

Where did the ‘Harvest Moon’ come from?

Last month, as a beautiful Harvest Moon graced the skies did you ever wonder how the Moon came to be? There have been several theories proposed over the years.

The most widely accepted is the ‘Big Whack’ theory proposed by William Hartmann in 1975. He said the primitive Earth was struck a glancing blow by an object about the size of Mars knocking off a massive fragment that became the Moon.

A paper in the latest issue of Nature Geoscience gives support to this theory with one new twist. Examination of rocks brought back by Apollo astronauts found them identical to Earth rocks except for a slight excess of one lighter element in the lunar rock. The authors speculate that the Earth sustained a direct hit rather than a glancing blow and this caused the object to disintegrate entirely while stripping the Earth of its crust. The resulting debris ring eventually coalesced into the primitive Moon while raining materials back to the surface of the Earth. Heavier elements preferentially returned to Earth causing lighter elements to be higher in lunar rocks.

Focus on the planets

Venus, Saturn, and Mars grace the evening sky while Mercury and Jupiter light up the predawn hours.

Mercury starts October about a third of the way up on the eastern horizon 45 minutes before sunrise. It sinks lower with each passing day and becomes lost in the Sun’s glare by midmonth.

Venus starts the month low in the southwest at sunset and creeps a little higher each night. By month’s end Venus is a third of the way up on the horizon about an hour after sunset.

Mars rises in the south as Venus and Saturn sink towards the horizon. Look for Mars about an hour after sunset on Oct. 7 when it is just to the lower left of the Moon. Mars is growing steadily fainter and smaller so few features can be made out even with a telescope.

Jupiter emerges in the east a half hour before sunrise nestled alongside of Mercury. While Mercury soon vanishes from the morning sky Jupiter continues to climb rising over two hours before the Sun at month’s end.

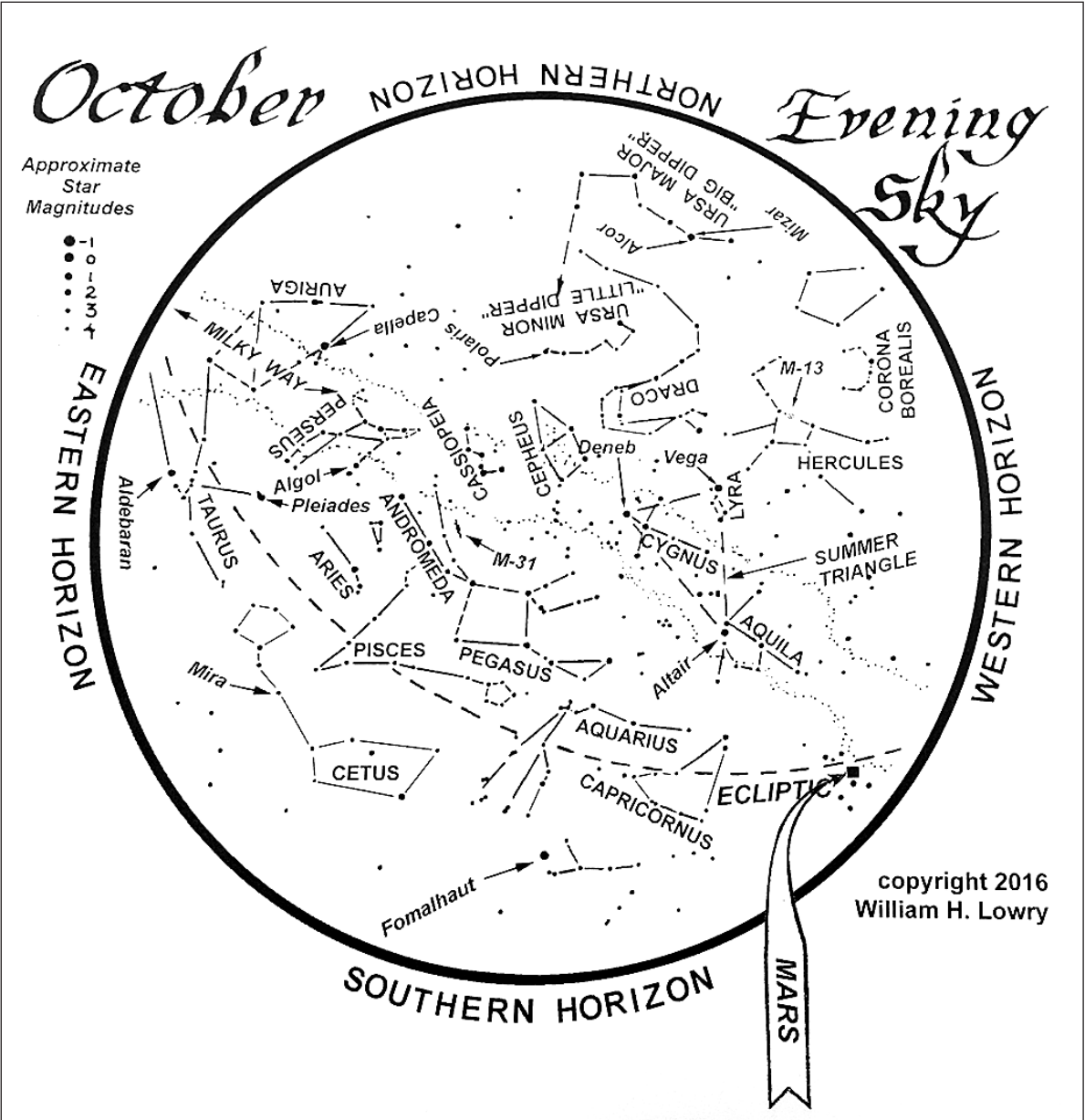
Saturn starts the month less than a third of the way up on the southwestern horizon and steadily sinks all month. While far less vivid than in months past, Saturn’s rings remain open for viewing and the major moon, Titan, plus several others are easily spotted with a good telescope.

