



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

Crip

October 11, 1973.

Dr. James C. Fletcher
Administrator
National Aeronautics & Space
Administration
Washington, D.C. 20546

Dear Dr. Fletcher:

It has come to my attention that Mr. W. N. Sullivan, Dr. D. K. Hayes and Mr. M. S. Schechter of the Agricultural Environmental Quality Institute, Agricultural Research Service have discussed with Mr. Walter Sullivan and Col. James Wittmer, Space Medicine, Hq., National Aeronautics & Space Administration, the feasibility of flying fully embryonated gypsy moth eggs in diapause in Skylab III.

The purpose is to determine whether gypsy moth eggs would break diapause prematurely under zero gravity. It has not been possible to break diapause of this insect by physical or chemical means.

The intracellular organization of the brain may be disturbed by zero gravity so that development would be initiated. If the natural 9 month egg diapause of the gypsy moth can be terminated at will, it would be of great help to specialists in the Animal & Plant Health Inspection Service who are attempting mass rearing of the gypsy moth for sterile male release but lack a suitable means for breaking diapause.

Regulatory officials of the states through which these insects would be carried have authorized proceeding with this research project. Necessary precautions will be taken to insure that the insects cannot accidentally escape at any time.

We would greatly appreciate the opportunity to participate in this research project in cooperation with the National Aeronautics & Space Administration.

Sincerely,

Earl L. Butz

Earl L. Butz
Secretary



Re: Gypsy Moth

Diapause : a period of spontaneous dormancy independent of environmental conditions interrupting developmental activity in an embryo, larva, or pupa or arresting reproductive activity in an adult insect and usually occurring during hibernation.

TV OPO book, Addendum A TV120 Gypsy Moth.

Alan Daly