

RETROSPECTIVE

Thomas E. Lovejoy (1941–2021)

Biodiversity pioneer and expert on the Amazon rainforest

By William F. Laurance

Thomas E. Lovejoy, one of the world's most storied conservation biologists, died on 25 December 2021 at the age of 80. Lovejoy was a renowned expert on biodiversity, tropical forests, and climate change who devoted much of his career to working in the Amazon, the world's largest rainforest. Our natural world, and those who study and protect it, will be poorer for his loss.

Lovejoy was born in New York City in 1941, the only child in a prominent, politically connected family. An avid reader and lover of the outdoors, he attended Millbrook School, a private boarding school in upstate New York, largely because it had a zoo whose wildlife piqued his interest. Later, he enrolled at Yale University, earning his bachelor's degree in biology in 1964 while working as a zoological assistant at the Yale Peabody Museum of Natural History. He then spent a gap year exploring the Nile River region of Nubia in East Africa before commencing a PhD at Yale on the ecology of Amazon forest birds, which he completed in 1969.

After finishing his doctorate, Lovejoy moved to the Washington, DC, area, where he quickly emerged as a new breed of scientist—a “biopolitician” who was just as comfortable rubbing shoulders with leading politicians, celebrities, and billionaires as he was exploring ecosystems as a muddy-kneed field biologist. In a career spanning half a century, Lovejoy held high-level positions with organizations such as the World Wildlife Fund, the Smithsonian Institution, and the United Nations Foundation, among others. He also served as an environmental adviser to Presidents Reagan, Bush Sr., and Clinton and as chief biodiversity adviser to the World Bank, where he helped to strengthen environmental safeguards for World Bank-funded projects.

Lovejoy was in every sense an international scientific leader. He made key contributions to President Carter's *Global 2000 Report* that in 1980 raised urgent concerns about biodiversity loss, population growth, and other environmental threats. He devised

the first debt-for-nature swap (in which a cash-strapped country exchanges part of its foreign debt for a pledge to undertake environmental protection), an innovative financial tool that so far has leveraged more than \$1 billion for nature conservation in at least three dozen nations. He popularized—or, according to some, coined—the iconic modern term “biodiversity.” Perhaps most notably, over the course of his dynamic career, Lovejoy served on scores of boards and advisory panels for scientific, academic, environmental, and philanthropic organizations. This gave him remarkable influence as well as personal



connections to a long string of global movers and shakers.

Of all of Lovejoy's accomplishments, the nearest and dearest to his heart was probably the Biological Dynamics of Forest Fragments Project (BDFFP) in central Amazonia. In concert with Brazilian colleagues, Lovejoy founded the BDFFP in 1979 to study how habitat fragmentation affects Amazonian birds, bats, trees, vines, insects, and other elements of rainforest biodiversity. Today it is one of the world's largest and longest-running ecological experiments, spanning some 1000 km². Along the way, the project has been a scientific and educational windfall, producing nearly 800 technical publications, 180 student theses, and advanced training for more than 700 environmental professionals from across Latin America. The BDFFP's sprawling study area also plays a key role in limiting deforestation associated with rapid road expansion in central Amazonia.

Lovejoy and I got to know each other in

1996 when I was hired as a lead researcher at the BDFFP. At that time, a portion of the project's annual funding came from the Smithsonian Tropical Research Institute in Panama, and Lovejoy occasionally butted heads with the institute's directors, who wanted him to share access to the many wealthy donors and philanthropists that had funded his work over the years. Lovejoy invariably refused, and the resulting clashes could be memorable. These were the only times I ever saw the normally buttoned-down Lovejoy lose his temper.

As a colleague, Lovejoy was charming, politically astute, and brilliant. He was also a natty dresser (after his passing, Lovejoy's daughters discovered that he owned 362 bow ties). Among many personal honors, Lovejoy received the Tyler Prize for Environmental Achievement in 2001, the BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology (which he and I shared equally) in 2008, and the Blue Planet Prize in 2012. Last year, he was elected to the US National Academy of Sciences in recognition of his seminal contributions to the study of tropical ecosystems and his vital work with Brazilian researcher Carlos Nobre on Amazon tipping points.

Of all of Lovejoy's myriad accomplishments, I believe the BDFFP will be the most enduring and valuable. Over the past four decades, Lovejoy used the project as a living laboratory to introduce innumerable politicians, entertainers, and wealthy patrons to the Amazon rainforest. Prominent visitors such as Al Gore, Tom Cruise, and Walter Cronkite ended their tour of the study area with a stay at Camp 41, the project's best-known field camp, where they enjoyed a captivating evening with a caipirinha (a potent Brazilian cocktail) in one hand and a plate of tambaqui (delectable Amazonian fish) in the other. It was a transformative experience for many visitors, who slept in hammocks under a pristine night sky untarnished by the glare of civilization. On waking, some were lucky enough to discover softball-sized footprints where a curious jaguar had recently stalked through the camp.

Will Lovejoy's singular research project survive without him? In 2018, he helped to establish the Amazon Biodiversity Center, a nongovernmental group in the United States devoted to funding the BDFFP. The Smithsonian Institution will also provide some continuing support. Such monies are uncertain, however, without Lovejoy to lead the fundraising. In my view, the most important way we can honor Tom Lovejoy is to ensure the long-term survival of his extraordinary legacy in the Amazon. ■

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