

## In Memoriam Betsy Harrison Gagne (1947–2020)

### Celebrating a True Force of Nature: Betsy Harrison Gagne's Gifts to Hawaii and its Native Ecosystems

Betsy Harrison Gagne passed away in March 2020 after a long battle with cancer. Betsy spent most of her life in Hawaii where she had a distinguished career in conservation biology.

Betsy and her family made a big difference for the little things that run our island world. They had a long history with conservation; in 1970, her mother Elizabeth

'Ibby' Harrison was secretary under Conservation Council for Hawaii President Lorin Gill, and together they blew the whistle on illegal logging of Koa trees in Hamakua at mauka Laupahoehoe.

Betsy graduated from the University of Hawaii at Manoa. She gained extensive experience in Hawaii's natural environment, which contributed to her astounding breadth of knowledge about Hawaii's biota. According to her close friends, Betsy inherited her mother's plucky disposition. A botany major and lover of plants, she was hired by the Hana Rain Forest Project in 1973 to help with establishing a remote research camp in Waihoi Valley, Maui. Betsy had the knowledge and abilities to guide researchers deep into Maui's cloud forests (the relictual home of birds yet-unknown to Western science, and of flightless painiu bugs), and they marveled at her ability to pitch tents in rainstorms. Her skills certainly impressed Wayne C.



Gagne, a world-wise Canadian citizen from Brownsburg, Quebec, sent from University of California Berkeley to the Bishop Museum, on a mission to sort and name scores of true bugs peculiarly fond of certain splendid endemic trees: olapa, oheohe, ohe makai, and kawau.

These first impressions and their overlapping interests led Betsy and Wayne to

embark on further explorations together (including in remote Upper Hana, where Betsy reported seeing mysterious birds with black faces, sightings of what Mary Kawena Pukui would later name poouli) and, before long, romance bloomed. They quickly cemented an engagement in the volcanic crucible of Kalaupapa's Kauhako Crater (close above the clinic where her Grandpa W. P. Fennel, M.D., once worked).

Mother Ibby was elated that her inflexible daughter had paired with a most unflappable mate. At the wedding, their dear friend Steve Montgomery was asked to read from *The Lorax* by Dr. Seuss. In the story, the Lorax "speaks for the trees" and confronts the *Once-ler*, whose profitable logging of endlessly useful truffula trees wreaks environmental destruction, warning: "Unless someone like you cares a whole awful lot, nothing is going to get better. It's not." It was Betsy's—and Dr.

Seuss'—favorite book. Together, Betsy and Wayne soon turned the Manoa residence of three Harrison generations into a '70s hub of young naturalists sharing tales and Kodachrome images fresh from forest frontiers. The house also served as their home base for conservation missions and field research ranging across the Pacific.

From April 1976 to December 1979, Betsy served with Wayne at the Wau Ecology Institute in Wau (WEI), Papua New Guinea (PNG) with support from the International Voluntary Service. Wayne was an entomologist and Betsy a botanist, and together they made significant contributions to biological science. They focused on the development of a conservation education program at WEI and also initiated its Composted Contour-mound Agro-Silviculture Project, which involved the development of a site-stable agricultural system to reduce the loss of primary forest due to traditional slash and burn practices. They built a demonstration garden and agroforestry project, their success leading to additional support from the United Nations University, and to the program's eventual operation by the provincial government. Betsy also spent part of her first year in PNG teaching at the Bulolo Forestry College.

Both assisted scientists visiting Wau Ecology Institute conducting biodiversity surveys in the highlands. Betsy joined several field expeditions, including to high peaks to study the alpine flora from June to August 1976, led by Museum botanist Pieter van Royen. In 1980 she produced an impressive poster on the major plant groups of alpine New Guinea for the PNG Department of Environment and Conservation. In addition, Betsy functioned as the WEI's research liaison officer, hosting a number of visiting researchers and organizing local logistics. She also had a keen eye for cultural items with ethnological importance and assembled an important

collection, which is housed in the Bishop Museum.

While her work took her around the Pacific, from PNG to Tahiti to Fatu Hiva, Hawaii was always in Betsy's heart. After returning to Hawaii, Betsy joined the Resources Management field crew that was fencing Haleakala National Park to protect vulnerable habitats from goats and other grazing mammals, and also served as an educational interpreter for the Friends of Haleakala. Wayne joined the staff at the Bernice P. Bishop Museum in Honolulu as an entomologist and environmental education specialist.

Betsy was the first biologist to see *Miconia calvescens* in Hana in 1991. Knowing the devastation that the plant inflicted on Tahiti after it escaped an American's estate, Betsy and Steven Montgomery mounted a seven-year campaign to get this "green cancer" onto Hawaii's Noxious Weed list, prohibiting its sale and further melastome importations. When Betsy told Lloyd Loope of the presence of these hyper-invasive plants, a Melastome Action Committee was formed so organizations could work together to fight them. This was the beginning of the Invasive Species Committees, which are now active on all islands. Over this period Betsy was also employed at the Bishop Museum doing natural resource surveys and at one time worked at the Hawaii Legislature for Senator Carol Fukunaga.

