

AERONAUTICS

Predict Aviation's Future

► TODAY'S AIR TRAVELER will think he is in another world of airplanes and airports by 1965. He will be flying in strange-looking craft, carried in planes with automatic flight control, be made safe by electronic traffic police and be able to land at one of tens of thousands of airports throughout the nation.

These are but a few of the predictions made by the future planners of the Civil Aeronautics Administration to commemorate the 30th anniversary of the Air Commerce Act of 1926.

Today civil aviation ideas are moving from mind to model just about as fast as the country's fastest jet. The only realistic approach to what is happening, CAA administrator Charles J. Lowen said, "is to let your imagination run wild."

The CAA predictions of things to come by 1965 are not figments of the imagination. Many are already working models or on the drawing board. Just a few of the predictions show that in ten years the skies will be filled with a mixture of present-day planes and strange-looking aircraft.

A limitation of runway space will mean more and more vertical takeoff airplanes and short takeoff and landing airplanes. Passenger planes will probably have tilting

wings and powerplants on a horizontal body and will rise and land like helicopters.

Long-distance flights will be made with the aid of natural jet streams flowing at 200 or more miles per hour more than four miles above the earth's surface.

Traffic control will be built around radar, radar beacons, automatic data links and computers. Radar and the radar beacons will give controllers "eyes." The automatic data link will keep all ground control stations informed about a plane's position, speed and altitude and feed back traffic information to the pilot.

Aircraft in flight ten years from now may be automatically warned by proximity sensing equipment of approaching aircraft or obstacles. Long-range flights may be guided by means of punched tapes aboard the plane for automatic flight control.

By 1965, airports will stop growing and begin to shrink. There will be tens of thousands of "smaller airports" all over the country and a reduction in the time it takes to get from an airport to the middle of town. Airport terminal buildings may very well be a dock for air liners in which passengers enter the building through "flying bridges."

Science News Letter, June 2, 1956

PSYCHIATRY

Mushroom Poison Crazes

► "A PLEASANT MARTINI FEELING" and faces that turn the color of an eggplant if it were diluted are among effects of injections into the blood stream of the poisonous mushroom and toad skin poison, bufotenine.

Hallucinations of seeing vivid red, green and yellow spots that look as if made of fluorescent cloth are other of the mock mental disease symptoms reported by prisoner volunteers given the drug.

The studies, made by Drs. Howard D. Fabing and J. Robert Hawkins of Cincinnati, are reported in *Science* (May 18).

The same chemical when given to dogs causes splaying of the hind legs and "an unearthly howling" which may go on for almost two hours.

Bufotenine is in the narcotic snuff, cohoba, of the Indians of Hispaniola and South America and in the Mouch-more of the Koryaks and other Siberian tribes of the Kamchatka peninsula and the flugsvamp of the Vikings, Drs. Fabing and Hawkins point out.

The berserk rages of the ancient Vikings and the temporary ecstatic states of depersonalization and hallucinations of primitive men who ate certain poisonous plants to produce these effects are now believed due to the bufotenine in the various plants.

The chemical has "surprisingly little" effect on either blood pressure or pulse rate, although one of the volunteers said he felt a tightness in his throat and pulse and a "racing pulse." His pulse rate remained at the basic 84 per minute.

Dilated pupils and nystagmus, with the eyes making involuntary fast movements from side to side or up and down, were other effects of the chemical.

One volunteer reported his mind "felt crowded," another that his mind felt better and more pleasant than usual. The one who reported the "pleasant Martini feeling" said he felt his body was taking charge of his mind.

Studies of this and other chemicals that produce mock mental disease are being pursued with the hope of learning more about possible chemical causes and remedies of mental sickness.

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VIROLOGY

Find New Virus Group In Babies With Croup

► DISCOVERY of a new group of viruses that may be the cause of croup in babies was announced by Dr. Robert M. Chanock

of Children's Hospital Research Foundation, Cincinnati, at a conference at the New York Academy of Sciences.

Cautiously, Dr. Chanock said his findings "suggest" the new viruses may be the cause of croup, but more studies are needed to confirm this. For the present, he calls the viruses "CA" viruses, meaning croup-associated viruses.

They were found in material swabbed from the throats of two to 12 infants with croup. When grown on monkey kidney tissue in the test tube, they produced an unusual "sponge like" change in the kidney tissue culture.

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