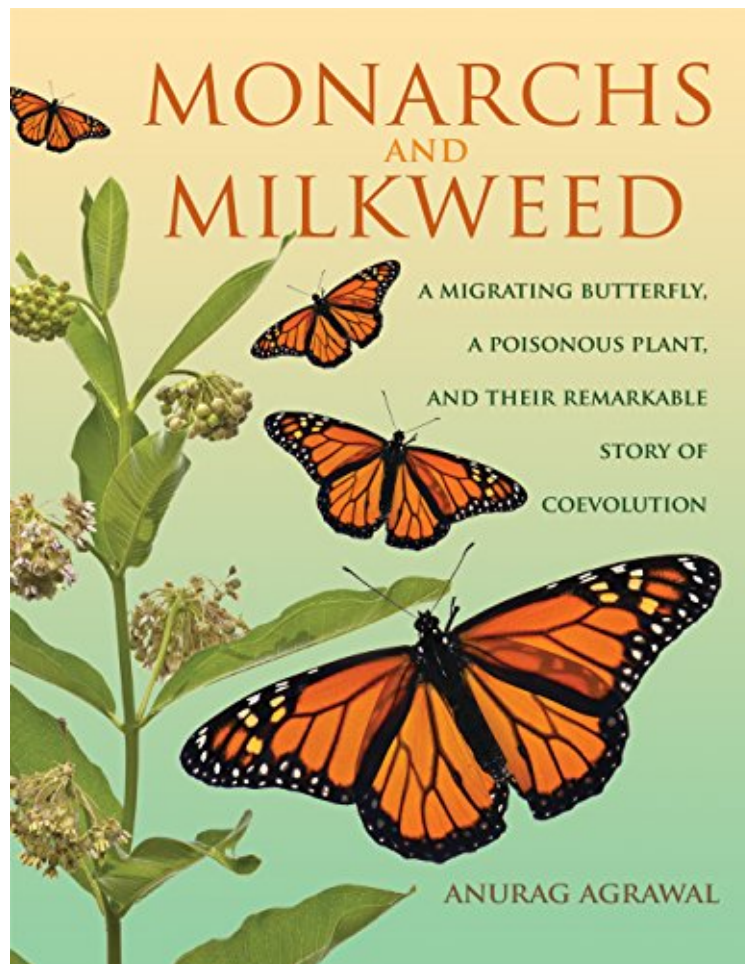


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# Monarchs and Milkweed: A Migrating Butterfly, a Poisonous Plant, and Their Remarkable Story of Coevolution

Anurag Agrawal

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**Anurag Agrawal : Monarchs and Milkweed: A Migrating Butterfly, a Poisonous Plant, and Their Remarkable Story of Coevolution** before purchasing it in order to gage whether or not it would be worth my time, and all praised Monarchs and Milkweed: A Migrating Butterfly, a Poisonous Plant, and Their Remarkable Story of Coevolution:

0 of 0 people found the following review helpful. Written by a renowned scientist who has studied this beautiful organism for yearsBy Gregory J. AugerIf you are an appassionato of the fabled Monarch butterfly, or even of butterflies in general, you won't want to pass up this book. Written by a renowned scientist who has studied this beautiful organism for years, it's a clearly written and up-to-date account of what we know and what we don't know about this mysterious beauty. Monarch caterpillars are destined by evolution to eat only milkweed plants -- yet those same milkweed plants are poisonous to the caterpillars. They have no choice in the matter. Once you get over the emotional pathos of this coupling -- what you require to survive will most likely kill you -- you'll be hooked on

reading about the seemingly endless strategies that the caterpillars have evolved in order to survive their ordeal. Who knew that caterpillars would have to face such grueling tests of their ability to persevere? The book is written so as to be friendly to the lay reader and is extremely well-illustrated. If you are looking for authoritative texts on the basic biology of these lightweight, ephemeral beings that fly all thousands of miles to a special place in Mexico where they can safely winter, this is a book you will want to own. Thanks to the scientist for taking the time to write it. 1 of 1 people found the following review helpful. Page-turner! By Hidetoshi Inamine This book is a real page-turner. Anurag Agrawal does a phenomenal job presenting a fascinating story about iconic monarch butterflies and milkweeds and more broadly about ecology. The book covers a wide range of topics: how milkweeds protect themselves from monarchs, arms race between monarchs and milkweed, how the monarchs in turn defend themselves from their enemies, monarch butterfly migration, and the conservation of monarchs to name a few. All of these topics are put in a wider scientific context by bringing in chemistry, history of medicine, ecological theories, evolutionary theories, etc. The book is written in clear prose, making it accessible to wide readers. Agrawal digests years of scientific studies into a coherent narrative that the readers can sequester with ease. The book digs deep into the biology, but Agrawal does it with care so the readers can follow him. Many factors make this book uniquely engaging. For example, Agrawal weaves scientific studies with personal anecdotes. The book presents a window of opportunity for the readers to see researchers as both scientists as well as ordinary human beings. The story behind the discovery of the monarch overwintering sites is my personal favorite. Both scientists and non-scientists will learn new things from the book. The book is beautiful, and I highly recommend it to everyone. 0 of 0 people found the following review helpful. I really enjoyed the first read and am already on a second ... By Kirsten C. Having studied monarchs for years and teaching others about their ecology, I found this book to be quite refreshing from among all of the other books that I have read. Agrawal presents the relationships among monarchs, milkweeds and other community members as a story to be told to others. He wants us to understand how one species can affect another through the coevolution of the tight connection/relationship that the monarch has developed with the milkweed. Additionally, Agrawal discusses the genetic/biochemical adaptations invertebrate milkweed community members have to milkweed toxins and how they respond differently to it compared to vertebrates. The chapters are self contained with little reminders by the author to "remember this point or that point" to help you understand the big picture and the connections. I really enjoyed the first read and am already on a second read. It is a must read for any monarch enthusiast (even if you think you know it all) because you will find information that you may not have connected with before. Agrawal is not afraid to play devil's advocate to challenge points and hypotheses by others in the field. There are always other angles by which we can look at nature and we should.

The fascinating and complex evolutionary relationship of the monarch butterfly and the milkweed plant Monarch butterflies are one of nature's most recognizable creatures, known for their bright colors and epic annual migration from the United States and Canada to Mexico. Yet there is much more to the monarch than its distinctive presence and mythic journeying. In *Monarchs and Milkweed*, Anurag Agrawal presents a vivid investigation into how the monarch butterfly has evolved closely alongside the milkweed—a toxic plant named for the sticky white substance emitted when its leaves are damaged—and how this inextricable and intimate relationship has been like an arms race over the millennia, a battle of exploitation and defense between two fascinating species. The monarch life cycle begins each spring when it deposits eggs on milkweed leaves. But this dependency of monarchs on milkweeds as food is not reciprocated, and milkweeds do all they can to poison or thwart the young monarchs. Agrawal delves into major scientific discoveries, including his own pioneering research, and traces how plant poisons have not only shaped monarch-milkweed interactions but have also been culturally important for centuries. Agrawal presents current ideas regarding the recent decline in monarch populations, including habitat destruction, increased winter storms, and lack of milkweed—the last one a theory that the author rejects. He evaluates the current sustainability of monarchs and reveals a novel explanation for their plummeting numbers. Lavishly illustrated with more than eighty color photos and images, *Monarchs and Milkweed* takes readers on an unforgettable exploration of one of nature's most important and sophisticated evolutionary relationships.