Uranus technically is in view all night but it will be most easily spotted high in the southwest around midnight. Look for its blue-green disk among the stars of Pisces.

Neptune is in the southwest rising two hours before Uranus where its blue-gray disk is nestled among the stars of Aquarius. A current finder chart for Neptune and Uranus may be found in the October issue of Sky & Telescope.

October events

- 1 Sunrise, 6:33 a.m.; sunset, 6:17 p.m.
- 3 Venus is low in the southwest as darkness falls with the thin crescent Moon to its upper right.
- 4 The Moon is at apogee or farthest distance from Earth today.
- 5 Saturn is just to the left of the Moon with orange-red Antares immediately below the pair.
- 7 Look for Mars to the lower left of the Moon about an hour after sunset.
- 9 Moon in first quarter, 12:33 a.m.
- 11 Mercury and Jupiter are extremely close together on the eastern horizon a half hour before sunrise.
- 16 Full Moon, 12:23 a.m. The full Moon of October is known as the Hunter’s Moon. The Moon is at



perigee or closest approach to Earth. This fact, coupled with the full Moon, could make for an abnormally high tide called a spring tide.

19 The Moon will occult or cover Aldebaran, the ‘Red Eye’ of the Taurus the Bull during the overnight hours.

21 The Orionid meteor shower peaks during the predawn hours. The waning gibbous Moon may obscure some sightings but look

for about 15 meteors per hour in the southeast out of Orion.

22 Moon in last quarter, 3:14 a.m. The Sun enters the astrological sign of Scorpio.

27 Antares, Venus, and Saturn are in an ascending diagonal line on the southwestern horizon a half hour after sunset.

30 New Moon, 1:38 p.m. The Moon enters Libra on the ecliptic.

31 All Hallow Eve or Halloween,

a cross-quarter day marking the midpoint between the fall equinox and winter solstice. The Moon is at apogee for the second time this month. Sunrise, 7:12 a.m.; sunset, 5:26 p.m.

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

Birds

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“Grouse had very good nesting conditions, but this past winter was mild,” Sullivan said. “So [grouse] took it on the chin in terms of predators. I think the number [of birds] coming into spring wasn’t as high [as they could have been].”

