

er's 1716 description of a spontaneous variety cross in *Zea Mays*. Cotton Mather's is still our earliest *authentic* description of plant hybridization. In spite of the popular names for the oaks used by Lawson, however, there is little doubt but that he was really describing the actual results of introgression, although he may well have been unaware of the fact.

Unfortunately, when we translate Spanish oak and red oak into taxonomic language we run into a bit of confused synonymy. The writer is indebted to Prof. John M. Fogg, Jr., for the translation. Spanish oak is taken to be *Quercus falcata*, Michx. This is a southern

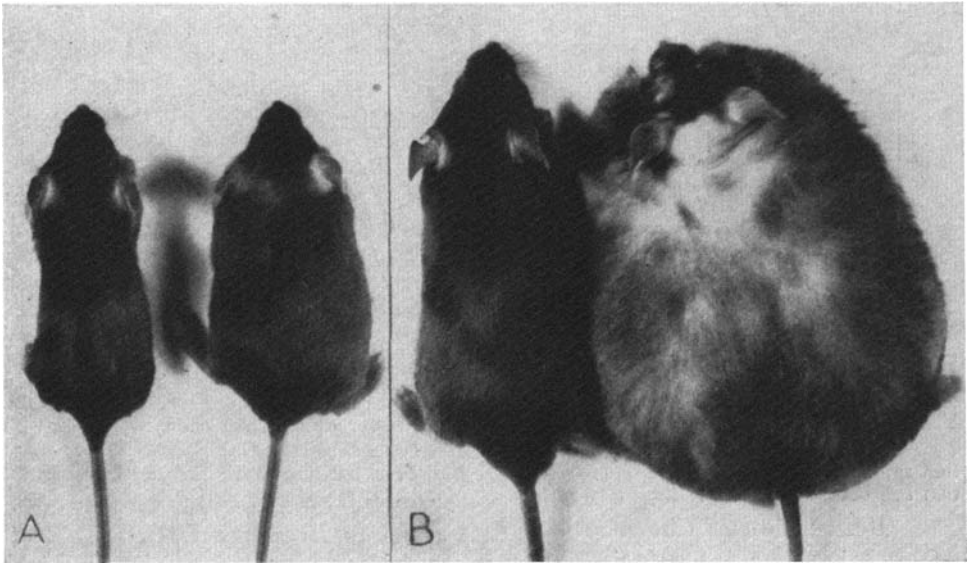
coastal plain species. The red oak is *Q. rubra* L., a species which is widely distributed in the southern Appalachians and which extends into the coastal plain. There are numerous intermediate forms which supposedly are the bastard Spanish oaks of Lawson. Indeed the relationship of *Q. falcata* and *Q. rubra* are such that Wm. Trelease in *The American Oaks* (1924) considers them a single species and reduces *falcata* to a form of *rubra*.

It is highly desirable that we discover exactly what the eighteenth century American Colonials meant when they called a plant a bastard.



OBESE, A NEW MUTATION IN THE HOUSE MOUSE*

ANN M. INGALLS, MARGARET M. DICKIE AND G. D. SNELL
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine



THE FAT MOUSE GROWS UP

Figure 4

A—shows normal control and an obese mouse at 21 days of age. The former weighed 12 grams; the latter 16. *B* shows a normal and obese mouse at ten months of age, when the obese mouse weighed 90 grams and the normal mouse 29 grams.

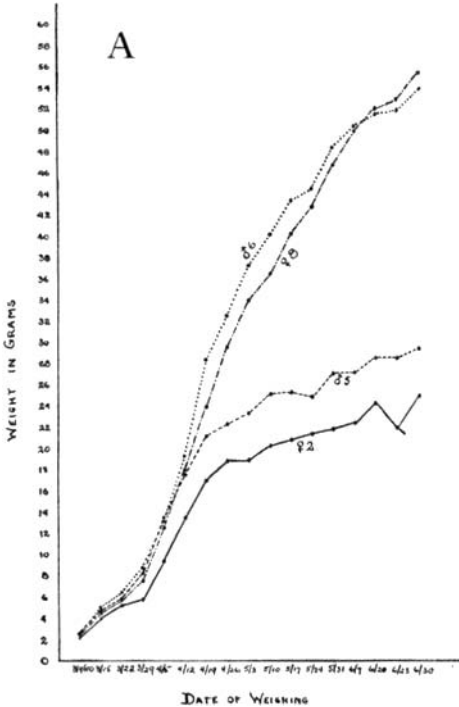
OBESITY, other than that occurring in yellow mice, is relatively rare in mice. The obese yellow animals attain weights up to 75 or 80 grams but the average weight is

around 60 grams and then there is a decrease in weight as age increases.† In the summer of 1949 some very plump young mice were found in the V stock.‡ Others occurred shortly after

