

# Comets and Meteors May Surround Stars

*Astronomy*

Evidence that many, if not all, stars are surrounded by meteors and comets like those we see in the solar system, and that they may serve as fuel to keep the stars going, is the announcement just made by Dr. Harlow Shapley, director of the Harvard College Observatory. If this is correct, it would explain how the stars may survive for a far longer time than the 100 trillion years that astronomers have recently supposed to be their maximum life.

By means of the spectroscope, which breaks their light up into a rainbow-like spectrum, crossed by numerous dark lines and bands that indicate the constituent elements, Dr.

Shapley has studied a large number of stars. Though they are of varying temperatures, and supposed to be of different ages, they all show a band which indicates the presence of cyanogen. This is a gas composed of carbon and nitrogen, and which is used terrestrially for killing insects.

Probably, he believes, this cyanogen is not actually in the stars themselves, but rather it is provided by meteors and comets that surround them. Comets and meteors that have come within range of observation have been found to contain carbon and nitrogen as separate elements. When these fall into a star, the high temperature would cause the elements to combine

to form cyanogen.

One important aspect of this hypothesis concerns the life of the stars. The generally accepted theory now among astronomers is that the energy of the stars comes from the actual disintegration of their matter into energy. Matter and energy, according to the ideas of modern physics, are both the same, and so one can be changed to the other. In this way the matter in the average star will keep it running for about 100,000,000,000,000 years.

However, if more and more fuel is constantly being shoveled on the stars, in the form of meteoric material, the star might survive almost indefinitely.

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## Mental Defects in Infants

*Psychology*

"Jimmie hasn't begun to say 'da-da' the way that lively Smith baby does," says Jimmie's mother confidentially to Jimmie's father, "and he still doesn't get the idea of playing peek-a-boo at all."

"But," they both reassure themselves, "Jimmie will catch up, of course. Babies develop so differently."

A warning against this sort of careless faith that baby will outgrow mental handicaps and shoot ahead at some later age was voiced by Dr. Arnold Gesell, psychologist of Yale University, before the American Association for the Study of the Feeble-minded.

The Yale Psycho-Clinic has carefully studied the behavior of several hundred normal babies and a large number of retarded and defective infants. As a result, a schedule has been worked out of 135 items which are characteristic of normal stages of development in the first year of life, Dr. Gesell said. When and how an infant fixes his eyes upon an object, what he does when a toy is removed from his sight, how he uses his hands—these reactions change with age, he pointed out.

"The growth of the human mind is already under way at birth," the psychologist stated. "Each month witnesses some change in the baby's muscular control, his posture, his language, memory, insight, responsiveness, and adjustments to other persons. These changes tend to proceed in an orderly manner with due reference to his age."

Growth is so swift in infancy that even one or two months of retardation at that time may prove important later. This has been shown, Dr. Gesell said, by clinical case reports in which mental growth charts of babies were kept. These cases demonstrate that a child's mental status can be predicted to some extent in infancy.

The earlier mental defects are recognized, the more opportunity there is for prevention and control, just as in physical handicaps, the psychologist pointed out.

Dr. Gesell stressed the fact that methods of diagnosing mentality in babies are still being worked out, and should be used only by professional trained persons with clinical experience. *Science News-Letter, June 9, 1928*

## Walrus Near Boston

*Zoology*

While today walruses are practically confined to the little visited arctic seas, within historic times they have been common as far south as the Gulf of St. Lawrence, and the recent finding of a skull on Georges Bank, off the coast of Massachusetts, seems to indicate that these mammals did come down as far south as Northern United States waters perhaps no longer than two or three hundred years ago.

This interesting specimen, consisting of the fore part of a walrus skull with the tusks still in place, was recently dredged up by the steam trawler *Mariner* at a depth of 80 fathoms. Col. J. M. Andrews has turned the skull over to the Boston Society of Natural History.

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## A House of Elk Horns

*Zoology*

Yellowstone Park headquarters at Mammoth Hot Springs will have a house built of elk antlers to display to visitors during the coming season as part of the exhibits of the park museum. It will be only a little house, containing a single room six by eight feet and seven feet high, but even so its construction will require some thousands of pairs of antlers.

Each year every adult male in the 20,000 elk in the park herds sheds a pair of antlers, so that large quantities of these have been easy to obtain. Enough have been brought to Mammoth Hot Springs to provide walls and roof for the "house of horn," which Chief Ranger Sam Woodring has undertaken to construct.

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## Locusts Fight Kindred

*Zoology*

Big predatory locusts, that prey on their own fellow-insects instead of on growing grain crops, are being tried out in Greece as one means of combating the pest of ordinary locusts now threatening the fields, according to word received here from Athens. These modern descendants of one of the plagues of Egypt have been causing serious losses to Greek agriculture during the past few years, and the Ministry of Agriculture is preparing to spend 16,000,000 drachmas (approximately \$3,200,000) in a campaign against them.

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