



Ventral margins of three shells of *Ostrea edulis* attacked by *Odostomia eulimoides*. The parasites are shown *in situ* with hatching spawn alongside. $\times 2$

each containing a pair of *Odostomia*. In many pockets spawn had been deposited and was about to hatch; it appears as a fine granular deposit alongside the parasites.

Although *Odostomia* cannot be regarded as a major parasite of oysters, its attack on the scale recorded must result in considerable irritation, some loss of condition and possibly small permanent malformations. That the irritation is intense is shown by the deposit of patches of conchiolin at the points of attack; such deposits are also laid down in oysters heavily attacked by *Polydora*³.

It is interesting to note that, in the River Roach, species of *Pecten* or *Chlamys*, the usual hosts of *Odostomia eulimoides*, are absent; apparently it can attack a wide range of lamellibranch molluscs.

I am indebted to Dr. Vera Fretter for the determination of the species of the parasite and to Mr. H. P. Sherwood for the photograph.

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¹ Fretter, V., and Graham, A., *J. Mar. Biol. Assoc.*, **28**, 493 (1949).

² Jeffreys, J. G., "British Conchology" (London, 1867).

³ Korringa, P., *Visserij-Nieuws*, **3** (10), 1 (1951).

Colour Vision of an Albino

ACCORDING to Gates¹ the frequency of pure albinos is about 1 in 15–25,000 of the population in Scotland. Owing to the kindness of Miss E. C. MacQuade, an albino woman aged about 45–50 years was brought for colour vision tests. She was a pure albino, according to Gates's classification, having cream-white hair, eyebrows and eyelashes, and only a very slight trace of pigment in the iris. She had a continuous nystagmus owing to photophobia, and a divergent squint, for the same reason, using mainly the left eye while the unused eye wandered. She was very short-sighted. Her mother had fifteen children, seven boys and eight girls. She and a younger sister, now deceased, were the only albinos known among all her relations.

Her colour vision was tested with Pickford's four-colour test² and the Ishihara test. She was almost red anomalous, without darkening of the red, since the Rayleigh equation for her fell between those of the normal and of the red anomalous shown by Pickford in his Diagram 32². Her red–green matching range was normal, but she was on the first occasion of testing a yellow deviant. On the second occasion,

about three weeks later, her red–green vision was the same, but she was now very blue–yellow weak, with three times the blue–yellow modal matching range. She failed on the Ishihara test, with 15 errors on 24 plates.

Her son and one sister were also tested, and their colour vision was quite normal. Owing to death, age, infirmity or difficulties due to residence and occupation, it was not possible to test any more of her relatives at the time, though further efforts will be made. It is impossible to say definitely whether the red anomaly and the blue–yellow weakness were due to the effects of the albinism or separately inherited.

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¹ Gates, R. R., "Human Genetics", Chapter 9 (1946).

² Pickford, R. W., "Individual Differences in Colour Vision", Chapter 9 (1951).

The Rh Chromosome *C^wdE* (*R_y^w*) occurring in Three Generations

Fisher and Race¹ postulated the existence of the gene combination *CdE*, and to date four examples have been found (van der Bosch², Wiener³ and Johnson⁴).

Race *et al.*⁵, after reporting the discovery of the Willis antigen, further postulated the existence of the combination *C^wdE*, but until now this exceedingly rare blood group has not been found. This communication reports the finding of the genotype *C^wdE* in three generations.

The blood of the propositus—Mrs. "O", an antenatal case—gave no reaction with anti-*D* sera but was agglutinated with anti-*C*, anti-*E* and anti-*c*. Therefore, her genotype was either *Cde/cdE* or *CdE/cde*, which are serologically indistinguishable. Samples of blood from her relatives were investigated with all available sera, including anti-*C^w*, and a study of the results showed her to be of the genotype *C^wdE/cde*.

The possibility of the propositus or her relatives having a *D^w* antigen (Stratton⁶) was excluded by testing their cells with a series of twenty incomplete anti-*D*'s followed by anti-human globulin serum to detect sensitization.

In forecasting the genotype *CdE/cde*, Fisher¹ estimated its frequency should be about 37 in a million, or that one in eight of bloods behaving as *Cde/cdE* would, in fact, be *CdE/cde*. It is interesting to note that we have examined bloods from the families of seven persons behaving as *Cde/cdE* or *CdE/cde*, and Mrs. "O" is the first of the type *CdE/cde* to be found among them.

The frequency of Mrs. "O"'s Rhesus genotype can only be estimated approximately. In its commoner combinations, the *C^w* allelomorph is about fifty times less frequent than *C*, so on this basis the chromosome *C^wdE* should occur about twice in a million. There

