

## POPULATION

# War May Save China From Evils of Overpopulation

There, At Least, Malthusian Checks Are Truly At Work With Grim Reality, Population Expert Says

A WAR in China might be China's salvation, Dr. Frank W. Notestein, American student of population from Princeton University, told the International Congress on Population meeting in Paris. China is growing so fast that if violence does not check her numbers, the population will probably double in less than 65 years.

"China cannot stand such growth," said Dr. Notestein. "If it is not stopped by war and other violence, it will be by famine and disease. Here, at least, the Malthusian checks are a grim reality."

China, known to the world as a nation of antiquity, is today a nation of youth, Dr. Notestein said.

Old age is venerated in the Oriental countries, but men and women do not live to grow old there as they do in other parts of the world. In New Zealand, half the population live to reach the biblical standard of lifetime—three score years and ten. In China half of those coming into the world die before they reach the age of 28 years.

In the United States, 90 of each hundred babies born live to celebrate their tenth birthdays. In China, 40 per cent. die before they reach the age of 10. An American baby coming into the world may be expected to live to the age of 59 to 63. But the Chinese infant can hope only for a life of 35 years.

Yet despite this terrific mortality in childhood and early youth, China's peoples are not being wiped out. No one knows just how many people live in that vast nation. Various estimates of the total population range from about 350 million to more than 550 million, Dr. Notestein told the Congress. Of these uncounted hundreds of millions, probably about 80 to 85 per cent. live in rural regions.

## Early Marriage

Marriage comes early with the Chinese. The family is as large as the farm can support.

"Virtually every one marries as soon as possible," said Dr. Notestein. "After age 30, the bachelor is rare and the

spinster virtually non-existent. Monogamy is the rule."

The average bride in China is a girl of 18, her groom is only 20. Contrast this with the average in New York State where the bride is 25 and the groom 29.

At the time of the first marriage, the age is still lower. More than half the boys taking their first wives are under 20 and in North China 12 per cent. are under 15. Of the brides on their first trip into matrimony, practically all (98 per cent.) are under 25, 81 per cent. under 20 and in North China 13 per cent. are under 15 years.

Much ado has been made lately in the United States over child marriages, yet in New York State, outside of New York City, marriages under 20 years of age constitute only 3 out of each hundred males as against the 54 per cent. in China, and only 30 per cent. of brides as against 81 per cent. in China.

## Birth Rates High

Birth rates in China where practically everybody is married are just about double what they are in the United States, 38.3 per 1,000 population as against 18.9 in the United States. The rate is also higher when computed on the basis of the number of married women of child-bearing age; 131 per 1,000 in the United States against 207 in China.

This picture of birth and death in China is an optimistic one, Dr. Notestein warned, because of the fact that the time selected for the survey on which these figures are based was not one of those periods of famine, flood or scourge which are ever-recurrent in China.

"If, by some magic, it suddenly became possible to eliminate the mortality from 'preventable causes' of death, sober students might ponder long before utilizing that power," said Dr. Notestein.

"Observers are unanimous in the belief that the population of China is already redundant and that, with existing productive capacities, a large increase in the population can only take place at the expense of a serious decline in the

standard of living which is already pitifully low . . . . Hunger would accomplish what disease was prevented from doing. It is perhaps fortunate that any improvement in mortality rates will, if it comes, come gradually, and may be accompanied by a corresponding decline in fertility."

The survey reported by Dr. Notestein was conducted with the cooperation of the Milbank Memorial fund in connection with the China Land Utilization Study under the direction of the University of Nanking's Prof. John Lossing Buck.

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## ASTRONOMY—PHOTOGRAPHY

## "Tears of St. Lawrence" Can Be Photographed

CAMERA enthusiasts seeking new subjects may find one in August when the "tears of St. Lawrence" make their annual appearance, under particularly good circumstances. The "tears"



FINSLER COMET

*This photograph was taken with the 40-inch reflecting telescope of the U. S. Naval Observatory on July 23 at 3:45 a. m. The short bright streaks are stars, appearing so because of their movement across the field as the instrument was kept trained on the comet. The longer trail is made by a meteor which happened to streak across the sky during the 20-minute exposure*

are the meteors, commonly called "shooting stars," which appear during most of the month of August, but particularly about the night of August 11.

An average of a dozen or so meteors can be seen hourly on any dark, clear night during the latter half of the year. More are seen after midnight than before. This is because the meteors, small bits of cosmic dust, generally no larger than grains of sand, are moving through space more or less at random. After midnight we are on the advancing side of the earth, and meet those coming toward us head-on, as well as overtaking the slower moving ones. But in the evening hours, when we are on the receding side of the earth, only those moving more rapidly, and in our direction, catch up.

