

Ask Andy

Bolide an Exploding Meteor

Andy sends a complete, 20-volume set of the World Book Encyclopedia to Jennie Joy Lovelace, 14, of Sioux City, Ia., for her question:

What are bolides?

Bolides are related to fireballs, to so-called shooting stars and falling stars. Meteors are space-traveling lumps of minerals voyaging for countless ages through the solar system. Their space-ways are enormous. But every hour thousands of speck-sized meteors collide with the earth.

Traveling through empty space at speeds of 25 miles a second, a meteor suddenly crashes into the resisting air of the earth. It must jam on its brakes and slow down, and its speed energy is turned instantly into heat energy. The space traveler catches fire, and the speck-sized meteors burn to ashes before they crash the ground.

A meteor 10 pounds or more, however, is likely to survive the fall. Its space traveling days are done, and the lump of ground mineral is now called a meteorite. A large falling meteor is bright enough to turn night into day. We can call it a fireball or a bolide, though we usually use the term bolide for meteors that explode in the air.

For a few seconds, we see a blazing ball of red or yellow, white or bluish green arching down to earth. Behind it trails a streak of fiery vapor often fringed with pinwheeling sparks. When a bolide explodes high in the air, the dazzling fragments scatter in all directions. Air current high in the stratosphere soon twists the fiery train out of shape, the glowing specks and the whole spectacle disappear in a few minutes.

Out in space, the bolide is a cold lump of dead minerals. It begins to slow down when

it meets resistance from the upper atmosphere and catches fire perhaps 100 miles above the ground. The sudden heat is terrific, and the fall is so fast that only the surface of the meteor catches fire. The inside remains stone cold, even after a meteor or its fragments strike the ground. The sudden surface heat may crack the lump of minerals, and it becomes an exploding bolide.

A meteor may travel the space-ways of the solar system at 25 miles a second, while the earth rotates at 18 1/2 miles a second. If it strikes from one direction, its speed is added to that of the rotating earth. A fireball may start its collision at 45 miles a second. But the resisting air slows down this fantastic speed as the meteor falls. It hits the ground with no more force than any other falling body.

Andy sends a Hammond's Nature Atlas of America to Stephen Roberts, 12, of Exeter, Calif., for his question:

Can a penguin swim?

The penguin is a flightless bird whose wings are too weak to lift his bulky body into the air. He is not much good on the ground where he must waddle along on short legs and wide, flat feet. But in the water, the dinner jacket bird is a champ.

The slender wings of the penguin are adapted as flippers. He uses them to swim under water where he seeks fishy food and frolics with his friends and relatives.

Andy awards each day a full set of the World Book Encyclopedia for the first question he selects to answer. When a second question is answered a large world globe or atlas is awarded. Questions are accepted from teen-age or less-than-teen-age readers. They should be addressed to the Register-Guard, 875 High St., Eugene. Andy prefers that questions be written on postcards, rather than in letter form.

To Your Health

B12 Controls Pernicious Anemia

By DR. JOSEPH G. MOLNER

Dear Doctor Molner: I am a 27-year-old mother and I have pernicious anemia. The doctor says there is no cure, only treatment which consists of Vitamin B12 every two or three weeks.

I feel a lot better but I lose energy easily. Is there any way I can fight this problem without having "shots" the rest of my life?—Mrs. K.V.

Injection of Vitamin B12 every two or three weeks is the standard treatment for pernicious anemia. You might feel much better about things if you knew the history of the disease and its treatment.

Within my lifetime (and very little more than yours) this disease has changed from one which was usually quickly fatal to one which can be kept under control with great sureness.

Then came the discovery that large quantities of liver would control pernicious anemia.

This was a godsend. Patients, otherwise marked for death, were delighted to eat a pound of liver a day—and live.

It was assumed that there must be something in liver which accomplished this, but years were required to find out. After liver came liver extracts, and from them finally Vitamin B12 which, it turns out, is the secret of controlling pernicious anemia.

