



PHOTO COURTESY NASA

M15 is one of the oldest star cluster in the Milky Way galaxy, located 33,600 light-years away in the constellation of Pegasus.

Stars over Sisters

By Paola Mendoza
Columnist

Generally speaking, constellations in evening autumn skies tend to be dimmer than those on display during the winter, spring, and summer seasons. This rule of thumb does not apply, however, to our featured constellation for October.

In October Pegasus, the Flying Horse, is already well up in the eastern sky by about 8 p.m. local time. To find it look for a giant square marked by Scheat, Markab, Algenib and Alpheratz, stars of approximately equal brightness.

Alpheratz was originally a member of Pegasus but became the brightest star in Andromeda when modern constellation boundaries were fixed in 1930. Few other stellar patterns have such a recognizable shape. It is the seventh-largest constellation, occupying an area of 1,121 square degrees on the celestial sphere.

Pegasus' brightest star is Enif, an orange supergiant body estimated to have a mass 12 times greater and a size 370 times larger than our sun. It is thought to be about 20 million years old and may, if it has enough mass, end its life in a supernova explosion in the next few million years.

While Pegasus contains several deep sky objects, almost all of them are dim, far off galaxies. The lone exception is M15, one of the finest globular star clusters in the sky. This ancient collection of stars is one of the oldest and densest in our galaxy, being an estimated 12 billion years old. Astronomers suspect there may be a black hole at its center. M15 has a diameter of 175 light-years and is 33,600 light-years away.

Pegasus plays a key role in one of the best-known legends of Greek mythology. As the story goes, the hero Perseus rescues princess Andromeda, daughter of King Cepheus and Queen Cassiopeia, from Cetus, the dreaded sea monster. To achieve this, however, Perseus first had to slay Medusa for her head, which had the

power to turn anyone to stone who gazed upon it.

The deed done, Perseus had to hurry back to the Aethiopian coast, where Andromeda was chained to a rock, with his newly acquired weapon. Perseus arrived just in time on the back of Pegasus to show Medusa's head to Cetus, turning him to stone.

All of these characters in the story are constellations located in approximately the same part of the sky — even the head of Medusa is there!

The planet Mars, now brightening in the constellation of Pisces, will reach opposition on October 13. Opposition is an alignment of the earth, sun, and a superior planet, with the earth being in the middle. This is the best time to view a planet because it is visible all night, reaching the meridian at midnight local standard time.

Actually, Mars will be closest to the earth on October 6, when the two planets will be separated by just 38.6 million miles. From this distance the apparent size of the planet's disk will be 22.6 arc-seconds. This may be close enough for observers with medium-sized telescopes to see the polar cap and/or glimpse some dark surface markings. Image quality will depend in large part on the stability of the atmosphere.

The time between Mars oppositions is 26 months, far longer than for any other planet in the solar system. After this month's opposition, the next favorable alignment won't come around until September 2035. So, don't miss this opportunity!

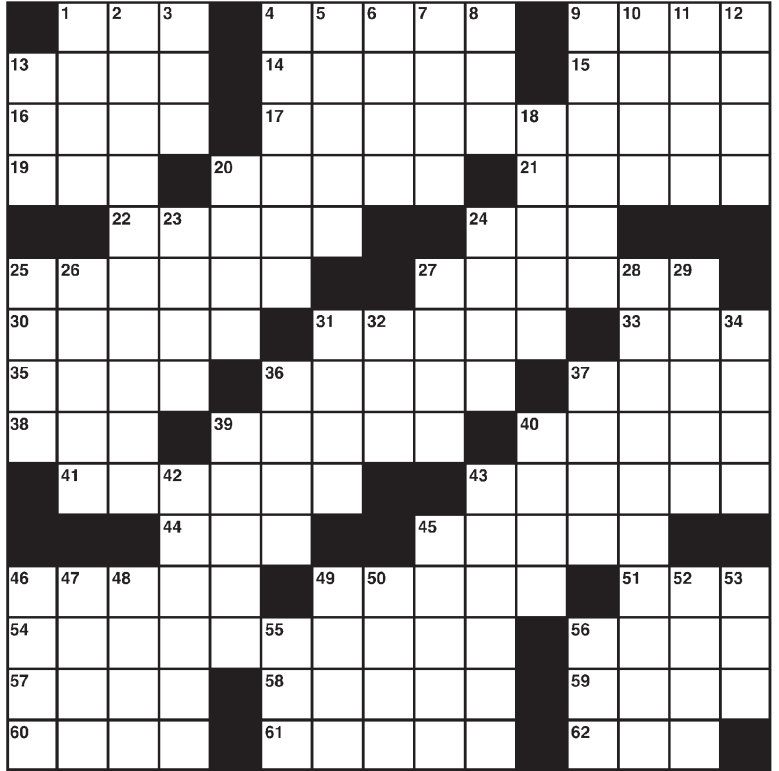
The moon is featured prominently this month. On October 1, the full Harvest Moon is on display. It's a harvest moon because it occurs closest to the autumnal equinox, which fell on September 22 this year. Then on October 31, another full moon rolls around. When two full moons pop up in the same month, the second is said to be a blue moon.

