

A MONARCH BUTTERFLY DOWSING KIT v1

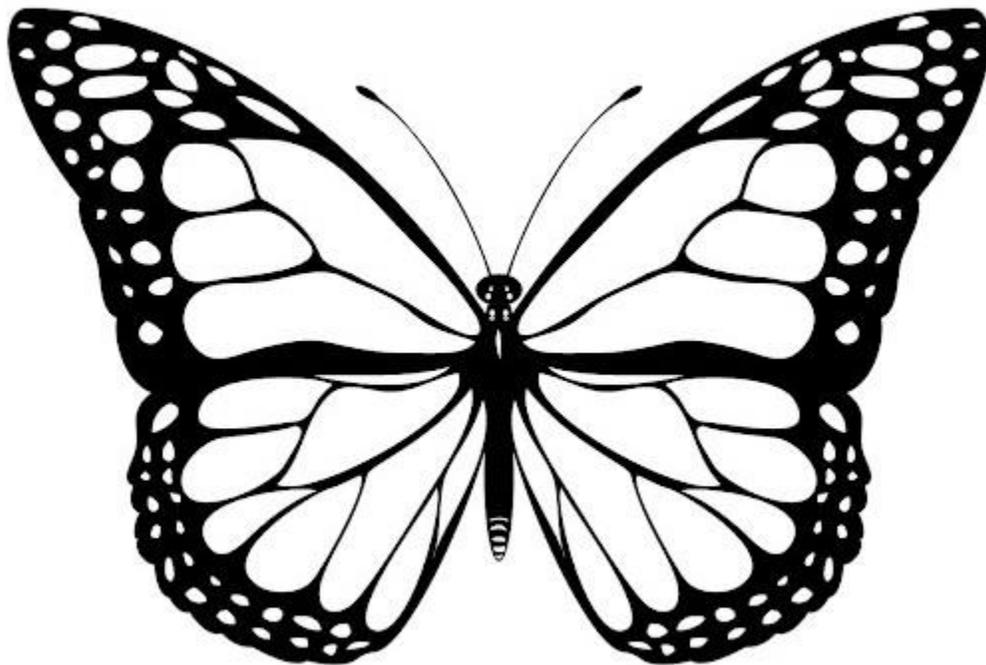
A Fun Way to Learn Dowsing While Helping a Beloved and Endangered Species

About the Monarchs

The Monarch butterfly *Danaus plexippus* is one of the most recognized, beautiful, beloved and well-studied insect species on our continent. It is renowned for its annual northward migration from Mexico to Canada each spring and subsequent return as winter approaches.

Monarchs are not agricultural pests; they thrive on milkweed plants which are neither noxious nor aggressive on farms and in gardens. Monarchs lay their eggs on milkweed and emerging caterpillars feed on these plants. There they grow, eventually pupating in the form of a chrysalis, to later emerge as full-grown butterflies.

But Monarch butterflies are in trouble. Agricultural practices, urbanization, roadside maintenance and other human activities have eliminated much of the milkweed and habitat features they rely on, decimating their numbers. Climate change and the wide use of insecticides have only made things worse. According to National Geographic, it is estimated that Western Monarchs, which are common in California and the West Coast, have declined by more than 99 percent since the 1980s. During that same period, Eastern Monarchs have declined by roughly 80 percent.



