

## POPULATION

# Birth Rate Will Drop

Present peak in marriages and births will decrease to new low soon, census expert predicts. "Curtailed baby crop" and surplus women expected again as result of war.

➤ MARRIAGE and birth rates, pushed to an all-time high by the war boom and the Selective Service Act, will hit a new low as soon as our full participation in this war is felt, Dr. Philip M. Hauser, assistant director of the U. S. Census, predicted to the Society for Social Research meeting at the University of Chicago.

With the death rate practically constant, last year's jump in the birth rate has brought U. S. population up to an estimated 133,039,000. Internal migration is increasing, with 1941 migration from farms to cities doubling that of 1940. This is expected to continue until the peak in war production is reached, including larger and larger percentages of women and Negroes, as the labor shortage grows.

However, in the long run, the war will greatly decrease the rate of popu-

lation growth, predicts Dr. Hauser. Since American economy has been built on anticipation of population increase, this may have serious economic consequences.

Unless we succeed in successfully converting war production to consumer production, other post-war results will be depression and chronic migration of destitute workers, perpetuating the Dust-Bowl era on a larger scale.

In any case we may expect a surplus of women following the war, says Dr. Hauser, which will create a class of women doomed to spinsterhood.

Another dislocation in world population comes from the fact that this war is being fought by the "curtailed baby crop" of World War I. These "hollow classes" in the age pyramid of the nation will reappear in each generation, requiring many generations to erase.

However, post-war planners should study the effects of population as a cause of war, even more than the post-war effects on population, said Dr. Hauser. He hopes the settlement of World War II will recognize the danger of faulty distribution between population and natural resources, as the Treaty of Versailles did not.

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## RESOURCES

## Boom in Shark Fishing; Source of Vitamins

➤ SHARK-FISHING off the South Florida East Coast has been catapulted from a more or less despised calling to a vital defense industry. The reason is the urgent demand for shark liver oil, which is particularly rich in vitamins A and D. Shark liver oil is largely replacing Norwegian cod liver oil, now impossible to import.

Salerno, on Manatee Creek, up St. Lucie River, is the center of the revived and now flourishing shark industry. The sharks are caught on mile-long chain trot lines, baited with chunks of coarse fish every 25 feet, set on the edge of the Gulf Stream bottom and left overnight. The ends of the line are anchored and marked with buoys. Hauled to the surface the next morning by winches, the sharks are clubbed, brought to port and flayed. The livers are boiled for the oil, which is barrelled and shipped to northern extracting plants. A shark's liver produces anywhere from two to 25 gallons of oil.

Varieties of the savage, cold-eyed scavengers of the sea, plentiful five miles off St. Lucie Inlet, include the nurse shark, hammerhead, tiger shark, leopard shark, lemon shark, mackerel shark and the great white shark. Sharks weighing up to and over 1,500 pounds, have been caught by the Salerno commercial fishermen. The average length is seven feet. The big fellows are the ones that got away, breaking the stout chain lines that held the three-quarter-ton "babies."

Sharks are processed as thoroughly as any pig in the Chicago stockyards. The skin is pickled in brine and goes to Newark, N. J., to be made into novelties and into a scuff-proof leather for the toe-caps of heavy working and hunting shoes. The fins find their way to the country's many Chinatowns for soup, and fetch a high-price since the so-called delicacy can no longer be imported from Shanghai and Hong Kong; the flesh is chopped up for dog and



*MARS, the Glenn L. Martin Company's 70-ton flying boat, is a possible answer to ship losses due to enemy submarines. Biggest flying boat in the world and herald of others twice and more her size, the Mars should be able to replace surface ships, it is claimed, because of high speed and greater frequency of trips. The giant size is indicated by contrast with the Grumman amphibian shown flying beside her. Flight deck and a large portion of the main deck are supercharged, permitting normal breathing without oxygen masks miles above the clouds.*

poultry food and fertilizer; the jaws and teeth are sold for souvenirs; the backbones are made into walking sticks; and the eyes are dried, crystallized and polished as jewels for the novelty trade—now largely confined to men in khaki stationed in Florida.

Shark fishing is not without its dangers. Men have been caught on empty hooks, dragged overboard and drowned. Sudden tropical storms have sunk more than one shark boat. And now that German U-boats have commenced to machine-gun fishing boats the men of Salerno have another hazard to face.

