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The Urban Farmer

THE BUZZ

Interest in our native pollinating bees continues to grow across America.

Each year more people learn to propagate and provide habitat for them. We are pleased to be a part of the education process and nothing thrills us more than hearing from people who have newly discovered the wonders of the bee world. Lisa and Brian will again attend the MidAtlantic Nursery Trade Show in Baltimore to introduce more East Coast garden centers to our bee products. We will also have a booth at the Central Environmental Nursery Trade Show in Columbus, Ohio.

February will find us at our booth at the Seattle Garden Show. Knox Cellars "Canned Bees" will be featured in the spring Gardeners' Supply catalog, and the "Humble Bumble Home" continues to be a popular item in the Gardens Alive national catalog. Territorial Seed, Harmony Farm Supply, Peaceful Valley Farm Supply, and Nichol's Garden Nursery also feature our products in their catalogs, while more than 100 retail stores have our "Bring Back the Bees" products display. Things are getting busy here!

SOME NEW MASON BEE OBSERVATIONS

The new pollination garden at Knox Cellars provided some interesting insights this year. I planted all native Pacific Northwest plants and have been watching to see which insects like which plants. The purple blossom of the camas plant was a favorite food of the Mason Bees, as were the hanging blossoms of the nodding onions. Out in the regular flower garden they were also frequently seen on bachelor buttons.

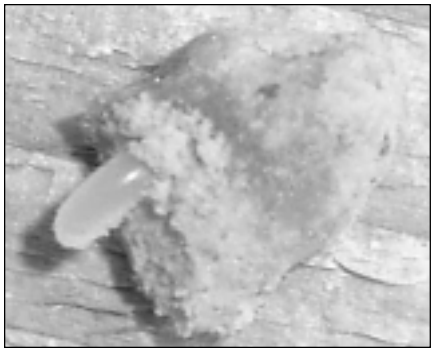
The big pollination garden thrill for the year was provided not by bees but by butterflies. We don't see many butterflies in our city anymore, but somehow this summer both monarchs and red admirals found us. Not in huge numbers mind you, but still they were there for days at a time feeding on our natural offerings. Try a pollination garden at your home. It will benefit the bees, the butterflies, the birds, and you.

REST STOP

I was making the long 500 mile drive to Portland, Oregon, on a lovely spring morning. I began to grow sleepy at the wheel and so pulled off the freeway at a wide spot and got out of my car for a stretch. Beside the road stood a giant apple tree in full bloom. It grew beside the remnant of a house foundation, no doubt condemned for the freeway construction. The engineers had spared the old tree and it stood in all its spring splendor, thousands, perhaps millions of its pink blossoms urgently pleading to be pollinated. I spent ten minutes peering up through its blossomed branches. Not a bee did I see. Silent testimony to the demise of the feral honey bee, and the absolute responsibility we all have to provide habitat for and education about North America's native bees.

EGGS & LARVAE ARE SENSITIVE IN CELLS

This photo shows a newly laid egg inserted into the lump of pollen and nectar. Soon it will be a larvae feeding on the sweet provisions. At these stages you must be gentle with your nesting tubes because a sharp blow will knock the egg or larvae from the food and it won't be able to get back. It's OK to move nesting habitat before they reach maturity in September, but you must be very gentle. After they have reached maturity they won't be harmed by rough handling. We send them across the country by mail and UPS and they come through unscathed.



GREETINGS!

This cute and fuzzy male is emerging from his long winter hibernation and eyeing the outside world for the very first time.

THE HOLE IN A BOX TRICK

We are constantly asked how you can clean out a wooden Orchard Mason Bee nest block between the time the hibernating bees emerge and the block is being filled with new nesting cells. Here is a great way to get the bees emerged from that old nesting block but prevent them from re-nesting in that block.

You simply put the wooden nesting block into a cardboard box. Then tape the box tightly shut with opaque tape, drill a 5/16-inch hole into the cardboard making sure that the hole is clear and open. Put the box outside beside your bee colony. The box will warm in the sun, the bees will emerge in the dark and seeing the light pouring through that one tiny hole, they will all find their way out of the box to start their normal life. They will not go back into the cardboard box but will begin nesting in the new clean nesting habitat that you have provided in your colony. Now you can take the old, dirty, and now empty, block out of the box, re-drill it, sanitize it, and dry it for use the next spring.

