

which would be among the first targets of enemy missiles in war.

The United States, meanwhile, is moving ahead with other VTOL projects. The Army is developing two surveillance planes.

One, a General Electric-Ryan Aeronautical Company project, uses six-foot fans tucked within each wing for its vertical lift. The thrust is diverted to the fans from two jet engines. The other project, Lockheed Hummingbird, utilizes a series of valves and turbojet engines to greatly increase vertical lift with no additional fuel consumption.

The preliminary trials of the Hummingbird are scheduled to be completed the end of November.

All these planes figure in some way in U.S. military plans. However, neither the U.S. Air Force nor the Navy now has a VTOL fighter under development.

It would be unrealistic to state that there are no barriers to a system of VTOLs for military and commercial purposes. In the past, the meager funds spread over a wide variety of experimental VTOL projects hampered progress in the field.

High fuel consumption required by the propulsion system—the gas turbine—that made VTOLs possible, the vision-cutting and engine-clogging dust storms raised by VTOLs blasting off, and increased competition from improved helicopter models and the "short take off and landing" aircraft are disadvantages pointed out by critics.

However, as one Federal Aviation Agency official stated, the two greatest problems facing U.S. transportation today are commuter travel and the short-trip travel, defined as up to 400 miles. More and more cars clog the nation's roads, with no relief in sight.

A system is needed that is reasonably cheap, convenient and flexible, avoids jammed highways, yet is readily accessible to the traveler when he wants it, the official stated. The VTOLs would closely fit that description.

• Science News Letter, 82:354 December 1, 1962

ARCHAEOLOGY

New Dating Method For Million-Year-Old Fossils

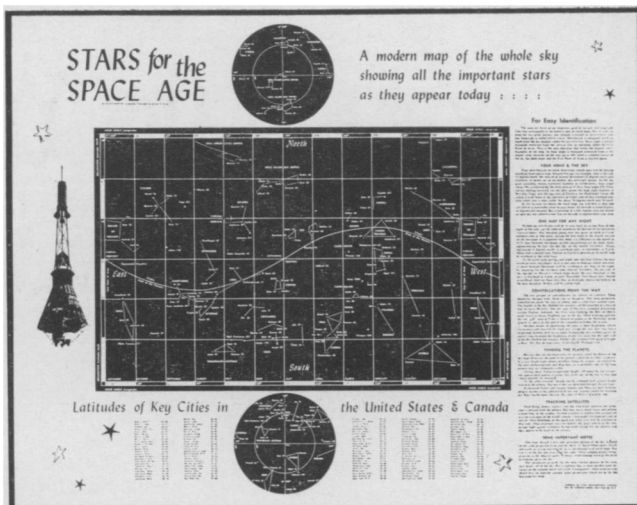
➤ A NEW RADIOACTIVE dating method promises to close one of the major remaining gaps in methods of fixing dates on the geological and archaeological time scales.

The new procedure, based on radioactive inequality in nature between uranium-234 and its parent U-238, was originated by David Turber of Columbia's Lamont Geological Observatory at Palisades, N.Y. The research is described in the Journal of Geophysical Research, Nov. 1962.

Uranium-234 is an isotope of uranium formed by the radioactive decay of U-238. The "disequilibrium" between the two isotopes possibly can be employed to date sedimentary material—which often contains fossils—as old as 1 million to 1.5 million years. Previous methods available could only date material accurately back 20,000 years to the last ice age.

• Science News Letter, 82:355 December 1, 1962

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