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BOOK NOTICE.

THE DETERMINATION OF DOMINANCE AND THE MODIFICATION OF BEHAVIOUR IN ALTERNATE (MENDELIAN) INHERITANCE, by conditions surrounding or incident upon the Germ cells at Fertilization. By Wm. L. Tower (Biol. Bulletin, Vol. XVIII, No. 6, 1910).

Prof. Tower has been engaged in an evolutionary study of the genus *Leptinotarsa* since 1895. In 1906* he published extensive data concerning this group from a number of points of view. The most interesting part of the results made known at that time was the production of new forms by exposing the beetles to extreme conditions of temperature and moisture during the period of the growth and maturation of the germ cells. The new forms were bred under normal conditions, and bred true in every case. All of the new forms (or nearly so) occur under natural conditions, either as distinct species or as extreme variants (sports). The new forms were obtained in varying proportions. In the best experiment all of the progeny (those that reached the adult stage) were of the new type.

In the present article Prof. Tower has given the results of a series of experiments to determine the effect (as shown in succeeding generations) of external conditions on hybridization. Here, also, extreme conditions of temperature and moisture were the factors. The contrasted characters of the beetles crossed were such as gave under certain conditions (normal?) typical Mendelian proportions in the second generation after crossing. In crosses between *L. signaticollis* and *L. diversa* the results varied, depending upon the conditions during mating, from one in which the offspring of the first generation were all true hybrids, as shown by a splitting into three groups in the second generation, to one in which all the offspring of the first and succeeding generations were entirely like the female *signaticollis* parent. In crosses between *L. undecimlineata* and *L. signaticollis* the results were similar, but more complicated, owing to there being three pairs of contrasted characters instead of a single pair.

*W. L. Tower, Evolution in Chrysomelid Beetles of the Genus *Leptinotarsa*. Carnegie Institution, Publication No. 48.