



FIVE PLANETS SHINE

The sky of early autumn puts on an especially fine planetary show, with three planets visible at night and two just before dawn.

BACTERIOLOGY

Studies Germ-Killing Power of Toothpastes

IN THIS germ-conscious world of ours a good many persons have the idea that they would like to keep their mouths not only clean but free of germs. The idea is probably based on knowledge that germs of many diseases enter the body through the mouth and nose and is probably strengthened by antiseptic claims made for some toothpastes and mouthwashes.

Without going into the merits of the idea, it can safely be said that the job of keeping the mouth free of germs is herculean if not altogether impossible. Much has already been written on this subject and just recently Arthur H. Bryan, bacteriologist of Baltimore City College, published results of studies he made on antiseptic toothpastes.

He used ten different methods of studying these. An average of the number of germs or bacteria in the mouth of each of his student-volunteers was established, and the students then were given various tubes of commercial toothpastes or powders and asked to use them regularly three times a day for a period of three weeks to one month. During this time frequent checks were made on the bacteria in their mouths.

The antiseptic property of the toothpastes was compared with that of phenol (carbolic acid) and found to be somewhat lower. From this it appears that these antiseptic toothpastes are not

strong enough to harm gums, tooth enamel, or tongue and cheeks.

Recently extracted teeth were soaked in solutions of the toothpastes, and others were mounted in blocks and brushed with an electric dental machine continuously for one hour with the various toothpastes.

The significant conclusion of these and the other tests was that the use of the dental creams decreased the number of bacteria in the mouth for one hour after use, but at the end of this hour the number of bacteria increased and at the end of two hours was as high or higher than before.

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PSYCHOLOGY

Now a Clinic to Teach Pedestrians How to Live

A CLINIC where men and women are treated not for tuberculosis or heart trouble, but for automobile accidents, or "pedestrianitis" as a physician might term it, that is the strange outgrowth of traffic conditions in our twentieth century cities.

Automobiles, as everyone knows, are a bad enough hazard for drivers. But the driver is at least somewhat familiar with the workings of his and other cars.

Pedestrians, in a great many cases, know nothing whatever about cars. They may have been brought up in a day when speeding vehicles were confined to railroad tracks. They are completely unaware of the difficulties of quickly stopping a rapidly moving car. They have never tried to see through a clouded windshield or skidded on a glassy pavement. They may not even realize that in the blinding glare of headlights, they may walk unknowingly into the path of an oncoming car.

A clinic for testing and instructing pe-

ZERO TO EIGHTY

by Dr. E. F. Northrup

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destrians established in Wichita has been the scene of a new study of pedestrian hazards. These have been analyzed by Dr. Harry R. DeSilva and W. H. Frisbee, Jr., of Harvard University, together with a study of pedestrian deaths in Connecticut.

Eye defects are a serious danger to the pedestrian, especially "tunnel vision" which restricts the field of vision to what is directly ahead. If informed of his defect, however, he can compensate for it by using greater precaution. Many pedestrians are lacking in ability to judge the speed of an approaching car. In the clinic miniature cars operated at various speeds controlled by the examiner serve as a means for developing this essential type of judgment.

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PHYSICS

Radium Lost is Often Recovered by "Hound"

YOU PROBABLY have not met a "radium hound" but he is a valuable creature, with a very scientific ability at playing "needle in the haystack" to the tune of thousands of dollars. He is in a class with divining rods. Who named him is not known and fortunately his pointing abilities are not frequently required.

Born in the physics laboratory, the "radium hound" is not a dog but an instrument, either the electroscope or the Geiger-Muller counter, both of which are affected by the gamma radiation given off by radium.

Radium is precious stuff and when it is used in the treatment of cancer and other diseases it is sometimes lost. The amount used is so small and seemingly insignificant that patients often can not be made to realize its value. A hundred milligrams in the form of a salt occupies the space of about a quarter inch of pencil lead. In former days this small amount cost \$12,000, and while the price of radium has been reduced materially a heavy investment is still necessary.

Dr. Robert B. Taft, of Charleston, S. C., has compiled amusing anecdotes and statistics on radium losses and the methods of recovery. There are 107 records of losses with 59 complete and 11 partial recoveries.

In one case Dr. Taft found some radium that had been on a dump for several weeks. In another case he saved an innocent man from going to jail on circumstantial evidence of radium theft.

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FORESTRY

Southern Woodpulp Industry Faces Difficult Problems

PULPWOOD from Southern pines, for newsprint paper and possibly for rayon and other synthetic cellulose products is at present one of the most hopefully regarded possibilities on Dixie's economic horizon. But it isn't going to be an easily shaken plum-tree, with all profits and no problems.

A recent discussion held under the auspices of the Society of American Foresters, and participated in by timber owners and operators as well as professional foresters, brings strongly into focus some of the difficulties the industry has to face.

Already existing forest products industries in the South watch the new development with some anxiety, for trees can be cut for pulping purposes long before they are of sawlog size, and even before they can be slashed for turpentine. However, it is rather generally agreed that if woodlands are properly handled, under adequately trained professional supervision, pulpwood cuttings can be legitimately made without endangering either the lumber or the naval stores industry.

But even within its own particular field, the woodpulp industry in the

South has problems which must be solved if it is to become established on a permanent basis, and not degenerate into another extractive, exploiting, migratory industry, causing local booms for a few years and then moving out of the stripped communities, leaving them collapsed and impoverished.

A particular evil is the present method of purchase. The mills do not buy directly from the timberland owners, but through contractors, who in turn frequently operate through sub-contractors. These men have no interest in maintaining sustained yield from the forests, but on the contrary have the strongest incentive to cut the land clean, frequently with the connivance and even the insistence of the smaller landowners.

Sounder economic and personal relations among the industry, the timber owners and the public not only in this matter of procurement but also in such things as fire prevention, tax legislation, and forest-consciousness generally, are regarded as necessary for the development of a really healthy woodpulp industry in the South.

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GEOLOGY

North Carolina's Legend Of Hoofprints Explained

NEW ENGLAND may have its famed legend of the headless horseman but North Carolina too has a "horse" legend; one of everlasting hoofprints which is a bit nearer reality than the fiction of Washington Irving.

Near Bath, N. C., are eight shallow depressions in the ground which legend says originated when a bucking racehorse threw his profane rider against a tree and killed him. The eight marks, conveniently placed to fit the story, undoubtedly exist and they have persisted for over a century according to records.

Thousands of visitors, at one time or another, have viewed them and efforts to fill them up—and make them stay filled—have failed. Around Bath you can talk with grown men, who as children tried to do this. Temporarily they suc-

ceeded but ever the hoofprints reappeared.

Two suggestions with some scientific reason have been advanced as the explanation of Bath's mystery hoofprints. Those with a geological turn of mind suggest that the prints are the external ends of small vents, filled with earth, which terminate in underground caves. Gradually, through erosion, the earth in these vents settles, no matter how often they are filled.

Soil chemists like Prof. C. D. Williams of the North Carolina State College, in Raleigh, suggest that the cause may be due to the underground presence of marl which goes slowly into solution. This marl is calcium carbonate and was formed by deposits of shells when the area was covered by the Atlantic.

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