vised." The revision comprises, as expressed by the author in its preface, "notes on three more types of animal life and is bound in a still more convenient form." Notwithstanding the closing statement of the author as to mode of binding, that of the former edition is continued without modification. On this point the reviewer had occasion to designate it as "the rather crude, *shoe-string* method." A more clumsy or inconvenient form of binding for such a manual could hardly be devised, and it is a pity the author's purpose of improvement might not have been realized.

Certain errors pointed out in the former review remain uncorrected in the present edition. C. W. H.

Ergebnisse und Fortschritte der Zoologie—herausgegeben von Dr. J. W. Spengel, Professor der Zoologie in Giessen. Bd. I., Heft 1, 1907; Heft 2, 1908. Jena, Gustav Fischer.

The undertaking of Professor Spengel and a corps of collaborators to present the results and progress of zoological investigation in a series of annual volumes will meet the hearty approval of zoologists everywhere. The general plan is to issue a series of parts as they are ready, so as to make up a volume each year of between 600 and 700 pages. The parts before us at the present time contain the following contributions: (1) "Die Chromosomen als angenommene Vererbungsträger," by Dr. Valentin Häcker, 136 pages; (2) "Die verschiedenen Formen der Insectenmetamorphose, und ihre Bedeutung im Vergleich zur Metamorphose anderer Arthropoden," by Dr. Richard Heymons, 53 pages; (3) "Die Scyphomedusen," by Professor Otto Maas, 50 pages; (4) "Die Amphineuren," by Dr. H. F. Nierstrasz, 68 pages; (5) "Die gegenwärtige Stand der Kenntnisse von den Copulationsorganen der Wirbeltiere, insbesondere der Amnioten," by Dr. Ulric Gerhard, 96 pages.

If the parts are a good promise of those to follow, it is obvious that the proposed series will have an exceedingly wide scope, so that the specialist in any particular field will not find his subject represented very often. But the object is rather to enable the student to obtain authoritative information of the state of investigation in lines other than his own, and this object will certainly be admirably accomplished by such reviews with their full lists of references. The writer would raise the question whether it would not be better to classify the separate contributions so as to give each volume an individual character? The *pros* and *cons* on this question are perhaps sufficiently obvious, and it is also obvious from the list of contributions to the first two parts that the editor will not take the responsibility of giving invidious precedence to any subject.

The publication has a field of its own which is not covered by the *Zoologische Anzeiger, Zoologisches Centralblatt,* the *Concilium Bibliographicum,* the *Jahresberichte,* or by Merkel und Bonnet's *Ergebnisse der Anatomie und Entwickelungsgeschichte.* The separate contributions to the first two parts are admirably concise, sufficiently complete and critically excellent. One must admire the enterprise of our German colleagues, who find time in the midst of unremitting investigation to sum up and present to the world these necessary records of progress, which contribute to the progress itself by the mere process of organization. So long as German scientists are willing to perform such necessary functions in so admirable a way, we of a newer country and culture are relieved of such duties and should be properly grateful. American science is no longer an undiscovered bourne in Germany; on the whole, the contributions of American zoologists to the subjects treated receive adequate recognition.

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Sir William Ramsay on Transformation of the Elements

In the course of his presidential address before the Chemical Society, London, on March 25, Sir William Ramsay said, as reported in the London *Times,* that his subject was the hypothesis that the genuine difference between elements was due to their gain or loss of electrons. The question was whether, to take a concrete example, an atom of sodium by