

The newsletter about designing, restoring and managing wildlife habitat

Fall 2024

Habitat Works is published by Chesapeake Wildlife Heritage, a 501(c)(3) nonprofit conservation organization dedicated to designing, restoring and managing wildlife habitat and establishing a more sustainable agriculture through direct action, education and research in partnership with public and private landowners. We welcome your comments and contributions.



CWH Bluebird Program

By Andi Pupke, Education & Outreach Director

Bluebirds evolved to nest in natural cavities like old woodpecker holes. Since European colonialization, large swaths of old forest and other natural landscapes have been cleared for development and agriculture. These changes reduced the supply of natural cavities for Bluebirds and other cavitynesting species.

Starting in the mid-1800s, the problem was compounded by the introduction of two European cavity-nesting birds to North America, the European Starling and the house sparrow. These are both aggressive competitors with

the Bluebird for nesting cavities, food and habitat.

The house sparrow is small enough to enter any hole a bluebird can. They will chase away native birds, kill bluebird adults and chicks and destroy eggs if given the opportunity.

But there is some good news...and you can be part of it!

Since the 1960s, the bluebird population has started to increase, thanks to the installation of manmade bluebird houses. When they are installed in appropriate habitat

with predator guards, Bluebirds will use these artificial nesting cavities to nest in.

Habitat

Bluebird habitat includes open pasture, meadow and lawn with a few trees or shrubs scattered throughout. Woodland edges along an open area will also work for them. They prefer their boxes to be at least 50 feet away from the woods' edge. Native birds that may use a bluebird house include Chickadees, Tree Swallows, Carolina Wren, Tufted Titmouse and others.

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Installing houses

Never add bluebird houses to areas that are treated with insecticides, like golf courses and agricultural fields. Bluebirds feed mostly on insects during the nesting season and provide their young with a 100% insect diet. If the insects are contaminated with insecticide, it may accumulate in the birds and harm them. Avoid installing bluebird houses in areas that have a large population of house sparrows, such as dense housing developments. Rural areas are better suited for Bluebirds.

Bluebirds are territorial and will not nest within 100 yards of another bluebird. They will allow another bird like a tree swallow to nest in a box 15 feet away from their box.



Mount the box on a post with a predator guard to prevent snakes and other predators from gaining access to the eggs or chicks in the house. The house should be mounted approximately 5 feet high on the post (about eye level) for easy monitoring.

Face the nestbox away from prevailing winds and, if possible, face it toward a tree or shrub within 100 feet to provide a landing spot for the young birds leaving the nest for the first time (fledging). It is very important that the fledglings stay off the ground during their first flight, as this keeps them safe from predators.

The Bluebird will lay one egg each day until the clutch is complete and normally have 4 to 6 eggs in a clutch. The female bluebird will start incubation after the last egg is laid, so all the chicks will hatch on the same day. The chicks will hatch in 12–14 days, and the chicks remain in the nest for 17–21 days.

Monitoring

Please don't install bluebird houses if you don't intend to monitor them. You may do more harm than good if you don't monitor your houses. Bluebirds are very tolerant of human activity. Never allow House Sparrows to nest in your bluebird houses. House Sparrows are non-native birds that are not protected by Federal Law. Other native birds that may use bluebird houses are protected.

Monitoring involves checking your nest boxes at least once a week during the nesting season and keeping data on each box each time you check on it. Do not open the box once the nestlings are 12–13 days old. This may cause them to fledge prematurely, which could lead to a poor chance of survival.

