

This means that certain chromosome arms may be marked with only one interchange. For the list, see M.N.L. 42:122-123 (1968).

Charles R. Burnham

8. "Discussions in Cytogenetics" reprinted.

A private reprinting of my book "Discussions in Cytogenetics" is available. Copies may be obtained for \$9.80 plus mailing costs. Anyone wishing to order a copy should write to my home address: 1539 Branston St., St. Paul, Minnesota, 55108; the bill will be enclosed.

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1. An epistatic phenomenon resulting in aleurone color inhibition in maize.

In reciprocal crosses between individuals having the genotypes RR and rr, respectively, the expectations are: (1) self-colored kernels when the former is used as the female parent, and (2) mottled kernels when the latter is used as the female parent. We report here an exceptional case in which an interaction between a specific modifier, Ma, and a modifier-sensitive R allele, R*, results in the absence or near absence of anthocyanin in aleurone cells having the genetic constitution rrR*.

The epistatic phenomenon resulting in the absence or near absence of anthocyanin in rrR* cells was first observed in the cross: Inbred line KYS (BzBz, cc, rr) X "Bronze" (bzbz, CC, RR). The reciprocal of this cross produced only self-colored kernels. On the other hand, when our K^L-9 knob stock (BzBz, CC, RR) was reciprocally crossed to KYS, only self-colored or mottled kernels were obtained.

In order to determine the genetic difference between "Bronze" tester and K^L-9 stock plants, the F_1 and F_2 individuals of the cross, K^L-9 X "Bronze," were used as pollen parents in crosses to KYS. The results of the tests are shown in Table 1.