

About the Subjects

Lincoln P Brower, Distinguished Service Professor of Zoology, Emeritus at the University of Florida & Research Professor of Biology at Sweet Briar College

Lincoln's passion for monarchs began when he was a graduate student at Yale in the 1950s. Known for his work on monarch butterflies through six decades, he is considered one of, if not *the* world's foremost expert on monarch butterflies. His research interests included the overwintering and migration biology of the monarch butterfly, chemical defense, ecological chemistry, mimicry, scientific filmmaking, and the conservation of endangered biological phenomena and ecosystems. Professor Brower authored and co-authored more than 200 scientific papers, eight films, and edited two books. He was a recipient of the Wilbur Cross Medal from Yale University, the Medal for Zoology from the Linnean Society of London, a Lifetime Achievement Award from the Animal Behavior Society, and the Henry Bates Award for the Biology and Conservation of Tropical Butterflies. In June, 2007, he received the Royal Entomological Society of London Marsh Award for "Lifetime contributions to Insect Conservation" and "Outstanding Contribution to the Field of Entomology", and in November 2008, he was especially honored to receive the Mexican Federal Government's award: *Reconocimiento a la Conservacion de la Naturaleza*. In 2016, he received the E.O. Wilson Award for his work to preserve the monarch from the Center for Biological Diversity. He served as Presidents of the Society for the Study of Evolution, the International Society of Chemical Ecology and the Lepidopterists' Society. He collaborated with various groups to protect and restore overwintering forests of the monarch butterfly in Mexico. His conservation interests in the USA also included modern agriculture's severe impact on biodiversity.

Unfortunately Lincoln passed away at his Virginia home in 2018 just prior to the completion of the finished film, but he will always be remembered for doing more for the monarchs and their overwintering habitat in Mexico than perhaps any one human has to this point. Director Kay Milam issues the question and challenge asking "who will now pick up the torch and lead the charge?"

Bill Calvert, Research Biologist Bill Calvert is a legend in the monarch world and often referred to as a "cowboy entomologist." From childhood he was obsessed with monarch butterflies and devoted his life to unraveling their magic and mysteries. Bill received a degree in philosophy from the University of Texas and then went off to serve in Uncle Sam's Army. After two years of soldiering, he decided he was a very poor soldier, and that he needed to do something practical. So he took up the study of butterflies. For his dissertation project he researched butterfly feet. More specifically, he investigated the mechanism by which female butterflies located their host plants. After a varied career in many places and involving many insect types, he began a collaboration with Lincoln P. Brower, one of the world's experts on the monarch butterfly, which produced over thirty scientific papers on the monarch. For a time, Bill led eco-cultural tours to the monarch over-wintering areas in Mexico. Bill has now retired from leading tours and has found a new way of life as a lamp maker in Otter Creek, Maine. The general term for his lamps is "Steampunk", meaning that they are basically found objects construed and fastened together in odd, artistic ways.

Carol Cullar, Director Rio Bravo Nature Center When Carol was only three she shinnied up a cottonwood tree to get on top of the chicken shed because she wanted to see what the world looked like from there. She wanted to know things, find the answer, solve the riddle, and find out why. Today she still feels that the greatest gift given to her by her parents was an insatiable sense of curiosity. She grew up on a small farm right on the Texas border up in the Panhandle. She played outdoors from dawn to dusk and only went inside when the weather was bad and recalls countless hours observing the red ant bed in the front yard. She wishes that every child could know the tranquility and impetus to imagination that an hour of watching a red ant colony can bring. And too that every child could experience that sense of wonder just waiting for them in a pond full of tadpoles or in the hatching of a chick, the emergence of a monarch butterfly from its chrysalis, or the interconnectedness of the seasons and the migrations of the birds and insects through the stark, but beautiful land of South Texas. Carol taught high school art for 18 years, and also Earth Science for another two years. Although now retired, Carol continues her educational outreach to the children and youth near her home of Eagle Pass and is an active citizen scientist continuing to participate annually in the eastern monarch butterfly migration.

Don Davis, Citizen Scientist Don has been involved in a wide range of conservation, scientific and educational projects beginning in 1967 with Dr. Fred Urquhart's "Insect Migration Studies" program. Don served on the Board of Michoacán Reforestation Fund prior to the founding of Monarch Butterfly Fund. Don has had a lifelong interest in natural history, while his education and career focused on child protection. He is a Life Member of Ontario Nature. Don's participation with others in workshops and meetings in held in Canada, U.S.A. and Mexico culminated in the North American Monarch Conservation Plan (2008). Don also worked on the Canadian Monarch Butterfly Conservation Plan. His travels related to monarch conservation have taken him all across North America. With recent retirement, Don remains dedicated to achieving the Monarch Butterfly Fund vision for monarchs in North America. He resides in Toronto, Ontario, Canada.

Sue Halpern, Writer Sue lives in the Green Mountains of Vermont where she writes books and articles, consorts with her husband, the writer and activist Bill McKibben and looks forward to visits from her daughter Sophie, plays with their remarkably enthusiastic dog, and introduces Middlebury College Students to digital audio storytelling. She is a Guggenheim Fellow and Rhodes Scholar, with a doctorate from Oxford, the author of a book that was made into an Emmy nominated film as well as six others that weren't.

Elizabeth Howard, Founder & Director Journey North Elizabeth Howard founded Journey North in 1994. Inspired by the early Internet-based projects in which school children tracked human expeditions (e.g. across the Arctic by dogsled or Africa by bicycle), she saw a clear and exciting parallel between these expeditions and the wildlife migrations that cross the globe with the seasons. She runs the Journey North website, which uses citizen scientists to track the movement of many migratory species and other seasonal phenomenon across North America. She now has twenty five plus years of monarch butterfly research, conservation, and outreach to her credit. Elizabeth has also been deeply engaged in the analysis of Journey North data, publishing several analyses on the movement patterns of monarchs. Her office sits on a hillside overlooking Lake Champlain and the Adirondack Mountains. Tracking birds and butterflies in real-time by sharing observations continues to amaze her.

