

## Present Increase In Population Not Unique in History

New York, N. Y. (Scientific American Feature) — Those who view the current rate of increase in world population with horrified concern may derive some comfort from the fact that the present "population explosion" is not unique in history. Recent studies by Edward S. Deevey Jr., director of the Geochronometric laboratory at Yale university, has found clear evidence that man has survived at least two prior "explosions."

"Before accepting the implications of the current population explosion," says Dr. Deevey, "it is well to set the present in the context of the record of earlier populations. As will be seen, the population curve has moved upward stepwise in response to the three major cultural revolutions. The tool-using and tool-making revolution was the first. It started the growth of the human stem from the primate line. The advantage conferred on man by tools gave the food-gatherer and hunter access to the widest range of environments and his numbers increased accordingly. No where did population density become excessive but, over the earth as a whole, it leveled off at the not insignificant total of about five million, an average of .04 person per square kilometer of land.

**Became Food Provider**

"After some millennia man became a food producer. He learned to farm. With this agricultural revolution the population moved up two orders of magnitude to a new plateau, multiplying 100 times in the short span of 8,000 years, to an average of one person per square kilometer.

"Here the population stabilized — but over the past 300 years the further multiplication by five plainly reflects the first repercussions of the scientific - industrial revolution. There are now 16.4 persons per square kilometer of the earth's land area.

"Explosions are not made by force alone, but by force that exceeds restraint. The release of such restraint, by technological innovation, is mirrored in the three epochs of cultural history. But the evolution of population size also indicates the approach to equilibrium in the two inter-revolutionary periods of the past. At what level will the present surge reach equilibrium? This is again a question of restraint, whether it is to be imposed by the limitations of man's new command over his environment or over his own nature.

**Diseases More Virulent**

"Two kinds of check appear to limit the size of a population. One, obviously, is the environment. It sets the upper limit to the amount of available space, food and other needed resources. The other is the limitation imposed by the population itself. As numbers rise infectious diseases spread faster or become more virulent. Pestilence asserts itself, the risk of war increases.

These belong to the "natural devices" cited by Thomas Malthus for imposing self-limitation on population size. So, too, does man's "moral restraint" or voluntary birth control. Experiments with animals disclose still other restraints, notably those stemming from personality de-

velopment growing out of stress induced by overpopulation. When rats become overcrowded litters are carelessly nursed, deserted or even eaten. In mentioning this I am not implying that the current human population explosion will be contained by cannibalism or any power so naked. I simply suggest that vertebrates have that power whether they want it or not. There is a neat device that men can use: rational, voluntary control over numbers. I further suggest that if the human method of adjusting numbers to resources fails to work in the next 1,000 years, as it has in the last million, sub-human methods are ready to take over."



**QUEEN OF LOVE**—Miss Sally Ford Curby, above, 19, received the crown and scepter of the Queen of Love and Beauty at the 77th coronation ball in St. Louis, Mo., marking the traditional opening of the fall social season. (UPI Telephoto)

## Record Number of OSC Graduates Are Placed in Positions

Corvallis — A record number of Oregon State college graduates were placed in teaching positions this fall by the college's teacher placement office, but the call for teachers continues to increase at an even faster rate than the supply.

In her report for the year, Mrs. Kathryn Smith, director of the teacher placement office, noted that opportunities for careers in teaching are unusually good now — and for a long time to come — for "well-prepared" graduates. She stressed the "well-prepared" aspect.

More than 7,000 requests for teachers were received at OSC during each of the past two years, Mrs. Smith said.

This fall, she helped place 296 June graduates in their first teaching job. Another 196 graduates of past years were placed in new and better teaching spots, some in administration. More than ever before were also placed in college teaching jobs.

**Starting Salaries**

Beginning salaries for the new teachers averaged about \$4,200 to \$4,600, a slight increase over a year ago, and ranged up to \$5,800.

Most calls at OSC from high schools this year were for teachers of girls physical

education, English, foreign languages, mathematics, physical sciences, and library. A great many calls were received also for graduates prepared to do special-type teaching, such as speech correction work, remedial reading, or working with the retarded.

Elementary teachers are constantly seeking more young men teachers, according to Mrs. Smith. It is imperative, she stated, that teacher candidates for high school positions be able to teach in two or more subject fields.

More than 200 school administrators from all the western states, including Alaska and Hawaii, came to the campus for interviews with graduates. Biggest tribute to the work of the OSC — trained teachers is that administrators from "near and far return year after year" for more graduates, Mrs. Smith said.

Red Wing, Minn.—Industrious woodpeckers were blamed for felling a high-line power pole and cutting off electric power to a large rural area for three hours.

The fallen pole, on a main power line serving the area, was not discovered until three hours after it had toppled.



**SENATOR'S BIRTHDAY**—Celebrating his 93rd birthday, Sen. Theodore Francis Green (D-R.I.), the United States Senate's oldest living member, looks as though he will eat candles and all at a party in his honor. Sen. Green, who began his long political career 34 years ago, will retire this year. (UPI Telephoto)

## Public Domain Produces Some \$371 Million in Fiscal 1960

The public domain, managed by the bureau of land management of the department of the interior, produced revenues of more than \$371 million during fiscal year 1960, Secretary Fred A. Seaton has announced. This is an all-time record for any one year.

