

For San Francisco Bone Collector, Skulls Are a Lifelong Love Affair

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By Lauren Sommer



Ray Bandar's collection of almost 2,000 California sea lion skulls is the largest in the world. (Lauren Sommer/KQED)

There are hobbies and then there are lifelong passions. Ray Bandar's passion is finding and cleaning skulls.

For six decades, Bandar has been making a quiet contribution to science, harvesting the bones of dead animals on the California coast and amassing an impressive collection of skulls. On Friday the California Academy of Sciences in San Francisco is opening a new exhibit of skulls that features his work.

Bandar keeps his own collection in the basement of his San Francisco home. The "bone palace," as he calls it, holds close to 7,000 skulls and skeletons, stacked floor to ceiling. He organizes the shelves by species, including seals, sea lions, leopards, cheetahs, horses, zebras, giraffes and dolphins.

"This is largest animal that lives and breeds in California," Bandar says, holding up an elephant seal skull. "That's an adult female."

Bandar is a spritely 86-year-old with an encyclopedic knowledge of the bones. "Sixty years at Ocean Beach, I've been decapitating dead marine mammals," he says.



Ray 'Bones' Bandar has spent six decades finding dead animals and preparing their bones. (Lauren Sommer/KQED)

For most of his life, Bandar searched local beaches for dead sea lions and seals and removed the heads. As a volunteer with the California Academy of Sciences, he worked under its scientific collection permit from the state. The more exotic animals in his collection came from local zoos after the animals died.

Cleaning skulls is not for the faint of heart. "I remove as much flesh as possible," he says. "Put them in bucket of water. Put them in a warm spot and leave it to sit there for weeks and the bacterial action removes all the organic material."

Bandar's fascination with the natural world began as a kid growing up in San Francisco, when he collected snakes and frogs in Golden Gate Park and donated them to the Steinhart Aquarium.

He collected his first skull in his twenties, dragging the head of a harbor seal back to his parents' house — on public transportation. He says he wondered to himself how he could get the meat off. "So I put it in a big pot. Said, 'Well, I guess I'll boil it.' And boy did it stink up the house. When my parents came home, they weren't too happy about that."



There are almost 7,000 skulls and skeletons in Bandar's San Francisco basement. (Lauren Sommer/KQED)

Over the years, Bandar attracted crowds of beachgoers as he harvested skulls. Occasionally, he attracted suspicion, like the time in Half Moon Bay when he was working on a 14-foot elephant seal carcass in front of the Ritz-Carlton.

"I'm sitting on his neck, cutting away, trying to sever the skull from the torso," he recalls. "And I turn around and standing on the beach is three cops."

The policemen eyed Bandar's ratty field jacket, covered in rotting flesh. They'd gotten a number of phone calls, Bandar says. "More than one call is, 'There's this homeless guy. He's trying to eat this dead elephant seal.'"

Bandar's wife of 60 years doesn't mind his hobby. The two of them met in art school. On their honeymoon to New York City, they fell in love with the bone displays at the American Museum of Natural History.

Vertebrae hang next to his wife's paintings in their living room. "To me," Bandar says, "they're beautiful pieces of sculpture."



Bandar would often attract crowds of beachgoers as he worked, as well as, occasionally, the police. (Lauren Sommer/KQED)

Bandar went on to teach biology for 32 years at Fremont High School in East Oakland, where dissection was a big part of the curriculum. "Even in medical school, the students do not get what they got in my classroom," he says. "I still hear from my students."

Bandar retired from collecting specimens last summer. The skulls in his basement will eventually go to the California Academy of Sciences, where his work will comprise one-fifth of the museum's ornithology and mammalogy collection.

Cal Academy's collection of skulls teaches the public, including thousands of school children who come to the museum each year, about wildlife and the natural world. One of the Academy's collectors is curatorial assistant Sue Pemberton.

Inside the specimen preparation room, Pemberton describes the work she has in progress. "You'll see over on the left here I have a young elephant seal skull," she says.

The skull is crawling with dermestid beetles, which specialize in eating dead flesh. Pemberton uses them to clean skulls for the collection. She also uses large buckets of water, the same method Bandar employs.

Pemberton pulls a harbor seal skull out of a bucket, and a putrid odor fills the air. "Smells like the worst outhouse you can ever be in," she says. "But that's how it works. Everything kind of breaks down."



Dermestid beetles clean the flesh off a young elephant seal skull at the California Academy of Sciences. (Lauren Sommer/KQED)

The skulls also help scientists learn how marine mammals are doing off the California coast. The bones reveal if the animals were sick and what they ate.

She pulls out a southern sea otter skull to illustrate. "Here you can see what color the teeth are. Bright purple, like the-color-of-grape-juice purple."

The otter stained its teeth eating purple sea urchins. Other sea otters have completely different diets, which they learn from their mothers.

Pemberton heads out to the beach whenever a report comes in of a dead animal; she's part of the [Marine Mammal Stranding Network](#), a group of wildlife centers and museums that responds to reports. Her whale kit is ready to go on the table: a dozen steak knives and an ax.



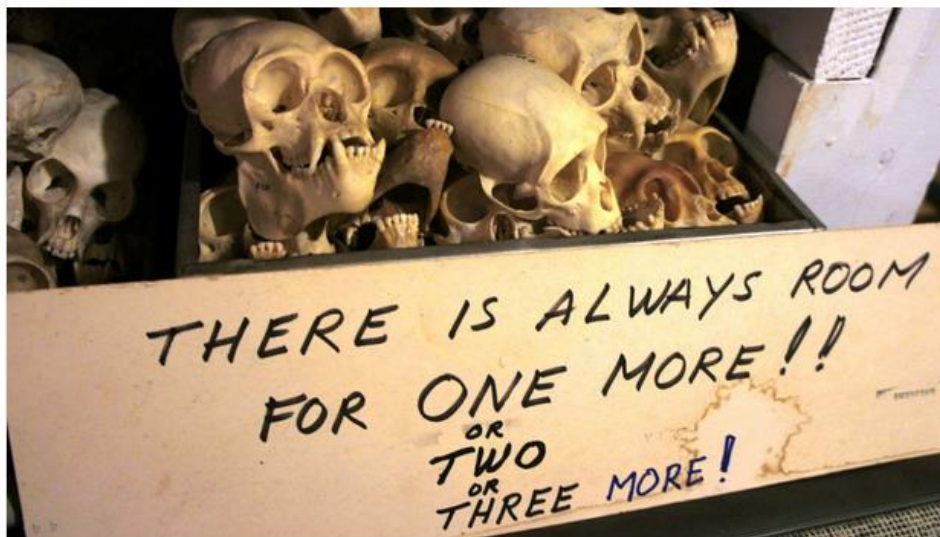
A southern sea otter skull with purple teeth, stained from the sea urchins that made up its diet. (Lauren Sommer/KQED)

"Sometimes there's a blubber layer that's two feet thick," she says. "So you're having to get through that to get to what you think might be the cause of death."

Pemberton and others have documented cases where ship strikes killed whales off the coast. The data actually helped change policy. Last year, federal officials put in new speed limits for cargo ships coming into San Francisco Bay.

"It's what you think about when you're elbow-deep in rotted, dead whales," she says. "And it's not pleasant by any stretch. But to know that it's actually helping with the conservation and protection of all the whales that come after that, it makes all really worthwhile."

Cal Academy's exhibit of skulls, featuring Ray Bandar's work, opens to the public on May 16.



A box of monkey skulls in Bandar's collection, with room for more. (Lauren Sommer/KQED)

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