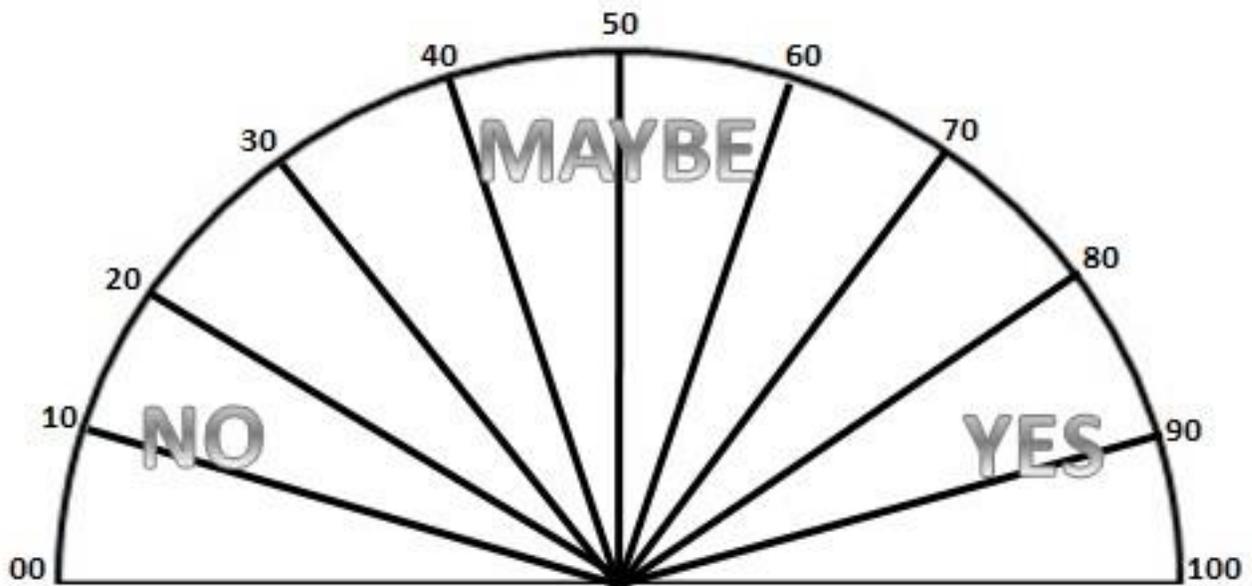
Biologists, conservationists and other responsible citizens are not ready to allow Monarchs to follow the path to extinction. There are many groups advocating and researching means for reducing herbicide and insecticide use and re-establishing diversity on farms and landscapes. We provide contact information for some of them at the end of this publication.

Introducing Dowsing

Dowsing is a means for tapping into our intuition to learn about things. It is especially helpful when those things we want to learn about are hard to find through conventional means. When we seek something that is hidden or ask an unambiguous question, scientists have observed that our bodies react in subtle, mostly imperceptible ways when we find what we're looking for or discover a truth. They call these subtle reactions *ideomotor responses*. We have known about this phenomenon for many decades. Ideomotor reactions are detected and measured routinely during biofeedback and polygraph (lie detector) analysis. In dowsing, we use hand-held willow branches, wire L-rods and small pendulums to amplify them.

One of the easiest dowsing techniques to learn requires a simple hand-held pendulum and simple 180° charts, such as those we present here. Your pendulums need not be specially crafted or expensive. Many people make their own using string and a small hex nut or lead fishing sinker. Of course, if you prefer something fancy, made with a crystal, a jewel, or the like, suspended from a chain, that's fine, too.

Chart dowsing is rather straight-forward, but if you've never done it before, you can learn, starting with the general purpose chart that follows.



Begin by suspending your pendulum directly over center bottom of the chart—the point where all the lines converge. Start by asking simple questions to which you know the answers. (Don't worry, we'll get to the butterflies later.) Some examples of such questions are:

- “Is the shirt I'm now wearing red?”
- “Is there a wedding ring on my finger?”
- “Do I own a car?”
- And so on...

If your pendulum does not readily start swinging back-and-forth toward YES or NO, nudge it a bit. It is ok to do this in the beginning because you are training your body's ideomotor response to perform in a consistent way. As you gain confidence (and get bored) asking questions with known answers, try asking some in which the answers are uncertain or unknown to you.

Perhaps you might ask:

- “For optimum health, should I plan to take additional Vitamin C each day?”
- “Is eating a banana at lunch today healthier for me than an orange?”
- “Is it advisable for me to change my car's oil this week, rather than waiting?”

Your pendulum may not always clearly point at YES, NO, or MAYBE, but simply favor one of these. Choose the answer you feel is most closely indicated.

Don't be surprised if some of your responses are incorrect, that's bound to happen for several reasons:

- Hey! You're still a beginner! You need more practice!
- Your questions might be too ambiguous. This frequently leads to a MAYBE response. Clarity of thought is essential for dowsing, and that requires a focused, uncluttered mind—a good thing to have under any circumstances.
- Nothing is perfect! Even when you are experienced, you'll make some mistakes. But the better you become, the fewer the errors, and the more useful dowsing becomes.
- While frivolity and experimentation are fine, you might discover that dowsing works most reliably when the answers you seek are useful and of value and there is a real need for the information.

