

IOWA STATE UNIVERSITY DOVE COLONY TO BE TERMINATED 1982

by
Wilmer J. Miller

After 20 years of research activity at Iowa State University Genetics Department, the end of the dove colony is now scheduled for 1 July 82. For this last year there will be a "winding down" process. The reasons for the termination are several. The immediate trigger is "Reaganomics" combined with the constant pressure for several years by the inspectors of the Laboratory Animal Facilities Committee to make us buy a cage-washing machine that cost \$30,000 six years ago. My response has always been that such a cost is not justifiable to the taxpayer, it does not aid the birds' health or well-being--indeed the opposite would occur. The disturbance of daily or weekly washing would ruin their nesting and even ordinary equanimity for those only in holding. This is especially true of the species hybrids. Local politics also is involved, but this is true of any human interactions in groups. The termination is not connected with the completion of all research objectives. Plenty of good ones remain.

We have been paying genetic attention to 46 characters recently, some rare or difficult to breed for (see table 1.). There will be insufficient time to analyze the recent ones, so you fanciers will have to carry on for down color, bill ring, hoarse or soft voice, etc.

The blood-type differences are of little interest to most of you, but we had worked up 8 different reagents for red cell individual differences and seven specific-specific reagents in the dwarf turtle dove backcross population. Two genetic linkage groups were found: silky and blood type "8" showed 8% crossing-over in males and 4% in females, while albumin had about 22% crossing over with blood type "y" (sex differences not worked out).

About $\frac{1}{4}$ of the colony of approximately 600 birds that we maintained are Japanese ringnecks reextracted (S. *douraca* = *risoria* now) after crosses. This was the source of the albino gene. About $\frac{1}{2}$ are backcross and inter se hybrids from the dwarf turtle dove, *Streptopelia humilis* (= *tranquebarica*). These will be donated to veterinary anatomy students, herpetologists, etc. The remaining $\frac{1}{4}$ are regular ringnecks. During the last 15 years we have donated 2,090 ringnecks of various color phases, etc. for breeding to quite a few fanciers, so our stock is widely spread we hope. At least 1,370 other doves were donated for research purposes to other investigators or simply to be eaten. There were 369 pigeons similarly donated to breeders also.

The pedigree records of the colony extend back to about 1937, but additions of outside stock were made periodically. Thus, this colony probably has been more representative of S. *risoria* stocks than any other in the world.

Hopefully, I can continue some reports on the statistics of the colony, data as yet unassimilated, etc.

ADAN nrr-Dec '81: 7

October 16, 1981

Genetic Characters in the I.S.U. Dove Population
Streptopelia humilis and risoria

Blood types:

Species:

hu-1, ri-1

hu-4 (& Japanese 4)

hu-8, ri-8

hu-y

hu [4-8] interaction product

albumin H (humilis)

versus R (risoria)

Structure-Color

silky (codominant)

bill ring (thin &) codom.

(absent) juvenile

dark-blond-white

albino (recessive)

ivory (recessive)

pied (recessive)

rosy (recessive)

white neck ring

mutant yellow down

mutant white down

FLARE (juvenile)*

stubby dwarf

bald head squab*

pale legs*

sex-influenced humilis color*

Quantitative?

egg size*

weight

tail length (10 vs. 15 cm.)

commissure length

hoarse & quiet voice*

anemia*

bill tipper*

Individual:

A I

B J

C K

D L

E M

F

G

H

Lectin:

Wisteria (juvenile) (Absorbed by any of several species, pigeon, turkey, muscovy, dove)

Mp Maackia by pigeon (juvenile)

W_xR wax kidney bean (by rabbit)

Peanut + (recessive)

* Only very limited data has been obtained for these characters.

ADAN Nov-Dec '81 p. 8