

## Home on the night sky range



### Outdoors

By Paul Zaenger

Home: It's a place where we are free to be ourselves. Our comprehension of home is as unique as each person is. And we can find glory in our lives with the people and things with which we surround ourselves.

Interestingly, though, our homes are transformed every evening when darkness falls.

We often light up our homes to chase away the dark of night. Doing so causes us to miss the wilderness that is the night sky.

Going out opens up a chance for greater understanding of both the physical place we call home and the seemingly unlimited place of our home planet. We can find a simple kind of beauty and splendor under the canopy of the night sky.

A group of 15 active duty – and recently discharged – men and women from Fort Carson made a winter trip to Black Canyon in a program called Post-to-Park a few years ago. Generated by Florissant Fossil Beds National Monument Ranger Jeff Wolin, the program aimed to bring soldiers recently returned from Afghanistan or Iraq to enjoy and encounter their wild land heritage.

Part reintegration to national life, part rest-and-relaxation, the troops who came to Black Canyon experienced skiing, snowshoeing, winter

#### IF YOU GO:

For more details on winter events with the Black Canyon Astronomical Society go to their website at: <http://www.blackcanyon-astronomy.com/>.

- Feb. 7, 7 p.m., Telescope Workshop, Montrose.
- Feb. 25, 7 p.m., Program and Night Sky Viewing, Black Canyon.
- March 25, 7 p.m., Program and Night Sky Viewing, Black Canyon.

camping and a look at the night sky.

The Black Canyon Astronomical Society brought their telescopes up to look at the winter constellations. These GIs had faced and seen unspeakable dread. When they looked at the rings of Saturn or the twinkle of star clusters, though, the beauty and wild of the night sky opened up.

Soldiers who grew up in many different parts of the United States felt at home in the wilderness of land and sky.

A part of this blending of land and sky can be found in the song "Home on the Range". Attributed to Dr. Brewster Higley and Dan Kelly of Kansas, this 1873 poem and song became a favorite of President Franklin Roosevelt and has become a musical icon as part of the dream of living close to the land.

You're probably familiar with the opening lyrics: *Oh give me a home, where the buffalo roam, and the deer and the antelope play. Where seldom is heard a discouraging word, and the skies are not cloudy all day.*

Feel free to sing it out loud.



Telescopes at the ready, members of the Black Canyon Astronomical Society share the wonders of the wilderness night sky at Black Canyon National Park. (Submitted photo/National Park Service)

Those Fort Carson troops – most of them from a big city – found the wide open spaces of the Colorado plains a wonderful springboard for exploring the rugged reaches farther west in the state. Here they found the peace. Here they could let their troubles slip away. Here they could find the simplicity of sojourning in wild country.

Perhaps you know that there are actually six stanzas to the song. Folklore tradition, over time, has somewhat altered the original version, but the two authors did not see the night sky as a separate entity to their home on the range.

*Where the air is so pure, the zephyrs so free, the breezes so balmy and light, that I would not exchange my home on the range for all of the cities so bright.*

The troops were to fully

recognize all winter had to offer. They skied out along the rim, some of them going 12 miles that afternoon for a full aerobic effort. They also snowshoed for about three hours in and out of draws and along the rim of the canyon.

Imagine them getting a workout on the stair-stepper machine at the club, except that they are among the breezes and zephyrs... so free.

Picture the sun going down that evening with the rosy glow of a February sunset. Visualize the wilderness of night coming upon the wilderness of land. The troops gather near the visitor center at Black Canyon. The scopes are trained at celestial objects. The sky fills up with thousands of stars; too many to count.

There is a lot we can know when out there in the night

sky. The soldiers saw unspeakable poverty and brutality in the third world. First world problems, the type we have to face, seem to pale in comparison.

They fully understood the simple value of being home.

Go outside tonight. Close your eyes. Let them adjust to the dark. Then look up.

*How often at night when the heavens are bright with the light from the glittering stars, have I stood here amazed and asked as I gazed if their glory exceeds that of ours.*

Paul Zaenger has been a supervisory park ranger at Black Canyon of the Gunnison National Park since 1993. Other park assignments include Mount Rushmore National Memorial and Glen Canyon National Recreation Area.

## Understanding the GPS, Part 1

One of the early forms of a navigational system was called LORAN, which stood for long-range navigation. This hyperbolic radio navigation system was developed in the United States during World War II.