Sullivan said that when a winter is extremely harsh, birds suffer, but predators also struggle to find food. When a winter is mild, the predators can find food sources (such as grouse) more readily. An average snowfall and average winter temperatures tend to favor the birds.

The DIF&W is conducting research and has put radio transmitters on hen grouse to track their mortality through the year.

“This past spring, [we learned during the study that] there was higher hen mortality during the nesting season, and even after the eggs hatched and [the hens] were on the ground with chicks, there was higher mortality for those breeding hens,” Sullivan said.

During 2014 and 2015, hen mortality during breeding season — largely attributed to predators — was about 30 percent, he said. This year, it was 40 percent.

Sullivan said that during those first two years of the study, 45 percent of the grouse died of natural causes each year, and another 15 percent were shot during hunting season.

Grouse tend to lay 10 to 12 eggs each, so there are typically plenty of young birds taking the place of those that die. Still, if an additional 10 percent of hens died statewide — as they did in two study areas — that would likely result in hunters having a bit less success.

Another resource that helps inform biologists as to the presence of grouse: A survey that moose hunters are asked to fill out when their session of moose season has ended. By compiling the totals from that survey, biologists can track how many grouse are seen or shot, per 100 hours in the woods, by



Maine Department of Inland Fisheries and Wildlife biologist Kelsey Sullivan shows off a ruffed grouse that was caught in a trap used to study the birds at the midcoast Maine survey site in September 2014.

those hunters.

Statewide, that number has fluctuated over the years. The 2015 total shows that across the state’s moose hunting territory, hunters saw an average of 43 grouse per 100 hours afield. After the predation that took place last winter, it’s reasonable to expect that this year’s moose hunters will see even fewer grouse. In 2014, moose hunters saw 52 grouse per 100 hours.

The number of American woodcock — which hunters also will target during the season — is expected to be healthier, Sullivan said.

Woodcock typically nest a couple weeks earlier than grouse, beginning in late April. Sullivan said that each year, biologists count woodcock at “singing grounds” where mating activity begins. That helps them predict how many of the migratory birds might be in Maine at that time.

“I think conditions were favorable for woodcock, and the singing ground survey ... numbers were up quite a bit this year,” Sullivan said. “And they have different predator pressures in the winter [than grouse do]. The predation

pressures [they face] are wherever they are in the wintertime, not in Maine, because they’re migratory.”

Earlier this year, Allen said that while many hunt grouse while riding roads, woodcock hunting is more attractive to another set of hunters.

“[Woodcock hunting] is all about dogs. Probably 93 percent of the harvest is taken over decent bird dogs. And it’s as good as it gets,” Allen said. “The woodcock is the consummate game bird for even amateur dog handlers, because they hold so well and their habitat is fairly easy to recognize and they’re predictable.”

No matter the abundance of birds this year, Sullivan knows bird hunters will head afield to enjoy the season. And he understands why.

“From personal experience, you’re out on the ground or walking a lot, you’re seeing all sorts of other things, you’re enjoying the crisp morning air,” Sullivan said. “You’re definitely in the thick of it. I think that is pretty appealing. And the excitement of flushing birds and working with dogs, too, is a big appeal.”

Duchesne

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Concurrently, there are birds from New Brunswick and Quebec that are flying south along the Maine coastline. We have our own set of bays they must fly over. All of these bird rivers converge in certain places, and sometimes the morning after a big flight can be pretty spectacular.

One particular spot in southern Maine has an autumn reputation. After a night of migration, whole flocks of songbirds discover that they’ve settled down on one of Casco Bay’s islands by mistake. They become anxious to return to the mainland, and this crossing

tends to concentrate at Sandy Point Beach on Cousins Island.

Derek Lovitch owns Freeport Wild Bird Supply. He has made it a habit to visit this spot over the years. Mornings where there is likely to be high bird traffic generally follow a clear night of north-west breezes. And so it was last Monday. The day dawned with a 40-degree temperature and a 13-mph breeze from the northwest. For four hours, Derek counted the birds crossing the point.

