral group in conservation efforts compared to charismatic megafauna. Even though authorities attempt to halt wildlife smuggling, it is insects like beetles that are still shown in collection exhibitions regardless of how they were obtained.

At the invitation of a friend, I attended an event called “Beetles: An Interspecies Gathering” in Brooklyn. I expected a gathering where scientists and hobbyists discuss insects, conservation efforts, and educating the next generation. It was the opposite. A beetle collector (who preferred to remain anonymous) proudly presented his collection, drawers without any accompanying scientific labels to provide insights into the distribution, habitat, and biodiversity—which I learned in class is fundamental to the field of entomology.

Over the years, this collector had accumulated thousands of beetles from all over the world but mentioned that they were becoming increasingly harder to find—the Titan Beetle—and I couldn't resist asking, “why?” He explained “there are fewer beetles in the wild, especially the colorful and larger species” due to weather and habitat changes. Additionally, “authorities are restricting collectors by making permits expensive and difficult to acquire” because of biodiversity, decreasing threats and banning collection of certain species³ “If you're interested” he said, “there are ways to obtain them”. “Would you like to buy any?”



Figure 1. Unlabeled exotic beetles showcased by the collector at the “Beetles: An Interspecies Gathering” in Brooklyn. The Titan Beetle on the bottom right.

I did not buy anything. Instead, I left puzzled by vast numbers of beetles with unknown origins. Sellers were clearly willing to cut corners and buyers from around the world are willing to pay hundreds, even thousands of dollars apiece for the rarest, flashiest insects to display in their collections or frame in their living rooms... but how much of a problem is the illegal invertebrate trade?

Each year, local poachers in Bolivia aim to make \$30 for each live Rhino beetle (*Dynastes satanas*) captured in the forests⁴. These live adults are illegally transported to major markets all over the world. Among other insects, beetles are predominantly used as toy pets and collectible ornaments. You might recall Heracross⁵—a bipedal, coleopteran insect robot collected in the Pokémon trading card game? This is, among several examples of how pop culture leads to mass interest in beautiful insects for collecting, ornamenting, displaying and artisan jewelry.

Beetles and other insects are purchased online on Etsy, eBay and InsectNet, a network for insect collectors. Most wanted specimens are from tropical regions of Indo-Asia, Southeastern Africa, and Northern South America and specific countries like Australia, Papua New Guinea, and Madagascar^{6,9}. The tropical climates, niche ecosystems and isolated habitats contain biodiversity hotspots that these marvelous critters call home.

Invertebrates, including insects, are smuggled into the United States, and are often detected. Just recently \$200,000 worth of smuggled insects, including butterflies, were caught by U.S Fish and Wildlife in Long Island^{7,8}. Insects are often overlooked in conservation efforts and removing rare species from their ecosystem niches further reduces the genetic diversity of that population. With single collectors hoarding thousands of specimens for personal use, and the trade remains unchecked, we could easily lose the precious insect biodiversity that keeps our ecosystems intact.

After having gazed so many unlabeled beetle drawers, I wondered if the guests at the event would feel disturbed by looking at taxidermized charismatic megafauna presented without labeling and a story. Audiences pay a lot of money to go visit Museums and view scientifically labeled megafauna exhibitions, otherwise those exhibitions could be shut down. Loss of genetic diversity and species is the same whether it be elephants, tigers or small beetles or butterflies. We are the audience. We have a say in the matter.

By uniting in our effort to increase awareness around insect handling, labeling and conservation, we can send a powerful message that insect smuggling is unacceptable. Let's be the voice for those who cannot communicate for themselves—at least in human tongue—and work towards a future where our ecosystems thrive, so the beauty of diverse insect life continues to inspire generations to come. Act now, boycott events where “unchecked” insects are displayed and report smuggling no matter how small it is. Let's create a world where insects can flourish without the shadow of extinction and those that have already been collected, to be labeled properly with an origin and a story.

References

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