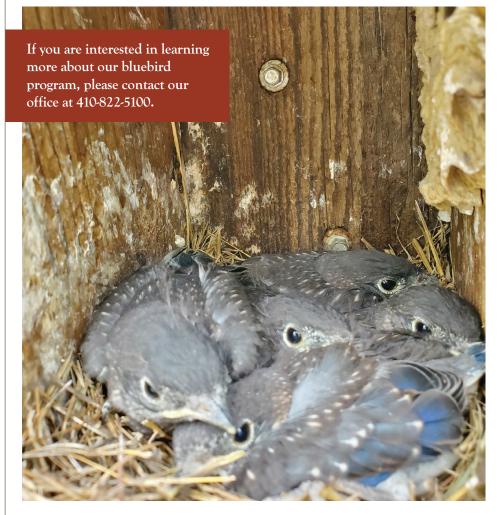
When you are performing your weekly monitoring checks, if you find nesting material wet from a storm or heavily infested with parasites, you can change it out. Place the chicks in a bucket to keep them safe. Take out the wet nest material and add dry clean grass clippings or soft pine needle. Shape the new nesting material into a cup and place it in the nest box, then return the chicks to the new nest.

You only want to monitor during calm, mild, dry days. Open the box carefully so eggs or chicks don't fall out. Songbirds have a poor sense of smell and will not abandon the nest due to normal monitoring.

Once the chicks fledge, remove the old nest and wipe out the box with a gloved hand. Do not use chemicals







to clean out the bluebird house in between broods. Bluebirds can nest more than once during the nesting season. In Maryland, they can nest up to four times if the weather cooperates. They will reuse the same box if it is kept clean between each brood. If you do not remove the old nest after the chicks fledge, there can be a buildup of parasites like lice and mites that can harm the chicks.

A good guide to have on hand if you are doing your own monitoring is *Peterson's Field Guide to Eastern Birds'*Nests. It has written descriptions of nests, the material they are made with, and great photos of nests and eggs. It is a very helpful tool when you are monitoring.

CWH monitors many bluebird trails for landowners who cannot. We will also work with landowners who want to monitor their own birdhouses and teach them the proper monitoring techniques. We install bluebird boxes on a post with predator guards for landowners in appropriate habitat.

EPA Says Three Widely Used Pesticides Driving Hundreds of Endangered Species Toward Extinction

Not so long ago, farmers would scout their fields for insects (or pay someone to do it). Insecticides were only applied if an economic threshold was reached, and this was called IPM (AKA integrated pest management). Now almost all of the corn and sunflowers that you see (and some of the soybeans) are grown using insecticide-coated seeds so that the neonicotinoid (AKA neonics) insecticides are translocated throughout the plant, posing a threat to any insect that eats the plant. However, only a small portion of the insecticide goes into the plant, The rest is water soluble and moves through the environment. Please read this article to understand why CWH does NOT use neonics or other insecticide/fungicide seed treatments. —NG

By Jonathan Hettinger

When Clay Bolt went looking for a rusty patched bumblebee, he would head to a city. The wildlife photographer said his best bet would be Minneapolis or Madison, Wisconsin, in a botanical garden or even someone's backyard—as long as it was far away from crop fields and neonicotinoid pesticides.

"It's kind of ironic. Cities have become a refuge for some of these most endangered pollinators," said Bolt, manager of pollinator conservation for the World Wildlife Fund. "Thousands of acres of monocultural row crops leave little to no room for most pollinators."

The rusty patched bumblebee has seen populations plummet with the rise of industrial agriculture and was given Endangered Species Act protections in 2017. The species, once broadly distributed throughout the eastern United States, is now largely found in small populations in parts of the Midwest.

Today, the bumblebee is among more than 200 endangered species whose existence is threatened by the nation's most widely used insecticides (one classification of pesticides), according to a recent analysis by the U.S. Environmental Protection Agency.

The endangered species range from Attwater's greater prairie chicken to the Alabama cave shrimp, from the American burying beetle to the slackwater darter. And the star cactus and four-petal pawpaw are among the 160-plus at-risk plants.

The three neonicotinoids—thiamethoxam, clothianidin and imidacloprid—are applied as seed coatings on some 150 million acres of crops each year, including corn, soybeans and other major crops. Neonicotinoids are a group of neurotoxic insecticides similar to nicotine and used widely on farms and in urban landscapes. They are absorbed by plants and can be present in pollen and nectar, and have been blamed for killing bees or changing their behaviors.

