

Stars over Sisters

By Alex Burroughs
Correspondent

Piscis Austrinus can be found in the lower southern sky in October, below the zodiacal constellations of Aquarius and Capricornus.

The name means the southern fish in Latin. First catalogued by Ptolemy in the second century, the constellation is made up of mostly faint stars, except for Fomalhaut which has an apparent magnitude of 1.16.

Fomalhaut, also known as Alpha Piscis Austrini, denotes the mouth of the southern fish and is the eighteenth brightest star in the sky. It is a white main sequence star that is 1.92 times more massive and 16.63 times more luminous than our sun and lies approximately 25 light-years from Earth.

In addition, Fomalhaut is the third brightest star in our sky (after Pollux in Gemini and the sun) with a confirmed object orbiting it. This extrasolar planet has an estimated 2,000-year orbital period.

Also within Piscis Austrinus, many deep-sky objects can be seen. Hickson Compact Group 90, a tight cluster of 16 galaxies, is found here. The three largest members of the cluster are elliptical galaxies NGC 7176 and NGC 7173 and spiral galaxy NGC 7174. Photographic evidence indicates that the spiral galaxy is being ripped apart by the gravitational forces of the two large elliptical galaxies. Eventually, it will merge together with its neighbors.

The galaxy cluster is about 100 million light-years away.

Although the annual Orionid meteor shower spans a two-week period beginning about October 16, peak activity will occur

in the early morning of October 21. The maximum rate of meteors is normally about 25 per hour from a dark location, but this year a waning gibbous moon will probably cut that number in half.

The Orionid meteors are caused by debris from Comet Halley that enters earth's atmosphere and are incinerated, resulting in a streak of light. The Orionids appear to radiate from the elbow of Orion the Hunter.

The month of October starts with dark skies with a new moon on October 1. As the moon waxes the first quarter will be on October 8 and the full moon is October 15. The month will end with a new moon as well, giving us dark skies for Halloween.

In early October keep an eye out right at sunset for Venus in the western sky. It can be found in the constellation Libra just above the horizon. The ringed planet Saturn will also be setting soon after sunset in the constellation Scorpius.

Mars is still a highlight of the evening sky in Sagittarius. Toward the end of the month Venus and Saturn will be very close to each other in the sky, setting in the southwest around 7:30 p.m. Mercury and Jupiter can be seen a few moments before dawn, peeking through the sun's glare. Using either binoculars or a telescope Uranus can be seen in the constellation Pisces all throughout the month.

To learn more about the night sky, be sure to come to the final Stars Over Sisters Starwatch event of the year on October 8, at 7 p.m. The free event is put on by the Sisters Astronomy Club at the Sisters Park & Recreation District building, 1750 McKinney Butte Rd.

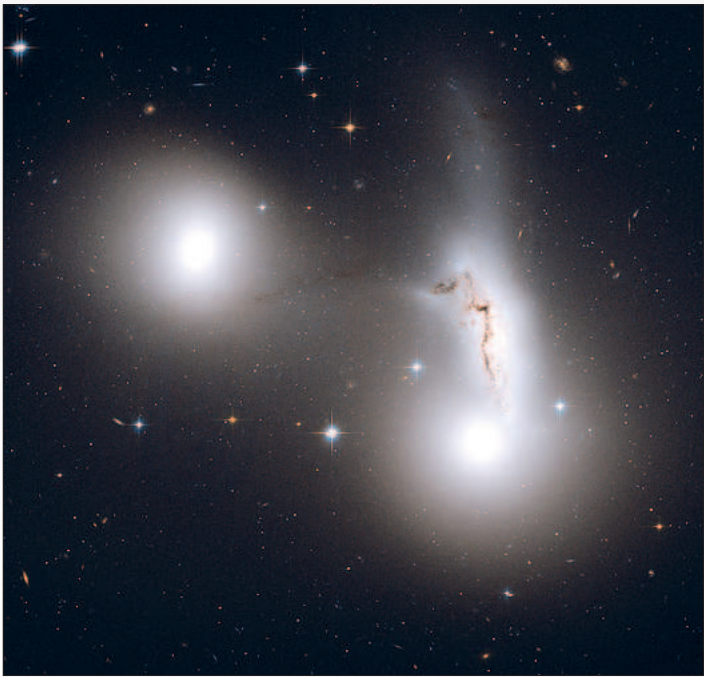


PHOTO COURTESY NASA

Two large elliptical galaxies ripping apart a spiral galaxy in the constellation of Piscis Austrinus.

The Nugget Newspaper Crossword

By Jacqueline E. Mathews, Tribune News Service

- ACROSS**
- 1 Part of a sleeve that encircles the wrist
 - 5 Gathers crops
 - 10 Make eyes at
 - 14 Zone
 - 15 Very willing
 - 16 Ship's jail
 - 17 Like poorly cooked venison
 - 18 Foretelling
 - 20 Cotton gin man — Whitney
 - 21 Peddle
 - 22 — and raves; carries on
 - 23 Manicurist's concerns
 - 25 Luau dish
 - 26 Cinnamon and nutmeg
 - 28 Preserved food in containers
 - 31 Window pieces
 - 32 Too flashy
 - 34 Prefix for print or represent
 - 36 Inflammation suffix
 - 37 Gets dirty
 - 38 Gush forth
 - 39 Ping-Pong table divider
 - 40 Set —; reserve
 - 41 Europe's longest river
 - 42 Status —; sign of wealth
 - 44 Dark red
 - 45 Take —; delete
 - 46 Beekeeper's reward
 - 47 Nasal passage
 - 50 Scrabble piece
 - 51 — up; misbehave
 - 54 Unable to get out and about
 - 57 Competent
 - 58 Hole-making tools
 - 59 Forward dive
 - 60 Trudge along
 - 61 Man or boy
 - 62 Cornered
 - 63 Cincinnati team
- DOWN**
- 1 Pet bird's home
 - 2 Russia's — Mountains
 - 3 Womanliness
 - 4 Actress Wray
 - 5 Fights off
 - 6 Deserves
 - 7 Elderly
 - 8 — XING; crosswalk sign
 - 9 — Lanka
 - 10 Acquire
 - 11 Big smile
 - 12 Dryer residue
 - 13 Breakfast order
 - 19 Close friend
 - 21 Competes
 - 24 Highest cards
 - 25 Cushions
 - 26 TV's "— City"
 - 27 Meat spreads
 - 28 Religious sect
 - 29 Possessing job skills
 - 30 San —, CA
 - 32 Hockey score
 - 33 Lung contents
 - 35 Waterbird

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Created by Jacqueline E. Mathews 9/28/16

— Last Week's Puzzle Solved —

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

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- 37 Blemish
- 38 As — as a boil
- 40 Mistreat
- 41 Weathercock
- 43 Cool dessert
- 44 Shaped
- 46 Door hanger's metal piece
- 47 Pretense
- 48 Des Moines, —
- 49 No longer valid
- 50 Melody
- 52 Lump of dirt
- 53 Danson & Cruz
- 55 Lunch order
- 56 "— Father, Who art in..."
- 57 Mar.'s follower

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