

## ASTRONOMY

**Spring Commences Monday Evening, March 20**

**S**PRING of 1933 will commence at 8:43 p. m., eastern standard time, on Monday, March 20, according to computations made at the Nautical Almanac Office, in the U. S. Naval Observatory. At that moment, the sun, which has been travelling northwards through the sky since last December, will cross the equator, and enter the zodiacal sign of Aries. This is called the vernal equinox and at this time of year the sun is below the horizon just as long as it is above, so that days and nights are of equal length. Also, on this date, the sun rises directly east and sets due west. Spring will continue until June 21, when the sun ceases its northward journey and starts south again.

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## PSYCHIATRY

**"Babying" by Parents Linked With Mental Disease**

**T**WO-THIRDS of a group of patients suffering from one of the most serious mental diseases were "babied" all their lives by their parents, investigators at the Rhode Island State Hospital for Mental Diseases found.

This "babying," which psychiatrists call over-protection, establishes a vicious circle in the life of the child, Dr. Jacob Kasanin said in reporting the work of himself and associates, Elizabeth Knight and Priscilla Sage, to the American Orthopsychiatric Association.

They studied 45 patients suffering from schizophrenia, a personality disorder in which the patients avoid outside contacts and retire into themselves and their world of daydreams. Dr. Kasanin did not say whether the babying caused the mental disease. That may have developed anyway. But the babying took away the only chance the patients had of developing normal personalities, he believes.

Unfortunately, these patients are very apt to be inferior children who were physically weak, or had suffered from serious ailments early in life, or had some defect like cross-eyes. They needed the extra care of their parents in order to develop and grow up. But on the other hand, receiving the extra care took away so much of their independence that it hindered their final development. Though they might be

strong and healthy, they remained "tied to mother's apron strings" and unable to achieve life of their own with marriage and establishment of their own families.

While the weakness of this type of child invites the babying he gets, often the babying is increased because of problems in the parents' lives. If the father dies, the mother may put the son in his place and give him all the extra affection and attention the father would have had. If the father has been disappointed in his own life and could not get a chance to go to school, perhaps, he may try to make up for it by giving his son all the care and opportunities and benefits he missed.

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## METALLURGY

**Micro-Movie Made While Metals Melt in Tiny Furnace**

**M**OVIES of highly heated metals about to become liquid have been produced in the Harvard metallurgical laboratory of Dr. Albert Sauveur by B. A. Rogers and L. R. van Wert.

With a small electric furnace placed under a microscope as a studio and with the camera viewing the melting scene through the microscope, the metallurgists have succeeded in recording the pictorial story of just how iron, silver and alloys of copper, nickel, cadmium and bismuth melt.

"Stills" of metals under the microscope are usual and some attempts have heretofore been made to obtain motion pictures of a specimen as it is moved within the field of a microscope. But the Harvard micro-motion pictures of metals undergoing changes are believed to be the first so far produced.

The sample of iron or other metal is highly polished in the customary way preparatory to microscopic examination, and placed in a diminutive furnace built on the stage of the microscope. An ordinary moving picture camera from which the lens has been removed is then moved up to the microscope, which magnifies 30 times. As the specimen is heated to some 2,785 degrees Fahrenheit, in the case of iron, the camera grinds, making a record of the changes in structure of the metal. Hydrogen passing over the surface prevents the formation of an oxide scale which would result upon heating in air, thus rendering visible all that goes on.

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**IN SCIEN**

## ZOOLOGY

**Yellowstone Beavers Use Stone in Building Dam**

**Y**ELLOWSTONE Park beavers are not slaves of one material in their engineering efforts. Park Ranger F. Sheldon Dart has found a beaver dam built of stones on a small stream in the Thorofare district.

The dam is approximately six feet long and varies from one to two feet in width. It is two and a half feet high at the highest point. Only a few willow twigs appear in its construction, almost all of its material being stone. The rocks range in size from pieces as large as a man's fist to some ten inches in diameter and twelve to fourteen inches in length.

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## ARCHAEOLOGY

**Old Arabian Coins Found in Viking Graves in Germany**

**V**IKING graves on the site of a former colony of settlers from Sweden in East Prussia have yielded new testimony to the far wanderings of these old sea-kings, in the form of a number of Arabian coins about a thousand years old. The excavation of about 200 burials was conducted by Dr. Wilhelm Gaerte, director of the Prussia Museum in Koenigsburg, who describes his findings in a communication to the German scientific weekly *Forschungen und Fortschritte*.

Besides the coins, the grave furniture included the weapons, drinking vessels and ornaments commonly given to the dead for their last journey. Part of the burials were of the bones and ashes of cremated bodies, but many of the Vikings had been buried unburned, in coffins hollowed out of logs. The presence of horses' skeletons indicated that the widespread custom of burying a warrior's horse with him was followed by these Swedish colonists of the southeastern Baltic shore.

