

**MINING**

**Prospector Replaced By Mechanical Digger**

➤ A MECHANICAL gold digger that threatens to make the grizzled prospector extinct is now operating in the Western deserts.

A portable dredge is sifting gold desert sands near Tucson, Ariz. The tiny gold particles are electrostatically separated from the sand after all moisture is driven off.

Placer gravel is first broken into smaller pieces and screened. Heaters sending a dry stream of air over the gold particles charge the particles, causing them to stick to a screen. The waste material is then blown away, it is reported in the Engineering and Mining Journal, 162:79, 1961.

The dredge was developed by Kelsey Boltz and Donald Wright of United Placer Industries. It is expected to allow profitable extraction of gold-bearing desert lands that have previously been uneconomical to operate.

• Science News Letter, 80:199 September 16, 1961

**BIOLOGY**

**Hamsters Prefer Alcohol, Guinea Pigs Like Water**

➤ AMONG SIX animal species studied by two scientists from the University of Helsinki, Finland, hamsters clearly preferred alcohol to water.

Guinea pigs drank mostly water. Hedgehogs preferred water but sometimes they drank enough alcohol to appear slightly drunk. Rabbits drank about as much of one as the other, not being able to distinguish between the taste, apparently.

Rats have an aversion to alcohol and not merely a relative preference for water. If alcohol is the only solution available, the amount of fluid the rats consume is lower than when plain water is available.

But rats as well as mice sometimes change their preference during the experiments.

Drs. Alpo Arvola and Olof Forsander report in Nature, 191:819, 1961, that the reason for preference or aversion to alcohol among animals is not known. How-

ever, Dr. Forsander believes the choice of alcohol can be explained by differences in metabolism in the animal.

• Science News Letter, 80:199 September 16, 1961

**SPACE**

**Capsule Recovered, Two Satellites Down**

➤ DISCOVERER XXIX, the latest in the Air Force series testing the Agena vehicle for ejection and recovery of space capsules, was successfully launched Aug. 30.

The capsule to have been recovered in mid-air was instead fished out of the sea Sept. 1 by stand-by crews. The gold-plated capsule carried biological specimens of live tissues for studies of effects of radiation on living matter. The Agena vehicle is still in orbit.

A satellite designed to determine how hazardous micrometeoroids are to space travel was launched by the United States Aug. 25. (See SNL, 80:70 July 29, 1961.)

The 127-pound Explorer XIII, originally slated as Explorer XII, was launched at Wallops Island, Va., by a four-stage, 36,600-pound Scout rocket. It carried equipment to detect and report hits by tiny particles believed to be debris from exploded planets or comets. It stayed in an orbit of 174 to 606 miles above the earth for three days. The satellite was originally planned to stay up for a year in an orbit of 280 to 610 miles.

The Ranger I, launched Aug. 23, that should have traveled 685,000 miles into space as a forerunner for moon probes came down on Aug. 30. Difficulties during launch sent the Ranger into an earth orbit of 105 to 312 miles.

• Science News Letter, 80:199 September 16, 1961

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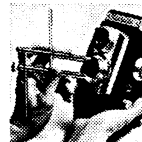
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**Questions**

**CHEMISTRY**—How many gallons of water can a mobile water purification unit just developed purify per hour? p. 189.

**PSYCHOLOGY**—What is the worst "fault" of Aldous, a new computer? p. 190.

**Photographs:** Cover, Pittsburgh Corning Corporation; p. 187, Westinghouse Corporation; p. 189, Case Institute of Technology; p. 191, Indiana University; p. 194, Johns Hopkins Medical Center; p. 195, Temple University Medical Center; p. 200, Mattel, Inc.