But new boats nevertheless are being outfitted to go after the sharks. Shark liver oil is now as valuable and as sorely needed as rubber or tin. Florida's shark fishermen are right up on the firing line.

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#### AERONAUTICS

## P-47 Now in Production Fast and Hard Hitting

See Front Cover

➤ THE "THUNDERBOLT," Republic's P-47, will out-fly and out-fight any fighter plane that any country now has in the sky, according to a report released by Lt. Gen. Henry H. Arnold, Chief of U. S. Army Air Corps.

Climbing fast, it achieves best flying speed as high as 25,000 feet. Military authorities put the P-47 in the 400-mile per hour class.

It weighs 11,000 pounds, compared to the ordinary weight of 6,000 pounds for a fighter plane. This extra weight is due to heavy armor, super-charger, equipment for high altitude flying, and armament.

The full firing power of the "Thunderbolt's" guns is said to be equal to a five-ton truck hitting a brick wall at 60 miles per hour.

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#### GENERAL SCIENCE

## Vice President Wallace Given Honorary Membership

➤ VICE-PRESIDENT Henry A. Wallace has been elected to honorary membership in the National Association of Science Writers. The action was taken in recognition of the Vice-President's interest in the popularization of science and his research contributions in the field of genetics.

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#### MEDICINE

# Tetryl Causes Illness

Blame chemical relative of TNT for cases of illness in thousands of war workers. Preventive measures and therapy devised. Tolerance develops after several weeks.

➤ TETRYL, chemical relative of TNT, is producing thousands of cases of poisoning in war plants, it is reported (*Journal, American Medical Association*, Aug. 22).

As production of explosives for the armed forces goes into high gear, an increasing number of poisoning cases are expected—odd cases of sickness with which the medical profession has been unfamiliar in peacetime practice.

Symptoms ordinarily occur after the second or third week of exposure. They usually consist of loss of appetite and nausea, coughing or sneezing, nosebleed, and—most significant of all—a characteristic inflammation of the skin. Anemia is also present in a good many cases.

Yellow coloration of the skin of these war workers is not a symptom but merely a stain.

Observations made on 1,258 cases by Dr. Leon J. Witkowski, Dr. C. N. Fischer and Howard D. Murdock, of Chicago, emphasize that the reactions are not only local, but affect the system as well. Of the war plants investigated where tetryl is processed, about 23% of the workers were affected.

Although many workers were found to

eventually develop a tolerance to the explosive after a number of weeks, the illness is not to be neglected. Physicians have already devised measures for the war workers to protect health and avoid lost time in the war effort.

The physicians making the report emphasize the necessity to control the tetryl dust found in the plant atmosphere. This may be aided by conducting certain operations in small closed rooms separated from the rest of the plant.

Cleanliness, ventilation, and temperature below 72 degrees Fahrenheit, are also important.

Dietary measures, which have been recommended by some, consisting of taking milk or vitamin C, do not appear to be of great value to date, according to the results of the current study.

Lotions and ointments have been successfully used by physicians to allay the skin inflammation and the anemia is controlled by standard methods of treatment.

Use of great quantities of tetryl in certain defense areas has introduced a new occupational hazard—a challenge that can be met by cooperation between workers, when symptoms are first noticed, and industrial medicine.

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#### NAVIGATION

# Charts Have New Colors

➤ NAVIGATION CHARTS of the U. S. Navy will now appear in new colors that show up in both daylight and under the red lights recently found best for war-darkened ships (*Hydrographic Bulletin*, Aug. 12).

Studies conducted by the Navy show, the Bulletin indicates, that the man who steps from a dark deck to a chart room illuminated by white or blue light, will require from ten minutes to half an hour after he returns to the darkness before his eyes again become dark-adapted. This time required before he is able to see well in the dark is reduced to only a few seconds if the light used is red instead of blue.

But when red lights and red goggles were introduced as a result of this study, it was found that the old colors on the navigation charts could no longer be distinguished. The buff color used for land, the orange which indicated navigational lights, and the red lines are all invisible under red lighting.

So in future charts, the land areas will be gray, the lights will be magenta, and purple will be substituted for red.

Care should be used in reading the old charts under red light, the Hydrographic Office warns, until the new charts are available.

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