

Count every living thing

By **Jon Carroll** Published 4:00 am, Tuesday, October 2, 2001

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THE CORRIDOR IS cool and the air is heavy. On either side are floor-to-ceiling metal racks holding jars of all sizes. Inside the jars, packed in formaldehyde, are fish curled into grotesque positions, their eyes bulging unnaturally against the thick glass.

John McCosker, lean and bright-eyed, picks one up. "This is a sweetlips. Cute little guy, huh?" He shakes it slightly; the pickled fish circles lazily in the thick fluid. "He's *Plectorhinchus chaetodonoides*, the harlequin sweetlips. Over here" -- he points to a shelf labeled "Group 181 Unidentified" -- "we have all the sweetlips we haven't identified yet. There's probably a new species. You could name it. *Plectorhinchus carrolli*."

We are in the basement of the **California Academy of Sciences** in Golden Gate Park. McCosker, an ichthyologist by training, and a media-friendly shark expert by accident, knows this room well -- some of the bottles contain fish he has collected and named.

He gestures down the row of jars. "This is one section of one museum containing one kind of vertebrate. All over the world, there are museums, and in every one there are thousands of unidentified species. And with the vertebrates, we're probably doing pretty well.

"No one knows the total number of species living on Earth, and no one can say how many are destroyed each day, no matter what numbers you hear. My guess is there might be 30 million species of living things, plants and animals, on Earth today -- or 100 million if you want to count the bacteria and the viruses. We know maybe 10 percent of them. The vast majority of critters that we share the planet with are unknown and unnamed. That should change."

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Why is it important to name them all?

He taps his finger on the gray metal shelf. "As **Aldo Leopold** said, the first rule of intelligent tinkering is to save all the pieces."

THE IDEA FOR the All-Species Project started a year ago with **Kevin Kelly**, an editor with little formal training in biology. He had always believed in what he called "all" projects. The canonical "all" endeavor is the Human Genome Project, but there are others -- the proposed 3-D map of the universe, for instance. It could be argued that the periodic table of the elements was the first all project.

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Kelly's idea was simple: Why not inventory all life on Earth? "This does several things," he said later. "It spreads the money all

over the globe into corners where money rarely gets to, it spreads the good of discovery all over the globe, and it creates the beginnings of a new biology because for the first time we would know all the parts of the biosphere."

Then as now, Kelly was working with Stewart Brand and others in the Presidio offices of the **Long Now Foundation**, which is creating a 10,000-year clock in the desert of eastern Nevada. Might this be a project that Long Now would be interested in?

KELLY WENT TO work persuading others. A plan began to emerge. Brand and Kelly and **Ryan Phelan**, the Internet entrepreneur and medical database specialist who is married to Brand, came up with some numbers: a 25-year time line; a total endowment of \$1 billion.

There was nothing exactly like the All-Species Project, but there were many things sort of like it. The All-Species Project would offer support and coordination and, using the considerable engineering brainpower that floats in the Long Now orbit, new tools for the old task.

Said Kelly: "I emphasized why knowing 'all' is vastly different than just knowing 'most,' and I suggested how we could really do 'all' by inventing new tools." For his part, Brand realized that "all" was a useful funding device. "You can't sell 'most,' but you sure can sell 'all.' "

And so it was born, the soon-to-be-nonprofit All Species Inventory or, latterly, just ALL. Tomorrow: old ways, new tools.

Give me a billion dollars and 25 years, and I can find a lot of beetles.

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