

airports, says Dr. Whitcomb. That leaves out all the people who choose otherwise. "We are, in effect, building a railroad track through their backyards."

The Academy recommends some six to eight further studies which should be carried out before the SST is approved for overland flights.

Sooner or later, says Dr. Whitcomb, the Government will have to decide what boom level it will allow over the United States. At this point, the SST cannot be modified to do away with the sonic boom problem, though in 10 or 20 years, that may be possible, says Dr. Whitcomb. ♦

CARIBBEAN FRUIT FLY

Florida Crops Threatened

Except for the gilded upthrusts of Miami and Miami Beach, Florida's Dade County stretches flat and rich with orange groves and vegetable fields. Now the cities and the visitors they attract—not always human—threaten the countryside and its crops.

The huge agricultural areas that make Florida one of the nation's most important food production states and the nation's winter vegetable center are threatened by the highly destructive Caribbean fruit fly.

Estimates are that annual damage may already be running at the rate of \$50 million a year.

Doyle E. Conner, Florida Commissioner of Agriculture, finds the situation so serious that he will immediately seek Federal aid for an all-out eradication program—the second to be undertaken—which he calculates may cost as much as \$10 million. Aid may be slow coming, under Federal guidelines requiring documentation of economic threat. The U.S. Department of Agriculture says that, so far, only minor damage to citrus groves is evident.

The Caribbean flies were first discovered two years ago in fruit trees close to Miami International Airport, apparently brought into the country by some of the hundreds of planes landing each week from more southerly areas.

The Caribbean pests are cousins of the Mediterranean fruit fly, which is considered more dangerous only because it principally attacks valuable commercial crops, like citrus, on which depend much of the state's economy. Small concentrations of the Mediterranean fly were found twice within recent years in the Miami area, and were swiftly cleaned out by full scale emergency eradication efforts.

When the Caribbean flies were first found in the Miami area, a program for their eradication was also under-

taken, but on a scale insufficient to do the job.

As a result, in the two years since then, the flies have swept into virtually every corner of big Dade County, which extends southward to the very edge of the Florida Keys. They've also multiplied at such an alarming rate that they're now found in 24 counties to the west, north and northwest of Dade.

The startling breeding rate of the Caribbean flies is evident in the numbers taken from special bush and fruit tree traps, designed to keep a check on their rate of increase.

Official state agriculture commission figures show that only 356 flies were found in Dade County traps during March of 1966. The reasons for the alarm become clear on the basis of figures just released, showing that in March of this year, the same number of traps produced 6,076 flies. In Broward County, adjoining Dade to the north, traps caught only 132 flies in March of 1966. But 1,967 were found

in the same month this year.

The Caribbean fly attacks a wide variety of hosts, including peaches, limes, sour oranges, grapefruit, tangerines, sweet oranges, bell peppers, tomatoes, mangoes, kumquats, loquats, guavas, rose apples, gooseberries and tropical almonds.

Malathion and similar insecticides are used for Caribbean and Mediterranean fruit fly control. However, at the University of Florida, Dr. R. M. Baranowski, associate entomologist, is working on a program to effect eradication through sterilization of Caribbean fly male adults. This was notably successful in the elimination of screw worms among cattle (SN : 3/11), which annually caused tens of millions of dollars in losses. The USDA gave the university a \$31,000 grant for the Caribbean fruit fly sterilization work and the state augmented this with another \$24,000. The effort has not yet produced a successful formula, but Dr. Baranowski says he's hopeful. ♦

CONSERVATION

Last Ditch Fight for Vanishing Estuaries



Interior

New Jersey housing creeps over marshland near Atlantic City.

Estuaries, the often swampy areas where rivers meet the sea, are a valuable but vanishing part of America's natural resources. Though they are essential as breeding areas for many of the most desired fish and shellfish, estuaries are rapidly being dredged and filled.

California, with relatively little estuarine fish and wildlife area to begin with, has suffered the greatest rate of destruction—67 percent. New Hampshire, Connecticut, New York and New Jersey have lost between 10 percent and 15 percent of their estuarine areas to dredging and filling.

Efforts to slow this rate of retrograde progress have met with little success in the past. But last week, the

Federal agencies most concerned—the Army and Department of Interior—agreed, under Congressional prodding, on a policy designed to protect important estuarine areas from unnecessary development.

The Army's Corps of Engineers has, in the past, issued waterfront construction permits without much regard for conservation. Under the new agreement, they will submit all requests for permits to the Interior Department for comment on their effects on wildlife.

Interior officials will still have no final authority, but the Army has agreed to respect their judgment. The knowledge that conservation has strong support in Congress should make this easier for the Engineers, who are canny