The story of solstice

Solstice means "sun standing still." In the Northern Hemisphere, it is the first day of winter, the shortest day and longest night of the year, occurring on the 20th, 21st or 22nd of December.

Earth is nearer the sun in January than it is in June – by almost 5 million km (3 million miles). Earth leans slightly on its axis. It is 23 degrees and 27 minutes off the perpendicular to the plane of orbit. This planetary pose is what causes all the variety of our climate, since it determines how many hours and minutes each hemisphere receives sunlight.

When it is winter solstice in the Northern Hemisphere, the sun is directly overhead at noon only along the Tropic of Capricorn, on which lie Sao Paulo, Brazil, southern Madagascar, and northern Australia.

To pagans, winter solstice was the night that the Great Mother Goddess gave birth to the new sun, restarting the cycle of the seasons. It is also called Yule, the day a huge log – the Yule Log – is added to a bonfire, around which everyone would dance and sing to awaken the sun from its long winter sleep. In Roman times, it became the celebrations honouring Saturnus (the harvest god) and Mithras (the ancient god of light), a form of sun worship that had come to Rome from Syria a century before with the cult of Sol Invictus. It announced that winter is not forever, that life continues, and an invitation to stay in good spirit.

Older than the pyramids

The oldest written reference of a festival to mark the return of the sun is made to the Mesopotamians. They held a 12-day festival to help the god Marduk tame the monsters of chaos for one more year. There are hundreds of megalithic structures throughout Europe and sacred sites in the Americas, Asia, Indonesia, and the Middle East are oriented to the solstices and the equinoxes. Even cultures that followed a moon-based calendar seem to have understood the importance of sun-facing seasonal turning points. In England, there is Stonehenge, and in Ireland, Newgrange, a huge circular stone structure estimated to be 5,000 years old, older by centuries than Stonehenge and the Egyptian pyramids. Seahenge, a Bronze Age timer circle,