

sponsored by the state health department.

"Indiscriminate pregnancies are dangerous to mother and baby and therefore harmful to the race," Dr. Norton continued, urging that three to six children in every family should be encouraged and that "the very best" birth control information should be available to every young married couple.

A corollary to planned parenthood is the provision by the community of "economic and social conditions which will make it possible for thoughtful and responsible parents at any economic level to plan for families of at least three or four children with reasonable assurance that the basic needs of the children with respect to nutrition, housing, recreation, medical and dental care and education will be met," Dr. Frederick Osborn, of the American Museum of Natural His-

tory, pointed out. He urged the birth control leaders to extend their activities into these related fields so that parents desirous of having children and planning for their future will feel secure to do so.

The suggestion that labor unions may soon support the birth control movement came from Mark Starr, educational director of the International Ladies' Garment Workers' Union. He said, in part:

"I cannot pretend to speak officially for labor, but it does seem to me that, sooner or later, trade unions must join the increasing number of religious, educational and social-work organizations which sponsor adequate education concerning human biology and birth control information and the techniques obtainable from reputable clinics and physicians."

Science News Letter, February 3, 1940

ASTRONOMY

Turning Back Stars Gives Date Egyptians Launched Calendar

Scientists Run Buhl Planetarium Backwards Through 5,200 Years of Sky History to Find Exact Time

By patiently running the Buhl Planetarium machine back through 5,200 years of sky history, until it flashed on the ceiling the star-picture seen by Egyptians the night of June 18, 3251 B.C., Dr. Jotham Johnson, University of Pittsburgh archaeologist, believes he has found the exact date when Egypt's famous calendar started.

Egyptians had no Leap Year provision, which explains why their calendar got out of step with the sun, and which also has given historians a clue to the date when their 365-day calendar must have been invented.

"Lacking a Leap Year, the Egyptian calendar fell back one day every four years," explains Dr. Johnson. "And in 1,456 years, their calendar slipped back an entire year. That 1,456 years of slipping back is called the Sothic Cycle. We know, by authenticated written records, that a Sothic Cycle ended in 139 A.D."

Counting back, historians have speculated that the Egyptian calendar might have started 4229 B.C. or 2773 B.C. Dr. Johnson considered one of these dates too early, because Egypt was too primitive then, and the other date too late in Egypt's civilization. He pinned his theory to 3251 B.C. and seized an opportunity

to check it when the Buhl Planetarium machine could be run backward for ten hours to reach such ancient sky patterns.

Historians, he says, are certain that Egyptians started their calendar when Sirius, the Dog Star, brightest star in the sky, appeared over the eastern horizon just before the sun came up. The natural time of year for the Egyptians to start their calendar, he adds, was when the Nile flood began, soon after the middle of June. Dr. Johnson sought, therefore, for Sirius to appear just before dawn in the mid-June sky picture of 3251 B.C., and to his delight the Planetarium confirmed his theory.

Additional evidence for his theory, he reports, is finding that a thin new moon appeared that night in the west just after sunset. Since the earlier Egyptian calendar had been a primitive one based on the moon, it would be natural, he explains, for them to want to change smoothly to a sun calendar, and this would mean choosing some night when a new-moon month was beginning.

Science News Letter, February 3, 1940

Hydroponics is a term for growing plants by water culture.

MEDICINE

New Serum Will Cure Spotted Fever, Is Hope

SERUM that may prove a cure for dangerous Rocky Mountain spotted fever, the tick-borne disease that every summer threatens ranchers in the far West and suburbanites on the Eastern seaboard, has been made by Dr. Norman H. Topping, National Institute of Health of the U. S. Public Health Service.

The serum, so far used only on guinea pigs and monkeys, is "the first definite hope of a specific treatment for Rocky Mountain spotted fever," officials of the National Institute of Health declared.

Guinea pigs and monkeys survived usually fatal doses of spotted fever virus when treated, after they became sick, with blood serum from rabbits that had been immunized to the virus. Details of the preparation of the serum are reported by Dr. Topping. (*Public Health Reports*, Jan. 12.)

Public health officials hope the serum will prove as useful in treating sick humans, but that cannot be determined until more of the serum has been made.

While this serum will, it is hoped, prove useful in treating sick humans, the federal health service has recently announced a new method of making a vaccine to protect against Rocky Mountain spotted fever. Advantage of this new vaccine over the old one is that it can be made on a large scale. The difficulty and danger of making the old vaccine limited the amount that could be made, and thus its usefulness.

Neither the vaccine nor the serum, however, is yet available for general use. Further tests must still be made with them, it was explained.

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MEDICINE

Sex Gland Disturbances May Cause Some Cancers

UPSET in the balance between male and female sex hormones in either men or women may be an important factor in the development of some types of cancer, Drs. V. Korenchevsky and K. Hall, of the Lister Institute of Preventive Medicine, London, England, suggest on the basis of their latest experiments. Details of the experiments, in which pre-cancerous changes occurred in rats when the male-female sex hormone balance was shifted, are reported in *Nature*.

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