

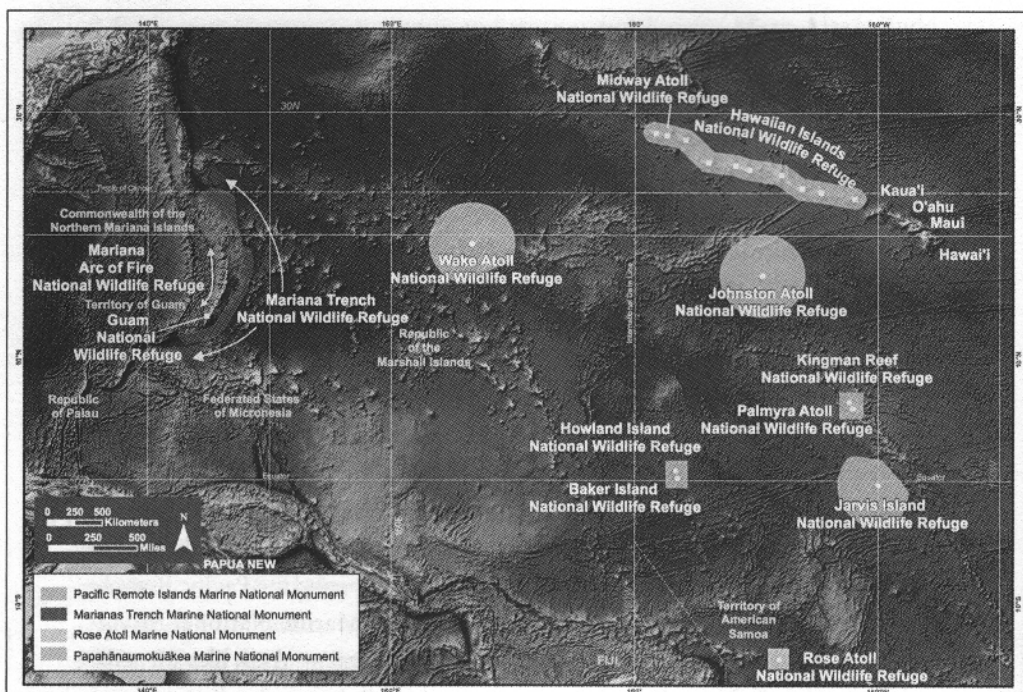


## INTRODUCTION

THE SWAN SONG of the George W. Bush administration was an environmental act so audacious that with the stroke of a pen Bush became one of the “greenest” presidents, right up there with Teddy Roosevelt in protecting federal land (and water) from development. On January 6, 2009, two weeks before he was to leave office, Bush created three marine national monuments: the Pacific Remote Islands Marine National Monument, the Rose Atoll Marine National Monument, and the Mariana Trench Marine National Monument. And, like TR, GW used the 1906 Antiquities Act, protecting approximately 195,000 square miles of some of the planet’s richest coral reef real estate. Then, on September 26, 2014, President Barack Obama extended the protected areas in the Pacific Remote Islands Marine National Monument to include the full Exclusive Economic Zones, out to two hundred miles for several islands. The geometry of the area in the surrounding circles added about six fold to the monument’s size, including over 485,000 square miles of ocean area—three times larger than the state of California. This is the largest marine protected area on the planet, spanning the Central Pacific Ocean between the Tropics of Cancer and Capricorn, on both sides of the international date line and the equator.

Few people have ever heard of the flyspecks of land enveloped by the marine monuments. Who knows about Howland Island, the “ratoll” where Amelia Earhart was headed; or Baker Island, where germ warfare testing took place; or Jarvis Island, the “catoll” on the equator? Perhaps better known are the military bases of Wake Island and Johnston Atoll, and the Palmyra Atoll yacht harbor. But Uncle Sam had been sailing out here for centuries, going about his business in these forbidden seas and desolate isles of Oceania, far enough away to be out of sight, out of mind, where anything goes, and often did, only to be quickly forgotten. Combining these concepts is the idea for titling this book *Isles of Amnesia*.

Each island has a hidden history, a secret story to tell, and an ecological lesson to teach. The commingled histories of people in the Pacific, and their commensal



