

AERONAUTICS—RESOURCES

# More Fuel Is Needed

Huge expansion of cargo plane fleet poses new problem of fuel supply. Air transport is aiding the African drive.

➤ AVIATION FUEL, the priority passenger on every cargo plane, must be produced in much larger quantities to keep aloft our growing fleets of military transports, it is revealed by a study issued by the Standard Oil Company.

About 3,300,000 gallons of 100-octane fuel a day will be required to fly the 1,200 cargo planes called for by a recent contract, assuming that they fly a third of the time.

To maintain such a fleet of planes, if they were the most efficient heavy type for long hauls, would require a substantial increase in the nation's 100-octane capacity, the report states.

Four to five gallons of aviation lubricants will also be required for every hundred gallons of gasoline consumed. The huge demands may make it necessary to restrict civilian consumption of premium grade motor oils. In normal times it would take more than a year to expand the complicated processing facilities for these aviation lubricants.

"Whether the industry can supply the fuel and lubricants to put into the air such a cargo fleet as is now being dis-

cussed depends on how rapidly the steel and other critical materials that must be allocated among various programs of strategic importance can be made available for 100-octane plant construction," Standard Oil officials warn.

The cargo plane's thirst for fuel is revealed by statistics showing that more fuel must be carried than cargo except on short runs and with frequent refueling. For heavy types of planes, like the Mars, the proportionate fuel demand is lowered.

Every cargo plane now in operation on overseas lanes requires more tankers to keep it in service than it replaces in freight ships, the report states. But planes are now actually delivering military supplies to far corners of the earth because of their speed and because their valuable cargoes can be delivered directly to troops inaccessible by ship.

Planes from the United States, for example, have been flying replacement parts for tanks and planes all the way to Africa to help maintain the drive of the United Nations.

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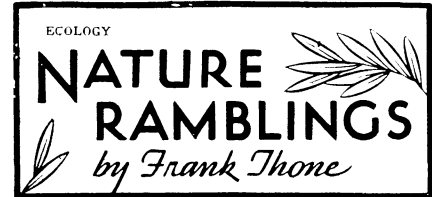
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Florida Dunes

➤ SAND DUNES are very much alike wherever you find them. Young soldiers and aviation cadets in Florida, whose thousands have largely replaced that state's normal peacetime population of tourists and vacationers, have doubtless noticed that the sand dunes along both ocean and gulf coasts are in a general way very much like other dunes they have seen along the seaboard farther north, or on the Pacific coast, or on the southern and eastern shores of Lake Michigan.

First there is bare, loose sand; then a zone of sparse, weakly-rooted plants eking out a hard existence; above this, one or more ridges bound with increasing firmness by the tough roots of perennial grasses. Still beyond comes the area of the stabilized dunes, with long-established plant populations of substantial bushes and various kinds of full-sized trees.

Closer examination, however, will show decided differences in detail underlying the general similarities. The same jobs of pioneering, sand-binding and stabilization are done, but there are different plants doing them.

A comprehensive and most readable study of the vegetation of Florida dunes has just been brought out by Prof. Herman Kurz of the State College for Women at Tallahassee. In text and diagrammatic illustration he tells the story of the plants that make the shifting sands stand still. (Florida Dunes and Scrub, Vegetation and Ecology; *State Geol. Surv.*, Tallahassee, \$1.)

A stroll from the water's edge takes the observant student of nature first across the weakly-held pioneer-plant zone where beach morning glory and the fleshy sea-rocket are the most con-