

## VITAL STATISTICS

# Fastest Growing Area

In a region of mountains and dense jungles, the world's greatest population explosion is causing serious food, education, and employment problems and the rapid growth of slums.

► THE FASTEST GROWING population of any major region in the world today is found not in China or India but in Tropical South America.

This area, 5,300,000 square miles in size, is nearly 50% larger than the United States. It is made up of six independent nations: Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela, plus the three Guianas, British, Dutch and French.

Tropical South America has a total population of 120 million and is growing at a rate of 3.2% a year. Its population will double by 1986. If this growth rate were to continue for a century, its population would total 3.8 billion, reported the Population Reference Bureau, Washington, D. C.

Its analysis shows that when population increases as rapidly as in Tropical America, enormous social, economic and political problems are created. It becomes very difficult, if not impossible, to raise the standard of living. Heavy capital expenditures must be devoted to providing the bare essentials of subsistence, to building schools, hospitals, roads and other services.

Tropical America's speedup in popula-

tion growth occurred in less than 50 years. By 1920, public health techniques, first developed in the industrial countries of the western world, began to take effect in Latin America. The death rate has been declining since the twenties, but it has broken sharply since 1945.

The widening gap between births and deaths determines the rate of population growth. The birth rate for the entire area lies between 40 and 50 births per year per thousand population, and the death rate is less than 20 per thousand.

Tropical South America has a density of 22.6 people per square mile—less than half that of the United States. By far the greatest proportion of the region consists of dense jungles and high mountains.

The density of the occupied area is much higher. Only two percent of the land is under cultivation, and each arable acre must support approximately one and a half people.

Three of these nations—Brazil, Ecuador and Venezuela—have growth rates of over three percent annually.

• Science News Letter, 86:37 July 18, 1964

## MEDICINE

## Cyanide Poisoning

► AN AMATEUR PHOTOGRAPHER narrowly missed death when he mistook a potassium cyanide solution (prepared to treat negatives) for lemonade.

Oxygen treatment in a nearby intensive care unit about five minutes after he swallowed two and three-quarter ounces of the poison is credited with saving his life. A lethal dose of cyanide is one-half a gram, or about two-hundredths of an ounce.

In spite of inhaling crushed amyl nitrite capsules on his way to the medical unit, the 39-year-old man was to all appearances dead on arrival. He had had two convulsions and his breathing as well as detectable heart action had stopped.

External heart massage was begun and continued for 15 minutes, until brain waves were established. Meanwhile the man's trachea was opened so he could breathe, and artificial respiration was carried out with pure oxygen at the rate of 16 "breaths" a minute.

Hydrocortisone had been administered by injection into the heart and repeated twice during the recovery period when the heart slowed down. The artificial respiration was kept up for 90 minutes, after which the man was breathing on his own power.

Sodium thiosulphate and sodium nitrite were injected intravenously to assist in

clearing the cyanide from the man's tissues, and he regained consciousness four hours after being admitted for treatment.

Two Glasgow, Scotland, doctors reported the case in the British Medical Journal, July 4, 1964, pointing out that "if vital functions are maintained in the face of apparent death" recovery is possible.

In this case, they said oxygen therapy was started after the "terminal events" of convulsions and apparent failure of the heart and lungs. Although they could draw no conclusions from this single experience, they credit the oxygen with saving the man's life.

• Science News Letter, 86:37 July 18, 1964

## MEDICINE

## X-Rays Spot Impending High Blood Pressure

► HIGH BLOOD PRESSURE can be spotted in the early stages of development by using chest X-rays, Dr. Morris Simon of Harvard Medical School and the Beth Israel Hospital, both in Boston, disclosed.

The condition can be detected by examining the X-rays to spot dilation of the blood vessels of the upper lungs and contraction of those in the lower lungs.

• Science News Letter, 86:37 July 18, 1964



Goodyear

**NEW SPACE SATELLITE**—This gyroscope-like model of a new 267-foot communications satellite has a plastic balloon that will inflate in orbit, mold wire antenna grid to its proper shape and then dissipate under the effects of cosmic rays, leaving just the antenna. The satellite is being developed by the Goodyear Aerospace Corporation, Akron, Ohio.

## PUBLIC SAFETY

## Fiber Glass Vaulting Pole Risky for Athletes

► COACHES of high school pole vaulters are warned of dangers in allowing fiber glass poles to be used by youths even five pounds over the recommended weight.

Serious concern over the risk of a young athlete's falling and being impaled on a broken pole has been voiced in a joint statement by an American Medical Association committee and the National Federation of State High School Athletic Associations.

The fiber glass pole manufacturer has set a definite weight limit after rating each pole through control tests.

"Too often," the joint statement says, "in an attempt to achieve the publicized whip-like action, the aspiring athlete turns to a pole lighter than that specified for his weight."

High school pole vaulters do not have the skill for 16-foot vaults requiring an extra five pounds to get the pole strength needed for the "kick to get over the top," the statement points out.

"Therefore, there is no excuse whatsoever . . . for the coach to allow his vaulters to use a pole lighter than that specified for their weight."

The two groups also recommended conscientious care of the fiber glass pole to avoid breakage.

• Science News Letter, 86:37 July 18, 1964