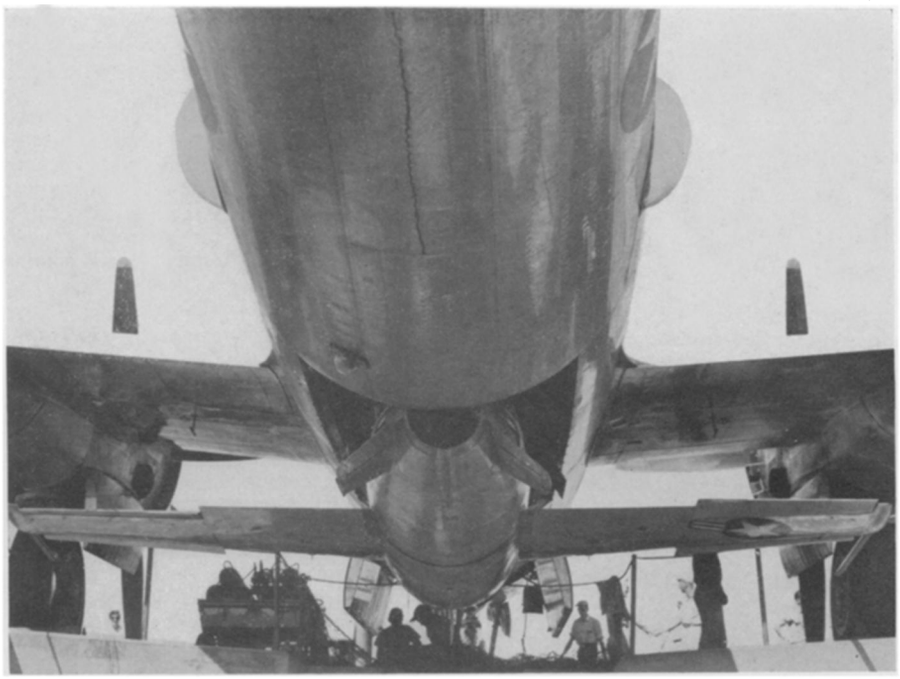

LOADING FOR SUPERSONIC RESEARCH—Being lifted into the bomb bay of a Boeing B-29 mother ship, a McDonnell XF-98 "Parasite" is shown just before starting a test flight. Such "mother" acts conserve the rocket plane's fuel for high-altitude scientific tests.

AERONAUTICS

1952 Aviation News

Beginning of first commercial jetliner service, crossing of Atlantic in helicopters and opening of polar route among top advances in aviation during past year.

➤ THE ENTRANCE of a jet-propelled airliner into regular scheduled commercial service is one of the outstanding aviation events of 1952. It marks the coming of a new era in civilian flying, an era of speed that puts places half-way around the world within a travel-day of home.

This first jet-propelled commercial transport, now known as a jetliner, is a British Comet. It entered scheduled service on May 2, 1952, flying from London to South Africa. Soon after that date another jetliner route was established from England to Ceylon. Over a score of Comets are now being built for various routes, including one from British Columbia to Japan and at least one within the United States.

Another important aviation event of the year was the crossing of the Atlantic ocean by two American helicopters. They followed a northern route, by way of Labrador, Greenland, Iceland and Scotland. No plans are being made for the use of helicopters in transatlantic traffic, but this flight, in which new distance records were made, shows that American helicopters can be delivered to Europe under their own power if necessary.

This Atlantic-hopping trip was made almost ten years from the date when the helicopter first established for itself a definite place in aviation by a 16-hop trip from Connecticut to Ohio.

The polar route between the Western and the Eastern continents was opened late in the year by an American-built Scandinavian airliner, with 35 persons aboard. It flew from Los Angeles to Denmark by way of the new American defense airport at Thule in northern Greenland. By following this Great Circle route, it cut the distance between the terminals about 1,000 miles from routes usually followed and cut the travel time by about four hours.

The flight was made possible by facilities for refueling at Thule. The building of this great airport at Thule is one of the important achievements of 1952. While constructed for defense purposes, its greatest service in the future may well be as an aid to civilian air traffic between much of the American continent and much of Europe and Asia.

Japan is brought nearer the United States, in time, by proof that non-stop flights between Tokyo and Honolulu are possible by giant transports, although the distance is nearly 4,000 miles. In November this year a Pan American World Airways Strato-Cruiser, carrying 47 passengers, made this trip in 11.5 hours, cutting the usual time by nearly seven hours.

It carried extra fuel, flew at an altitude of 25,000 feet and was aided by tail winds. But it shows the possibility of de luxe service, especially for those to whom time is important.

Another important step in aviation which has come to the front during the year is the come-back of the flying boat. Over the past few years, both in America and England, much research in seaplanes has taken place. As a result new hulls have been designed which lessen the drag that made older types difficult to operate from water. Hulls are also made more slender and are streamlined to decrease the drag or air resistance at take-off.

Extensive use of flying boats is promised for the future. One of their great advantages is that they use water for landing, eliminating need of expensive man-made landing fields.

Among the important aviation developments announced during the year are improved military planes, with automatic devices for handling and with increased speeds. These have been given much publicity. Less is known, however, about the improved power plants that will add to the efficiency and economy of aviation. Better jet engines are now in service, some of which have over a 10,000-pound thrust.

After-burners for jet-fighters are used on many new planes. Turboprops are coming into rapid use. A jet with two compressors in series is under experimental testing. Turbo-compound engines are ready for use, and a "by-pass" system which feeds air into the jet pipes to give greater thrust has been developed.

Science News Letter, December 27, 1952

ENTOMOLOGY

Change Fertilizers To Control Insect Pests

➤ INSECT PESTS may be controlled by juggling fertilizer formulas.

Dr. Philip Garman, Connecticut Agricultural Experiment Station entomologist, has found that in every case when different kinds of potassium fertilizers were added to the soil, the red mite population increased. He also found that the addition of calcium nitrate to the fertilizer neutralized the effect of potassium on the number of red mites.

These experiments were all greenhouse trials. Next year he will work in the open field to see if his observations hold true in commercial operations. If mite populations increase when potassium fertilizer is added under regular farming practices, he said, the discovery will mark a large step towards controlling pests by changing fertilizer formulas.

Science News Letter, December 27, 1952