You will have noticed that there are numbers around the perimeter of the chart, running from 00 to 100. This is most helpful when you seek answers best given in numbers. For example:

- “Considering our family's financial situation and needs, what percentage of our annual income should we give to our church and charities this year?”
- “On a scale of 00 to 100, how important is writing and sending a family Christmas letter this season?”
- “Between 0 and 10 (Yes, you can mentally adjust the scale to fit your needs!), how many t-shirts should I pack for next week's trip to Florida?”

Dowsing in Aid of Monarchs

A particularly devoted group of citizen scientists have undertaken the task of helping to grow Monarch butterflies by planting milkweed, protecting the caterpillars and chrysalises from predation, and tending to the emerging adults. Unfortunately, these dedicated folks can encounter problems in their efforts. And while there are good troubleshooting guides in print and online, there is abundant room for additional creative tools and methods—like dowsing—that can help. It is the reason that we developed this kit. It is another tool to aid in identifying butterfly maladies when and if they occur.

Overview of Monarch Maladies

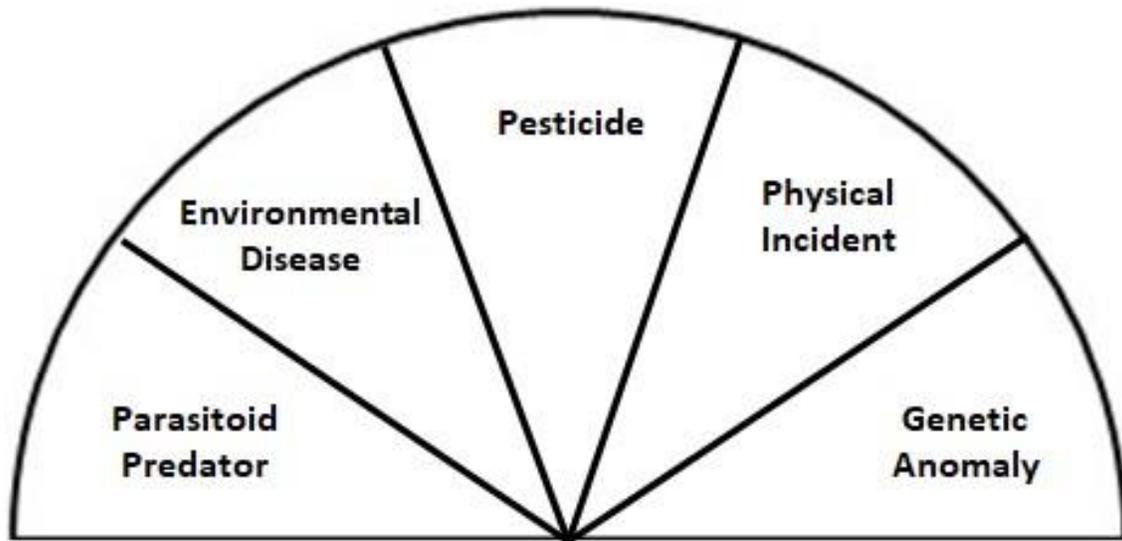


Chart #1

With Monarch butterflies, as with all living creatures a lot of bad things can happen, causing death, disability, or simple lack of vigor. Sometimes the causes are obvious; sometimes not. When we are uncertain, we can dowsing for additional guidance. Chart #1 shows the common maladies that can affect butterflies individually or by population.

Maybe you have a Monarch caterpillar or adult suffering from an unknown condition; perhaps have a number of them. You can try dowsing as part of your research to find out what's wrong and fix the problem. (It is recommended that you cross-check your dowsing results with other sources of guidance before taking action, especially in the beginning.)

To dowsing for butterfly maladies, begin as you did when training on the all-purpose chart. Suspend your pendulum over the junction point at the bottom, where all the lines converge.

“Ask: What is the primary malady affecting this butterfly (or population of butterflies)?” It is ok to nudge the pendulum into motion, but then allow it to rotate to one of the answers printed on the chart.

- Parasitoids and predators are mostly a problem for caterpillars, since toxins in the adult make them largely inedible. Should you dowse that parasitoids or predators are the main problem, proceed to Chart #2.
- There are several environmental diseases that can affect Monarchs. Should you dowse this as principal malady, you can dig deeper using Chart #3.
- Pesticides are a common hazard for Monarchs. There are many different kinds of pesticides and it is most useful to identify the way in which your butterflies or caterpillars were exposed to them, rather than identifying the specific chemical or product. Chart #4 is designed to aid in this determination.
- Physical incidents and conditions can be various. Chart #5 shows some of the most common.
- Genetic anomalies can happen in nature. Some are interesting and good, but many lead to death of the organism.

