tamination would have had to occur in two groups of females obtained virgin at different times. While we have no explanation of the failure of one complementary class to appear, we believe that contamination as by a previous uncontrolled mating of the theca females is excluded.

In the remaining experiments, somewhat more extensive and systematic than the first two series, complementary crossover classes appeared when even moderate numbers of crossover individuals were obtained. Eight out of 127 males that survived the heat treatment in this series produced crossover offspring, as shown in Table I.

Crossovers have thus been produced in each of the regions of the third chromosome marked by the genes used, except that between thread and scarlet. Questions relating to the relative frequency of crossing-over in the several regions, frequency of crossing-over in females resulting from these crossovers, the optimum age and intensity of treatment are being reserved until more data are secured.

TABLE I

Designation of male	Number of crossovers	Composition of crossover offspring
1	1	e^s ca
2	1	th st cu e^s
3	3	ca
4	12	th st
	2	cu e^s ca
5	1	th st
	1	th st cu e^s
	2	th st cu
	3	e^s ca
6	1	th st
7	1	e^s ca
8	6	th st
	5	cu e^s ca

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SUSCEPTIBILITY TO POISON IVY AND POISON OAK[1]

AN investigation of the susceptibility of 101 adult city-dwelling persons to the skin-irritating properties of poison ivy and poison oak has been made. Water-free alcoholic extracts of the dried leaves of these plants were made and diluted in varying concentration. They were tested by placing small disks of blotting paper, moistened with the extract, on the forearms of the persons examined. The patches were covered with a cellophane shield and secured by adhesive tape. They were left in place for twenty-four hours. The ivy and oak extracts were tested simultaneously one on each arm. The weakest extracts were applied first and the result examined after seven days. If no reaction, consisting of a persistent erythema and itching, was observed, the next stronger solutions were applied. The proportion of the reactions in those persons tested at each level of concentration was calculated and corrected to percentage of the total number tested by multiplying by the percentage of persons immune to the next lower level. The figures are shown in Table I. The 1:100 dilution of the original extract was arbitrarily chosen as the unit of concentration.

TABLE I

Irritant	Concentration	Power of concentration $(1+\log)$ A	Per cent. persons susceptible B	$\frac{B}{A}$
Poison oak	1	1	24	24
	3.3	1.5	36	24
	10	2	42	21
	100	3	65	22
Poison ivy	1	1	27	27
	3.3	1.5	42	28
	10	2	47	24
	100	3	60	20
	3000	4.5	75	17

It is seen from this that the number of persons susceptible to these extracts tends to vary as the logarithm of the concentration of the irritant. In other words, the proportion of the population affected increases arithmetically as the concentration of the irritant is increased geometrically, which is similar to the action of physiological stimuli in general as expressed by the Weber-Fechner law.

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