May 2023 Creation Care Green Tips

**The Products We Buy:  Helping the Pollinators We Depend on for Survival Thrive in Our Fields, Yards and Gardens**

1.  Insects (such as bees, butterflies, beetles) represent a huge share (nearly 80%) of all animal species, yet the alarming drop in their numbers worldwide prompted a report in the *Journal of Biological Conservation* predicting the **extinction of 40% of the world's insect species** if we don't make serious changes to industrialized agriculture, climate change, habitat destruction and urbanization.  One of the main culprits in destroying the insects that are crucial for **pollinating plants to feed people and making soils more fertile** is a class of insecticides called **neonicotinoids (neonics).**Widely used by farmers, homeowners and groundskeepers since the early 1990s, neonics are the most widely used insecticide globally, found on nearly all conventionally grown U.S. corn fields, as well as flea collars, bed bug products, golf courses, and gardens.  Concerns about potential human health effects are being studied by George Washington University and the U.S. Centers for Disease Control and Prevention, warning that the water-soluble chemicals are finding their way into drinking water and food.  The Minnesota DNR has found neonics in **61% of the 800 white-tailed deer spleens** sampled from around the state, with evidence that the deer suffered reduced fawn survival, altered organ weights, and developmental and behavioral abnormalities.  While the European Union (EU) has banned many **neonicotinoids since 2013**, and Canada is proposing similar restrictions, the U.S. has yet to take any action to protect consumers.  You can encourage policy-makers to do so.

2.  The predominant class of insecticides (also referred to as pesticides), known as **neonicotinoids (neonics),** are lethal to many insects, not just pests, and have other broad-reaching and unintended effects.  Neonics affect the nervous system of insects, as well as their immune systems, making pollinators such as bees unable to fend off disease or to navigate back to their hives.  When they do return covered with contaminated pollen, the hives become contaminated.  Further up the food chain, insect-eating birds are **declining annually by up to 4%,** according to studies at the University of Illinois, while data released in the *Journal of Biological Conservation* reports that at least **33% of aquatic insects,** which are the food source of many fish populations, are facing extinction.  The U.S. Forest Service warns that without pollinators, the "human race and all of Earth's terrestrial ecosystems would not survive."  In your own yards and gardens, use products labeled as "safe for organic gardening," and purchase seeds and plants that the seller can verify are not contaminated with neonics.  Ask your favorite store to carry OMRI (Organic Materials Resource Index) Listed products to use for all gardening purposes.

3.   Based on over 15,000 studies, a 2019 report from the United Nations' Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services found that about **one million plant and animal species are threatened with human-caused extinction.**The interactions between animals, plants, humans and the environment  form a complex web, and disruptions can have serious consequences for our own health.  **80% of our agricultural food** depends on pollinators, yet, according to the Xerces Society, a science-based conservation group focused on invertebrates (insects), our chemically-driven way of producing food is catastrophic for the insects on which food production depends.  According to the National Resources Defense Council (NRDC), the most heavily used class of insecticides in the U.S. are **neonicotinoids (neonics),** applied to an estimated 150 million acres of crops each year.  Nearly all conventional corn seed is treated with neonics, as is much of soybean seed, which become "systemic" by being absorbed into a plant's tissue, carrying the toxin all the way from its roots to the nectar on which bees then feed.   As little as **2% of the insecticide is absorbed by the plant** as it is growing, leaving the rest to end up in soil, groundwater, rivers and lakes, according to studies at Pennsylvania State University, with serious implications for wildlife and humans.  As a consumer, you can vote with your dollars by supporting local and **regenerative agricultural practices** that avoid pesticides and harmful chemicals, build soil health for crop fertility, and protect our water.

4.  Americans use over **70 million pounds of pesticide** annually to maintain their lawns, which is **ten times more** than all of America's farmers use on their crops.  Bees, butterflies and beetles pollinate plants, enrich soil and provide a critical protein for species up the food chain (like birds), yet **Neonicotinoids (neonics),** the most widely used class of insecticide (pesticide), are a main cause of the predicted **extinction of 40% of the world's insect species.**Ecologically, insects are "the little things that run the world," in the words of biologist E.O. Wilson.  The Audubon Society asks us to rethink traditional landscaping, which, in the words of entomologist and leading authority on rebuilding local food webs with native plants, Doug Tallamy, represents "an ecological deadscape."  America's estimated **40 million acres of lawn** is enough to blanket the whole of New England, but provide little sustenance for pollinators and birds.  Across the country, more and more households, neighborhoods, towns, businesses, schools, etc. are shifting to a nature-friendly approach.  You can be a part of helping monarchs, bees and other pollinators by planting a variety of native plants around your home, devoting some portion of your lawn to native plants, reduce or eliminate pesticide use, create rain gardens, community or neighborhood native plant gardens, and go to [rewild.org/Rewild-Your-Campus](http://rewild.org/Rewild-Your-Campus) for ideas on how to "re-wild" your yard and community.

5.  "Only in the last moment of human history has the delusion arisen that people can flourish apart from the rest of the living world," wrote renowned biologist E.O. Wilson.  We are deeply connected to the biosphere, to all the living plants and animals that inhabit the Earth along with us (biodiversity).  Biodiversity is also the key to our prosperity, acknowledged by the fact that **80% of our agricultural food** depends on pollinators.  Scientists have noticed a dramatic drop both in total bug numbers and diversity of insect species, a result of industrialized agriculture, climate change, habitat destruction, and the use of pesticides, especially the **neonicotinoids (neonics)** that are the most widely used in fields, yards, and gardens.  In addition to being in nearly all conventional corn and soy crops, they are everywhere from the flea collar on your cat, the over-the-counter spray you use in your flower garden, and in many of the plants you buy for landscaping, even the ones labeled "bee friendly."  Common names on products are: **acetamiprid, dinotefuran, clothianidin, imidacloprid, thiacloprid and thiamethyoxam,** and are used in a variety of ways, such as foliar sprays, seed coatings, soil drenches, granule applications, trunk injections and topical applications for flea control.  Neonics are water-soluble, and easily enter the soil and water we drink, with federally funded research suggesting there may be links between neonic exposure and **malformations of the developing heart and brain and a cluster of neurological symptoms including memory loss and finger tremors.**PURCHASE SEEDS AND PLANTS from sellers who can verify the non-use of neonics at any stage, and look for USDA Organic Certified seeds and plants, which cannot legally contain the chemicals.  Ask your favorite store to carry OMRI (Organic Materials Resource Index) Listed products to use for all gardening purposes.