Pesticide manufacturers say that studies support the safe use of these chemicals, which, in addition to seed coatings, are also sprayed on more than 4 million acres of crops across the United States, including cotton, soybeans, grains, fruits, vegetables, and nuts. But conservation groups said that the EPA's analysis has "gaping holes" and downplays the harm to endangered species.

"These are likely the most ecologically destructive pesticides we've seen since DDT," said Dan Raichel, acting director of the Pollinator Initiative at the Natural Resources Defense

Council, an environmental advocacy group that works to "safeguard the earth—its people, its plants and animals, and the natural systems on which all life depends."

The chemicals "jeopardize the continued existence of" more than 1 in 10 endangered fish, insects, crustaceans, plants, and birds across the United States, according to the analysis by the environmental fate and effects division in the EPA's Office of Pesticide Programs.

In 1972, the EPA banned DDT, an ecologically destructive insecticide that had gained widespread attention because of Rachel Carson's book *Silent Spring*, which chronicled DDT's role in harming the environment and driving species like the bald eagle toward extinction.

The EPA—which originally approved the three neonicotinoids in 1991, 1999 and 2003—has been forced by a 2017 court settlement to assess the impact of the chemicals on endangered species.

The EPA has released the analysis with the hope of soon putting into place mitigations of the harm being caused, said Jan Matuszko, director of the environmental fates and effects division in the EPA's Office of Pesticide Programs, in an interview with Investigate Midwest. An EPA spokeswoman said the EPA



is planning to announce a proposed interim decision to re-register the neonicotinoids in September.

However, experts claim the way the agency analyzed the neonicotinoids' predominant use—as seed coatings on crop seeds before they are planted—underestimates the amount the pesticides move off where they are applied and into species' habitat.

Use of neonicotinoids skyrocketed in the late 2000s and has continued to rise, despite concerns about effects on pollinators and human health. In 2018, the European Union banned neonicotinoids because of concerns about harm to pollinators. On June 9, 2023, the New York state legislature passed a first-in-the-nation bill that would ban neonic-treated corn, soybean and wheat seeds; the bill is awaiting the governor's signature.

In addition to environmental harm, scientists have expressed concerns about neonicotinoids' effects on human health. In 2020, NRDC filed a petition asking the EPA to ban use of the chemicals on food because of risks to human health, including neurotoxicity and neurodevelopmental issues for children.

A 2022 study from researchers at 16 institutions across the United States found the chemicals in the urine of 95% of pregnant women in California, Georgia, Illinois, New Hampshire and New York. A 2023 study by the U.S. Geological Survey found neonics in more than half of wells in eastern Iowa, as well as in the urine of 100% of farmers it tested.

"It's way worse than what we're able to pay attention to," Bolt said.

The chemicals are manufactured by some of the largest agribusiness companies in the world. German chemical company BASF is the lead registrant on clothianidin; German multinational corporation Bayer is the lead registrant on imidacloprid; and Swiss company Syngenta, owned by ChemChina, is the lead registrant on thiamethoxam.

Bayer spokeswoman Susan Luke said Bayer is committed to working with the EPA to "help ensure any new measures proposed by EPA are fully informed and based on sound science."

"Bayer remains committed to the safe use of imidacloprid under label instructions; safe use that, along with other neonicotinoids, has been reconfirmed by regulators after diligent review worldwide," Luke said in an emailed statement to Investigate Midwest.

Syngenta spokeswoman Kathy Eichlin said in an emailed statement that more than 1,600 studies have been conducted that support the safe use of thiamethoxam.

"Without neonics, growers would be forced to rely on a few older classes of chemistry that are less effective at targeting pests and require more frequent applications," Eichlin said.

