

earth and environment notes

HYDROLOGY

Satellite May Predict Australian Floods

A synchronous satellite, hovering 23,000 miles above Australia, has been proposed for use in flood forecasting in Queensland and Northern New South Wales.

Accurate data on the behavior patterns of flooding rivers are often lost because the floods themselves cut communications, reported W. J. Gibbs, the Commonwealth Director of Meteorology, at a recent 23-nation symposium on hydrological forecasting. Flood forecasting is never simple, Gibbs said, but it's particularly difficult in Australia, where floods often come within 24 hours of rain. A satellite could transmit warnings and precipitation data from monitoring points and ground stations, even if land lines were washed out.

"We must predict the rain which will cause the flood," he told the meeting, which was sponsored by the Australian Government, the World Meteorological Organization and UNESCO.

CLIMATOLOGY

Canadian Permafrost Mapped

The distribution of permafrost over Canada has been charted by the Canadian Geological Survey, following 14 years of data-gathering by Dr. R. J. E. Brown of the National Research Council's division of building research.

The extent of the continuous and broken permafrost zones and the occurrence of permafrost at high elevations in the western mountains are shown on the color map. Also provided are data on physical factors influencing permafrost formation and distribution, and a bibliography of source information. The map is available for 50 cents from the Survey's Dept. of Energy, Mines and Resources in Ottawa.

POLLUTION

Tracking Beach Oil

The problem of oil-polluted beaches cannot be solved without a means of determining where the oil came from. In spite of new loading and tank washing procedures, tankers may be sources of pollution, as can cargo and passenger ships using dual-purpose oil and ballast tanks.

The Thornton Research Centre of Shell Oil Co. in Britain has developed a technique, based on gas/liquid chromatography, that analyzes the oil residues found on beaches. It can now be established, Shell says, whether traces come from crude, fuel, or lubricating oil. The method could reduce future mishaps by reducing the number of possible pollution sources needing attention.

FORESTRY

Ancient Redwoods Not As Good As Today's

Dawn redwoods, found growing in China a quarter-century ago and thought to be ancestors of California's giant sequoias, can't compete as wood producers with modern species, according to the Department of Agriculture.

The wood, which closely resembles the California redwood in color and cell structure, is too light, weak, limber and soft, say scientists at the Department's Forests Products Laboratory in Madison, Wis.

That conclusion is based on tests of wood from trees grown in the National Arboretum at Washington, D.C.; results coincide closely with findings made earlier by Chinese investigators. The Chinese trees, known only from fossils until they were discovered in 1941 in Hupei and Szechuan provinces, apparently first appeared in the late Cretaceous period, some 80 million years ago.

ORGANIZATION

Japan Joins Hydrographic Body

The Japanese Government has decided to sign the convention of the International Hydrographic Organization, drawn up last May in Monaco by delegates from 48 countries. Twenty countries have signed the convention so far.

CARTOGRAPHY

Charting Texas' Unknown Waters

Texas hardly seems a likely part of the world in which to find uncharted waters, but such an area exists just south of Corpus Christi. Baffin Bay, Tex., and its adjacent waterways are about to undergo their first hydrographic survey.

From the Gulf Intracoastal Waterway in Laguna, the U.S. Coast and Geodetic Survey will work westward, charting depth and obstructions such as rocks, sunken wrecks, reefs, sand bars and oil and gas well platforms. Electronic sounding equipment, aerial photographs, hand leads and sounding poles will all be used in the survey.

The data will be incorporated into a small-craft chart planned for production in 1970.

METEOROLOGY

Quicker Storm Data Proposed for U.S.S.R.

An automatic weather data service has been proposed for Russia by two scientists with the Soviet Scientific Research Hydrometeorological Center in Moscow.

At present, according to V. V. Brezhnev and Yu. K. Federor, Russian storm-warning information is sent out by telephone to a group of users; if there are 40 or 50 users in the chain, the last to be notified gets the information some three or four hours after it is sent out.

The researchers propose a simultaneous-transmission system in which the telephone is first used to inform those in the system that there is a message. Keys on a panel would link each user to the center, and a light above each key would indicate when the user is switched in. When all users needing the message are switched in, the attendant would read the text, and each user would signal proper receipt of the message.

The Russian report appeared in SOVIET BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY AND SPACE (No. 169), published in English by the U.S. Department of Commerce.

6 january 1968/vol. 93/science news/13