Parasites and Predators

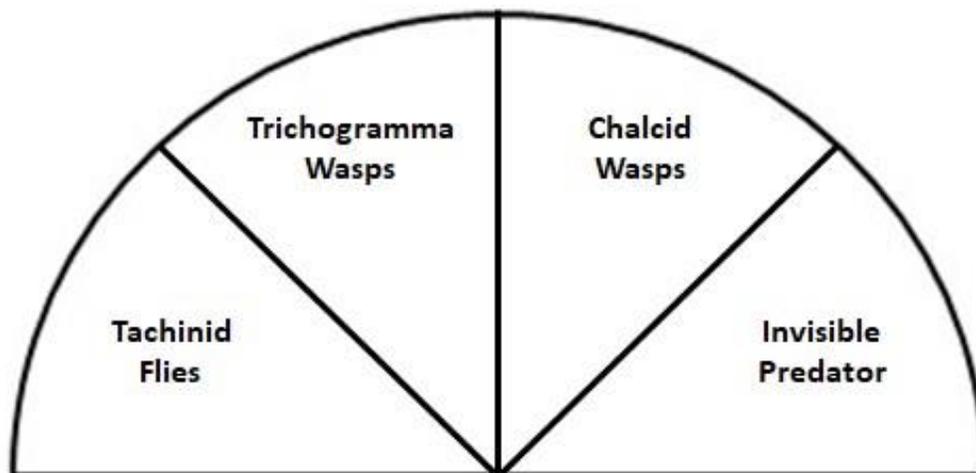


Chart #2

- Tachinid flies *Lespesia archippivora* are the most common parasitoid of Monarchs. Adults lay their eggs on caterpillars. As the fly larvae emerge, they bore into the caterpillar to feed. Telltale signs of parasitism are white gelatinous threads left by the larvae as they leave the dead or dying caterpillar to pupate.
- Trichogramma wasps *Trichogramma* sp. are tiny, almost microscopic insects. Adults lay their eggs in Monarch eggs, causing them to blacken, die and eventually release lots of tiny wasps.

- In contrast to the other common parasitoids, a Chalcid wasps (several genus and species) lay their eggs into newly-formed chrysalises before they fully harden. Large numbers of fully-formed adult wasps emerge later.
- Predators can include mantids, ants, large wasps, spiders, ants and a host of other arthropods, some of which might not be obvious unless you look carefully.