BASF spokesman Chip Shilling said in an emailed statement that clothianidin presents "minimal risk to humans and the environment including pollinators." He said these products "undergo many years of extensive and stringent testing to ensure that there are minimal adverse effects to the environment, including threatened and endangered species, when used according to label directions."

"We will continue to engage in extensive training and other stewardship activities to ensure that clothianidin seed treatment products are handled and applied safely," Shilling said.



EPA and the Endangered Species Act

"This is, as we know, unprecedented. I've never seen a determination that was this large in scope," NRDC's Raichel said of the EPA's analysis, adding, "EPA violated the Endangered Species Act when it approved these pesticides."

Though the EPA was founded at the height of the environmental movement ignited by *Silent Spring*, the EPA has never assessed the impact of pesticides, which includes herbicides, insecticides, fungicides and rodenticides, on endangered species since the Endangered Species Act was signed into law by former President Richard Nixon in 1973.

However, the EPA has consistently lost Endangered Species Act lawsuits for decades. In April 2022, the Biden administration pledged to take action and released an Endangered Species Work Plan for pesticides.

Under the Endangered Species Act, the federal government cannot take any action that will "jeopardize the continued existence" of a protected species. In other words, the federal government cannot drive a species toward extinction.

If the government's action is found to do so, it is called a "jeopardy" finding—which is rare. A 2015 review of seven years of consultations found only two jeopardy calls of more than 88,000 actions taken by the federal government during that time period. Jake Li, a co-author of that review prior to joining the EPA, is now deputy assistant administrator for pesticide programs at the EPA, overseeing the pesticide office.

Any federal agency that believes an action may harm an endangered species must consult with the U.S. Fish and Wildlife Service or National Marine Fisheries Service (depending on the species at risk) to see if that harm rises to the level of jeopardy—which means the species is less likely to survive because of the action.

In the case of these three neonicotinoids, the EPA released a biological evaluation in 2022 finding that these specific insecticides are likely to adversely affect—or harm—between 1,225 to 1,445 listed species, depending on the active ingredient. This is between two-thirds and three-fourths of all protected species in the U.S.

The U.S. Fish and Wildlife Service or National Marine Fisheries Service are then supposed to weigh whether that harm would rise to the level of extinction. In this instance, however, the EPA did its own analysis because the two agencies are backlogged in their analyses on pesticides, Matuszko said.

"It's going to be awhile before (the services' analyses) come out," Matuszko said. "The reason we're doing this is to get mitigations in place for listed species much earlier. We want to be able to protect those species before we go through the entire consultation process."

A spokeswoman for the U.S. Fish and Wildlife Service—which oversees implementation of the ESA for terrestrial species and freshwater species—declined to answer questions, instead referring questions to the EPA.

Genevieve O'Sullivan, a spokeswoman for CropLife America, said the trade organization that represents pesticide manufacturers appreciates EPA's work on the analysis to get mitigations in place for protected species.

"The new report provides better data for industry and growers to work with the relevant federal agencies as they determine additional mitigations for the continued responsible use of pesticides," O'Sullivan said in an emailed statement.

EPA analysis: Largest use of neonics doesn't impact endangered species

The EPA's analysis, though, found that the largest use of neonicotinoid insecticides—as seed coatings—will not cause species to go extinct. Researchers who study the environmental impacts of neonicotinoids say the EPA's analysis downplays the risks.

Justin Housenger, a branch chief in the environmental fates and effects division of the EPA's Office of Pesticide Programs, said in an interview that in the EPA's analysis, they found seed treatments to be safer than other uses of the chemicals because seed treatments have "no offsite transport," meaning they don't run off into water or drift into the air.

However, it is "widely accepted" by researchers that seed treatments do move from where they are applied, said Christian Krupke, a professor of entomology at Purdue University, who has published extensively about the environmental impacts of neonicotinoid seed treatments.

Research by Krupke and others shows that treated seeds lose up to 95% of the pesticide to the environment. This happens through seed abrasion and drift during the planting process or loss to soil or waterways through erosion. Birds can also eat treated seeds that are not properly buried.