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# CE FIELDS

## METEOROLOGY

### Records Show Long Period Of Warm Winters

**M**ILD WINTER weather, prevailing in the eastern United States during the season of 1932-33, has continued an unparalleled record for a succession of winters with temperatures above normal, according to a statement by the U. S. Weather Bureau.

The statement says, in part:

"The records show unmistakably that the central and eastern United States are and have been for a number of years in the midst of a period of prevailing warm weather which has continued much longer than any other similar period of record, notwithstanding the occurrence of relatively short periods of subnormal temperatures, such as the winter of 1917-1918, and the brief spells of extremely cold weather that occurred in December and February, last. For example, at St. Louis 12 of the last 13 winters have had above-normal temperature; at New York 10 of the last 13, with the past six winters all above normal; while at Washington, D. C., this makes the thirteenth successive winter with mean temperature above normal."

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## PHYSIOLOGY

### Catching Cold Depends on Body's Heating System

**W**HETHER your body has a good heating system or not decides how easily you will take cold this spring, Dr. P. Schmidt, prominent German hygienist, told a correspondent of the American Medical Association.

Dr. Schmidt had noticed for many years, that under the same circumstances, some people take cold much more easily than others. Now, using human beings as guinea pigs, he has found out why.

Under his guidance a large number of persons exposed themselves to cold until they were thoroughly chilled. Then he measured their skin-temperature at several intervals until they had all re-

turned to normal. He discovered that most of them regained normal skin temperature in a very short time. Some, however, were much slower to warm up to normal, and thus took cold.

The reason for this, says Dr. Schmidt, is the contraction of the blood vessels and tissues at a low temperature. When contracted they are much less able to fight off germs and bacteria, just as an army of men when cramped into close quarters are unable to fight efficiently. So the persons whose temperature remained low over a long period of time gave the germs a chance to get the upper hand.

Only one-tenth of all those tested had slow temperature reactions, which should mean that only one-tenth of all people are naturally subject to colds. When you catch a cold, if you belong to the other nine-tenths, it means that your heating system is temporarily out of order because of nervous or psychological conditions or because a prolonged unperceived draft has cooled off your bodily radiators. That last is why people have learned to think they catch cold from drafts. They do indeed, though indirectly.

Persons whose heating systems are ordinarily slow, says Dr. Schmidt, can speed them up by spending a great deal of time out of doors.

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## BIOLOGY

### Australian Ants Likened To Poisonous Snakes

**"B**ESIDES the poisonous snakes, they are really the only formidable 'animals' in the Australian Bush."

Thus Prof. William Morton Wheeler of Harvard University characterizes the Australian "bulldog" ants, in a new book. Prof. Wheeler describes these fierce insects as sometimes more than an inch in length, "singularly alert, wasp-like, large-eyed, long-jawed, and fiercely stinging."

Primitive ants of Australia, he states, differ from ants of other continents in their colony-founding methods. The queen ant, at the outset of her career, does not accept the permanent imprisonment which is the fate of her sisters elsewhere, but from time to time breaks through the wall of her cell and goes out to forage for her young. When she returns she seals herself in again, and after the colony has made a good beginning she settles down to being permanently house-bound.

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## PUBLIC HEALTH

### Best Health Record Made On Reduced Budget

**P**UBLIC HEALTH need not suffer when budgets are reduced. Evidence of this is found in Chicago.

In that city during 1932 the infant death rate and the general death rate were reduced below the records of any other year, although the health department budget was reduced \$500,000 in this one year. For a cosmopolitan as well as metropolitan center like Chicago, the American Medical Association considers this an achievement of the first magnitude. It may be an inspiration to other public officials faced with budget economies.

Incidentally, it was pointed out, the employees of the health department, like other employees of the city of Chicago, are serving with their salaries many months in arrears.

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## ARCHAEOLOGY

### French Expedition Seeks Syrian Ancient History

**T**HE FRENCH archaeological mission to Ras Shamra, which has been unearthing important writings and ruins, is to start another season of digging up ancient history, this spring. Prof. F. A. Schaeffer of the University of Strasbourg is director of the expedition.

Ras Shamra, Syria, north of Palestine, gained the spotlight in archaeological circles when Prof. Schaeffer found a library of tablets there, written in an alphabet script, in an unknown dialect.

Among the latest discoveries at the site is a tall tablet bearing a picture of the mighty god Baal, brandishing a club and thunderbolt. Prof. Schaeffer pronounced this one of the finest representations of this ancient city deity known.

Another recent discovery is a polychrome head of a woman wearing spicurls on cheek and forehead. The coiffure shows what was fashionable in this part of the world about 1400 B.C.

Prof. Schaeffer has excavated richly furnished tombs in the cemetery of the city, as well as temples and other buildings in two strata of the earth. A third, deeper layer remains to be explored, and is expected to carry the history of this picturesque city back toward 3000 years before Christ.

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