Wayne passed away unexpectedly in May 1988. (In Memoriam. Wayne C. Gagné 1942–1988. Proceedings of the Hawaiian Entomological Society 30[1990]:21–22.)

Despite this devastating loss, Betsy carried on their shared commitment and passion for conservation, research, and education. From the mid-1990s to her retirement in 2018, Betsy served the Natural Area Reserves Commission, becoming its Executive Secretary. She coordinated

management and research for the Department of Land and Natural Resources (DLNR) in protected areas across the state.

Along with native flora, Betsy was passionate about island invertebrates. Betsy's fierce advocacy for Hawaii's charismatic microfauna led to her active involvement in the wekiu bug working group, and prompted the hiring of the first entomology position dedicated to native species at DLNR. The position directly resulted in the creation of the Hawaii Invertebrate Program and the Snail Extinction Prevention Program, which aim to enact applied conservation, management, captive propagation, and research for the benefit of rare native invertebrate species statewide.

Throughout her career, Betsy was a huge supporter of invertebrate conservation work at the Bishop Museum. She was particularly fond of Hawaii's native snails and worked with them from her earliest days at the museum, where, as a Roosevelt High School student, she was employed by Yoshio Kondo. As recently as 2018 she brought Alan D. Hart back to Oahu for an American Malacological Society symposium. Alan Hart is the artist-naturalist who had single-handedly petitioned the USFWS to list all remaining predation-plagued *Achatinella* tree snails (kahuli) as endangered. As part of her legacy, Betsy supported the Bishop Museum's Hawaii Biological Survey (HBS), an ongoing natural history inventory of the Hawaiian archipelago. The HBS was created to locate, identify, and evaluate all native and non-native fauna and flora within the state, and to maintain reference collections. A portrait of the newly named forest snail, *Auriculella gagneorum* is further evidence of the Gagne family's ongoing contributions to the Bishop Museum, featured in National Geographic (Dec. 2020, p. 24).

Betsy was no stranger to using the

Endangered Species Act to protect native species. Her efforts led to the federal listing of the native Blackburn's Sphinx Moth (*Manduca blackburni*), after she collected the first larvae on aiea trees in Kanaio, Maui. And with Francis G. Howarth, she contributed to the listing of the Kauai blind cave spider (*Adelocosa anops*) and Koloa blind cave amphipod (*Spelaeorchestia kokoana*).

Betsy's major legacy was connecting with so many people and cultivating a passion for conservation in others. As a natural resource educator, Betsy exploited her teaching experiences in New Guinea. Wayne also involved her in the Ohia Project, a curriculum sponsored by Bishop Museum, Moanalua Gardens Foundation and MacArthur Foundation that continues to educate children about island ecology. She was a tireless coordinator of volunteer service trips to numerous sites around the state, including Natural Area Reserves, National Parks, Forest Reserves and as part of the Youth Conservation Corps. Betsy worked with numerous groups as a volunteer project leader for the Sierra Club but also accommodated just about any group interested in exploring Hawaii's natural areas, from law students at the University of Hawaii to Pacific Century Fellows to visiting researchers. Betsy generously shared her encyclopedic knowledge of Hawaiian natural history. These efforts both educated and inspired new advocates for conservation, but also provided extra hands to accomplish goals like removal of priority invasive weeds from Kaena Point.

From building fences in Haleakala National Park to pushing papers and fielding phone calls from the public, to serving as Commission Secretary for the State Natural Area Reserves System and participating in the State Bioprospecting Commission, from discovering new native species to eradicating invasive ones, to

coordinating the art exhibit at the Hawaii Conservation Conference—Betsy did it all. As a result, it seems that at some point in her career, she worked with everyone in the state. Because of her passion for all of Hawaii’s “critters”—from snails to plants to bugs to birds to oceanic life—she was intensely interested in any conservation-related project and never hesitated to participate. The following quotes from Betsy characterize her spirit and passion for the native life that defines these islands:

*“These [natural area] reserves are like a window to the past. They are part of our heritage.”*

*“It’s all about ecosystems, not ego-systems.”*

*“Every time a species goes extinct it pulls us all a little closer to the edge.”*

Betsy Harrison Gagne waged a long battle with three forms of cancer, but passed away in the spring of 2020 leaving

behind a conservation legacy that, along with her late husband Wayne’s, will live for generations.

A hui hou, Betsy. May your spirit soar with the albatrosses over Kaena Point, among the cloud forests above Hana, and in the many reserves of Hawaii that were blessed by your life’s work.

—Steven Lee Montgomery<sup>1</sup>, Francis Howarth<sup>2</sup>, Allen Allison<sup>3</sup>, Sharon Reilly<sup>4</sup>, Jim Churchill<sup>5</sup>, Emma Yuen<sup>6</sup>, Cynthia King<sup>6</sup>

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