*This work has been aided by grants to the Roscoe B. Jackson Memorial Laboratory from the Commonwealth Fund, Anna Fuller Fund, Jane Coffin Childs Memorial Fund for Medical Research and the National Advisory Cancer Council.

†DICKIE, M. M., and G. W. WOOLLEY. *Jour. Hered.* 37:365-368. 1946.

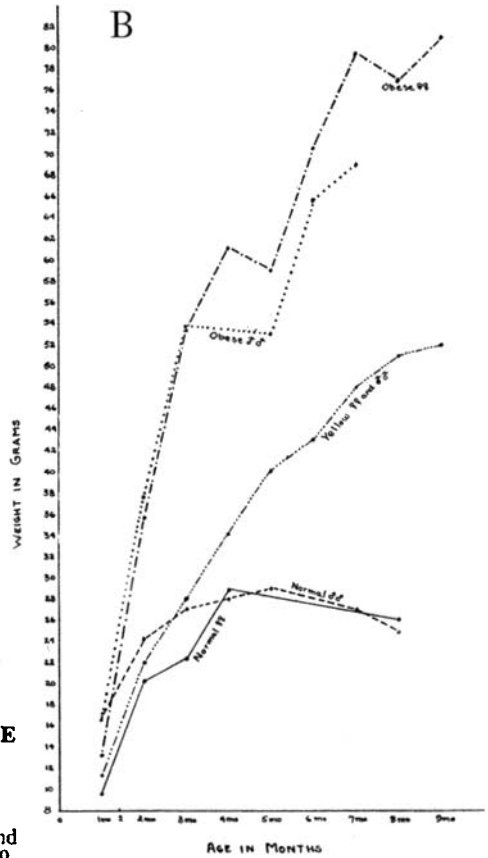
‡V stock of Jackson Laboratory mice (*Mus musculus*) carries genes *aa lnln ss wa-lwa-1 cv*.



WEIGHT CURVES OF NORMAL, OBESE AND YELLOW MICE

Figure 5

A traces the growth of two normal and two obese littermates from birth (March 9, 1950) to about four months of age. For the first six weeks of life the two types cannot be distinguished. B compares growth of obese, yellow and normal mice, for the first nine months. Yellow is another gene which causes obesity but to a lesser extent than obese.



that among offspring of these V stock animals that had been outcrossed to the fuzzy sock.

the obese, but none have died up to 12 months of age.

Description of Character

Obese animals are first recognizable about four to six weeks of age (Figure 4). At that time they appear to have a slightly shorter body, are rather square and have expansive hind quarters. From that time on, they increase in weight rapidly, so by three months of age they weigh about twice as much as their non-obese litter-mates. The weight of the obese continues to increase, though not as rapidly as it did up to three months of age. At the present time there are two animals ten months of age that weigh 90 and 75 grams (Figure 5B). They are still gaining. Figure 5A is a graph of weights of two obese and their non-obese sibs from birth to four months of age. The graph in Figure 5B shows the comparison of obese, fat yellows and normal animals.

Breeding Data

Obese animals, themselves, are sterile. Data obtained on offspring of heterozygotes show that out of 212 animals, 43 were obese. This approximates the 3 to 1 ratio expected for a recessive gene, with a slight deficiency of obese. It is suggested that this gene be designated by the symbol *ob*.

Summary

A new mutation called obese and designated by the symbol *ob*, occurred in the V stock at this laboratory in the summer of 1949. Obese animals increase rapidly in weight until they are about four times the weight of normal animals. This recessive gene causes sterility in the homozygote, but as yet, there seems to be no indication of any affect on the life span of the animals.

As yet, we do not know the life span of