

Spring hive inspections reveal winter's secrets

We have now reached the time of year where we know that either our hives have made it through most of the winter or that they have been lost.

This extraordinarily warm winter has been such a contrast to last winter where hives needed to be large to make it through the brutal cold. This year was great for small hives as well as for those larger ones. That is, provided the varroa mites did not get them in the fall.

It became apparent this winter that while many hives were doing very well enjoying the relatively warm weather, a significant number of hives had already died. The reason for this goes back to our unusually warm fall. Here's what happened.

Most of us treated our hives to remove varroa mites last summer between late July and the end of August. Up until that time, mite levels in hives were not

too bad. The aim was to get rid of almost all the mites to allow the colonies to build up a good population of mite-free, fat, healthy bees that would live for six months or so over the winter.

There were some beekeepers who, for some reason, did not treat their hives for mites. Sometimes you can get away with this, more frequently, however, you cannot.

Normally, the cold weather in late September and October brings a halt to the bees' production of brood (young) as they concentrate on food storage and sealing up the hives with a glue-like substance called propolis, for winter. But last fall was not normal. The weather stayed warm for many

weeks. Bees continued to rear brood, and developing brood is what mites need to feed and reproduce. Those hives that had not been treated for mites, suddenly had a very rapidly rising mite population.

Worse still, mites, (who are like a giant tick to a bee), bring many kinds of viruses and bacteria into the hive, infecting their hosts. During the cold nights the bees had to huddle together (cluster) to keep warm. With all the bees in the hive packed closely together, viruses spread quickly. The sick bees do not stay in the hive, rather they leave the hive to die, saving their sisters the task of carrying out their diseased bodies. Within a week or two, the populations in these hives had crashed from being full of bees to being very low, leaving perhaps a hundred pounds of honey uneaten.

At the same time as this

was happening, the first frost in September brought an end to the flow of the majority of nectar into the healthy, mite-free hives. As the days were still nice and warm, bees were still flying, desperately seeking any source of food they could find. Soon they found hives whose population of mite and virus infested bees had crashed leaving all this food almost unguarded. In a matter of days they would rob the honey from the hives, overwhelming the low, sickly population. In the process of moving the huge bounty of honey, thousands of virus carrying mites climbed aboard the robber bees and were carried back to hives once free of mites. With brood rearing still going on because of the warm weather, mites now boomed in population in these hives, too.

Over the next month or two these hives started to die. But by this time the

weather had become too cold for them to be robbed out.

Fortunately, not all hives suffered this fate. The majority of our hives stayed relatively mite-free and have done very well this winter. As long as they do not run out of food before the nectar flows start, they will be big and strong by the end of May.

For those that did lose their hives, it's time to restock hives with new bees.

I have already sold-out of my first consignment of 3-pound packages of bees with queens arriving in late April. Fortunately, I have a second shipment arriving in early May. Other beekeepers prefer to stock their hives with larger nucleus colonies, also called nucs. My nucs will be ready in early June, and they are selling out fast.

Those beekeepers who lost their hives last year after not treating for mites,

should reconsider their approach to managing hives and mite levels. For those of us who did treat but still lost hives, the lesson to take on board is keep checking mite levels in the hives, even after mite treatments, and if necessary, treat again late in the fall.

I will again be at the Bangor Garden Show April 15-17. I will be giving talks on Saturday and Sunday. Stop at our booth and say hello and pick-up some honey and other bee related products!

Peter Cowin, aka The Bee Whisperer, is president of the Penobscot County Beekeepers Association. His activities include honey production, pollination services, beekeeping lessons, sales of bees and bee equipment, and the removal of feral bee hives from homes and other structures. Check out "The Bee Whisperer" on Facebook, email petercowin@tds.net or call 299-6948.

For birds, singing is an act of territorialism, not art

Birds don't think about much, mostly just food and sex. Despite the simplicity of such a life, bird communication can be quite complex. Birds are renowned for their vocal abilities, but they use lots of visual cues, too. Perhaps nothing is more obvious than the crests sported by many species.



BOB DUCHESNE
GOOD BIRDING

I got to thinking about this while staying at Maple Hill Farm Inn in Hallowell. It's my home away from home while I'm serving in the Maine legislature. Feeders draw a goodly variety of birds to the front lawn, and a parade of crested birds flit past my window. At any one time, there may be blue jays, cardinals and tufted titmice in view, sporting more exotic and colorful headwear than you'd find at a Shrine Circus.

