No certain data exist on the frequency of mutation in *Gammarus*, but white-eye, the most mutable locus in *Drosophila*, only changes once in about 300,000 individuals, and no mutation has ever been seen in the laboratory in *Gammarus*. Yet a number of curious cases of the type given in my previous note[2] have been observed by different workers. It therefore seems unlikely that they are due to reverse mutations.

With regard to the second possibility. It is the rule in Oxford, as in Plymouth, to give the female in a cross mating a fresh bowl, etc., after her moult. Pipettes are always well washed out and examined, and where possible dried, before being used for another stock. In these circumstances, I consider it very unlikely that the results are due to contamination from other pots.

Fortunately there is in this case definite positive evidence for the third explanation, for the anomalous individual appeared a whole day before the rest of the brood, strongly suggesting that the egg from which it arose had been fertilised before the rest. I do not know how much, if any, of the lining of the oviduct is shed at the moult, but I think that the possibility of sperm persisting in the mesodermal region, and fertilising one egg on its way to the brood-pouch cannot be excluded, and is much the most reasonable explanation of the results observed.

Mrs. Sexton suggests that if this explanation were true, all the genetic work so far done on the species would be valueless. An added precaution is always taken in this laboratory to ensure the authenticity of the offspring. It is clearly necessary to discard the first family, which may have been in the pouch before the female was mated up, but here either the *next* brood is also discounted or some other precaution to the same effect is taken, and little doubt can be cast on results on this score.

With regard to the statement that Mrs. Sexton had never met a comparable case, it may be mentioned that only in a proportion of instances could the persistence of sperm in this manner be detected.

K. W. YARNOLD.

Department of Zoology and
Comparative Anatomy,
Oxford.
Oct. 15.

[1] E. W. Sexton, NATURE, **136**, 477, Sept. 21, 1935.
[2] K. W. Yarnold, NATURE, **135**, 832; 1935.

Overlapping of Speech Sounds

THE piece of sound film reproduced in Fig. 1 shows the last part of the vowel and the first part of the consonant in a registration of *ash*. The vibratory bits that characterise the vowel can be traced in ever-diminishing strength to the third line in the reproduction. The mixture of regular and irregular vibrations that characterise the consonant can be traced back to the middle of the first line. The end of the vowel and the beginning of the consonant are seen to be overlapped.

Fig. 2 reproduces macrophonic registrations of the pressure of the breath at the mouth during *a*, *sh*, *e*, *s* and *ashes* spoken on one occasion. Comparison shows that the word *ashes* was spoken with the sounds *sh* and *s* slightly overlapped, and the two vowels mounted on top of them. The overlapping is indicated by the heavy horizontal lines at the bottom of Fig. 2.

As it is not possible to produce two sounds in succession and then by a reversal of time push the later one forward, the overlapping must occur before the sounds are spoken. This indicates that the central—or inner—activity that originates what is spoken has not only dimensions of time and pro-

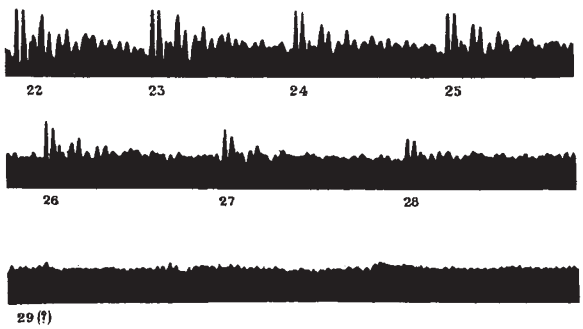

FIG. 1.

minence but also a dimension of breadth that provides for simultaneous events.

The overlapping clears up a mystery. It is well known that the character of a speech sound may depend on a sound that appears later in the printed word. How a sound could work backward against

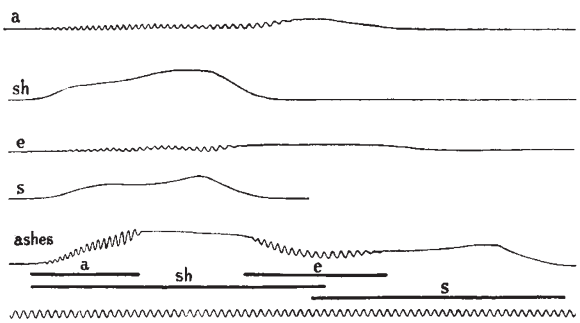

FIG. 2.

time was unexplainable. The difficulty disappears if sounds can be overlapped in the word to be spoken. This principle may well prove fertile in explaining the phenomena of sound change.

E. W. SCRIPTURE.

Phonetic Laboratory,
62 Leytonstone Road,
London, E.15.

Origin of the Wing accompanying the Rayleigh Line in Liquids

IT has been recently reported by Gross and Vuks[1] that, in the light scattered by some organic crystals, there are a few lines or bands very close to the Rayleigh line. The origin of these lines has been attributed to lattice oscillations in the crystals. It has been further pointed out by these authors that these lattice oscillations persist even in the liquid state, but, owing to the looseness of the oscillations in the liquid state, these lines spread out so as to form a continuous wing on both sides of the Rayleigh line. According to these authors, the major portion of the wing is thus due to the persistence of these lattice oscillations in the quasi-crystalline groups present in the liquid, and only the portion very close to the Rayleigh line which increases in intensity with