



amount of matter concentrated in so small a space, its density must be extraordinarily great. The old rule of "A pint's a pound, the world around," does not hold there! A pint of the stuff of Sirius B, as the companion is designated, would weigh about 20 tons.

Perhaps even more extraordinary is the fact that this superdense material is not even solid, but is a gas. Fortunately, however, modern atomic theory gives us an idea of how this might be. An atom, like the solar system, consists mostly of empty space. There is a nucleus around which, at various distances, are moving a number of electrons. Dr. R. S. Richardson, of the Mt. Wilson Observatory, compares atoms to a number of men, each of whom has a heavy weight on the end of a string, which he is rapidly whirling around his head. While they do this, the men could hardly approach each other very closely, but if the strings should break and the weights fly off, then the men could crowd very near together.

This is believed to be what has happened to the atoms in Sirius B and in other "white dwarf stars," some of which are nearly a thousand times as dense. With atoms tripped of their electrons, the nuclei (which have most of the mass), can come many times closer together. They may still be separated enough for them to move around freely and thus have the properties of a gas.

#### INDEX OF REFRACTION LIQUIDS

For Identification of Minerals & other Solids by the Immersion Method of Microscopy  
Range 1.400-1.700, intervals of 0.002 or as selected. Index certified to 0.0002  
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For identification of minerals, gems and other substances by the sink-and-float method. New suspensions extend the working range up to density of 7.

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#### Celestial Time Table for January

Jan.	EST	
1	12:11 a.m.	Moon in last quarter
6	8:00 a.m.	Moon nearest, distance 223,500 miles
7	3:10 p.m.	New moon
8	6:27 p.m.	Moon passes Venus
11	7:31 a.m.	Moon passes Jupiter
14	7:23 p.m.	Moon in first quarter
17	11:27 p.m.	Algol (variable star in Perseus) at minimum
18	9:00 a.m.	Moon farthest, distance 251,900 miles
20	8:16 p.m.	Algol at minimum
22	11:47 p.m.	Full moon
23	5:05 p.m.	Algol at minimum
	11:00 p.m.	Mercury farthest west of sun
27	11:29 p.m.	Moon passes Saturn
30	10:13 a.m.	Moon in last quarter

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

Science News Letter, December 30, 1950

#### ARCHAEOLOGY

### Find Ancient Camp Site About 12,000 Years Old

➤ DIGGING deep in the icy soil of northern Alaska, Robert J. Hackman, a U. S. Geological Survey worker, found remains of a camp site where prehistoric Americans bivouacked some 12,000 years ago.

The discovery was announced in Washington by the Smithsonian Institution, which has received from Mr. Hackman a considerable collection of stone points, work of the ancient people.

The collection includes lamellar flakes and burins similar to those found by Dr. J. L. Giddings, of the University of Pennsylvania, under seven feet of soil on Cape Denbigh. The Giddings finds are considered the oldest work of man in the New World and resemble the work of Stone Age man in the Old World. The new collection was found buried about ten inches deep in Anaktuvuk Pass through the Brooks Range in northern Alaska.

A similar find was made independently at about the same time by William Irving, a student at the University of Alaska. Mr. Irving's discovery was made not far from

Mr. Hackman's, and it was also probably remains of a bivouac on the trail taken by the first Americans from the Alaskan coast to the interior of the North American continent.

In addition to the flakes like the Cape Denbigh culture, the Hackman collection includes some Folsom-like points which link this ancient people to ancient man in the United States Southwest. There were also points of unique design.

Unfortunately, no organic matter was found with the stone points that could serve to date them by the radioactive carbon calendar method. Antiquity of the specimens was calculated from study of the geology of the site and the style of workmanship of the points.

Another Geological Survey worker, Milton C. Lachenbruch, found two Folsom points near the headwaters of the Noatak River, just beyond the Brooks Range. This site was probably a third bivouac in the great migration.

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#### PUBLIC HEALTH

### Cholera in India Not Alarming in U. S.

➤ A CHOLERA outbreak in India "does not make news" to health authorities in the United States, Dr. G. L. Dunnahoo, director and chief of the foreign quarantine division of the U. S. Public Health Service, commented on reports that the disease is attacking hundreds of thousands on a pilgrimage to the village of Rantali in eastern India.

Cholera is always smoldering in India. World Health Organization has been getting reports of four to eight thousand cases weekly for months.

When cholera jumps a thousand miles, as it did in the Egyptian outbreak in October, 1947, it is news to health authorities as well as the general public. But the chances of it spreading to the United States are very slim. One or two cases might come in by plane. U. S. quarantine officers, however, are stationed at international airports here to guard against just that happening. Passengers from regions where cholera exists must be vaccinated. If in spite of this a case is found on a plane or boat arriving in the United States, passengers and crew are held in quarantine for five days. This is the length of time it takes cholera to develop.

The disease spreads through contaminated drinking water, food and eating utensils. Vaccination is the weapon used to check outbreaks.

Chloromycetin and other antibiotic drugs and sulfa drugs have all been tried as remedies, but none has been an unqualified success.

Science News Letter, December 30, 1950