BEE TUBE BANDITS

Mindy Gage wrote from Oregon City, Oregon, to tell us about a species of ground squirrel that has discovered her System nesting tubes filled with developing bees. The squirrels chewed through the bird netting she had tacked over the opening of her bee box, knocked the tube container to the ground and feasted on the contents of the tubes. She lost most of next year's crop of bees. Mindy will put heavy hardware cloth over the front of her box containing the nesting bees next year. We recommend 3/4-inch mesh.

BEES AMONG THE ROCKS

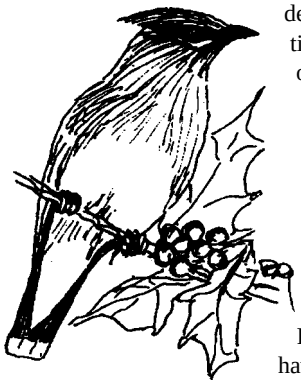
This summer our family had a marvelous adventure on a Smithsonian Study Tour through the Dinosaur National Monument in Colorado and Utah. We first traveled to Vernal, Utah, and then to Colorado, where we joined the good people of Adrift Adventures on a four-day float trip down the amazing canyons of the Green River. The first day of our adventure was spent in and around Vernal looking at dinosaurs and Indian pictographs (1000-year-old rock paintings). That afternoon as we followed a trail at the base of a cliff rich with pictographs, Lisa's sharp eyes spotted bee nests in a series of small holes in the rock. Sure enough, both Mason bees and Leafcutters had been at work building their nest cells in holes somehow created in the rock by wind or water erosion or perhaps by the bees themselves. We took a picture of the nests to show you. Do you know how the holes got there, and what bee species might have used them?

A TENNESSEE NATURALIST

Tim Ramey of Linden Tennessee wrote us a long interesting letter describing his adventures with Mason bees and others in the Tennessee River Valley. Here is a tidbit.

"There is one small solitary wasp we have here called a tenant wasp. Like the Orchard bee they also must have a cavity in which to nest. I cut small sections of reeds, which as you know, are hollow sections with natural divisions separating each hollow. These are perfect to use. I put them on the porch and watch these little workers stock and seal these reeds." Tim, you can bet those wasps are stocking their cells with some nasty insect that would otherwise be eating in your garden. Tim goes on to talk about the Orchard Mason Bees that for years have nested in "an old hay barn across the road." Unfortunately the barn was torn down this year but he is providing nesting holes for the bees with our system tubes and with a reed that he cuts "down by the river." Thanks Tim, we enjoyed your letter.

BIRDS, BERRIES, & BEES



On this warm May morning I have been reflecting on the interdependance of life forms in our garden. We are enjoying a visitation from a large flock of Cedar Waxwings that have come to feed on the bright red berries on our holly tree. We are charmed by their crested beauty and their perky manner as the flock numbering at least forty birds darts from the holly to the lilac bush, over to the bird bath and then up to the oak trees. They are beautiful creatures that have enhanced our garden for several days. They represent just one of the pleasures in a year-round sequence of natural happenings.

Each Christmas season we get great pleasure from a fulsome harvest of holly boughs laden with perfect red berries. For years we have marveled at the abundance of the berries. We have so much lovely holly that we place a "free box" of boughs along the sidewalk by our house. The box is signed "Deck Your Halls" and passersby empty it of its berry-laden boughs almost daily in the days before Christmas.

Last December as I was trimming the tree, it finally dawned on me. We have all of those berries because of the Orchard Mason bees that nest near by each spring. This spring, to test my theory, I waited eagerly for the holly tree to bloom. Sure enough, when the tiny white blossoms appeared, Orchard Mason bees were to be seen everywhere on the tree harvesting the pollen and nectar. The Orchard Mason bees are the reason for our tremendous holly berry crops and thus are to be thanked for the visit by the beautiful Cedar Waxwings.

