groups of worms develop to maturity and in so doing evoke the self-cure mechanism which, while it leads to the expulsion of the adults, does not appear to affect the dormant larvæ.

If these phenomena occur in infections of other members of the Trichostrongylidæ, they would appear to have an important relevance to the epidemiology of parasitic gastro-enteritis of ruminants.

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Occurrence of *Pelagia* in the River Yealm Estuary, South Devon

The scyphomedusan *Pelagia* was observed in some numbers in the River Yealm estuary, South Devon, on December 20, 1951. This is of more than merely faunistic interest, though on that score alone it is worthy of note, since the genus is purely pelagic and, so far as I am aware, has never before been recorded in the English Channel nearer inshore than the neighbourhood of the Eddystone, and then only very sparsely[1]. The present record is due to the vigilance of Miss Agnes Russell, of the yacht *Ardglass* moored in the Yealm estuary, who saw a specimen of the medusa as she was rowing ashore from her yacht; though not a biologist, she was quick to recognize its unfamiliar pattern and that, in any event, a 'jelly-fish' in December was a matter for further inquiry.

Miss Russell brought the specimen to this laboratory, where it was identified as *Pelagia*, a genus under which many different species have been described that may be no more than forms of the one species *Pelagia noctiluca* Péron et Lesueur. A further search was then made, resulting in the finding of some sixty specimens, all close to the edge of the strand, some near the mouth of the estuary and some in Newton Creek where the first one was taken, which is almost a mile from the open sea. All when captured were exhibiting swimming movements of the bell, varying in degree from feeble and sporadic contractions in some to vigorous rhythmic pulsations in others. The size in diameter of the bell ranged from about an inch to 3–4 in., the majority being about 2 in. Pigmentation was not examined in detail but was in two main colours, a golden brown, distributed as a speckling over the surface of the bell, and a mauve, characteristic more particularly of the gonadial elements, which in the larger specimens were well developed. The specimens were kept alive overnight in circulating sea water and were then removed to the laboratory of the Marine Biological Association at Plymouth. When mechanically stimulated in the dark, most of them had shown faint luminescence which, in the case of the more vigorous, was sufficient to outline momentarily the shape and pattern of the whole animal. Handling produced stinging sensations, which were not lasting and only noticeable on the more tender areas of the skin such as between the fingers.

The further interest of this occurrence is as a contribution to data concerning the movement of Atlantic water into the English Channel. Russell[1], who recorded this medusa from Channel stations, regarded its presence there as indicating an influx of water of oceanic origin.

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[1] Russell, F. S., *J. Mar. Biol. Assoc.*, 22, 417 and 497 (1938).

Effect of Acetic Acid on the Oxidation of Ascorbic Acid in Fruits and Vegetables

It has been established by earlier investigators that acetic acid has a destructive effect on the ascorbic acid in raw cabbage. This effect is somewhat surprising, since the lower the *p*H in the medium, the more stable is the ascorbic acid and, therefore, one would expect the acetic acid to have a preservative effect on the ascorbic acid in cabbage. However, in experiments carried out in the early months of 1951, we found that, in many fruits and vegetables, the ascorbic acid is to a remarkable degree oxidized into dehydroascorbic acid if slices are sprinkled with 5 per cent acetic acid and allowed to stand for two hours. This oxidation does not take place if water is used instead of acetic acid. Other lower fatty acids have a similar effect. The action of lactic acid is very slow and that of citric and tartaric acid practically negligible.

In fruits and vegetables possessing only weak resistance against the oxidation of ascorbic acid, the effect of acetic acid is most pronounced. Thus, in cabbage, cucumber, horse-radish, carrot, potato, lettuce, dill, leek, apple, pear and banana, 60–90 per cent of the ascorbic acid is oxidized. In parsley, spinach, cauliflower and tomato, the corresponding values are 20–50 per cent, and in orange and onion, only 0–10 per cent.

We conceive the effect to be similar to that caused by mechanical damage to the cells. The acid penetrates into the cells and the hydrogen ions bring about a disturbance of the balance between the oxidizing and the reducing enzyme systems of the cell.

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Transitions in the Chromium–Manganese and Nickel–Vanadium Sigma Phases

Transitions occur in the chromium – manganese sigma phase at 1,005° C. and in the nickel – vanadium sigma phase [see *Nature*, January 12, 1952, p. 70] at a temperature below 800° C. In both these systems the structure present above the transition temperature has been investigated by high-temperature camera photographs. The films show that the same main X-ray reflexions are given by the high-temperature phase as are observed at room temperature. Alloys quenched from the high-temperature phase regions do not show decomposed microstructures. The transitions may be of the order–disorder type.

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