Crests are widespread in the bird world. In Maine, consider the great-crested flycatcher and the double-crested cormorant. Many crests are so small that they are only seen when the bird is agitated. Ruby and golden-crowned kinglets are named for the color of their crests, but these are seldom visible except when the bird is expressing alarm or annoyance. Some crests are enormous, especially among exotic birds such as cockatoos and peacocks. A few crests are permanently upright, but most can be raised and lowered at will.

The ruffed grouse is a game bird that understand-

ably fears humans. But on its breeding territory or in its much-loved dust bath, a defiant grouse may give you the full-crested display, demanding you leave. If nothing else, crests make a bird look bigger than it is.

We're accustomed to crests that stream backward. Most crested birds in North America migrate, so crests must be at least somewhat aerodynamic. In the tropics, many birds travel neither fast nor far. Crests that extend forward or bristle prominently from the forehead are more common among birds that never worry about a headwind. Ground birds are also more likely to have significant crests. Various western quails have silly top-knots. The American roadrunner of the desert southwest may be fleet of foot, but he's not fast enough to worry about airstreams.

By the way, which is faster, a coyote or roadrunner? See answer below.

There must be significant evolutionary advantages to crests, because bird ancestors had them, too. Many dinosaurs had crests that predated feathers. Then and now, crests could be made out of keratin, a hard protein that is found in hair, fingernails and rhinoceros horns. The cassowary in New Guinea is a flightless bird that sports a keratin crest.

Some birds, primarily fowl, have fleshy crests called combs. Wild turkeys even have wattles to accompany their combs. Once again, birds that stay in groups are often in need of more communication tools. A



MAPLE HILL FARM, HALLOWELL

A tufted titmouse perches on a bird feeder.

crest signals attitude with much less effort than it takes to crow or sing. Up-crested crests can show bravado; lowered crests can display defeat and dejection. Depressed birds and humans alike are said to be "crestfallen."

Now then, despite the cartoons you watched well into adulthood, coyotes can run at least twice as fast as roadrunners. The roadrunner can hit a top speed of only about 20 mph. Maybe their crests slow them down.

Bob Duchesne serves as vice president of Maine Audubon's Penobscot Valley Chapter. He developed the Maine Birding Trail, with information at mainebirding-trail.com. He can be reached at duchesne@midmaine.com.

New galaxy formed near the dawn of the universe is spotted

A team of astronomers from Yale University and the University of California have used the Hubble Space Telescope to shatter the cosmic distance record by spotting a galaxy 13.4 billion light years away. Galaxy GN-z11 formed only 400 million years after the Big Bang, so researchers are seeing what was taking place near the dawn of the universe.



CLAIR WOOD
MAINE SKIES

to its practical limits, so any new discoveries will have to await the James Webb Space Telescope scheduled for launch in 2018.

Focus on the planets

Mercury will make its best appearance of the year in April. At the start of the month, Mercury shines low in the west as the evening twilight deepens, and by mid-month, it will be at its highest point remaining visible from about an hour after sunset until twilight ends.

Venus rises in the east only a half-hour before the sun and disappears from view after the first week of April.

Mars rises in the east around midnight as the month opens and by 10:00 p.m. at its close. Telescopes will reveal remnants of the north polar cap and a variety of surface markings.

Jupiter rises in the southeast as darkness falls and remains prominent throughout much of the night. Surface markings will be readily visible and its four major moons will continue their dance about and across the face of the planet. April 6 is noted as a particularly active night for watching the moons and their shadows.

Saturn follows Mars into the eastern sky a half-hour after the Red Planet where

the two make a watchable pair all month. Saturn's ring system is open to viewing by telescope as is its major moon Titan.

Neptune barely makes it above the eastern horizon late in the month and will be very difficult to spot, and Uranus is lost to view all month.

April events

1 Sunrise, 6:17 a.m.; sunset, 7:02 p.m.

2 Saturn rides high on the southern horizon an hour before sunrise with Mars just lower to its right. Antares completes a triangle being situated to the lower right of Saturn or the lower left of Mars.

7 New moon, 7:24 a.m.

The moon also is at perigee or nearest approach to Earth today.

