RESOURCES

Russia Has Minerals

Engineer organization told that Soviet Union is well supplied below ground, but lacks industrial capacity to produce minerals for long war.

➤ THE SOVIET UNION is generally well supplied with minerals in the ground, the American Institute of Mining and Metallurgical Engineers meeting in St. Louis was told by Paul M. Tyler, mineral technologist of Bethesda, Md.

Russia has made astonishing progress during the past quarter century in expanding mineral production, he said, but it still lacks enough industrial capacity to wage a long drawn-out war on a large scale. Despite impressive gains, the production of minerals in the Soviet Union is less than one-third that of the United States.

Even in agriculture the Soviet Union makes a relatively poor showing in comparison with its population and natural advantages, he stated. Output per worker is far below the American standard in all fields of production and due to the large numbers needed on farms fewer workers are actually available for industry and mining in Russia than in our own country.

Enough is known of the geology of the area under Soviet control to evaluate claims of new mineral discoveries. Virtually all Russia's mineral supply sources are vulnerable to air attack or sabotage. The already inadequate supplies of oil are largely confined to the shores of the Caspian Sea.

Copper production would be dangerously reduced by damage to the principal refinery near Sverdlovsk or to the Kounrad mines and smelter. The Ridder mine, one of the world's greatest mines, is the predominant source of lead and zinc. Even iron and steel output is more highly localized than is generally supposed. It is almost equally divided between the Donets basin of the Ukraine and the Urals plus the recently developed outpost in the Kuznetz basin.

Science News Letter, February 24, 1951

RESOURCES

Plastics Are Limited

➤ WIDE-SPREAD hopes that plastic materials will be available to replace strategic metals in civilian products were blasted by C. W. Blount, vice-president of Bakelite Company, a long-time manufacturer of plastics.

"It has come to our attention," he said, "that currently published news reports offer promise of replacing metals with plastic materials. These reports have given the erroneous impression that plastic materials are available in quantity, have no real established uses of their own that are vital, and therefore supplies can be drawn upon immediately."

The two most likely plastics for replacing metal in any type of construction are phenolic laminates and a type of glass laminate employing a plastic resin known as styrene polyester, he stated.

Phenolic laminate materials are limited by the allocation of phenolic resin by suppliers who can not produce enough because of shortage of raw material. The uses of these products are for such essential items as silent timing gears for automobiles, various types of electrical insulators to assure availability of electric power and numerous similar applications.

Projected war demands for the second of these materials, styrene polyester for glass laminates, have been such that current facilities for producing the glass fibers are being expanded several fold. Requirements of these products for landing craft, radomes, and many classified war items are such that the industry can not under any conditions hope to manufacture sufficient quantities with the raw materials available.

Both of these two plastics involve resins which are made all or in part from benzol. Any expansion of availability would force a decrease in the amount of benzol for the production of synthetic rubber.

Science News Letter, February 24, 1951

OCEANOGRAPHY

Mysterious "Red Tide" Tracked by Postcards

➤ AID in tracking down the mysterious "red tide" outbreaks that periodically wipe out the fish in the Gulf coast areas is expected from plastic postcards being dropped now in the Gulf of Mexico. The first of these postcards has been returned to Washington, D. C.

Several thousand of these postcards, each sealed in a plastic container, will be dropped by a Navy plane in the Gulf area during the year. It is expected that, after drifting about in the Gulf currents, they will be cast up on beaches. A message, in both English and Spanish, asks the finder to return the card to the Gulf States Fisheries Commission at New Orleans, La.

From information on the returned card, scientists will figure out the paths which the cards and, therefore, the currents, must have followed. This pattern will show what connection there is between the currents and the production of the red tide organisms.

Red tides are known to be caused by sudden multiplication of red-colored, one-celled organisms called protozoa, which are near the bottom of the evolutionary scale. The postcard survey of currents will help to predict and control such outbreaks in the future.

The cards will also help to trace complex Gulf currents and the distribution and migration of commercial fish stocks, including shrimp. The Interior Department's Fish and Wildlife Service, the Gulf States Marine Fisheries Commission, the State of Texas, Texas A & M College and the Office of Naval Research are cooperating in the project.

Ocean currents have long been studied by following drifting objects, usually sealed bottles containing cards. However, the path followed by drift bottles is often greatly affected by the winds.

Science News Letter, February 24, 1951

ASTRONOMY

Year's First Comet Coming Closer to Us

➤ FAINT COMET Pajdusakova, the year's first comet discovered Feb. 4, is pulling away from the sun, but getting closer to the earth. On Feb. 27 it will make its nearest approach, being only 92,000,000 miles from our planet and thus about the same distance away as is the sun.

Rapidly speeding away from the sun, the comet is becoming fainter. It will probably have faded from ninth magnitude, its brightness when discovered and too faint to be seen without a telescope, to eleventh magnitude by April, estimates Dr. Allan Maxwell of Howard University, Washington, D. C.

The path of the comet is almost perpendicular to that of the earth, Dr. Maxwell calculates. This partly explains why the comet, itself quite faint, was picked up while still so near the sun's blinding light.

Racing across such constellations as Vulpecula, the little fox; Cygnus, the swan; Cassiopeia; and Perseus, the comet will soon best be seen in the evening just after sunset instead of in the early morning shortly before sunrise. But by the time it reaches the night sky late this spring, it will have faded so much it will be visible with only the best telescopes.

Dr. Maxwell's figures agree closely with orbital data received from Dr. L. E. Cunningham of the Students' Observatory, Berkeley, Calif., as calculated by Joseph Bradley.

Science News Letter, February 24, 1951