Jose Luis Alvarez, CEO La Cruz Habitat Protection Project Jose Luis Alvarez is one of those dedicated individuals who steps forward at a critical point with an understanding of a problem and an inventive approach to try and make a difference. After living abroad, Jose returned to Mexico and bought a ranch, which he named Hacienda La Cruz, near Santa Clara de Cobre, a small town known for its copper crafts. After raising cattle and sheep at Hacienda La Cruz for three years, Jose saw what was happening to the land around him. Jose understood the desperate need for re-establishing forests on the mountain slopes around the monarch overwintering sites and also understood the financial needs of the subsistence farmers who owned the nearby lands. He has spent over 20 years developing efficient methods of growing healthy tree seedlings that utilize readily available organic materials. Jose has worked with the communities in and around the monarch sanctuaries to demonstrate the environmental and economic value of planting trees on their depleted fields and eroded lands. By providing outstanding quality trees and giving valuable technical support, Jose has built a relationship of trust and respect among the community leaders and project participants.

Monika Maeckle, Writer, Blogger and Butterfly Evangelist Monika has a special passion for pollinators, native plants, conservation and the monarch butterfly migration. She is the founder and director of the Monarch Butterfly and Pollinator Festival in San Antonio and is a co-founder of the Rivard Report. She writes about pollinators, native plants, and the ecosystems that sustain them at her Texas Butterfly Ranch blog. People often ask: Where is the Texas Butterfly Ranch? She likes to say it's a state of mind more than a particular place. Monika is a Master Gardener and also manages a weekend ranch for wildlife. Some years ago Monika learned that her property along a stretch of the Llano River lay right in the path of the annual Fall monarch migration, and the pecan trees there serve as roosting sites for thousands of migrating monarchs. What struck her most was that they had always been there, she just hadn't noticed. Now, she does and she educates, inspires and encourages numerous readers to do the same.

Maraleen Manos Jones, Environmentalist, Educator Author & Activist Maraleen brings a spiritual perspective to the world of butterflies. She is an environmentalist, educator, author

and artist. Her first book, *Spirit of Butterflies* features the significance of butterflies in mythology, religion, superstition, literature and the arts. She is currently working on her next book entitled, *Adventures of a Butterfly Warrior*. She has been raising, tagging and releasing monarchs for forty years and was the first non-native woman to find the overwintering sites in Mexico in 1977 and has been returning ever since. Maraleen is a Master Gardiner and her butterfly gardens in Shokan, NY are open to the public a few times a year. She has worked to save monarchs in both the U.S. as well as in Mexico. Her newest campaign is *Saving the Planet One Garden at a Time*.

Dr. Orley “Chip” Taylor Founder and Director of Monarch Watch; Professor of Ecology and Evolutionary Biology, University of Kansas

Chip’s long passion for pollinators spans decades. He began his career studying sulphurs, the ubiquitous yellow butterflies that feed on legumes such as clovers and alfalfa. He was forced to leave that field of study after developing an allergy to them – apparently not an uncommon occurrence in science when one spends lots of time with a particular species. He then moved on to studies of the biology of neo-tropical African (killer) bees in South and Central America, a path he pursued for 22 years. In 1992, Chip founded Monarch Watch, an outreach program focused on education, research and conservation relative to monarch butterflies. Since then, Monarch Watch has enlisted the help of thousands of volunteers to tag monarchs during the fall migration. This program has produced many new insights into the dynamics of the monarch migration. In 2005 Monarch Watch created the Monarch Waystation program, recognizing that habitats for monarchs are declining at a rate of 6,000 acres a day in the United States. The goal of this program is to inspire the public, schools and others to create habitats for monarch butterflies and to assist Monarch Watch in educating the public about the decline in resources for monarchs, pollinators and all wildlife that share the same habitats.

Catalina Trail Catalina is a Mexican-born naturalist and social worker. She was born on a ranch in the mountains near El Salto, in the Mexican state of Michoacán. As a child she loved to observe nature and read books about science. When she was 11 she moved with her family to the state capital, Morelia, and by age 17 she was living and working in Mexico City. She loves adventure, exploring Mexico, Canada, the United States and Central America. She is noted for discovering, along with her then-husband Kenneth C. Brugger, the location of the overwintering sites of the monarch butterfly, which has been described as "the entomological discovery of the 20th century." In 1973, Catalina & Ken came across a notice in a Mexico City newspaper written by Fred and Norah Urquhart, the Canadian entomologists who had been studying the migration patterns of monarch butterflies since 1937 that sought volunteers to help search for monarchs. Brugger and Trail loaded up the Winnebago and began to search the mountains west of Mexico City. Following clues that pointed toward Michoacán, they hiked the mountains by day and spent the nights in the motor home. Finally on January 2, 1975, they summited Cerro Pelón where the trees and even the ground were covered with millions of resting butterflies. Catalina was 25 at the time. On January 9 they called the Urquharts to report their find. The discovery was reported in National Geographic magazine in August 1976. The Nat Geo cover featured a picture of Catalina covered in butterflies. Their search for the butterflies is dramatized in the IMAX film *Flight of the Butterflies*. Catalina returned to the roosting site in February 2012 as the guest of the filmmakers. She worked as a case manager for a nonprofit

organization in Austin, Texas until her retirement. She now tends her garden and occasionally appears at events promoting the conservation of monarchs and other pollinating insects.