I.1. Marine National Monuments in the Pacific

animals that “share our table” reveal a truth about our conquest and colonization. Although these islands have a shared lineage of ancient Polynesian or Micronesian discovery, many were claimed by Yankee whalers who named some such as New Nantucket, New York, Washington, and American Islands. Benjamin Franklin himself wished to “convey the conveniences of life, as fowls, hogs, goats, cattle, corn, iron, & c., to those remote regions which are destitute of them, by personally delivering thus items to the South Seas.”<sup>1</sup> Whalers and guano collectors visited in the early and mid-nineteenth century, with the military and government scientists following in their wake. Especially notable was the US South Seas Exploring Expedition of 1838–1841, the oceanic equivalent of the Lewis and Clark expedition, which properly charted many of the ship-eating reefs and desert islands and whose collections of artifacts and specimens became the foundation of the Smithsonian Institution. With the islands now charted, a great rush of Pacific exploration in the late nineteenth century pushed the American frontier to the rims of the Pacific basin as we “manifested our destiny.” In 1859, the German geographer E. Behm coined a term for this region—Das Ameri-

kanische Polynisien, or American Polynesia—to describe a discrete geographic region that was under the influence of the United States. But the area of American ownership is more accurately referred to as Insular Pacific America because the vast region spans from Hawai'i to Samoa to Guam, and their neighbors—small, obscure tropical islands that are hundreds, if not thousands, of nautical miles from each other.

The coral reefs of Jarvis Island, Palmyra Atoll, Kingman Reef, Howland and Baker Islands, Johnston Atoll, and Wake Island are all included as the Pacific Remote Islands National Marine Monument and National Wildlife Refuges. American Samoa is the southernmost US property and includes the protected areas of the National Marine Sanctuary of American Samoa, Rose Atoll National Marine Monument, and the National Park of American Samoa. In the westernmost Pacific, Guam and the Commonwealth of the Northern Mariana Islands contain the Mariana Trench Marine Monument, the Pacific National Historical Park (on Guam) and the American Memorial Park (on Saipan), the Guam National Wildlife Refuge, and the Mariana Arc of Fire National Wildlife Refuge. While the latter are Micronesian in geography, politically they are all protected and managed by similar federal mandates.

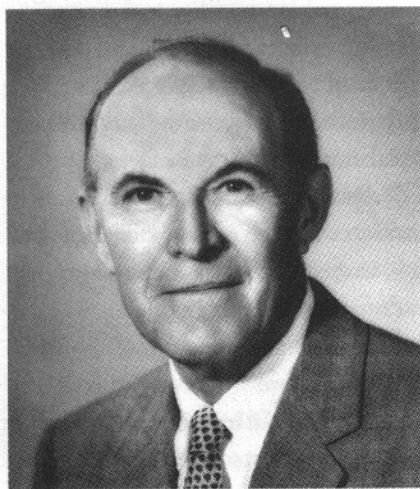
Because the United States has some of the strongest environmental regulations in the world, various governmental agencies can protect the islands, along with the titanic ocean ecosystems of some of the last undisturbed coral reefs in the world. Ranging from military bases to national landmarks, each has some level of protection from exploitation. Our oceanic empire extends American sovereign rights two hundred miles around each island as part of the US Exclusive Economic Zone, to include the hundreds of thousands of square miles that represent the largest protected marine area on the planet, thanks to the Bush and Obama administrations. With overfishing, coral reef decline, ocean acidification, and rising sea levels due to global warming, our civilization owes the region some care and concern after what it has given to the good old United States of America.

The early conquests and discoveries in the red, white, and blue Pacific, aka America's Lake, were largely forgotten until the US government began an immense undertaking during the early years of the second Roosevelt administration. In 1940, the Works Project Administration (WPA) initiated a project to ascertain the discovery dates of, or early American visits to, islands in the Central Pacific Ocean. The WPA hired unemployed librarians to examine old ship logs and newspaper accounts from records lodged in the National Archives and historical societies and libraries in Massachusetts. A total of 316,774 newspaper issues and 1,617 logbooks were read during this project; the reports were published in 1942, creating a seven-volume set.<sup>2</sup>

Also in 1942, Edwin Horace Bryan Jr. published *American Polynesia and the Hawaiian Chain*. He was one of the first biologists to visit and write about these islands for a modern audience. At the time of his publication, World War II was being waged across the Pacific, touching down on many of these islands, so long forgotten but now in the news. Bryan's island accounts derived from historic expeditions and those he participated in during the 1920s and 1930s while he worked as an entomologist at Honolulu's Bishop Museum. The accounts were edited to avoid aiding the enemy, but he kept alive the memories from an obscure part of American history.

I met Ed Bryan in 1982 after my first visit to American Polynesia. He was eighty-five years old and still running the Pacific Scientific Information Center in the Bishop Museum, tracking all the news about Oceania. His office was a congested cubbyhole, jammed with books, newspapers, scientific journals, and loose-leaf binders filled with clippings, all stacked upon each other, covering the available space. Bryan archived ephemerae by gluing newspaper clippings to cardboard backings, noting the source and any pertinent data. He managed to keep track of most of the developments in Oceania until he died in 1985. When the collecting ceased, his office was closed and his archive was boxed, double-bagged in plastic, and sent to the basement of the chronically underfunded museum.

