

place where their natural enemies are absent, in forty-fifty years they revert to the condition of the wild ancestor. Further, though it might be supposed that the study of these sports is of prime importance to the farmer, experience shows that this is not so. Thus the work of these two experimenters has raised Lamarckism from the rank of an hypothesis to the status of a proved fact; for the first time evolution has been experimentally demonstrated in the laboratory.

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The Dead Language of Science

PROF. F. E. FRITSCH¹ complains of the many new terms encumbering a recent German text. We must all sympathize with his view. But is there not a worse evil in our midst, one to which long use has inured us? I mean the constant reiteration of dead terms, of decayed verbiage. Prof. Fritsch disinters a sample, the word 'spireme', and discusses its use. This word originally (in 1882, according to Wilson) referred to the threads seen in the prophase of a nuclear division, mitosis or meiosis. In England and America it was connected with *Ænothera* in 1907, and became known as the 'continuous spireme' of meiosis. This connexion ended after a period of some confusion in 1932, when the spireme suddenly passed away. By 1934 it had disappeared from Sharp's "Introduction to Cytology". It is no doubt from the *Ænothera* connexion that Prof. Fritsch recollects the word and in a meaning to which it was never restricted elsewhere. In Germany its last technical use is found in 1934 (Geitler, "Grundriss der Cytologie"). There also it has since disappeared (Geitler, 1938, "Chromosomenbau").

By technical use, I mean use by those who are handling the material or studying the process every day. There are many words, dead words, found in text-books for elementary students which are never used in technical practice. This fact is obvious as soon as it is pointed out. Take the word 'karyokinesis'. It is never used either in speech or writing by those who study nuclear division, and was effectively superseded by 'mitosis' more than fifty years ago. Yet almost every English text-book mentioning cytology tells its readers that nuclear division is known as karyokinesis or mitosis; and every student commits to memory this unnecessary fiction—usually, it must be admitted, along with a correspondingly erroneous account of the process. Other sciences could tell the same tale.

There are many words in text-book currency which fall into this phlogiston group. Words like 'heterotypic mitosis', 'nuclear reticulum', 'telosynapsis' and 'xenia' are the dead or dying remains of past misunderstandings—merely useless lumber. There are many others not yet dead, however, which have no proper place in text-books. Words as cacophonous as 'obdiplostemony', as obscure as 'arrhenotoky', as superfluous as 'phragmoplast' must give the specialist pause.

It is to be feared that men of science in all countries will often, in inventing new terms, create hideous, meaningless and unnecessary words. It is also to be feared that compilers of text-books will often be afraid of appearing ignorant if they neglect to record

these verbal discoveries. But it is the business of these writers to sort out the words which will convey the information necessary for doing certain work. Words that do not fulfil this use should always be rejected from the text and segregated in a glossary for the inspection of the learned, not for the confusion of the learner.

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¹ NATURE, 143, 47 (1939).

The Prehensile Paw of the Giant Panda

IN NATURE of January 28, p. 157, Prof. Wood-Jones, in his description of the prehensile digit in the fore paw of the giant panda, stated that the radial sesamoid bone has a special muscular arrangement making it movable so as to act as a true thumb; it "usurps the place of the true thumb and simulates all its movements".

This remark must have been based, I think, upon an examination of the paw with the skin removed, because in the skeleton of the foot, as has been known for years, the lengthened sesamoid bone in question looks, in a measure, so like an additional digit on the inner side of the foot that anyone might be excused for suspecting that it projects like a thumb and is capable of considerable lateral movement, giving it a prehensile function. It has scarcely any such function. It is enveloped in the skin of the foot, like the metacarpal bones, and is quite invisible, the only indication of it, as is also well known, being the enlarged, cushion-like extension of the plantar pad which covers its apex. The use of this pad was unsuspected until the living animals were observed in the Zoological Gardens. On the dead specimen, I found it capable of only slight movement; but it acts as an accessory to the prehensile power of the first and, to a lesser degree, of the second digit. When these are normally flexed in a vertical plane, their terminal pads come into contact with this elevated portion of the plantar pad and constitute a grasping organ. The mechanism is exactly comparable to that produced by bringing the tips of the first and second fingers on to the ball of the thumb in the human hand.

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Turtles in the English Channel

IN his interesting letter on the occurrence of turtles in British waters, Mr. H. W. Parker¹ has suggested that their presence in the English Channel may be an indication of the drift of warm surface water up-Channel. There is another possible explanation. Evidence has not been lacking during recent years that there has been an extension of the distribution of many warm water animals to the far north (see, for example, Stephen²). Recently also the unusual capture of a flying fish, *Cypsilurus heterurus*, in Oslo Harbour in 1937 has been recorded by A. Wollebaek (see Bruun³); this is the first record of a flying fish at Oslo since 1848.

While there is no indication that the water temperature in the Channel region is any higher than normal, there can be no doubt that warm water has been penetrating farther towards Arctic regions. This will