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Nota di contenuto	Front matter -- Contents -- Contents -- PART I Model Programs for Citizen Science, Education, and Conservation / Oberhauser, Karen S. -- PART II Monarchs as Herbivores, Prey, and Hosts / Roode, Jacobus C. de -- PART III Monarchs in a Changing Climate / Nail, Kelly R. / Oberhauser, Karen S. -- PART IV Conserving North American Monarch Butterflies / Brower, Lincoln P. / Fink, Linda S. -- PART V New Perspectives on Monarch Migration, Evolution, and Population Biology / Davis, Andrew K. / Altizer, Sonia -- References -- Contributors -- Index -- Color Plates
Sommario/riassunto	Monarch butterflies are among the most popular insect species in the world and are an icon for conservation groups and environmental education programs. Monarch caterpillars and adults are easily recognizable as welcome visitors to gardens in North America and beyond, and their spectacular migration in eastern North America (from breeding locations in Canada and the United States to overwintering sites in Mexico) has captured the imagination of the public. Monarch migration, behavior, and chemical ecology have been studied for decades. Yet many aspects of monarch biology have come to light in only the past few years. These aspects include questions regarding large-scale trends in monarch population sizes, monarch interactions

with pathogens and insect predators, and monarch molecular genetics and large-scale evolution. A growing number of current research findings build on the observations of citizen scientists, who monitor monarch migration, reproduction, survival, and disease. Monarchs face new threats from humans as they navigate a changing landscape marked by deforestation, pesticides, genetically modified crops, and a changing climate, all of which place the future of monarchs and their amazing migration in peril. To meet the demand for a timely synthesis of monarch biology, conservation and outreach, Monarchs in a Changing World summarizes recent developments in scientific research, highlights challenges and responses to threats to monarch conservation, and showcases the many ways that monarchs are used in citizen science programs, outreach, and education. It examines issues pertaining to the eastern and western North American migratory populations, as well as to monarchs in South America, the Pacific and Caribbean Islands, and Europe. The target audience includes entomologists, population biologists, conservation policymakers, and K-12 teachers. Contributors: Anurag A. Agrawal, Cornell University; Jared G. Ali, Michigan State University; Sonia Altizer, University of Georgia; Michael C. Anderson, Eden Prairie, Minnesota; Sophia M. Anderson, Eden Prairie, Minnesota; Kim Bailey, Georgia Department of Natural Resources; Rebecca Batalden, University of Minnesota; Kristen A. Baum, Oklahoma State University; Scott Hoffman Black, Xerces Society for Invertebrate Conservation; Brianna Borders, Xerces Society for Invertebrate Conservation; Lincoln P. Brower, Sweet Briar College; Wendy Caldwell, University of Minnesota; Mariana Cantú-Férnandez, Universidad Nacional Autónoma de México; Nicola Chamberlain, Harvard University; Sonya Charest, Montreal Insectarium; Andrew K. Davis, University of Georgia; Alma De Anda, Covina, California; Guadalupe del Rio Pesado, Alternare, A.C., Mexico; Janet Kudell-Ekstrum, USDA Forest Service; Linda S. Fink, Sweet Briar College; Mark Fishbein, Oklahoma State University; Juan Fernández-Haeger, University of Córdoba, Spain; Eligio García Serrano, Fondo Monarca, Mexico; Mark Garland, Cape May Monarch Monitoring Project; Brian Hayes, Monarch Teacher Network; Elizabeth Howard, Journey North; Mark D. Hunter, University of Michigan; Sarina Jepsen, Xerces Society for Invertebrate Conservation; Diego Jordano, University of Córdoba, Spain; Matthew C. Kaiser, University of Minnesota; Ridlon J. Kiphart, Texas Master Naturalists; Marcus R. Kronforst, University of Chicago; Jim Lovett, University of Kansas; Eric Lee-Mäder, Xerces Society for Invertebrate Conservation; Stephen B. Malcolm, Western Michigan University; Héctor Martínez-Torres, Universidad Nacional Autónoma de México; Susan Meyers, Stone Mountain Memorial Association; Erik A. Mollenhauer, Monarch Teacher Network; Mía Monroe, Xerces Society for Invertebrate Conservation; Eneida B. Montesinos-Patino, Monarch Butterfly Fund; Gail M. Morris, Southwest Monarch Study; Elisha K. Mueller, Oklahoma State University; Kelly R. Nail, University of Minnesota; Karen S. Oberhauser, University of Minnesota; Diego R. Pérez-Salicrup, Universidad Nacional Autónoma de México; Amanda A. Pierce, Emory University; John Pleasants, Iowa State University; Victoria Pocius, University of Kansas; Robert Michael Pyle, Northwest Lepidoptera Survey; M. Isabel Ramírez, Universidad Nacional Autónoma de México; Sergio Rasmann, University of California, Irvine; Gerald Rehfeldt, USDA Forest Service; Eduardo Rendón-Salinas, World Wildlife Fund-Mexico; Leslie Ries, National Socio-Environmental Synthesis Center; Jacobus C. de Roode, Emory University; Richard G. RuBino, Florida State University; Ann Ryan, University of Kansas; Cuauhtémoc Sáenz-Romero, Universidad Michoacana de San Nicolás de Hidalgo; Lidia Salas-Canela,