THE BUMBLEBEES RETURN

For the second year now a great orange-tailed queen bee found the tiny hole under the shop window that leads through a plastic tube into the Humble Bumble Home above my workbench. For the second consecutive year I have had the pleasure of watching those beautiful bees building their comb and living their life cycle right before my eyes.

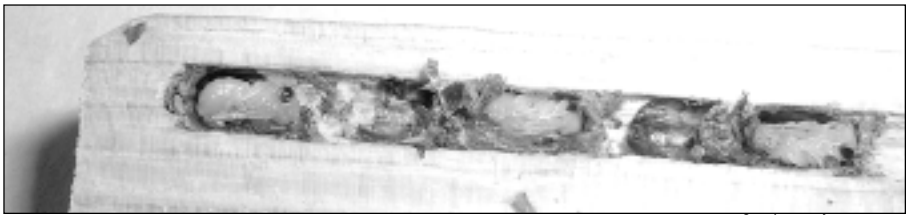
I also had colonies develop in the two Humble Bumble Homes attached to the north side of the garage and the house. I have decided that smell is of vital importance in attracting bees to boxes. Once a colony nests in your bee box your odds of having success the next year increase greatly. The smell of the used box seems to attract the queen bee the next spring. I now have two boxes that have been occupied for three years in a row. If you have a box and have not had luck attracting a family of bumblebees yet, you might try to find some wax from a old bumblebee colony and rub it all over the entrance and inside of the box. Also be sure to place the box in the shade or on the north side of the house.

MORE BUMBLEBEE TALK

Marvin McCoy is a bumblebee propagator in Seattle. He wrote "I have one of your bumblebee houses and had bumblebees nest in it voluntarily for the past two years. Both years wax moths got into the hive and by early August the hive became very weak. This year the bees are doing better and I have seen several queen bees and a large number of drones up to this date. Do you know of any way to fight the wax moths?" I responded that bumblebees are afflicted by a great number of ugly nest associates, the wax moth being but one of them. All of these parasites slowly wear down the strength of the colony until it fails. It is just nature's way. I think the life of a bumblebee colony is a race to get the new queens raised and the males hatched before all the assailants bring down the colony. McCoy reports that his bees, black with yellow stripes, always post a guard bee right inside the entrance looking out and checking everything that comes in the door.

Bumblebee on a pieris bloom; we regret we lost the name of the person who sent us this digital image.

OSMIA TEXANA CRESSON



My friend Rex Welland who lives in Victoria, British Columbia, Canada, was kind enough to send me a start of a new bee this spring.

He has identified this bee that occurs naturally in his garden, as *Osmia Texana Cresson.* Because it is fond of blackberry and raspberry blossoms and does a great job of pollinating them he calls it the "Berry Bee." Rex has propagated them for several years and has increased his colony nicely.

The Berry bee is smaller than the Orchard Mason, a member of the subgenus *Helicosmia Thomson,* it is related to *Osmia coerulescens* that I mention in "The Orchard Mason Bee."

While Michener's great book "The Bees of The World" states that *O. texana Cresson* nests in old burrows and cells of *Anthophora occidentalis Cresson* (a ground nesting bee). Welland propagates them in small holes drilled in wood. I have had excellent success in increasing the population. I attached the wood nests which Rex shared with me to a large block of wood drilled with 125 4-mm holes. Rex sent me 16 plugged holes. 115 are now plugged in the large block and there are eight of the original holes replugged.

I split out one of these refilled holes on September 6. Inside the 3-5/16-inch deep hole I found seven cells lined up one after another, each one with a thin fibrous cocoon far flimsier than those of the Orchard Mason. These cocoons I could easily pick apart with tweezers, and in each one was a white pupae just 5/16-inch long (see picture above).

Rex tells me that these bees, like *Osmia californicus,* are parsivoltine. Some of them overwinter the first year as larvae, and the second winter as hibernating adults. Others overwinter as adults the first year to emerge in the spring. The fact that the bees I was observing are in the pupal stage means that they are going to continue to metamorphose and in about a month will reach the adult stage, ready to hibernate and emerge next spring. If you have small leafmulch-plugged holes which fail to emerge the first year, do not give up hope. They might be parsivoltine bees.

