

Book Reviews

The Evolution of Living Things. H. Graham Cannon. Thomas, Springfield, Ill., 1958. x + 180 pp. \$3.50.

The biological, or synthetic, theory of evolution has gained so wide an acceptance, at least in English-speaking countries, that one is apt to forget that several other surmises still have their adherents. One of these possibilities is, certainly, the Lamarckian doctrine. H. Graham Cannon, a fellow of the Royal Society and professor of zoology at the University of Manchester, England, is a staunch advocate of Lamarckism. In the book under review, he attempts to state his reasons both for rejecting the biological theory of evolution (which he labels "Neo-Darwinism," a name that properly belongs to certain speculations, particularly those of Weismann, which were in vogue early in the present century) and for his espousal of a particular brand of Lamarckism (psycho-Lamarckism). The gist of the latter, in the author's own words, is as follows: "All the evidence that I have sifted in the earlier chapters leads as far as I can see inexorably in one direction: to the conception of some guiding force within the organism which controls and guides its evolution, not by haphazard changes but by selected modifications."

The assumption of guiding forces is not, however, likely to appeal to many biologists. None of the evidence referred to is either new or original, and all of it has been interpreted by other evolutionists in accordance with the biological theory. The strictures against the latter are, in large part, based on misunderstanding. Two examples will suffice. On page 116 we read: "The Mendelians regarded the organism as a collection, not a complex which is something much more, but simply as a collection of unit characters for which there was appropriate but well defined gene representation. They regarded the characters of an organism like so many marbles in a box, and just as individual marbles may be changed at random and substituted, so might the characters undergo isolated, independent random change." Cannon

apparently believes that these views, considerably overstated by him, are still held by geneticists. On pages 147 and 148 he states that "it must be remembered that it is at least possible that there are more different types of organisms without chromosomes than those with them. They can carry no genes and therefore they cannot exhibit a Mendelian type of inheritance and it follows from this that they cannot have evolved according to Neo-Darwinian principles . . . I am well aware that repeatedly it is stated that some sort of sexuality has been found among bacteria. But why anyone should look for sex in organisms which do not possess nuclei I do not know."

In recent years Lamarckism has suffered unfairly, because it has acquired much-talked-about partisans in the form of the Lysenko clique. Cannon is evidently embarrassed by his allies, for the whole Michurinist-Lysenkoist affair is not so much as mentioned in his book. This did not prevent some organs of the press from reporting that the trend in western biology is now towards acceptance of Lysenko's views! This would only be correct if Cannon's opinions represented a trend, and they do not.

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Terms Used in Archaeology. A short dictionary. Christopher Trent. Philosophical Library, New York, 1959. 62 pages. \$2.75.

The effort under review is so fantastically bad that one wonders at the irresponsibility of a publisher who is willing to put such a poor job in print.

Of the meager total of only 240 entries, some 60 (25 percent) are British site-names. The absence among them of such important excavations as Star Carr, Skara Brae and Sutton Hoo is incomprehensible. On the technical side, one also looks in vain for burin, graver, scraper, leister, rock shelter, assemblage,

industry, culture, and other significant terms too numerous to mention. Flake is given, but pressure flaking, core, blade, and striking platform are not.

Sins of commission outweigh those of omission and occur on every page. Most of the definitions are grossly inadequate, and errors abound. Hallstatt for example, is *not* spelled Hallstadt, Paleolithic cultures are *not* customarily called by the names of their type sites but rather by their adjectival forms (for example, The Magdalenian Culture, *not* The La Madeleine Culture), and Sumerologists will be startled, and not too pleased, to learn that Akkad and Sumer are merely alternative terms.

Normally one would consider \$2.75 a modest sum for a technical dictionary, but with the decimal point moved two places to the west this one would still be overpriced.

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The Nimonic Alloys. W. Betteridge. Arnold, London; St. Martin's Press, New York, 1959. xii + 332 pp. Illus. \$15.

The Nimonic Alloys is intended to be a comprehensive summary of the properties of a single group of commercial alloys. It is obvious that any book which attempts to present the state of current technology in a field in which there is great interest and activity will inevitably be subject to criticism on the grounds that some of the material is already out of date. However, it is obvious that in this case the author and his colleagues have taken special pains to make the book as complete and up to date as possible.

The nimonic series of alloys was developed in Great Britain during the early stages of World War II; the latest member of the series was introduced in 1955. These alloys, all basically modifications of the familiar binary 80-20 nickel-chromium electrical resistance alloy, are used in various wrought forms in gas turbines and for other purposes where high resistance to scaling and a reasonable degree of strength under heat are required.

This book is intended primarily for the user and fabricator of these materials, and the emphasis is therefore placed on their metallurgical characteristics and physical and mechanical properties. In addition, some information on