But it gets better. Because the second full moon this month is on October 31, it becomes a rare Halloween blue moon. Spooky!

The Nugget Newspaper Crossword

By Jacqueline E. Mathews, Tribune News Service

- ACROSS**
- 1 Sharp poke
 - 4 Most Saudis
 - 9 Snatch
 - 13 Sickly-looking
 - 14 Stogie
 - 15 All the __; currently popular
 - 16 Small brook
 - 17 Excludes from the group
 - 19 Spanish shout
 - 20 Bride's purchase
 - 21 English city
 - 22 Makes progress
 - 24 Cuomo's title: abbr.
 - 25 Pieces of kindling
 - 27 Most modern
 - 30 Give a speech
 - 31 Sci-fi visitor
 - 33 Rubber ducky's pond
 - 35 Summer blowers
 - 36 __ on; select with a mouse
 - 37 Phi __ Kappa
 - 38 __-tac-toe
 - 39 Traditional Arapaho home
 - 40 Ferries & dories
 - 41 Acquires knowledge
 - 43 Odds maker
 - 44 Dyer's vessel
 - 45 __ to; toast
 - 46 Montezuma, for one
 - 49 Weak
 - 51 Org. for Panthers & Jaguars
 - 54 Coming in again
 - 56 In __ straits; desperate
 - 57 Rugged cliff
 - 58 Seat for several
 - 59 Martian vehicles
 - 60 Gap
 - 61 Father children
 - 62 Emerald or onyx
- DOWN**
- 1 Slammer
 - 2 Loyalty
 - 3 TV's "The Fresh Prince of __-Air"
 - 4 Oak tree droppings
 - 5 Ascends
 - 6 Ballplayers' negotiators: abbr.
 - 7 Saloons
 - 8 Mrs. abroad
 - 9 Mourn
 - 10 Level a building
 - 11 Over-the-hill
 - 12 Good Queen __; Elizabeth I
 - 13 Paid athlete
 - 18 Circus performer
 - 20 Water barrier
 - 23 Performs on Broadway
 - 24 Square one
 - 25 Like a baby's skin
 - 26 Fail to keep up with
 - 27 Pleasant
 - 28 Sharp utensil
 - 29 __-frutti
 - 31 European peaks
 - 32 "Let sleeping dogs __"
 - 34 Military installation
 - 36 Copper-plated coin
 - 37 Welcome blessing
 - 39 Expanse of land
 - 40 Recipe verb
 - 42 Get even for
 - 43 Intelligent
 - 45 Tango or rumba
 - 46 Curved beam overhead
 - 47 Four score minus eighty
 - 48 Short-necked duck
 - 49 On the house
 - 50 Jewelry store purchase
 - 52 Word on a gift tag
 - 53 "__ Miserables"
 - 55 Lessen; recede
 - 56 Used a shovel



Created by Jacqueline E. Mathews

— Last Week's Puzzle Solved —

S	E	W	N	S	O	D	A	S	T	G	I	F		
H	A	H	A	P	R	I	C	E	H	O	L	E		
E	R	I	E	U	N	B	E	A	T	A	B	L	E	
A	S	S	P	R	O	S	A	M	I	S	S			
	P	L	A	N	T		D	U	E					
S	T	E	E	D	S		T	E	N	S	E	S		
E	A	R	N	S		G	R	E	A	T	S	E		
P	H	I	S		B	R	I	E	F	S	P	R	Y	
T	O	N		R	O	A	D	S		P	E	E	V	
	E	G	O	I	S	M		P	L	A	C	E	D	
		U	G	H			N	A	O	M	I			
S	L	O	T	H		F	O	R	D		A	S	H	
C	A	P	I	T	A	L	I	S	T		A	L	L	Y
O	V	E	N		R	E	B	E	L		F	L	A	P
T	A	N	G		M	E	S	S	Y		T	Y	P	E

©2020 Tribune Content Agency, LLC
All Rights Reserved.

This Week's Crossword Sponsors

WELL PUMP SERVICE Pump & Electrical Contractor

**PRESSURE TANKS • CONSTANT-PRESSURE SYSTEMS
FREQUENCY DRIVES • MOTOR CONTROLS • PUMPS**

A Division of Sisters Owned


PEAK PUMP & MOTOR CCB#178543

24-HOUR EMERGENCY SERVICE **CURT'S ELECTRIC**

Zach 541-420-8170

You're retired. Your money isn't.

Call to learn why consolidating your retirement accounts to Edward Jones makes sense.



Karen Kassy, Financial Advisor
541-549-1866

Edward Jones
MAKING SENSE OF INVESTING

The **GEMSTONE** COLLECTION

Energize your skincare ritual...

the **BALANCER**

the **ENERGIZER**

the **NOURISHER**

NOW AVAILABLE! STOP IN FOR FREE SAMPLES!

492 E. Main Ave. • Open Mon.-Sat., Flexible Hours
Karen Keady Esthetician/Owner • 541-480-1412

Essentials
Skincare



SistersEssentials.com