These bees emerge after the Orchard Masons have completed their cycle and so they are another alternative pollinator for your garden. If we continue to have success, and after we have learned more about them, we may be offering them for sale.

HORNET TALES

We have previously written about the important role that wasps play in our ecosystem. Cousins of the bee, wasps feed their larvae a diet of meat, therefore, wasps are the great hunters of the *Hymenoptera* clan. They relentlessly pursue other insects to feed their babies. Ironically, the adult wasps are fueled by nectar just as the bees are. In contrast, our friends the bees are peaceful gatherers. Their babies will eat only pollen and nectar, and so the bees spend their days gathering nature's sweets.

Without the wasps we would all be knee deep in insects, our crops would be consumed by insects, and our world would be in great trouble.

Of the wasps that live in my world I think the huge black and white bald-faced hornet is the most interesting. It builds a basketball sized paper nest which it hangs from a tree or shrub. Despite their size and stinging potential, bald-faced hornets are remarkably gentle, allowing visitors to pass close to the nest, and only becoming aggressive when the nest is attacked. Here are a couple of recent bald-faced hornet adventures reported to us.

Chuck Nafziger, of Seattle sent us this delightful story.

"In the spring of 1993 I was working in my front garden. I stepped under and into a large rhododendron in order to do some pruning. As I was cutting branches I noticed angry insects buzzing me. I quickly but carefully got out of the rhodie. The insects followed me but did not attack. Soon they returned to their spherical nest in the rhododendron.

"I had found a nest of bald-faced hornets. The next day I cautiously approached the nest again. The hornets would fly past minding their own business until I was about one meter from the nest. When I got too close they buzzed me until I backed off.

"The nest got bigger and bigger as the summer progressed, but the hornets caused no problems. One day I noticed hornets flying to a willow in my backyard. In previous years the willow had been infested with aphids. Out of curiosity I stuck my head into the low thick branches of the willow. There were no aphids there, but instead I was buzzed by hornets. There was no nest in the tree, they were acting as though they were protecting the tree as their territory. Their aphid farm? I also realized there were no aphids on my apple trees and very few on my other plants. The first time in 15 years that I could say that."

Mr. Nafziger goes on to report that eventually when the cold weather came the hornet colony died off. "In some ways I miss the hornets, they are fascinating insects. I am convinced they are effective predators of insect pests. I know I will no longer automatically destroy wasp or hornet nests like I was taught as a young man. The 'live and let live' philosophy just feels better. My year with the hornets rests in my memory as an enjoyable and worthwhile experience."

THE NEST MOVERS

I received an urgent phone call from Mrs. Roy Wagner, who wanted help identifying a large black and white insect occupying a ball-shaped paper nest hanging from a bush. It was easy, she had a growing colony of Bald-faced hornets in her back yard. To her credit her question was not how to destroy them, but how to safely move them to another location. After some discussion we settled on a plan. Her husband would wait until dark, slip a large plastic bag over the nest, seal it, cut off the branch, and transport it to the nearby woods where he would tie the branch to a new limb, slip off the bag and leave. Sounded great in the planning.

The next day her husband called me with the report. He had waited til 3 AM, the coldest and darkest part of the night, he had slipped up on the nest with a flashlight, gently secured the bag over the nest, clipped off the branch and transported the now buzzing bag 1000 feet away to the neighboring woods. He tied the protruding branch to a low tree, slipped off the bag and got out of there quickly.

The next morning he went to the original nest site to clean up debris from the cutting and found a number of confused and angry hornets circling about the now vacant nest site. So angry in fact, that two of them attacked and stung him on the face. His neighbor reported disoriented hornets flying in circles around her yard. Our friend then went back to the woods to check on the large paper nest. There were no hornets to be seen using it.

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A LETTER "TO KNOX PEOPLE"

This was how the letter began, it was written in a neat, but shaky hand on small lined paper by 78-year-old Ralph R. Roberts. The letter was so charming that we present it here largely unedited.

"To Knox People, I have a 1000 questions, but first of all there is a little story I have to tell, so pull up a chair, pour a cup of coffee, and have a good laugh.