I followed in Bryan's footsteps from Philadelphia, where we were both born, to far-flung atolls and islands. I exhumed his dusty boxes of arcane news items



I.2. Edwin H. Bryan Jr.

and historical trivia of the remote Pacific. I read the forgotten names and saw the faces of the mariners, merchants, missionaries, and madmen who sailed into the void and discovered uninhabited islands and treacherous reefs, where so many forms of life, including human lives, would be lost. I followed the course of American destiny, from Yankee whalers and guano miners to early aviators and the global cataclysm of war, culminating in the explosion of the atom bomb. Along the way, I had the privilege of updating some of Bryan's stories, and

uncovering some of my own, all the while participating in the development of island restoration as a scientific field.

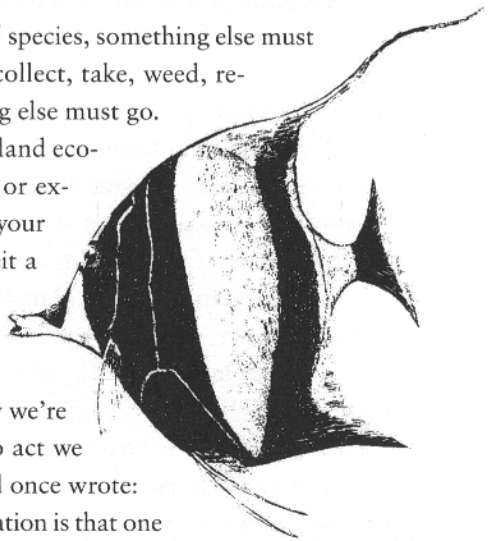
I've chosen to save seabirds on tropical islands under US jurisdiction. Nice work if you can get it. As a specialist in predator control for over three decades, I have trapped cats and poisoned rats, cut trees, pulled weeds, killed ants, and counted seabirds on these dollops of land surrounded by unfathomable marine monuments. Crawling off and onto government airplanes and ships, I've cruised over the briny deep with support from the US military, the US Fish and Wildlife Service, the National Park Service, and the National Oceanic and Atmospheric Administration. Along the way, I've met other "island rats" like myself, bureaucrats from every government agency that one can imagine. Most keep to themselves—whatever duty they are on is secret. Fine by me, I'd rather not reveal I'm an exterminator.

As a federal biologist attempting to make the islands a better place, I've learned the sorry history of introduced species, whose impacts since first contact have accelerated. I've seen a wide array of ecological disasters brought on by the accidental or purposeful release of animals and plants taken from every corner of the globe and let loose on islands. This "biological pollution" is unraveling the fabric of life on islands and "dumbing down" the complexity of environments by wiping out entire populations of native species, and the collective ravages are helping to create a wave of extinction potentially greater in rate and magnitude than any known from the antediluvian past. Island species and indeed entire ecosystems are swept away forever, and we are left trying to save what we can of the original diversity.<sup>3</sup>

In order to stanch the bleeding away of species, something else must die. Euphemisms abound: control, cull, collect, take, weed, remove, restore; but to act means something else must go.

Removing invasive species to restore an island ecosystem requires eradication, extirpation, or extermination; pick your term, and pick your poison. Some say we're playing God, albeit a lesser, non-omnipotent god, for having the chutzpah to predict how an ecosystem will respond to an eradication, even one as simple as a desert island. Others say we're having a similar effect if we fail to act. So act we must. As the great ecologist Aldo Leopold once wrote:

"One of the penalties of an ecological education is that one lives alone in a world of wounds. . . . An ecologist must either harden his shell and make believe that the consequences of science are none of



his business, or he must be the doctor who sees the marks of death in a community that believes itself well and does not want to be told otherwise.”<sup>4</sup>

Rather like surgeons, eradication practitioners must act with their own version of the Hippocratic oath—“do the patient no harm”—but in this case, it is better stated as “do as little harm as possible,” for the patient is an island and the outcome is unpredictable. Indeed, our work often produces unintended consequences, each one pointing to an ecological function not fully understood or an eradication technique not gotten quite right, but offering an opportunity for adaptive management and experimental research. We are aware and responsible for the implications of our work, willing to be responsible for not only the organisms and ecosystem but also for the spirit of the land, recognizing the duality of life and death in a healthy, humane manner, honoring our relationship to nature of which we are intrinsically part.

We are obliged to confront the difficult, emotional challenges of killing—a primal fact of life in our own human nature capable of violence. This is something we struggle with as ecological artisans. We take life, collecting samples and specimens, managing wildlife, culling competitors, weeding Eden. The one thing I’ve learned from eradications is that even if it feels right, it never feels good. No blood lust is sated, no delight taken, no killer instinct honed; instead, there’s a sorry sadness at the heart of it, that humans caused the need for eradication in the first place. Here then is the confession of an “island rat,” using lethal force to correct ecological problems in paradise.