insecticides were used a nearly complete biological control existed. In the Dominican Republic, such claims for the insecticides, however, are not supported by the circumstances, which are, for this reason, presented here.

The green peach aphid was first discovered in the Dominican Republic, in January 1951, by Chupani and Ginberg, two members of the Dominican Department of Agriculture. They found it throughout the Cibao Valley, with the heaviest infestations west of Santiago. Samples of these aphids collected in March 1952, were identified as *Myzus persicae* (Sulzer) by Louise M. Russell, of the U. S. Bureau of Entomology and Plant Quarantine.

Before January 1951 no report is known to have been made of aphids occurring on tobacco in the Dominican Republic—a remarkable record, considering that tobacco has been an important agricultural crop in that country since pre-Columbian days. Harry and Howard Allard, who made an intensive study of pests on Dominican tobacco in 1947 (*3*), do not include Aphididae in their paper. It is doubtful that these observers would have failed to note aphids on tobacco if they had been present.

In February 1952, the distribution of the aphids was general in the tobacco-growing regions of the republic, extending east and west through the Cibao Valley and south as far as Bonao (Monseñor Nouel.) The intensity of the infestations varied from light to very severe, the latter category implying the presence of honeydew and cast skins on the underside of leaves, which were thus rendered commercially worthless.

Lead arsenate has been the only insecticide used in these agricultural areas, and then only in a very limited way for certain chewing insects. We are not aware that any of the new synthetics had been used on any crops in the tobacco-producing regions before the aphids were discovered. The status of the natural predators had not been disturbed by any chemical poisons. Nevertheless, the predators have not responded to the opportunities afforded them. For example, the populations of several of the lady beetles in fields heavily infested with aphids for the second year have been rather scant.

Support is found for the interesting theory of George N. Wolcott (*4*), entomologist of the Insular Experiment Station at Río Piedras, Puerto Rico, that the aphids have been windborne to Hispaniola and Puerto Rico from Cuba, where they have become an important pest since they first were found there, in 1948.[2] The green peach aphid appeared on these two islands to the east of Cuba at the same time, being observed on tobacco in January 1951 both in the Dominican Republic and in Puerto Rico. It quickly established itself as a pest of considerable economic importance in both islands.

So far, this aphid has been rather selective as to its host plant. In many Dominican tobacco fields, tomatoes and eggplants are found growing adjacent to tobacco that is heavily infested with aphids. Such plants either have been planted by the farmer for his own use or are of volunteer growth from a previous crop. We have yet to observe aphids on these other solanaceous plants, even where the adjoining tobacco plants may be very heavily infested. Does this indicate, as Wolcott has suggested in correspondence this year, that the aphids found on the Dominican tobacco are morphologically indistinguishable but, on the basis of host selection, physiologically distinguishable from those previously present in the West Indies?

ERNEST G. BEINHART[3]

[2] *The editors fail to see how Wolcott's theory of windborne migration is supported in a region where the prevailing trade winds blow consistently from Puerto Rico to the Dominican Republic to Cuba, and where the rare reversals of wind direction are associated with hurricanes, the radii of which are much too small to bridge the water passages between these islands.*

References

1. CHAMBERLIN, F. S. *J. Econ. Entomol.*, **42**, 544 (1949).
2. *Ibid.*, **43**, 640 (1950).
3. ALLARD, H. A., and H. F. *Tobacco in the Dominican Republic.* USDA, For. Agr. Rept. No. 30 (1948).
4. WOLCOTT, G. N. *Science*, **116**, 43 (1952).

[3] Tobacco specialist, Office of Foreign Agricultural Relations, on assignment to the Dominican Republic.

Shipping Small Animals

I AM glad to report that the difficulties with transportation of live materials for research, cited by Wm. Hegener in your July 4 issue (SCIENCE, **116**, 20 [1952]), are well on the way toward solution, at least with respect to air express.

Through the intervention of Barry King, research executive of the CAA Medical Division, an excellent memorandum on the subject has been sent to members of the Air Express Traffic Committee by its executive secretary, Emery F. Johnson, of Air Cargo, Inc. We know of at least one positive response to this memorandum—National Airlines has gone on record as accepting small laboratory animals on all flights, provided they are: (1) consigned to a recognized research organization and all parts marked "Live Animals for Research Purposes;" (2) inoffensive to passengers and crew at National's discretion; (3) packaged in such a manner as to be leakproof and require no care in transit; and (4) of a size readily handled on board all types of aircraft.

National has stated that it is wholly in sympathy with the problems being experienced in shipping animals for research purposes, and that it was amending its tariffs because of the pressing humanitarian need for this research.

BEN STERN

Office of Aviation Information
Civil Aeronautics Administration
Department of Commerce