Diseases

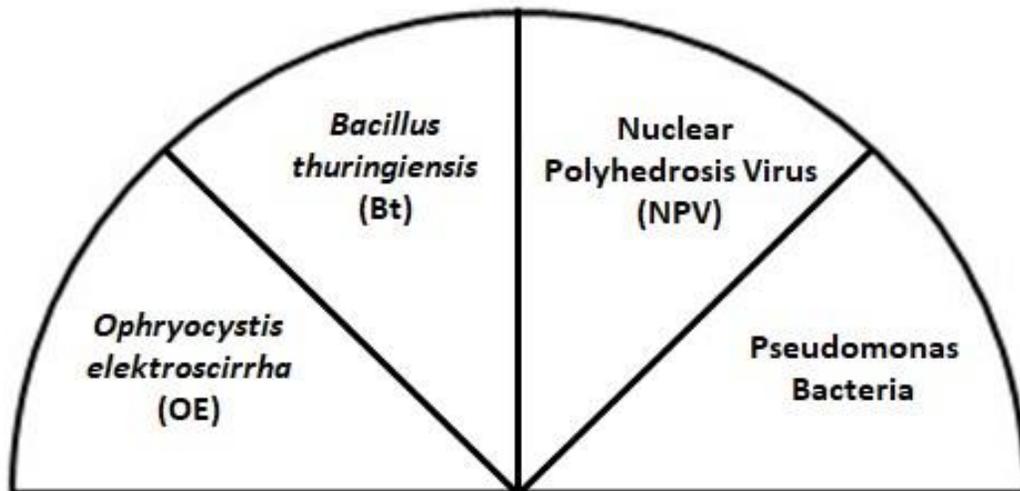


Chart #3

- OE *Ophryocystis elektroscirrha* is a protozoan parasite that initially infects the surfaces of the butterfly's eggs. Symptoms are not seen until the Monarch pupates and its chrysalis exhibits uneven color. If the adult emerges, it is often weak, disfigured, and lethargic.
- Bt *Bacillus thuringiensis* is a bacteria found in soils. When ingested, it ruptures the gut lining of the caterpillar, which quickly stops eating and dies within a few days. Biochemists have taken Bt and formulated it into pesticides that are used by organic and conventional growers alike to control pests like cabbage butterfly, corn earworm, and tomato hornworm.
- NPV (Nuclear Polyhedrosis Virus) is one of two organisms known to cause *black death* in butterflies. It is a fatal virus that causes the caterpillar to deflate, turn black, and liquefy. It can also infect Monarchs in the pupal stage, causing the chrysalis to turn black and liquefy as well. Like Bt, NPV has been formulated into sprays to control gypsy moth and other pests. Fortunately, most NPV insecticides are highly pest-specific and are not believed to be a significant source of infection for Monarchs.
- Pseudomonas, *Pseudomonas* sp., the other cause of *black death*, is a bacterial organism that likes warm, moist conditions. It most commonly attacks caterpillars already weakened by some other disease or mishap.

Pesticides

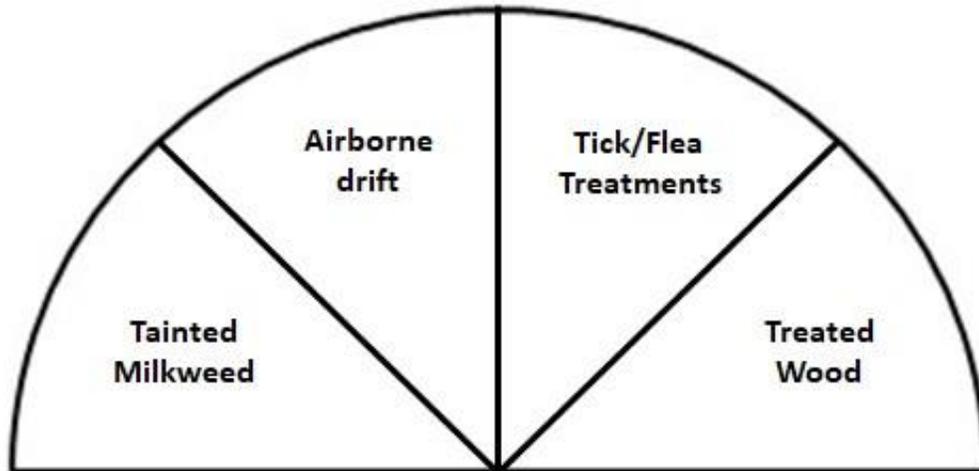


Chart #4

- Milkweed obtained from nurseries or harvested along roadsides, rights-of-way, and agricultural areas may have been sprayed with pesticides toxic to butterflies.
- If the place you raise butterflies is close to agricultural fields or barns, or yards and gardens managed with sprays, there is the possibility of unintentional chemical drift.
- Some tick and flea treatments used on pets, yards, or carpets might be hazardous to Monarchs.
- Avoid treated wood when building cages and other features where the butterflies reside.



Other Physical Conditions



Chart #5

Most of the physical conditions on Chart #5 are self-explanatory except for anal prolapse. Anal prolapse describes a condition in which the caterpillar's rectum protrudes from its anus, resulting in a quite visible bright green blob at its rear. It is fatal and the causes for this malady are not yet understood.

Excellent Resources for Dowsing

American Society of Dowsers (ASD)
PO Box 24
Danville, VT 05828
Phone: 802-684-3417
Email: info@dowsers.org
<https://dowsers.org/>

United States Psychotronics Association (USPA)
525 Juanita Vista
Crystal Lake, IL 60014
Phone: 815-355-8030
Email: contact@psychotronics.org
<https://www.psychotronics.org/>

Superb Resources for Butterfly Conservation

Monarch Joint Venture
2161 University Ave W.
Suite 200
St. Paul, MN 55114
Email: info@monarchjointventure.org
<https://monarchjointventure.org/>

Save Our Monarchs Foundation
P.O. Box 390135
Minneapolis, MN 55439
Email: Ward@SaveOurMonarchs.org
<https://www.saveourmonarchs.org/>

The Xerces Society for Invertebrate Conservation
628 NE Broadway, Ste. 200
Portland, OR 97232
Telephone: (503) 232-6639
Toll Free number: (855) 232-6639
Fax: (503) 233-6794
Email: monarchs@xerces.org
<https://xerces.org/>