"Just after I received the Humble Bumble Home my son calls and says, 'Dad, I think I have a bumblebee nest in my compost pile.' So off I go with a few jars, and I cut a couple pieces of aluminum siding to slide under the jars, a little digger and my wife's tea strainer, and the HumbleBee box, plus the book by Mr. Griffin. Want to make sure I do it like the book says. When I got to my son's place the bees were active. The little book says there are 15-25 of these little guys. Well, after trapping 53, things started to slow down. Now I'm ready to go for the gold. Well, the little book says they don't go very deep. Now after tearing that pile apart about four feet deep, lo and behold there they were, two round piles about six inches in diameter like two large handfulls. I would guess at well over 500 bees.

"Now what do I do? I get a stick and poke at the pile and they came out of there hell bent for election right at me. All in all I counted 32 stings. After running around the yard to elude these guys I went back to the nest to look for the queen and out she came, never seen a bee so large. I tried to trap her in one of the jars and she got away. The little book says they don't fly far. We chased that gal at least 300 yards and up into a large maple tree over 90 feet tall.

"The little book says if she's disturbed she won't come back, so we released those 53 that were trapped and just to show their gratitude for being freed, more stings. Mean little guys! Going back to the nest who comes flying back? You guessed it. Two more tries, no queen, finally she came back for the 4th time and I got lucky.

"Getting ahead of myself, between trips I went for the cone. This cone was so large pieces had to be broken off to fit it in the Humblebee house. I just grabbed it with about 40 bees on it and placed it in a box on the ground along with the queen. Within a week those little guys had chewed a cotton pad up in little pieces that completely covered the cone, and they patched the pieces back onto the cone. Amazing.

"Oh! About those stings. I have arthritis in my wrist so bad couldn't write with it. Two days later there wasn't a sign of any soreness and up til now it's as good as new.

"Quite a story huh? No lies, all true. By now your coffee is getting cold."

Whew, is Robert a tough guy or what? The moral to the story must be, Don't poke 'em with a stick.

DIGITAL CAMERA DELIGHTS

The amazing new digital cameras are resulting in some wonderful bee pictures coming our way. My very favorite picture of an Orchard Mason Bee is the great shot on page 1, sent to us by Nancy Ness of Mason County, WA.

Another great shot (below) is this wonderfully graphic photo of nesting cells lined up one after another in a reed split to show the cells. This is the perfect depiction of the nesting habit of *Osmia cornifrons,* the Hornface Bee. It was sent to us by Tim Stoehr. An outstanding photograph.

THE NEST MOVERS cont.

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It seemed obvious that the hornets, with their navigation systems programmed to the home location, were not able to re-program to the new, but nearby, location. I feared that they must wander aimlessly looking for home until they died, and probably the growing larvae in the nest would also die without parental attention.

I admired these folks for their strong sense of environmental responsibility and thought the tale was concluded. I was wrong, Another day passed and Roy called again. The hornets were rebuilding the nest in the same location in that shrub. They had been at it for a day and it was already three inches round. He had also checked on the original nest out in the woods and he was pleased to report that there were some foragers coming and going from its entrance.

AN OFFICE VISITOR

The Knox Cellars home office is a tiny cluttered room above the workshop. It enjoys a wonderful view out across Bellingham Bay with the San Juan Islands in the background. In the summer it gets a little warm up here and so I always leave the top window opened a bit and the office door open so that the warm air will draft up and out the window.

One June morning I noticed a large long-legged wasp, we call them mud daubers, carefully fly in the open window, past my head as I sat at the computer, and out the office door behind me into the upper storage area of the shop. A few minutes later out the window it went, no doubt on a foraging mission of some sort. These large wasps feed their larvae on spiders, and rear them in a small home of mud that they affix to the rafters of attics or other sheltered places. Before long my wasp friend returned in the window, past my head, and out the office door into the storage area. Soon I found her nest and for the rest of the month and into August she was a regular passer-through in my office. She has raised her brood now and I don't see her. I kind of miss her company, but I don't miss the spiders that she no doubt eliminated.

Mystery Bee

Someone sent us a digital picture of a bee they wanted us to identify. Gee, we don't know… anyone else have a clue?

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