Revenues during 1960 also included the two billionth dollar in public land receipts as the grand total of all-time revenues since 1785 climbed to more than \$2 1/4 billion. More than half of the \$2 1/4 billion came in during the last eight years, Secretary Seaton said, as the result of greatly expanded conservation and development programs by the bureau of the department.

During the same year that BLM took in \$371 million, Congressional appropriations to BLM amounted to about \$34 million, including \$28 million for the management of lands and resources, \$5 million for construction, and \$769,000 for range improvements.

**Responsibility**

The bureau of land management is responsible for the conservation and management of about 477 million acres of public land in 28 states, most of which is located west of the Rockies and in Alaska.

BLM Director Edward Woolley said that receipts from the sale and leasing of public domain land and resources are an important source of revenue at both the national and local level. About \$500 million have been distributed to states and counties, Woolley said, including about \$52 million in 1960. These revenues are important aids to education and other local government programs.

Woolley explained that the 1960 revenues came from the following sources: mineral leases and permits \$324 million (including \$229.5 million from rents, royalties, and bonuses on the Outer Continental Shelf); timber sales, \$36 million; sales of public land, \$5 million; grazing, \$4 million; and \$2 million from other sources.

**Large Single Source**

The largest single source of public domain revenues was oil and gas leasing on the Outer Continental Shelf. In February, 1960, the sixth and largest federal competitive oil and gas lease bid opening resulted in high bids of over \$282 million for 145 tracts off Texas and Louisiana.

Woolley said that there is an additional \$300 million of federal revenues in an Outer Continental Shelf leasing escrow account. That money would also go into the treasury provided the Outer Continental Shelf boundary dispute is settled in favor of the federal government.

Nearly all of the \$36 million worth of timber sold by BLM in 1960 came from the and California Railroad grant 2 1/2 million acres of Oregon

lands (O and C) in western Oregon. Woolley said these lands contain some of the finest, high quality, old growth timber in the nation. The lands are intensely managed on a sustained yield basis.

According to Ross A. Youngblood, district manager of the local bureau of land management office, receipts for fiscal year 1960 in the Medford district were primarily from the sale of timber from the O and C grant lands and intermingled public domain lands, and from leases and permits. The total collections in the district was \$6,152,844.69.

**Distributed to Counties**

Seventy-five per cent of the gross revenues from the O and C timber sales are distributed to the 18 counties in western Oregon in which the timber land is located. At

the present time the western Oregon counties are voluntarily contributing one-third of their share of receipts for reforestation, access road construction, and recreational developments.

Revenues to the O and C counties reached an all-time high of \$24.4 million in 1960, Woolley said. Congress appropriated \$6 million to BLM for forestry in 1960.

Woolley said that for 175 years the public domain has been contributing to the growth and development of the United States. It originally embraced about 1.8 billion acres, but since 1785 more than 1.1 billion acres have been transferred to state, county, and private ownerships to settle and develop the country. Thirty states from Florida to Alaska have been carved from the public domain.

## OSC Gets \$203,000 In Grants For Basic Research Expansion

Corvallis — Grants totaling \$203,000 have been received by Oregon State college oceanography department to expand basic research on the ocean off Oregon and to help train badly-needed oceanographers. Announcement of the grants from the Office of Naval Research was made by President A. L. Strand.

Last year, OSC was given a \$319,555 grant by ONR for purchase of a quarter-million-dollar research vessel and to start some new oceanography studies. The 80-foot "floating laboratory" is now under construction in Portland and will be finished early next spring. It will be named Acona — an Indian name for Yaquina, Newport — on the Yaquina bay — will be the home port.

**Extensive Study Planned**

With the new grants and with completion of the vessel, Oregon State will be able to study the ocean from "top to bottom" and "inside out," Dr. Wayne V. Burt, head of the oceanography department, pointed out.

Research will include studies of currents off Oregon and how they change; bottom sediments and the ocean floor; temperature, oxygen content, and salinity of the water; inventories of plant and animal life; pollution problems in coastal estuaries; movements of "water masses" within the ocean; and defense-type research on underwater factors affecting submarine operations.

Oregon State is one of 10 schools, strategically located along the East and West coasts and the Gulf of Mexico, selected to carry out a giant 10-year national program of research in waters surrounding the United States.

In the case of Oregon, almost no research had been done on the ocean before Burt joined the OSC staff in 1954, even though Oregon has the fourth longest coastline of any state.

**Have Blank Areas**

Detailed ocean maps still

have blank areas off Oregon because of lack of information. President Strand noted, but the OSC research will produce a detailed description of the ocean — its chemistry, biology, geology, and physical processes — in years to come.

The Acona will be equipped with special gear that will permit the scientists to probe to depths of 3 1/2 miles and will have a range of 4,000 to 6,000 miles.

Four new staff appointments have been made this year in oceanography, providing specialists in every phase of ocean research. Eight staff members now make up the teaching and research faculty of the department.

Trained oceanographers are in great demand for research, industrial, and teaching positions, President Strand said, and the department of oceanography will enlarge its teaching programs in years to come. A total of 100 students are taking courses in oceanography this fall.

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**Business Too Brisk At Church Auction**

Cockeysville, Md.—Business was really brisk at a church auction in the community health center.

The auctioneer not only sold the old lamps and other objects donated by church members, she accidentally disposed of a box of toys left there for children visiting the center to play with.

Church members had to raise a special fund to replace the toys. And replacement was made at retail, not auction, prices.

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