

ter into the water at various points along the stream assists materially in studying flow conditions.

"The channel is provided with a sediment-intercepting basin at the discharge end so as to allow for observations of the erosion, transportation, and deposition of sediment by flowing water.

"Although the apparatus is quite new, a number of investigations have been made therein which indicate the variety

of tests which are possible. These include studies of the stability of the sand dams being constructed in connection with the canalization for navigation of the Upper Mississippi River, the design of flood regulating works for various hydroelectric developments, experimental investigation of the mechanics of the hydraulic jump, hydraulic bore, waves of various types, and the like."

*Science News Letter, October 19, 1935*

#### ASTRONOMY

## New Hubble Asteroid Is Not In Usual Path of Planets

**S**TILL another fragment of what may be a shattered planet which once traveled around the sun in an orbit between Mars and Jupiter has been found by observations of Dr. Edwin P. Hubble of Carnegie Institution's Mt. Wilson Observatory. The previously unknown astronomical object, found on photographic plates taken by Dr. Hubble in the course of other astronomical investigations, is an asteroid: a tiny planet whose diameter is probably from ten to a few hundred miles.

Ordinary asteroids are not particularly interesting to astronomers. Orbits on some 1,300 of them are known, and estimates place the probable total number which could be photographed with a great telescope like the Mt. Wilson 100-inch at perhaps 40,000.

Asteroids and minor planets are so common, in fact, that most astronomers agree with the late Professor Weiss of Vienna, who used to speak of them as "the vermin of the sky." The total mass of all the "vermin," if they were lumped together, would make a planet less than 800 miles in diameter.

Dr. Hubble's asteroid, however, has one characteristic, strikingly different from the other 1,300, which attracted his attention to it.

### Not in Same Plane

The Hubble asteroid, instead of going round the sun pretty much in the same plane as the earth and other planets do, was found to be moving in an orbit whose plane is inclined at nearly 39 degrees to the ecliptic. Only one asteroid is known to have a larger inclination: Hidalgo, with an inclination of 43 degrees.

It was this surprising feature of the new asteroid which attracted Dr. Hubble's attention.

Most plausible of all the theories advanced to account for the origin of asteroids is that of Sir James Jeans, British astronomer who is research associate of the Carnegie Institution.

Sir James suggests that the gravitational pull around each planet produces a "danger zone" around it. Another astronomical body approaching too closely to such a zone may be literally pulled apart. Originally there may have been a small planet, between Mars and Jupiter which came into some danger zone, probably that of Jupiter, and began breaking up in consequence until now nothing is left of it but tiny fragments, the asteroids.

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#### PUBLIC HEALTH

## Disease Hazards of Africa Also Menace United States

**M**ANY of the tropical diseases which may prove the Number One enemy of the Italian army in Ethiopia are a serious hazard to life and health right here in the United States. A warning to physicians and health officers even in cities as far removed from the tropics as Milwaukee, to be on the alert for cases of these diseases was sounded by Dr. M. Fernan-Nunez, of Marquette University School of Medicine, at the meeting there of the American Public Health Association.

Patients suffering from malaria, relapsing fever, dengue fever, and from the parasitic worms of the tropics are to be found in cities all over the United States. Tapeworms, liver flukes and malaria parasites taken from patients in Milwaukee were shown by Dr. Fernan-Nunez in an exhibit on tropical diseases which received a certificate of merit

from the Association's committee on scientific exhibits.

The tiny liver fluke which Dr. Fernan-Nunez showed under the microscope is the same disease-producing parasite that defeated Napoleon's men in Egypt, Dr. Fernan-Nunez pointed out. Malaria, which has already claimed a war correspondent in Ethiopia, is reappearing in northern American cities as a result of the increase in decorative rock gardens. This disease, one of the white man's chief enemies in the tropics, kills five million people every year throughout the world, a number equivalent to the entire population of Ireland, Dr. Fernan-Nunez commented. Over three hundred million people suffer from it annually.

Raw hamburger and raw fish are another source of danger, since they may harbor tapeworms. These and other worms which scientists classify as parasites cause more disease and deaths every year than the group of organisms known as bacteria, which are responsible for diseases like pneumonia, tuberculosis and diphtheria, Dr. Fernan-Nunez said.

*Science News Letter, October 19, 1935*

#### MEDICINE

## Questions the Value of Care Before Childbirth

**A** QUESTION as to the relative importance of prenatal care for the expectant mother was raised by Dr. Margaret Tyler, Yale University medical school professor, at the meeting of the American Public Health Association.

Obstetrical care at the time the child is born may play by far the greatest part in improving the outcome for the mother, a survey reported by Dr. Tyler indicated. Groups of patients receiving contrasting amounts of care and supervision during pregnancy but attended at childbirth by the same obstetrician were studied.

The outcome at labor was strikingly similar for the contrasting groups, revealing no definite superiority on the part of those who had the more extensive care, Dr. Tyler reported.

The better prenatally cared for group was found to include an excess of complications of pregnancy, many of which had apparently prompted the seeking of extra care. This same group revealed an excess of complications of labor, the ratio of which to those in the poor-care group did not appear to have been markedly altered from the ratio noted in pregnancy.

*Science News Letter, October 19, 1935*