Identifying a flying warbler at a distance is difficult under the best of circumstances, but Derek is good at it. He spotted 265 northern parulas making the crossing. There were 122 black-

throated green warblers, 103 yellow-rumped warblers and 71 blackpolls. Most American redstarts have migrated by now, but 24 made the crossing that morning. Palm warblers are late migrants, and many haven’t left yet, but Derek counted 47. Northern flickers are easy to pick out, because of their large size and white rumps. Derek noted 115 crossing to the mainland.

Altogether, Derek tallied 45 species and 1,348 individual birds crossing the causeway at Sandy Point Beach during the four hours. That may seem like a lot, but he reports that this wouldn’t even make the top 10 list of days he’s spent on that beach.

A few rarities turned up.

Dickcissels are grassland birds of Middle America that don’t breed in Maine or anywhere near Maine. I’ve never seen one here. Derek got two during the morning. I’m envious. He counted 10 Tennessee warblers. That’s about nine more than I’ve seen all year. My envy grows. There were 345 birds that were too distant to identify. My envy shrinks. Counting this river of birds is starting to sound like a lot of work.

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Holyoke

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the globe is very complicated,” Kantar said. “There are moose populations that are clearly increasing. There are moose populations that are clearly decreasing. There are populations that are colonizing in areas they’ve never been in, like the agricultural areas of North Dakota.”

And those populations are being influenced by a variety of factors, including, in some places, winter ticks.

But even here in Maine, it’s inaccurate to make blanket statements about the herd, he said.

“While we’ve had high calf losses in western Maine, in northern Maine, where we’ve seen [the population] pretty stable up there, right now we don’t have as much of a concern,” Kantar said. “But we’re studying that, and now we’re going back into our second year [of research] there.”

And while the moose herd in the western part of the state is struggling to deal with the effect of winter ticks, Kantar pointed out that the problem was likely influenced by the abundance of moose on the landscape to begin with.

“We know that the more moose that you have over time, [that] has likely created a scenario where winter ticks have done really well,” Kantar said. “Our winter tick population has grown with our moose population through the decades. This is not a one-year thing where all of a sudden, one year, something’s happened.”

Moose

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time providing these veterans an incredibly special experience in northern Maine.”

This year 23 of the 25 special moose hunt permit holders tagged a moose, according to Keri Hentosh who, with her husband David Hentosh, owns Smoldering Lake Outfitters in Bridgewater.

For the past several years Smith Farms has worked exclusively with the Hentoshes to bring the hunters into their broccoli fields.

“It’s really a once in a

Hire a guide

Early this week, I got my hands on the Maine Department of Inland Fisheries and Wildlife’s annual Research & Management Report. If you’ve never seen the report, you should try to get your hands on one. There’s an amazing amount of data to consider.

In the section on moose, I pored over the success rates of moose hunters in various Wildlife Management Districts.

Statewide, 72 percent of hunters succeeded in their hunts in 2015, as it turns out.

But here’s something to consider: If you really, really want to fill your tag on a Maine moose hunt, there seems to be a pretty simple way to do so.

Hire a guide.

I know, I know. We’re Mainers. These are our woods. We know exactly what we’re doing when we head there. We’re also thrifty. And reluctant to ask for help from others.

Here’s how that plays out: Resident moose hunters were only successful 69 percent of the time last year. Nonresidents — there were 265 of them — filled their tags 97 percent of the time.

“The higher success rate of out-of-state hunters, as compared to residents, may be attributed to the higher proportion of out-of-state hunters using registered Maine guides for their hunts,” Kantar wrote in the report.

Word to the wise for future hunters.

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lifetime opportunity for these veterans,” Keri Hentosh said. “It’s so great to meet these guys from all over the country and watch them enjoy the hunt and have the opportunity to talk to each other and open up about their military experiences.”

As far as Smith is concerned, it’s a win-win.

“I can’t think of a group of people more deserving to go on a special hunt than our veterans,” she said. “It’s good for everyone. It’s good for us because it’s taking care of the moose damage, and it’s good for the vets who get to experience the moose hunt.”