

## Mountain Skies

### July and August 2001

**A**s we bask in the buggy nights of summer, the Milky Way arches overhead to add cosmic glitter to that of the lightning bugs. Scorpius, with red Antares, and Sagittarius, with the distinctive teapot asterism, are rich with star clusters, nebulae, and the signature of our galaxy's central supermassive black hole in radiation outside our visible band.

Much of the material between us and the "Monster in the Middle," as Chet Raymo dubs our galaxy's black hole in an essay in *The Soul of the Night* (Ruminator Books, St. Paul, Minn., 1996), is gas and dust. The gas is a mix of hydrogen and helium whose nuclei were produced in the first few minutes of the existence of the universe, and heavier elements such as carbon, oxygen, nitrogen, silicon, and others that were forged in the nuclear reactions of stars like our own sun and in the spectacular explosions, supernovae, of giant stars. Some of the atoms of carbon, oxygen, and silicon

bond together to create interstellar dust grains fractions of microns (1000th's of millimeters!) across. The dust blocks the light from the glowing gas and stars in the disk of our galaxy and is easily discernable as dark swaths across the bright starfields of the Milky Way.

#### THE SERPENT BEARER

This year we have the opportunity to explore a rather obscure if ancient constellation, Ophiuchus (off-ee-yOU-kuss), the Serpent Bearer. Legend claims that "Offices" represents Apollo's son Aesculapius, who was such a gifted physician that he could restore the dead to life. Since this threatened to deprive the underworld of sufficient population, Jupiter killed him, but placed him in the sky as compensation. He holds in his hands a serpent that is the only split constellation in the sky. Serpens Caput, the serpent's head, is just south of (below) Corona Borealis (see *Mountain Skies*,

September/October 1999) and includes the lumina, the brightest star in the constellation, Unkalkhai (you-nuck-al-HAY-ee). The body, Serpens Cauda, stretches from Sabik (SAY-bick) at the southern end of Ophiuchus past Scutum and nearly to Aquila's wing (see *Mountain Skies*, September/October 2000). It is thought that the healer is shown with the serpent because of the ancient association of snake charmers and healers that is still reflected in the medical symbol the Caduceus, the snakes entwined around a rod.

This entire region will provide many beautiful sights, even with binoculars. In Serpens Caput, M5 is a globular cluster that is among the oldest structures in the galaxy. It is 27,000 light years distant, but can be discerned with unaided eyes in extremely good conditions (with extremely good eyes!). If you have a chance to see it, compare it to M13, the globular cluster in Hercules (see

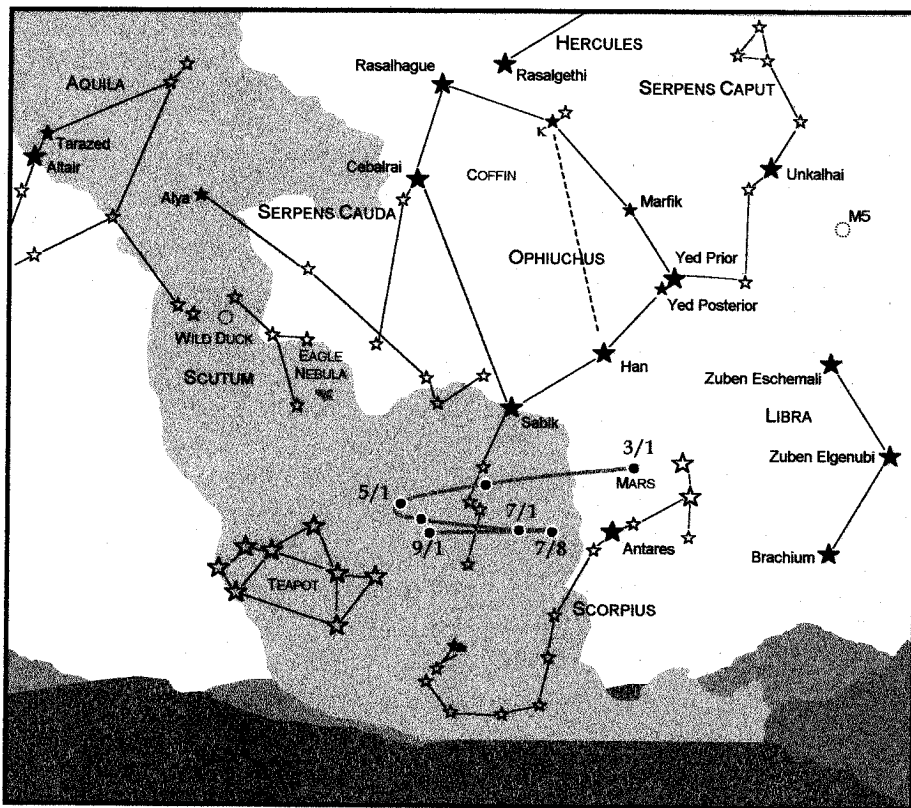
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LOOKING SOUTH AT 11:35 PM ON JULY 1, 9:35 PM ON AUGUST 1,  
AND 7:35 PM ON SEPTEMBER 1, 2001

Mountain Skies, July/August 2000).

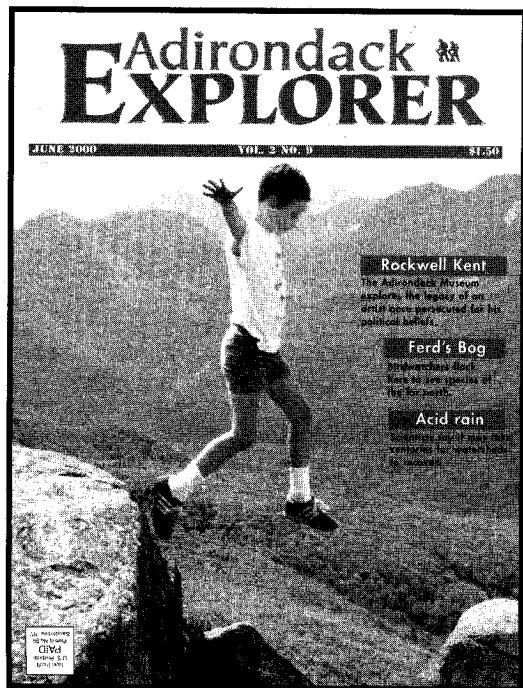
**WHAT'S YOUR SIGN AGAIN?**

In Britain in 1995, Ophiuchus made the news with the claim that astronomers had found a new Zodiacal sign. From November 29 to December 13, the sun is in Ophiuchus. If you were born during this time, you may be an astronomical Ophiuchan instead of the Sagittarian that the newspaper astrology columns claim you are.

Those who practice astrology have not kept up with the wobble of the Earth, so your sun sign is where the sun would have been had you been born about 5000 years ago. To find your actual astronomical sign, the constellation the sun was in when you were born, download a (free) copy of Starry Night Backyard from <www.starrynight.com>, and set the "home location" to the city closest to the place of your birth, and the date and time of your birth. Under the "Constellations" pull-down menu, choose "boundaries" and "labels." Find the sun—if you were born at night you'll have to change the time to get the sun above the horizon—and you'll be able to identify your astronomical sun sign. To all you Ophiuchans out there, maybe you should seek a career in the healing arts...or snake charming!

-Aileen O'Donoghue

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