

ANTHROPOLOGY

Early Population Checked

Infanticide, sexual abstinence, abortion, cannibalism, tribal fighting and human sacrifice were methods used by primitive man to control population.

► **STONE AGE** man controlled his own population by means of traditional customs and taboos, believes Dr. V. C. Wynne-Edwards, University of Aberdeen, Scotland.

Now modern man is getting to the point where he should swiftly control his population in relation to his habitat.

Primitive hunters and food gatherers remained in balance with their natural resources by infanticide, sexual abstinence and other behavior customs, just as animals act to keep down their population.

This new hypothesis stating the relationship between behavior and population is set forth in *Science*, 147:1543, 1965.

The built-in mechanisms of regulating populations in animals and prehistoric man have been lost in modern man, Dr. Wynne-Edwards said.

As primitive man gradually evolved through the ages, he learned to grow his own crops and expanded his skills until it became unnecessary to limit his numbers. For 5,000 or 10,000 years people of the Western World and Asia have increased without appearing to harm the world about them or endanger its productivity.

By studying behavior habits of animals that preserve a self-righting balance between population density and environment, Dr. Wynne-Edwards hopes to throw new light on human behavior and population problems.

In essence, he said two distinct methods of regulating the reproductive output have been widely adopted in the animal kingdom. One is to limit the number of adults that are permitted to breed, and the other is to influence the number of young that each breeding pair is conditioned to produce.

Guppy fish, for instance, maintain a relatively stable population in an enclosed environment simply by eating their young when there are too many, or by permitting more young to survive when their numbers are decreased. When mice become too crowded, there is a self-regulated decline in ovulation and reproduction.

Birds keep their numbers in balance with their environment by various methods, including establishing individual territories or colonies that ostracize certain members and by practicing the pecking order or social hierarchy, whereby individuals of higher rank have prior right to help themselves, while others wait their turn. When there is not enough food, for instance, the dominant individuals are in good shape, while the subordinate members sometimes die of starvation.

Primitive tribes of human beings decreased their juvenile population by at least one of three ritual practices—infanticide, abortion, and abstinence from intercourse—Dr. Wynne-Edwards reported.

In many cases marriage was long deferred, and in some cases fertility was apparently impaired by surgery during initiation ceremonies. Adult members were often decreased by cannibalism, tribal fighting and human sacrifice.

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ARCHAEOLOGY

Fossil Search Aided By U.S. Public Roads

► **OVER 50,000** valuable fish fossils, millions of years old, will be dug out of the Ohio soil with the help of the Bureau of Public Roads, in cooperation with the Ohio State Highway Department and the Natural Science Museum in Cleveland.

This significant fossil search will begin in early April and will cover an area of six miles in the southwestern quadrant of Cuyahoga County, in connection with the new highway, Interstate 71.

Scientists hope to uncover fossil remains of sharks and bony fishes from the Devonian period, more than 350 million years ago at a time when aquatic vertebrates were developing, said Dr. David Dunkle of the Smithsonian Institution, Washington, D.C., director of the entire project. The period is sometimes called the Age of Fishes.

The Ohio area was once under an upper continental sea that stretched from what is now the St. Lawrence River toward the Gulf of Mexico, Dr. Dunkle said.

In the six months' time of the project, road beds 500 feet across will be relocated, and scientists hope to double the fossil collection already in the Museum which took about 35 years to accumulate. At times modern equipment will be digging 60 feet deep in the black shale material where the fossil fish are found.

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ARCHAEOLOGY

Ancient Greek Village Shows Men Farmed Early

► **ANCIENT MAN** in southeastern Europe may have switched from being mere hunters and food-gatherers to more sophisticated farmers about 8,000 years ago—far earlier than scientists had previously thought.

By uncovering evidence of farmers who raised wheat, barley and lentils along the flood shores of a water area on the Macedonian plain of northern Greece, scientists feel they must reconsider the time when the agricultural revolution reached Europe from its area of origin in the Middle East, reported Robert J. Rodden, field director of a joint expedition of Cambridge University and Harvard University.

The ancient people in this area also tended sheep and goats and may have herded cattle and pigs, Mr. Rodden stated in *Scientific American*, 212:83, 1965.

Called Nea Nikomedeia after a nearly modern village, the mound marks the site of the oldest dated Neolithic community yet found in Europe. The village was thriving near the end of the seventh millennium B.C.

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General Electric

RAIN SAVED—A new silicone coating is used to decrease absorption by porous concrete in this basin on Grand Turk Island, Bahamas, where rain is caught for storage. The coating was developed by General Electric's Silicone Products Department, Waterford, N.Y.