On the other hand, Bovingdon[8] found no detectable difference in the results of fumigation experiments on adults of *Calandra* spp. and *Tribolium* spp., some of which were exposed to mercury vapour and others which were not. In the latter, the mercury vapour was trapped by passing the gas mixture containing it over gold foil.

There seems to be ample proof, however, that mercury vapour is highly toxic to insect eggs. Though other stages are not so seriously affected, it would probably be wisest to avoid the use of exposed mercury altogether in experimental work with insects and possibly other organisms.

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Blood Groups and Pigmentation

The physical characters of the population of Rachrai (Rathlin Island, Northern Ireland) have already been described[1] and compared with those of the people of Sheffield[2].

A recent survey of the blood groups of the two peoples shows significant relationship between the stages of evolution of the blood group genes and those of the factors for hair and eye colour. Observations of blood grouping and of hair and eye colour were made on thirty males in Rachrai—there are some hundred and fifty on the island. The distributions of hair and eye colour conjointly agreed very closely indeed with those found at the first survey. One third were blue-eyed, one third had fair (blond) hair. One third were of the RR (or O) blood group, one third were B or AB. In Sheffield, one half were of the RR group, one tenth were B or AB; one half had fair hair, one quarter were blue-eyed. The Sheffield observations were made on more than three hundred individuals, both for blood and for hair and eye colour. Appropriate statistical tests showed that the populations differed significantly in the distributions of the characters named.

These observations agree with a formula of connexion between the proportions of fair hair (h), pure blue eyes (e), RR blood, and B (including AB) blood, namely:

$$\frac{e}{h} = P\frac{B}{RR},$$

where P is a parameter defined by the inequality: $1 < P < 3$. This formula is derived from a consideration of the genetic nature of the characters concerned, together with their reputed order of sequence in evolution. For Rachrai, P has the value 2·1; for Sheffield it is 2·4. The classification of eyes into blue and others, and of hair colours into fair and others, is based upon published studies upon the post-natal development of the Sheffield population[3, 4], in which such a classification was found to have significance.

An account of the work outlined above will be published in full.

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The Jump of Fleas

I can find nowhere any reference to an interesting peculiarity about the jump of fleas, though perhaps it may be common knowledge among those who train them to perform.

While I was studying in the Department of Entomology of the London School of Hygiene and Tropical Medicine, I observed a number of fleas jumping. They were contained in a petri dish and were watched under a large hand lens.

It casually occurred to me as I looked down on a stationary flea that its body was streamlined, but that the fat heavy end was its tail. Arguing from the flight of a dart, which will turn and fly point forward however it may have been thrown, I considered that a flea should travel tail first through the air.

It was an easy thing to check as fleas were all the while coming and going across my field of vision. I watched those that were landing and saw that they were in fact invariably facing the direction from which they had come.

Continuing, I noticed that a flea needs a space of about one to two inches in the air clear of obstructions for the process of turning its heavy end to the front, after jumping off. If it hits something during this part of the leap, it lands sideways and usually falls over. But if not interrupted, the leap carries the insect so that the first parts of its body to touch anything are the two back legs, which are carried in a convenient position ready for landing tail first.

If the landing place proved uncongenial, I suppose nothing could get away more quickly than a flea, already facing as it is the way it wishes to return.

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Fertile Haploid Sectors by Partial Merogony in Mozaics of *Drosophila pseudo-obscura*

A strain of *D. pseudo-obscura* gives a high proportion of mozaic offspring. In the majority of those obtained, only the X-chromosomes of the parents were marked and the phænotype of the mozaics consisted of a regular area showing the expected constitution and an exceptional area (usually less than half) in which the recessive genes of the paternal X were expressed. Of the fifty obtained in the first experiments forty-six were female with no suggestion