

Island, and passes near Winnipeg, Regina and Medicine Hat, the sun never gets as much as 18 degrees below the horizon even at midnight. At this latitude, from June 2 to July 12, twilight lasts all night.

Twilight results from the reflection of sunlight from the upper atmosphere. For some time after the sun has set, as seen from the ground, it would still be visible from an airplane high overhead. Thus the air above us is illuminated well after sunset and still sends us some reflected light until the sun is so far below the horizon that no part of this illuminated air remains in view from the ground.

On the average, when it is 18 degrees below the horizon and the rays of sunlight pass 50 miles overhead, the sky above is so dark that stars of the sixth magnitude—the faintest that can be detected by the naked eye—are visible. This is astronomical twilight, as given above.

However, there are other stages of twilight as well. Civil twilight is considered to end when the sun is six degrees below the horizon. This is about the time that automobile headlights have to be turned on according to the traffic regulations in many states.

Then there is also nautical twilight, which ends when the sun has gone down 12 degrees. During this time the brightest stars can be seen, but the sea horizon is still visible, so the navigator of a ship can measure their altitude with his sextant to determine his position.

To get to places where civil twilight lasts all night, one has to go considerably farther north—to Sweden or Alaska, for example.

Celestial Time Table for June

June EST	
4 12:35 p.m.	Moon in last quarter.
5 9:00 a.m.	Moon nearest, distance 229,700 miles.
8 3:22 a.m.	Moon passes Venus.
11 9:55 a.m.	New moon.
18 4:00 p.m.	Moon farthest, distance 251,100 miles.
19 7:01 a.m.	Moon in first quarter.
21 10:34 a.m.	Moon passes Saturn.
12:00 noon	Sun farthest north, summer commences in Northern Hemisphere.
22 5:00 a.m.	Venus farthest west of sun.
26 10:29 p.m.	Full moon.
27 12:00 noon	Mercury farthest east of sun.
30 7:00 p.m.	Moon nearest, distance 228,300 miles.

Subtract one hour for CST, two hours for MST, and three for PST.

Science News Letter, May 23, 1953

ZOOLOGY

Animal "What's What" Lists Unusual Names

► "SO YOU think you know the animals?" asks Francis H. Elmore, park naturalist at Yellowstone National Park.

To prove that you may not, as he found out he did not, Mr. Elmore collected a four-page listing of the male, female, neuter and young names applied to animals besides their regular "family" names.

Try yourself out on a few. Maybe you are a better naturalist than you think. (Answers are found following all the questions.) Name the animals whose young are sometimes called: (1) stirk; (2) scrod; (3) eyas; (4) bullhead; (5) squealer; (6) brit; (7) stot; (8) kit; (9) graul; (10) teg.

(Answers: (1) cattle; (2) cod, haddock; (3) falcon; (4) bullfrog, toad; (5) grouse, partridge, quail, pigeon; (6) herring; (7) horse, ox; (8) muskrat, mink; (9) salmon; (10) sheep.)

What is the name of the young of: (1) chimpanzee; (2) jackrabbit; (3) green turtle; (4) whale?

(Answers: (1) infant; (2) kitten; (3) chicken; (4) calf.)

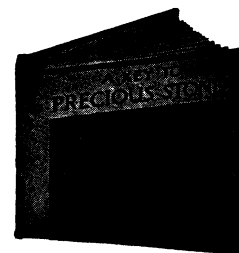
What do you call a: (1) female falcon; (2) female fish; (3) female owl; (4) male red deer; (5) male sandpiper; (6) female swan; (7) male terrapin?

(Answers: (1) haggard; (2) hen; (3) jenny howlet; (4) hart; (5) ruff; (6) pen; (7) bull.)

Did Mr. Elmore make his point?

Science News Letter, May 23, 1953

Taste panels have been able to spot water containing one tablespoon of salt in 10 gallons.



A Key to Precious Stones

By L. J. SPENCER

Formerly Keeper of Minerals, British Museum

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FORESTRY

Oak Wilt Spreading

► TEN YEARS ago, the death-dealing fungus causing oak wilt, now known as *Endoconidiophora fagacearum*, had been spotted only in three states, Wisconsin, Iowa and Minnesota. Today it has fanned out over 18 states, in some areas killing over 50% of large oak stands.

If left unchecked, oak wilt may eventually spread over the entire eastern half of the United States, declares Marvin E. Fowler, forest pathologist with the U. S. Department of Agriculture.

Losses would be tremendous if the disease managed to spread through the great oak forests of the Ozarks, lower Mississippi valley and the East, Mr. Fowler warns.

The most effective control for oak wilt is the complete destruction of infected trees by ruthless cutting and burning. Underground transmission of the disease by root contact must be halted by poisoning all healthy oaks within 50 feet of an infected tree. Oak wilt attacks the red oak group more rapidly than it does the white oaks. However, no native oak species is known to be immune to the disease. Trees of all ages and sizes succumb to wilt.

Wilt-infected trees can be readily spotted from low-flying planes, simplifying greatly the task of locating and destroying centers of infection.

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