The trace of the fracture-surface on each long face of a test member was inclined at an angle of about 45° to the length of the face. The surface of the fracture was not normal to the face, but had a varying inclination (Fig. 3) and sloped in opposite directions on either side of the centre line of the face. Thus in a broken member, each of the fracture-surfaces, on account of its curvature, consisted of a 'hanging wall' on one side of the axis of torsion, and a 'footwall' on the other side of the axis, to use the terminology applied to faults. When fracture took place, the 'hanging wall' was in each case *raised* with respect to the 'footwall'.

The concrete broke in tension, but owing to the fact that this was produced by torsional loading, the separation of the two parts involved the motion described above, which would correspond to that of a pivotal reversed fault if it occurred under geological conditions. In text-books of geology, reversed faulting has generally been attributed to compressional forces. A brittle stratum or series of strata in Nature, however, might be subjected to torsional loading, for example, through unequal settlement over an area; the torsional axis in this case would be horizontal (or nearly so). It is suggested that such a loaded stratum would then be likely to break in tension, in a similar way to that seen in the tests described.

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Jędrzej Sniadecki (1768–1838) on the Cure of Rickets

IT is a view generally accepted that the English physician, Dr. T. A. Palm, first directed the attention of the scientific world to the curative effect of sunlight on rickets. L. J. Harris[1], when dealing with the frequency of the occurrence of rickets in relation to the climate, writes: "The explanation was given by an English medical man, Dr. T. A. Palm, in 1890. He it was who first pointed out that rickets is prevalent wherever there is little sunlight and unknown or comparatively rare wherever sunshine is abundant".

In connexion with the view expressed above, it seems of interest to quote an opinion of Jędrzej Śniadecki about the methods of curing rickets. Jędrzej Śniadecki was a Polish physician and physiologist and professor of chemistry at the University of Wilno. He was the first to introduce into Polish science Lavoisier's then new ideas. The hundredth anniversary of his death was celebrated this year by Polish men of science. In his book "On the Physical Education of Children", written in 1822, Śniadecki says in the chapter on "English Disease"[2]: "If the parents' financial status permits, it is best to take the children out into the country and keep them as much as possible in the dry, open and pure air. If not, at least they should be carried about in the open air especially in *the sun, the direct action of which on our bodies must be regarded as one of the most efficient methods for the prevention and the cure of this disease.* . . . Thus strong and obvious is the influence of the sun on the cure of the English disease, and the frequent occurrence of the disease in densely populated towns, where the streets are narrow and the dwellings of the working-class people low and very poorly lit."

From the passages quoted above it is quite clear that J. Sniadecki fully realized the significance of the sun both in prevention and cure of rickets.

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[1] Harris, L. J., "Vitamins in Theory and Practice", 110 (Cambridge, 1935).
[2] Śniadecki, Jędrzej, "Dzieła", vol. 1, 273–274, Warszawa (1840).

Marine Turtles as Current Indicators

IN a letter recently published in NATURE[1], my friend Mr. Paul Deraniyagala directed attention to the fact that Kemp's loggerhead turtle, the normal range of which appears to be the Mexican Gulf neighbourhood, occasionally finds its way to the shores of the British Isles; he suggests that: "The possibilities of sea turtles as current indicators would thus appear to be considerable . . ."

A favourable opportunity to test this hypothesis has quickly presented itself, for there has been an unusual number of turtles stranded on the British coasts during the first eighteen days of December. Seven, in all, have been reported. Four of them (two at Bognor, one near Tenby and one on Selsey Bill) were common loggerheads, *Caretta caretta* (Linn.); the others (one at St. Ives, one near Charmouth and one at Bexhill) have not been identified.

Exactly whence they may have come is uncertain, since turtles occur in the tropical and subtropical waters on both sides of the Atlantic; but they must have come from that ocean, and it is difficult not to associate their coming with the remarkably warm weather and almost uninterrupted series of south-westerly gales which characterized late November and early December. It seems probable that there has been a strong in-drift of warm surface water into the English Channel from the south-west, but whether there has been that inflow of true Atlantic water which seems so essential for the rehabilitation of the West Country fisheries remains to be seen.

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[1] NATURE, **142**, 540 (Sept. 17, 1938).

Reproduction of the Dogfish

IN the course of a recent investigation, I have found that:

(1) Migration of ova from the ovary to the cœlomic opening of the oviducts in *Scylliorhynus canicula* is entirely dependent upon ciliation, as it is in Amphibia[1].

The entire peritoneal wall and many abdominal viscera of an adult female are ciliated. The cilia, which are absent in the male and immature female, direct a current of cœlomic fluid towards the ostium. An ovum excised from the ovary of one adult female and inserted through an abdominal incision into the peritoneal cœlom of another will undergo migration towards the ostium. The speed of the migration depends upon the region into which the ovum is introduced. An ovum placed in the bridge joining