

CHRONOLOGY
**NATURE
 RAMBLINGS**
 by Frank Thone



The Date of Christmas

CHRISTMAS comes on Dec. 25 because ancient pagans had a midwinter feast to celebrate the beginning of the sun's return northward after its southward journey that brought gloomy, short days and discouraging cold. Christianity, supplanting paganism, made the transition easier by setting the date of the midwinter feast as the traditional date of Christ's birth.

This connection between Christmas and the winter solstice is rather generally accepted; even the most orthodox of churchmen now freely state that there is no dependable record or tradition exactly dating the great event in Bethlehem, and that the Christmas celebration did not begin until about three centuries after Christ's time.

But an even more intimate connection, a closer parallel, between Christian teaching and pagan solar lore is traced by the Abbé Chauve-Bertrand of Nevers, France, well known for his studies on astronomical questions as relating to the evolution of the calendar. Ancient pagan religious observance even celebrated the birth of the "New Sun" from a celestial virgin.

This virgin of the skies was none other than the constellation Virgo, one of the twelve groups of stars comprising the Zodiac. During the harvest season, when the girls went forth into the fields to help in the reaping, Virgo stood high in the heavens, as the ruling constellation.

But by the time midwinter came, Virgo was just dipping beneath the horizon, so that the sun to issue forth from her bosom and to be cradled in her arms. Hence, says Abbé Chauve-Bertrand, the myth of the New Sun born of the Virgin. Pagan midwinter processions in Arabia and Egypt carried the image of the sun as a new-born child, while

Priests chanted, "Korah, the Virgin, has given birth to Aion."

The sun cult was most strongly represented by Mithraism during the first Christian centuries, and Christian teachers argued from Mithraic analogies in establishing the supremacy of their religion. St. Ambrose called Christ "our New Sun," and St. Cyprian referred to him as the "True Sun." Even in the ancient Hebrew prophecies the coming of the Messiah was hailed as the advent of the "Sun of Justice."

Science News Letter, December 18, 1937

OCEANOGRAPHY

Diver Under 320 Tons Pressure at 420 Feet

MAX E. NOHL, diver, who descended to a depth of 420 feet in Lake Michigan recently, withstood a pressure on his body of 320 tons more at that depth than he did at the surface.

Atmospheric pressure of 15 pounds to the square inch adds up to about twelve tons when all the 3500 square inches of the average man's skin are considered. At 420 feet the pressure is about 197 pounds to the square inch.

Dissolved gases in the human blood

● RADIO

December 23, 4:15 p. m., E.S.T.
THE CHRISTMAS STAR—James Stokley
 of the Franklin Institute.

December 30, 4:15 p. m., E.S.T.
THE YEAR IN SCIENCE—Watson Davis,
 Director of Science Service.

In the Science Service series of radio discussions led by Watson Davis, Director, over the Columbia Broadcasting System.

stream and body cells enable us to resist the pressure of the atmosphere. At shallow depths, compressed air helps a diver to resist water pressure, but as the pressure increases, nitrogen from the air dissolves in the blood stream, causing trouble if the diver comes to the surface too rapidly.

"Bends," or caisson disease, a common and serious illness of divers, is caused by collecting nitrogen bubbles in the capillaries. These bubbles act as blood clots. Diver Nohl, to prevent this, used an atmosphere of oxygen and helium, which causes fewer bubbles in the capillaries on ascending to the surface.

JUST ISSUED

December 1, 1937

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1827 - 1905

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He killed Indians relentlessly when menaced; yet he considered creation of an Indian empire to halt encroachment of white settlers on the "rightful owners" of the land. He never hesitated to pistol, club, or butt anyone who crossed him; yet the Governor of California singled him out to suppress the Vigilante rioters of 1856. He stood armed to fight Abolitionists and believed ardently in State rights; yet his privately-raised regiment is credited with saving the Union at Gettysburg and in the Seven Days Battles.

All these seeming inconsistencies become an orderly part of the picture of the day in Isaac J. Wistar's forceful writing of his autobiography. It is the last word from a leader of a vanished American generation.

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