

ARCHAEOLOGY

Ancient Man's Teeth

► PREHISTORIC MAN cleaned his teeth.

Evidence of this habitual use of cleaning agents on the teeth of ancient skulls was reported to the British Association for the Advancement of Science by Dr. E. K. Tratman, archaeologist and dental surgeon.

Such evidence, although rarely reported, is probably quite common in the remains of teeth of ancient man, Dr. Tratman indicates. It would be easily missed if the scientists studying the teeth were not familiar with the type of damage caused by various cleaning methods.

Toothpicks, when used habitually, leave their own unmistakable marks on teeth. It is even possible, Dr. Tratman said, to deduce whether the individual who used the toothpick was righthanded or lefthanded in life.

Prehistoric man had cavities in his teeth just as does his modern descendant, but any one prehistoric man had fewer cavities. Even the pattern of their location was different. In prehistoric man, the cavities occurred almost exclusively between the teeth

starting at the gum line or below, and they did not bother him until middle or later life.

In Britain today, most cavities occur on the biting surface of the tooth or between the teeth above the gum line, and each individual has a large number of cavities.

Pyorrhea, the dental disease that causes the gums to recede and the teeth to loosen, was rife among prehistoric Englishmen, Dr. Tratman reported. It is probable, he reasons, that some of the single teeth found at prehistoric sites were lost by the ancient owner because of pyorrhea.

Prehistoric man had little need for the braces modern dentists have learned to use to straighten teeth. When his teeth did grow crooked, there was some simple cause such as a supernumerary tooth.

Altogether, there is a great deal that prehistoric man's teeth can tell us about his life, diet, habits and diseases. The teeth's form and fissure patterns can even reveal from what racial group he came.

Science News Letter, May 5, 1956

OPTICS

Standard Color Gauge

► A DEFINITE YARDSTICK for measuring colors has been provided for the first time by Walter R. J. Brown of Eastman Kodak's Research Laboratories, Rochester, N. Y.

As a result, American women should be able to match colors more readily for dresses, wallpaper and furniture. Mr. Brown was awarded the Adolph Lomb Medal of the Optical Society of America for his studies leading to an exact way to term shades of color.

Men are just as good as women in picking out the right shade to match a particular color sample, Mr. Brown's tests showed. Twenty-two basic colors were used and a total of 17,000 matches were made.

From these tests, scientists now know how much tolerance, or "give," can be permitted in selecting shades of color.

Mr. Brown's study has revolutionary implications for color film and television manufacturers, since it can help prevent harsh contrasts and shows the limits of hue, saturation and brightness that can be used.

Textile and home appliance manufacturers now have a nation-wide standard so that finishes for different parts of the same product can be applied in different sections of the country and be identical when the parts are assembled.

Automatic computing machines can be used to help check the shades of color and to aid in making exact decisions about color quality.

Some idea of the complexity of the prob-

lem Mr. Brown tackled is indicated by the fact there are more than 20,000,000 different colors that may be seen with normal vision. His results are expected to be made the basis of an international agreement on a method for specifying color differences and tolerances.

Science News Letter, May 5, 1956

PHYSICS

Miniature Galaxies Made in Laboratory

► MINIATURE GALAXIES are being made in a laboratory by firing chunks of ionized matter at each other at speeds up to 140 miles per second in a strong magnetic field.

Pictures of self-luminous patterns thus formed were shown at the American Physical Society meeting in Washington by Drs. Winston H. Bostick of the University of California, Livermore, and David Finkelstein of Stevens Institute of Technology and New York University.

Under certain conditions, spiral patterns resembling galaxies can be obtained. Thus the scientists may be duplicating on a small scale one process in the formation of spiral galaxies, the interaction and condensation of ionized matter.

A small magnetic gun no larger than a shirt button is used to propel the ionized matter, known as plasma, which consists of both positive ions and electrons, tiny nega-

tive particles. When fired from the gun in a strong magnetic field, the plasma appears to form a plasma-magnetic entity termed a plasmon.

Two plasmons shot at each other across a magnetic field "will either repel or attract, depending on whether they pass on the right (American style) or the left (English style)," the scientists said. The attraction and repulsion are reversed if the magnetic field is reversed.

The plasmons behave rather like elementary particles on a large scale, and are a valuable laboratory tool for studying basic astrophysical processes.

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