Having one injection every two or three weeks is far simpler, you must agree, than forcing yourself to eat a pound of liver every day.

So instead of rebelling against the shots, reflect on how much luckier you are than patients who had the same disease only a few decades ago.

There is no way to "fight" pernicious anemia except with these substantial doses of B12.

Dear Doctor Molner: Is it common for a young man of 23 to have to urinate every 30 or 40 minutes? I have been that way for four months, ever since I accepted a small beer in a sleazy bar.

Does holding in the urine strengthen the bladder?—W.F.N.

This problem is decidedly not common at your age, and I suspect either a urinary tract infection or diabetes (either diabetes mellitus, meaning excess sugar, or diabetes insipidus, a considerably different ailment which does not involve sugar).

I doubt that the small beer, drunk in any kind of a bar, had anything to do with it. That's probably coincidence. I suggest that you have a urinalysis, plus whatever further tests may then be indicated, to find out what is wrong.

Sometimes a bladder, if under-urinated, may be stretched by deliberately trying to hold in the urine as long as possible, but that applies only to healthy individuals. It cannot overcome a disease condition, and I strongly suspect in this case that something is distinctly wrong and needs treatment.

National Parks Spruce Up For Record Season in '63

WASHINGTON—Spring cleaning begins in winter for the National Park Service—it needs the head start to spruce up the public's 28-million-acre estate.

During the winter slack, rangers and maintenance men clear roads, cut and mark trails, supplement museum exhibits and scrub down visitor centers.

Some 90 million people—a record number—are expected to visit the national parks in 1963. Last year more than 88 millions came to camp, hike, ride, swim, fish, study or just sightsee from car windows.

Park visitors will find their National Park System bigger and better than ever, says the National Geographic Society.

In the past two years, 13 parks, historic sites, memorials and monuments totaling 232,544 acres have been established.

Three new seashore parks are in the Park System, which previously had only Cape Hatteras, Padre Island, a long sand reef on the southern Texas coast, the greatest expanse of undeveloped seashore in the United States portion of the Gulf of Mexico. Point Reyes, Calif., features bird rookeries, and offshore islands, and herds of sea lions. Cape Cod National Seashore preserves 27,000 acres of cliffs and beaches, moors, streams and pine-fringed ponds. The National Park System now includes 191 acres stretching from the snow-white beach-

es of Virgin Islands National Park in the Caribbean to the flame-throwing volcanoes of Hawaii. The system soars as high as Alaska's snow-mantled Mt. McKinley, drops as low as Oregon's 1,998-foot-deep Crater Lake.

Special events are featured in

matter of fact



Wonder whether the increase in average use of electrical energy by residential customers during 1961 was due to the use of more electric can openers? Last year 187 kilowatt-hours more were used, bringing the average residential consumption to 4,012 kilowatt-hours per year.

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many parks. Hopi Indians, for example, stage evening dances on the south rim of Grand Canyon. At Philadelphia's Independence Hall, "sound and light" pageants nightly dramatize the story of American independence. A park historian in Washington, D. C., helps youngsters dip bayberry candles at Old Stone House, a Georgetown landmark.

The same refreshments that George Washington's mother gave her guests—spiced cider and gingerbread—are served on Washington's birthday at his birthplace at Popes Creek Farm, Va.

A new underground display trench at Russell Cave, Alabama, will enable visitors to see how Stone Age Americans lived 9,000 years ago. Russell Cave, man's oldest known habitation in the Southeast, was given to the Park System by the National Geographic Society in 1958.

Tourist at Wetherill Mesa, one of many canyon-scarred hills in Colorado's Mesa Verde National Park, may examine the cliff dwellings and ceremonial kivas of Pueblo Indians who reached a high degree of culture before mysteriously vanishing 700 years ago. The National Park Service and the National Geographic Society have excavated three cliff cities and uncovered skeletons, pottery and grain.