LORAN was a complicated system using radio beacons, timing their arrival of the signal, to pinpoint your location. It was a difficult system to learn and operate, as it went through many changes.

I used this system on offshore fishing vessels in the 80s. It was reasonably accurate and fairly reliable as far as repeatability of returning to specific locations. The system required large receivers and long antennas. Portability was not an option.

During the 1980s, the federal government made available a new system to the civilian market. This system was known as Global Positioning System (GPS).

I will not attempt to give operation instructions in this small article. I am not a tech savvy person to say the least. It has been 25 years and email still gives me a rough time.

I resisted using a GPS for many years, thinking they were far too complicated. GPS has changed a great deal over the years and the units available are easier to operate.

#### How GPS Works

GPS is a satellite-based navigation system comprised by a system of 24 satellites orbiting the earth. These satellites were placed in space by the U.S. Department of Defense, each circling the earth twice a day, transmitting a constant signal back



### Tips from the Posse

By Mark Rackay

to earth.

The orbiting satellites are 12,000 miles above us. They are moving at 7,000 miles per hour. The satellites are solar powered and equipped with back up batteries to keep them running during a solar eclipse. Each satellite has small rocket boosters to keep it flying in the correct orbit.

A GPS receiver compares the time a signal transmitted by a satellite with the time it was received. The time distance tells the receiver how far away the satellite is. Taking the distance measurements from a few satellites, the unit is able to determine your position and display it on its electronic map.

A GPS receiver will record your location in latitude and longitude. A receiver must be locked onto three satellites to calculate a 2-D position for you and track your movements. When a unit is locked onto four or more satellites, you can receive 3-D information, which would include altitude. Once your position is determined, the unit can calculate a great deal of information, such as

speed, bearing, track, trip distance, distance to your destination, arrival time at current speed and much more.

Accuracy and repeatability with GPS is incredible. The new GPS receivers are equipped with a Wide Area Augmentation System, or WAAS, which increases accuracy to within three meters.

The GPS system is extremely reliable, but there are a few areas of concern. The main problem has to do with the number of satellites visible at a given time. The more satellites a GPS receiver can see, the better the accuracy. Buildings, terrain, electronic interference or dense foliage can block signal reception. Basically, a GPS unit will not work indoors, underwater or underground.

Signal multi-path is another area that can affect the accuracy of GPS. This occurs when a signal is reflected off objects such as a tall building or a large rock formation before it reaches the receiver. This reflection increases the travel time of the signal, thereby causing errors. The secret is to have a clear view of the sky when operating your unit.

In the next column, we will discuss several units available and their pricing. We will also cover some of the available features on these units.

Until next time, keep your GPS pointed at the sky, and see you on the trail.

Mark Rackay is a freelance writer who serves as a director and Public Information Officer for the Montrose County Sheriff's Posse. For information about the Posse, call 970-252-4033 (leave a message) or email [info@mc-spi.org](mailto:info@mc-spi.org).



## CPW slates roundtables for hunters, anglers

STAFF REPORT

Colorado Parks and Wildlife's southwest region invites hunters and anglers to give their ideas and voice their opinions about wildlife issues at a Sportsmen's Roundtable meeting which will be held by video teleconference from 6 p.m. to 8 p.m., Wednesday, Feb. 1.

Anyone interested can go to one of the local wildlife offices in the southwest region to participate. Locations of the offices: Gunnison, 300 W. New York Ave.; Monte Vista, 0722 S. Road 1 East; Montrose, 2300 S. Townsend Ave. (U. S. Highway 550); Durango, 415 Turner Drive.

The meeting is part of the ongoing statewide "Sportsmen's Roundtable" process set up by CPW to assure that hunters, anglers and everyone who cares about wildlife can provide input and discuss issues with leaders of the agency.

Sportsmen's Roundtable representatives will be at the meeting, along with Patt Dorsey, southwest regional manager. Also attending will be local CPW wildlife managers and biologists. Updates will be provided on: statewide and regional issues facing the agency; updates on big game, including deer, elk, bears and mountain lions; regional aquatic issues; and youth education and hunter recruitment efforts.

CPW staff wants to hear from participants regarding big game hunting, fishing and other wildlife-related issues.

For more information, call Joe Lewandowski at 970-375-6708; or by e-mail at [joe.lewandowski@state.co.us](mailto:joe.lewandowski@state.co.us).

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