

Isolate with which the <i>C. betacea</i> and <i>Carica papaya</i> <i>Phytophthorus</i> were grown in paired cultures	Plus strain					Minus strain			
	<i>Areca</i> , S. Kanara	<i>Areca</i> , Bombay	<i>Colocasia</i> , S. Kanara	<i>Tomato</i> , Coimbatore	<i>C. betacea</i> Burliar	<i>Ca. papaya</i> Coimbatore	<i>H. eesul</i> entus, Coimbatore	<i>Spondias</i> S. Kanara	<i>Areca</i> , Bombay
<i>Cyphomandra betacea</i> isolate	0	0	0	0	0	X	X	X	X
<i>Carica papaya</i> isolate	X	X	X	X	X	0	0	0	0

X — Cospores formed within four days; 0 — no oospores formed.

cologist's stock culture collection at Coimbatore. The results of these trials are set down below in a tabular form:

These results show that the *C. betacea* isolate is a plus strain of *P. palmivora* and the other a minus strain.

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ON THE ANALYSIS OF BLOOD-GROUP DATA OF PUNJABIES AND MALDIVIANS

KALRA¹ has examined the blood groups of 2,500 Punjabies at I.M.H., Rawalpindi, and of 211 Maldivians at Adder Atoll. This note gives the results of statistical analysis of the data collected by him.

Let *p*, *q* and *r* represent the true gene probabilities of the three allelomorphic genes A, B and O respectively, so that *p* + *q* + *r* = 1. These true values for Punjabies and Maldivians are,

the blood-group data are in good agreement with Bernstein's genetical theory.

The maximum likelihood estimates of gene probabilities for Punjabies and Maldivians, along with their standard errors, are presented in the annexed table.

Column 3 of this table gives the estimated gene probabilities, Column 4 the corresponding variances and Column 5 the estimated gene probabilities and their standard errors, both multiplied by 100. It would appear from this table that the proportions of A and B genes in the case of Punjabies are significantly higher than in the case of Maldivians. However, the proportion of O genes for Punjabies is significantly lower than that for Maldivians.

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1. Kalra, S. L., *Curr. Sci.*, 1947, 16, 92.
2. Stevens, W. L., *Ann. Eugenics*, 1938, 8, 362.
3. Bernstein, F., *Klin Wschr.*, 1924, 3, 1495.
4. —, *Z. indukt. Abstamm. -u. Vererblehre*, 1925, 37, 237.

Caste	Gene	Estimated Probability	Variance	Percentage and standard error
1	2	3	4	5
Punjabies	O	.5942048	×10 ⁻⁵ 5.6601849	59.420 ± 0.752%
	A	.1752423	3.1879764	17.524 ± 0.565%
	B	.2305529	4.0625955	23.055 ± 0.637%
Maldivians	O	.7653750	×10 ⁻⁴ 4.58493	76.538 ± 2.141%
	A	.1051228	2.35896	10.512 ± 1.536%
	B	.1295022	2.86833	12.950 ± 1.694%

however, unknown, and have, therefore, to be estimated from the samples examined by Kalra. The most efficient estimates of the true gene probabilities are readily obtained by the use of the method of maximum likelihood which has been discussed in full detail by Stevens.²

Using the maximum likelihood estimates of the true gene probabilities, the conformity of the blood-group data for Punjabies and Maldivians with the genetical theory advanced by Bernstein^{3,4} has been tested by applying the χ^2 -test with one degree of freedom. For Punjabies, $\chi^2 = 2.25782$ ($0.20 > P > .10$) and for Maldivians, $\chi^2 = 0.10361$ ($.90 > P > .80$). Neither of these values is, therefore, significant at the customary 5 per cent. level of probability. Thus, for both Punjabies as well as Maldivians,

EFFECT OF CERTAIN FACTORS ON THE PULSE FREQUENCY OF A RELAXATION OSCILLATOR

AN audio-pulse frequency oscillator working on the relaxation oscillations of a thermionic valve controlled by the constant 'CR' of the time circuit has manifold applications. The device is usually a condenser shunted by a high resistance suitably placed in the oscillator valve circuit. A number of arrangements have been described by many authors,* but none seem to have paid much attention to the effect of other factors on the pulse frequency apart from the constant 'CR'. The object of the present communication is to give the effect of