"There is no doubt that there are important non-target effects (of seed treatments)," Krupke said.

Housenger said because the seeds are precision planted in fields, they likely don't move from where they are planted. He also said that the EPA's analysis recognized "dust off" of pesticides during planting could happen but doesn't "quantitatively assess it further."

Housenger added that seeds are physically too big for many endangered birds to eat. Further, the EPA's analysis found that unless a species' habitat was the treated agricultural field and its diet was primarily seeds, it would not face a jeopardy call, Housenger said.

"Unlike with foliar and soil applications, there's no offsite transport," Housenger said. "When you stack all these lines of evidence together, that's why you've got this relatively low number, even though seed treatment considerations and uses were considered."

The EPA's assessment disregards wellestablished research in the field, said Maggie Douglas, assistant professor of environmental science at Dickinson College.

"I don't know where that disconnect is coming from, but it does seem to exist," Douglas said. "At this point, there's quite a lot of evidence that this (movement) is happening. Seed treatments are not just staying in the field."

In recent years, the U.S. Geological Survey has found neonics in rivers across the United States, tributaries to the Great Lakes and well water and groundwater in Iowa.

"Treated seeds are no question in my mind why we're finding this," said Dana Kolpin, a research hydrologist with the U.S. Geological Survey, who has been an author on many of those studies.

A 2021 study by Kolpin and others found that clothianidin was in 68% of groundwater in northern Iowa and southern Minnesota. Clothianidin is used heavily as seed treatments in corn, but rarely used otherwise in those states.



That these chemicals are used on half of all cultivated cropland shows how widespread the pollution could be, said Bill Freese, science director at the nonprofit Center for Food Safety.

"It's a huge issue. We're talking the biggest crops in America," Freese said. "Yet EPA is convinced these seed treatments don't jeopardize species. I think that's the most glaring evidence of how bad their assessments are."

Lack of knowledge about neonic usage

No one knows the exact acreage planted with neonicotinoid treated seeds, but it is by far the largest-scale use of the chemicals, said Douglas, who has published extensively on tracking how, where and to what extent neonics are used.

As of 2012, about 150 million acres of crops were planted with neonicotinoid-treated seeds each year; the coatings are applied to the seed prior to planting. Neonicotinoids are considered systemic, which means that plants absorb the chemicals and spread them through their circulatory system. This makes flowers, leaves, nectar and pollen harmful to both pests and non-target insects.

The neonicotinoids can often be taken up by non-target plants, including wildflowers and other native plants on the edges of fields. A paper by Krupke found that more than 42% of the land in Indiana is exposed to neonic pesticides during corn planting, impacting the habitat of more than 94% of the bees in the state.

The U.S. Geological Survey, which tracks overall pesticide use by purchasing data from a third-party contractor that gathers the information via farmer surveys, stopped tracking seed treatments in 2015 because the data was too complex and full of uncertainties,



according to the USGS website. Many farmers also do not know which seed coatings they are planting, making accurate information difficult to get, Douglas said.

After the USGS stopped tracking seed treatments, recorded use of the chemicals—through applications by growers, such as spraying—fell significantly. Imidacloprid usage immediately dropped in half, while thiamethoxam use has dropped about seven-fold, and clothianidin usage has dropped more than 35-fold, USGS data shows.

Housenger said the EPA also does not know exactly how many acres currently are treated with neonic-coated seeds. An EPA spokeswoman, though, said the agency estimates that between 70% and 80% of all corn, soybean and cotton acres are planted with neonicotinoid-treated seeds. In 2023, that would range from 135.3 million to 154.64 million acres. This does not include treated seeds of other crops, including fruits and vegetables.

Coated seeds unregulated

The endangered species act is the sole way to mitigate environmental harm from treated seeds because of a loophole in how these seeds are regulated.

