American Industries Move To Middle-Sized Cities

Trend Is Away From Largest Population Centers, But Equally Away From Small Towns and Villages

MERICAN industry is not leaving the big cities for the small towns. Instead, it is shifting both from big cities and small towns to medium-sized centers of population. During a period of over a generation, from 1899 to 1933, American industries have shown this tendency, steadily and strongly.

This is the conclusion of Daniel Creamer in a report just issued by the Study of Population Redistribution, and made public by the Wharton School of Finance and Commerce, University of Pennsyl-

Widespread decentralization of industry to small villages would be a "revolutionary reversal of the trends thus far observed," according to Mr. Creamer.

If the Government were to foster the decentralization of factories to very small towns, it would be bucking the tide of natural trends, he says, pointing out that "the relative shrinkage in wage jobs over the period 1919 to 1933 was greatest in towns under 10,000 population.

Since 1933, there has been a slight deviation from the previous trend, in some industries. Four industries-men's clothing, knit goods, silk and rayon, and boots and shoes—showed absolute gains in number of jobs located in "non-industrial" counties of scattered population and small, isolated towns.

Union control and resistance to wage cutting was less in these industries than in any others, Mr. Creamer points out, and this movement to small towns was probably an attempt to escape paying high wages and submitting to unionization.

For the purposes of the survey, an industrial shift in the 200 leading "industrial" counties from large cities to their outskirts has been termed "diffusion." Nearly three-fourths of all the wage jobs in manufacturing are concentrated in these 200 counties.

In contrast, "dispersion" is the name applied to movements of factories into the more than 2800 non-industrial counties having no cities over 100,000 population and with few inhabitants depending on manufacturing for a living

During the 34-year period from 1899

to 1933, diffusion rather than dispersion

was the rule, the report states.

Directed by Dr. Carter Goodrich, the population study will concern itself in a later publication with a more detailed account of the movement of particular industries during the past several dec-

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PLANT PATHOLOGY

Parasite Fungus of Pines **Itself Victim of Parasite**

*HE WHITE pine blister rust fungus, most formidable enemy of this valuable timber tree, is itself the victim of another parasitic fungus, Dr. Ernest E. Hubert of the University of Idaho school of forestry points out (Journal of Fores-

try, June).

This parasite upon a parasite forms

the blister sust's outpurple patches on the blister rust's outbreaks on the pines. It invades their tissues and prevents the rust from forming spores to reproduce itself. In the meantime the purple spores are spread by the wind and by insects to other masses of the blister rust.

Prof. Hubert states, however, that previous observations in Europe, and his own in this country, do not encourage him to expect material results from this purple fungus as a practical control of the blister rust epidemic. He feels that its attack is too erratic and uneven. Present methods of control will therefore continue to be necessary.

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PALEONTOLOGY

Siwalik Hills Yield **Evolutionary Data**

THE SIWALIK Hills of northern India, that lie between the headwaters of the Indus and Ganges, close to the Himalaya frontier, are yielding new clues to the evolution of races of animals that are no longer found in Asia. The fossils of these early forms, left in the rocks of the Siwaliks from fifty million years ago up to the beginning of the great Ice Age of the pleistocene, have been examined at the American Museum of Natural History by Dr. Edwin H. Colbert. His studies will be published soon in exhaustive monograph form.

One riddle toward the solving of which the Siwalik fossils have helped is the line of descent of the hippopotamus. The popular notion that this huge animal is related to the pigs has received a good deal of scientific agreement, for there are certain anatomical similarities, as well as general superficial resemblance. But Dr. Colbert has shown that the hippopotamus may have closer kinship with a long since extinct animal family known as the anthracotheres. The hippo is a



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