On the night of August 11, if one watches the northeastern sky, one or more a minute will probably be seen. And instead of flitting across the sky in all directions, these will seem to radiate from one particular place, the constellation of Perseus. The August meteors are therefore called the "Perseids." Actually this is an illusion, the same one that makes the tracks of a railroad converge in the distance, for the meteors are moving in parallel paths around the sun in a great elliptical orbit. Every August the earth crosses this orbit, and the meteors are seen in profusion. As they follow the same path as Tuttle's comet, last seen in 1862, they are believed to be the comet's debris.

In many years the moon is nearly full about August 11, and its glare hides the fainter perseids. This month on the best date it is several days before the first quarter, so it sets before midnight, and the early morning sky is quite dark.

For meteor photography a fast lens is essential. It should be of F. 6.3 or better, and fast films should also be used. Low in the northeast, soon after midnight, the brilliant star Capella will appear, and Perseus is the constellation just above and to the right. Place the camera on a tripod, or some film support, and point it to this region. Then open the shutter, and give a long exposure of 15 minutes, or even longer. During this time the turning of the earth makes the stars move, so they will photograph as parallel streaks, but the meteors will be moving in other directions, and they can easily be distinguished. When other exposures are given the camera's position can be changed, so as to keep it pointed to the same region of the sky. If one has another fast camera, it might also be used, pointing it to

the part of the sky above, or to the side, of that included in the first.

Such photographs may have some value to astronomers. The time of each exposure should be noted, and this information, together with the original films, which are better for the purpose than prints, sent to Dr. Charles P.

Olivier, of the University of Pennsylvania, at the Flower Observatory, Upper Darby, Pa. In Canada they may be sent to Dr. Peter M. Millman, Dunlap Observatory, Richmond Hill, Ontario. They will also be glad to know the number of meteors seen during half hourly periods.

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#### PUBLIC HEALTH

## Head of Public Health Service Urges War Against Syphilis

**I**N a fighting declaration of renewed warfare against the great but preventable plague of syphilis, Surgeon General Thomas H. Parran of the U. S. Public Health Service, in a new book, "Shadow on the Land" (Reynal and Hitchcock), calls upon physicians and laymen alike to insist upon putting into effect a platform of action:

1. Locate syphilis.
2. Obtain public funds which assure adequate treatment of all infected persons.
3. Educate the private physician and the general public.

This disease affects one out of every ten adults of the nation. It is a hundred times more prevalent than infantile paralysis and twice as common as tuberculosis. Dr. Parran calls it the greatest public health problem.

Giving figures and naming cities and persons, Dr. Parran discusses official action being taken to combat syphilis.

Chicago and St. Louis are not rated highly in their handling of clinics, although Dr. Parran praises the control program of Chicago now getting under way. In Houston, Dr. Parran quotes a local opinion that dairy cattle are given better care than syphilis patients. But Dallas, with newspapers leading, has developed an excellent clinic and control program. New York has done more than any other city in the past two years. Washington, D. C. has a "distressing" record in health protection and Dr. Parran lays the blame largely on lack of financial support from Congress.

Wiping out congenital syphilis is the first thing to do completely, Dr. Parran writes. This is a job that will not require a generation. With good treatment begun before the fifth month of pregnancy there is only one chance in eleven that the syphilitic mother will not bear a healthy child.

Prostitution is condemned by Dr. Parran as one of the major methods of spreading syphilis and he calls it "the single greatest social handicap to complete eradication of America's No. 1 killer." Fear of disease alone will not control syphilis, he observes, and ideally, we should teach our boys and girls to prefer sex morality.

#### Praises Newspapers

Dr. Parran acknowledges the cooperation of the press in bringing the syphilis problem to the attention of the American people. He also urged further reporting of the conditions in particular cities.

"During the past year a great number of American newspapers and magazines honestly have tried to be helpful in the program to educate people about the facts of syphilis control," Dr. Parran writes. "Some of the best feature writers in the country have been doing articles for their papers about how Columbus brought syphilis to Europe in 1493 and Wassermann devised a blood test to find it in 1907. They give a few national figures on prevalence and sometimes they review what Scandinavia and Great Britain have done. That's all.

"And that's fine! Everybody needs to know a little about the background of this problem. I've tried to sketch a few of those essential facts in preceding chapters. But we need spotlights as well as background for the great contemporary tragedy. The news story begins where these stories stop. I should like to see some of the crack reporters get down to brass tacks regarding how much syphilis we actually have, month by month and year by year in these states and cities. Where does it come from? How much of it is stopped at the source? Are all cases treated? Is treatment good? Is it considerate? If not, who's responsible?"

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