The EPA regulates all pesticides through the Federal Insecticide, Fungicide and Rodenticide Act, or FIFRA. Using that standard, the EPA must weigh whether a pesticide causes "unreasonable adverse effects on the environment." But unlike the Endangered Species Act, the EPA has the discretion under FIFRA to make a determination of whether environmental harms outweigh the benefits caused by the use of pesticides.

Seed coatings, however, aren't regulated by FIFRA.

The EPA exempts seed coatings because of a loophole called the treated article exemption. Originally designed so the EPA didn't have to evaluate the safety of lumber treated with chemicals for preservation, the EPA has since expanded that definition.

On May 31, the Center for Food Safety, a nonprofit that promotes environmentally safe and healthy food systems, filed a lawsuit against the EPA arguing that the agency cannot exempt coated seeds under FIFRA because they, unlike other "treated articles," have widespread devastating impacts that EPA does not properly assess.

Krupke said there is little research that supports the effectiveness of seed coating to protect corn and soybeans under typical field growing conditions. A 2014 analysis by the EPA found that soybean neonicotinoid coatings "provide negligible overall benefits to soybean production in most situations."

"We don't need to be using nearly as much of these as we're using," Krupke said. "This is an avoidable problem. In most cases, it's not helping crops, yields or farmers."

This story was originally published by Investigate Midwest, a nonprofit, online newsroom offering investigative and enterprise coverage of agribusiness, Big Ag and related issues through data analysis, visualizations, in-depth reports and interactive web tools.

ASK ANDI

By Andi Pupke, Education & Outreach Director

Q: While checking my Bluebird boxes, I found an odd egg in a Chickadee's nest. What is going on?

A: That large egg in the Chickadee's nest appears to be a Brown-Headed Cowbird's (BHCB) egg. BHCB is a stocky blackbird with a fascinating approach to raising its young. Female BHCBs do not build a nest. They put all their energy into producing eggs and may produce as many as three dozen eggs in one season.

They lay their eggs in other birds' nests, abandoning their young to be raised by other unrelated birds, usually at the expense of at least some of the host bird's young. They will lay their eggs in more than 200 species of birds' nests. This behavior is called brood parasitism. They are North America's most common brood parasite.

BHCB eggs will hatch faster than other species' eggs, giving them a head start in getting food from the parents. For example, the BHCB egg will hatch in 10–12 days, whereas the chickadee eggs will hatch in 12–13 days once incubation begins. Nestling BHCBs also develop at a faster pace than their nestmates. They will sometimes toss out the eggs and young or smother the other chicks.

Some birds such as the Yellow Warbler can recognize the cowbird eggs but are too small to get the eggs out of the nests. Instead, they will build a new nest over the top of the old nest, hoping the BHCB will not return.

Some larger species puncture the parasite's egg or throw them out of the nest. Most hosts do not recognize the cowbird's eggs as different from their own.

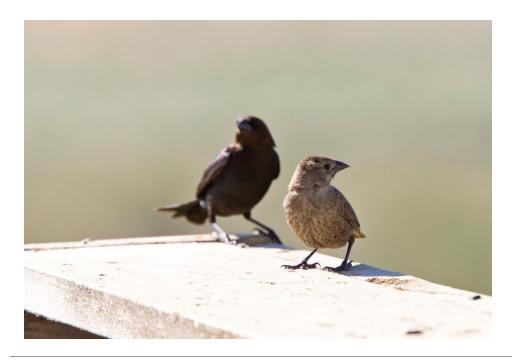
BHCBs were once confined to the open grasslands of middle North America, but they surged in numbers and range as humans built towns and cleared forest lands across the United States.

BHCBs are native to North America, but many folks consider them nuisance birds since they destroy the eggs and young of smaller songbirds and have been linked to the decline of several endangered species, including Kirtland's Warbler and the Black-Capped Vireo.

