

inside face of the back panel, at a distance of $\frac{1}{2}$ " from the distal border of the panel. This wooden strip ($\frac{3}{4}$ " thick) and the $\frac{1}{2}$ " lip at the outer end of the back panel offer support and rigidity to the box when the back panel is folded into position for use. The back panel is then held in place with a piece of light cord fastened through a hole in one side panel near margin A-B and wound around a light nail driven into the outer face of the back panel near the margin E-F. Both the inside and the outside surfaces of the assembled box are painted with a dark red, non-glossy paint.

Experience has shown that heavy canvas is the most readily available and economical of the "hinge" materials. It can be stapled to the corresponding panel surfaces for short periods of use, but strips of box-banding metal and light nails provide a more durable assembly.

References

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GENETIC ANALYSIS OF A RED EYE MUTANT ("or") OF *Anopheles atroparvus*.

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The isolation of individuals with red eyes ("or") from our laboratory strain, which has been maintained in close inbreeding for many years, has resulted in the formation of a strain, whose individuals transmitted the above-mentioned characteristic, without the appearance of insects with the wild-type phenotype. The eggs, the larvae and the pupae of the "or" strain dif-

fered neither in pigmentation nor in other morphological characteristics from those of the laboratory strain. Chromatographic analyses were carried out on normal adult individuals, and on those of the mutant "or." In the former there was found evidence of the presence of Xanthommatin, and of an Ommin (Laudani, Lecis and Bianchi, 1969; Laudani, 1970).

In the "or" strain only Xanthommatin was found to be present. The two populations differed also with regard to their pterinic complement: in the "or" strain there was evidence of the presence of isosepiapterin, which is lacking in insects of normal eye colour (Laudani and Lecis, 1970). Furthermore, 2NH₂-4OH pteridine was present in the standard strain, but it was not detectable in the mutant. Our working hypothesis presumed that the "or" phenotype was determined by a recessive "or"/"or" mutation and that insects with normal eyes could be +/"or" or +/+.

To confirm this hypothesis and to establish the behavior of the mutant, both mass and pair matings were carried out. The results thus obtained were analysed by the χ^2 method.

In the collective crossing, 10 ♂♂ of the wild type were crossed with the same number of "or" ♀♀; in the F₁, 2537 individuals were obtained (♂♂/♀♀=0.95), all with the normal-eyed phenotype. Five ♂♂ of this F₁ chosen at random were then crossed with the same number of ♀♀ of the same F₁. Thus were obtained 225 ♂♂ and 258 ♀♀ of the wild type (tot.=483), and respectively 78 ♂♂ and 84 ♀♀ of the "or" strain (tot.=162). The ratio 3:1 appears to be well represented (P<1).

Twelve individuals obtained from the crossing (♂♂ wild x ♀♀ "or") were back-crossed with the same number of "or," as shown in Table 1.

In both reciprocal back crosses the 1:1 ratio (380 wild: 362 "or," P<0.7; 455 wild; 454 "or" P<.01) was noted.

F₁ were also obtained from crossings between 10 ♀♀ wild and the same number of ♂♂ "or." The 2202 individuals examined (♂♂/♀♀=0.96) were all of the wild phenotype. The F₂ obtained from the crossing of 5 pairs chosen at

TABLE I

Parents	F ₁			eye color	P
	♂♂	♀♀	tot.		
♂ wild (♂ wild x ♀ "or")	183	197	380	wild	<0.7
x ♀ "or"	190	172	362	red	
♀ wild (♂ wild x ♀ "or")	242	213	455	wild	<0.8
x ♂ "or"	211	243	454	red	

TABLE 2.

Parents	F ₁			eye color	P
	♂ ♂	♀ ♀	tot.		
♂ wild (♀ wild x ♂ "or")	302	296	598	wild	<0.4
x ♀ "or"	290	260	550	red	
♀ wild (♀ wild x ♂ "or")	370	336	706	wild	<0.2
x ♂ "or"	332	371	703	red	

random was constituted of 338 ♂ ♂ and 400 ♀ ♀ of the wild type (tot.=738) and correspondingly 137 males and 138 females of the "or" type (tot.=275). This segregation follows the 3:1 ratio ($P < 0.4$). Since reciprocal crosses gave identical results, it would seem to us, therefore, correct to sum the number of individuals with normal eyes and "or" for the calculation of the value of P (Table 1 and Table 2).

Twelve individuals obtained from the crossing of ♀ ♀ wild x ♂ ♂ "or" were back-crossed with the same number of "or" strain, as shown in Table 2. The ratios between mutant and normal individuals showed, as was expected, a distribution of the type 1:1.

From the evidence obtained, it is concluded, therefore, that the "or" phenotype is determined by a recessive autosomal mutation. The crossing of single pairs (♀ +/"or" x ♂ "or"/"or" and ♀ "or"/"or" x ♂ +/"or") furnished few ovi-positions and adult individuals (Table 3). A notable difference from the expected results was obtained. The sex ratio also was different from that expected. However, adding up the F₁ of each single pair, we obtain in both of the reciprocal crossings the expected ratio 1:1 ($P < 1.0$).

References

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A DISTRIBUTIONAL NOTE FOR *Aedes punctator* (KIRBY)¹

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A female mosquito collected in a New Jersey light trap located near Frederika, Bremer County, Iowa, on July 27, 1969, has been subsequently identified as *Aedes punctator* (Kirby), by Dr. Alan Stone of the Systematic Entomology Laboratory, U. S. Department of Agriculture. This represents a new state record for Iowa and a southern extension of the distribution of *Aedes*

¹ Journal Paper No. J-6668 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa. Project No. 1788.

TABLE 3.

Parents	No.	F ₁		tot.	F ₂		tot.	P
		♂ ♂ wild	♀ ♀ wild		♂ ♂ "or"	♀ ♀ "or"		
♀ +/"or" x ♂ "or"/"or"	1	51	45	96	39	45	84	<1
	2	33	24	57	18	21	39	
	3	24	39	63	30	21	51	
	4	3	25	28	30	44	74	
	tot.	111	133	244	117	131	248	
♀ "or"/"or" x ♂ +/"or"	1	45	78	123	60	60	120	<1
	2	33	12	45	15	9	24	
	3	48	57	105	78	63	141	
	4	18	20	38	12	11	23	
	tot.	144	167	311	165	143	308	