8 Mercury is to the lower right of the thin crescent moon on the western horizon shortly after sunset.

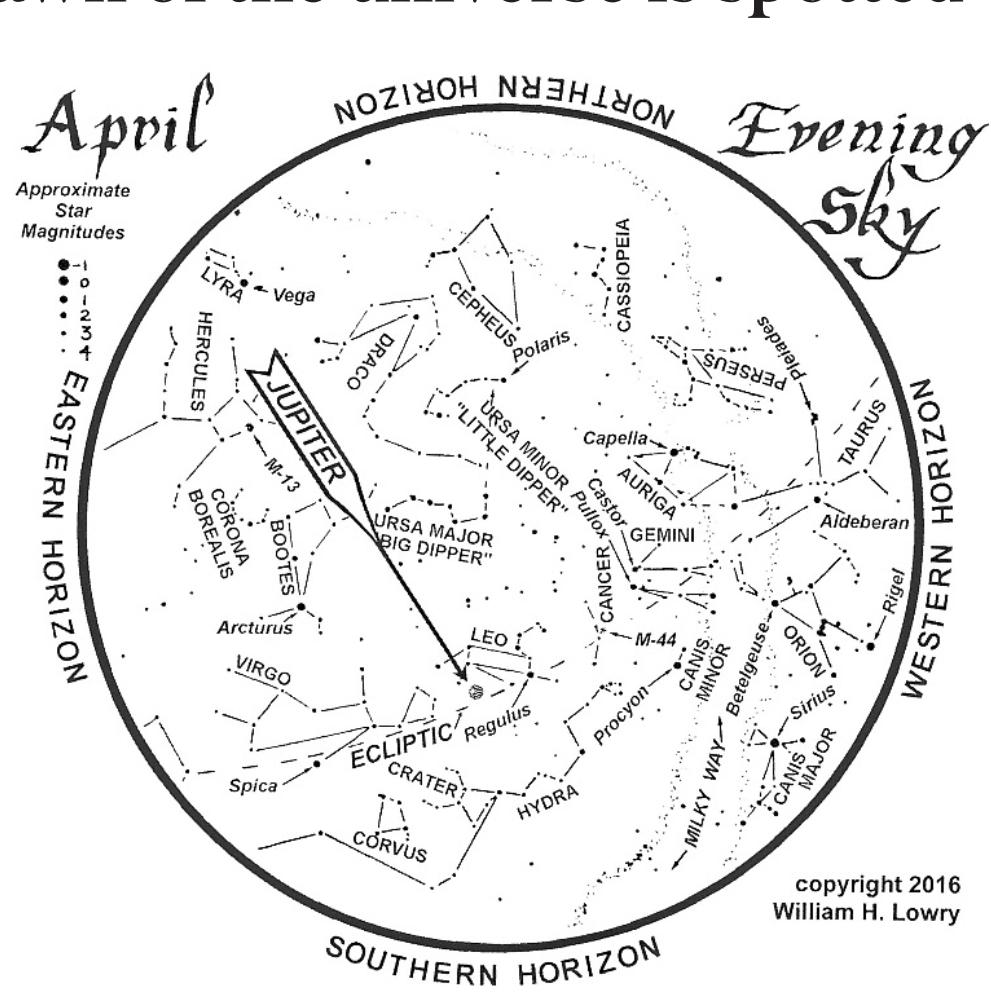
10 Aldebaran, the 'red eye' of the Bull is very near to the lower right of the moon at nightfall.

14 Moon in first quarter, 11:59 p.m.

17 Jupiter is situated very near to the upper right of the moon in the early evening.

18 The sun enters Aries on the ecliptic.

19 The sun enters the astrological sign of Taurus but astronomically has just entered Aries.



21 The moon is at apogee or farthest away from Earth today.

22 Full moon, 1:25 p.m.

The full moon of April is variously known as the Pink Moon, Egg Moon or Grass Moon. This should be the peak night for the Lyrid meteor shower how-

ever the full moon will obscure all but a few of the very brightest.

25 The moon, Saturn and Mars form a triangle in the southern sky at dawn.

Mars is below the moon while Saturn is just to the lunar left.

29 Moon in last quarter,

11:29 p.m.

30 Sunrise, 5:27 a.m.; sunset, 7:39 p.m.

Send astronomical queries to Clair Wood at cgmwood@aol.com or care of the Bangor Daily News, Features Desk, P.O. Box 1329, Bangor, Maine 04402.

"We've taken a major step back into time, beyond what we ever expected to be able to do with Hubble," said Pascal Oesch of Yale University. "We see GN-z11 at a time when the universe was only 3 percent of its current age."

Hubble has been pushed