BHCBs lay eggs in a variety of nests, including those of Red-Winged Blackbird, ovenbirds, and warblers. This means they will find nests in marshes, forest floors, shrubs, and treetops. They even on rare occasion will lay eggs in cavity nests, like your bluebird box. •

Side Note:

I have monitored Bluebird houses for over 25 years and have never seen BHCB eggs inside a manmade bird house. This year I have found THREE different native bird nests inside Bluebird houses that contain BHCB eggs.





Osprey Deserve All the Help We Can Provide—Hook, Line and Sinker!



Approximately one quarter of all the Osprey in the contiguous U.S. nest in the Chesapeake Bay region. They are an indicator species on top of the food chain and will reflect changes in the quality of their environment. Ospreys face many threats, one of which may be easily addressed.

Osprey put a lot of odd things in their nests. Over decades of nest management, CWH staff members have found dog leashes, teddy bears and many other man-made items in them. If an Osprey finds an object floating in the water, they will often put it in their nest.

Sadly, they often have fishing lines and hooks in the nest—and these can become deadly. The Osprey may become entangled in the fishing line while picking up sticks and other nesting material along the shoreline and in the water. A recent survey of the Patapsco River found that half of the Osprey nests had fishing lines in them.

Where did this fishing line come from? Folks out fishing get their line snagged, their lines break, or they cut it. It is up to the person fishing to retrieve the lost hook and line. Just like camping—pack out all that you bring in. The line and hook are not only a hazard for the Osprey and great variety of wildlife but can also be dangerous to people.

Chicks in the nest have become so tangled in fishing line that they can't fly. Blood flow can get cut off to a leg or they can starve to death after becoming wrapped in fishing line. An adult female osprey got tangled in the fishing line in her nest and died hanging upside down from the nest. Her chicks died from starvation.

In June of 2023 our technicians found a female osprey that was unable to fly. Once they captured it and had it safely in a crate, we found not only fishing line wrapped around its wing; it also had a hook embedded in the bone of the wing. She had unwittingly pulled the hook in deeper while trying to fly and untangle herself from the line.

We could not safely remove the hook, so we took the bird to Tri-State Bird Rescue and Research in Newark, Delaware. They specialize in rehabilitation of native and orphaned wild birds. Sadly, the Osprey did not recover from its injuries.





The best thing we can do to prevent a tragic outcome like this is to stop it from ever happening. Clean up fishing line, hooks. sinkers and lures. Retrieve any snagged line that you have broken off or see at your fishing spots. Remember, it is your responsibility to clean up after yourself.

Osprey populations are among the few examples of conservation success. We identified the threat that DDT posed—it was affecting the eggshells of nesting Osprey. The Federal Government enacted legislation to ban DDT and that allowed their population to rebound from the brink. Today, we can help Osprey simply by cleaning up after ourselves.

The reproductive rates of the world's largest population of Osprey have fallen below DDT-era lows. Overfishing may be to blame. Check out these articles for more information.

wm.edu/as/biology/news/osprey-chicks-are-starving-in-the-chesapeake-bay-researchers-say-and-controversial-menhaden-harvest-may-be-to-blame.php

audubon.org/magazine/researchers-sound-alarm-over-chesapeake-bays-ospreys

ccbbirds.org/2023/07/14/the-center-for-conservation-biology-documents-unprecedented-osprey-nest-failures-within-the-lower-chesapeake-bay/



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Fall Seed Planting for Common Milkweed (Asclepias syriaca)

their dormancy. Planting outside in



fall will save you the hassle of in-home stratification.

Pick a planting spot with moist soils and full sun, remembering that a milkweed patch will spread once it gets started. Clear your planting area to bare dirt. Spread the seeds on bare soil and rake them in lightly or run the sprinkler to ensure good seed-to-soil contact. Make sure they are planted no deeper than the width of the seed. Seeds will move over the winter, and some will not germinate, so exact spacing is not needed.

Mark your planting area and wait for spring. Milkweed will have upward growth later in the spring, as it is a true warm season plant. Be patient—once the soil temperatures stay consistently warm, you will see seedlings begin to appear.