SCIENCE

VOL. LXV APRIL 22, 1927 No. 1686

CONTENTS

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal.

Lancaster, Pa. Garrison, N. Y.

Annual Subscription, $6.00. Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

Entered as second-class matter July 18, 1923, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

THE LIMITATIONS OF TAXONOMY[1]

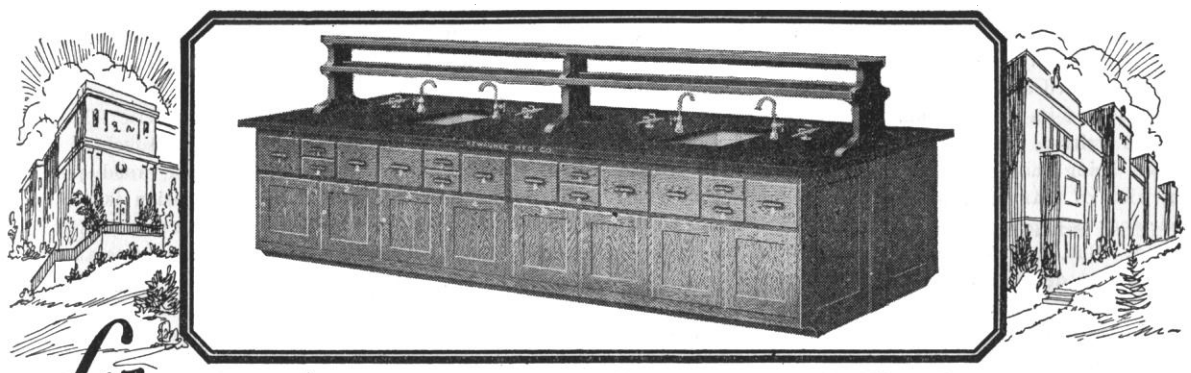
IT is a matter of common observation that taxonomic work in entomology is more highly regarded than formerly. I remember less than thirty years ago, when a student of mine went to an eastern entomological center for advanced work, he wrote back to me that no courses in classification of insects were provided; the students, he wrote, were supposed to work this up on the outside. Now in the same institution are offered a series of taxonomic courses in entomology, covering most of the orders. Even at the beginning of the present century, very few entomologists occupied positions where classification was a recognized part of their duties; generally those who did the necessary identification work were paid ostensibly to do something else. But now we find a considerable number of taxonomic positions in entomology in the United States—not all as well paid as they should be, of course, but hopefully established. The great expansion of economic work in entomology has made exact identification a fundamental requisite, as is now universally recognized.

From this fairly secure position I wish to survey the field and point out some limitations of taxonomy which make me doubt whether even within our own fraternity the difficulty of our task is fully appreciated, and whether without a more general appreciation of the requirements of our science we can hope in the next few decades to approach in any acceptable degree toward the ideals we hold.

The first and most obvious difficulty is the inconceivable number of species to be classified. I can well remember when a venturesome but far-seeing entomologist predicted that the living insect species of the world would ultimately be found to number at least a million. At the time many thought the estimate extravagant; but now it is seen to be far too low. It is claimed that the number now described and named is about 640,000, and the annual additions run far into the thousands. Walther Horn has recently put the difficulty this way:

> Whoever as an entomologist looks into the future knows full well that we are steering into a shoreless sea, no matter whether he estimates the total number of insect species at three, ten, or fifteen millions. In the near future any beginner will be grayheaded before he has caught up with what is already known.

[1] Address of the retiring president of the Entomological Society of Washington.



for the Average Chemical Laboratory at a very moderate price

In this No. 851 will be found a Chemical Desk that ideally serves all the needs of the average school chemical laboratory, yet at a very moderate price.

In it is embodied all the essential features of more elaborate and expensive desks. The general arrangement of drawers, plumbing, etc., follows closely along the lines that have proven most serviceable. It accommodates sixteen students, working in sections of eight.

Kewaunee

Laboratory Furniture

The past few years have witnessed a wonderful transformation in the science equipment of the educational institutions of America.

Every science teacher knows the importance of properly designed, properly built laboratory furniture, and how much influence it exerts upon the character of work of the students.

Kewaunee has produced a line of Laboratory Furniture that has never been approached as a manufacturing product or an educational adjunct.

A copy of our Laboratory Book is free. Address all inquiries to the factory at Kewaunee.

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

C. G. CAMPBELL, *Treas. and Gen. Mgr.*

115 Lincoln St.
Kewaunee, Wis.

New York Office
70 Fifth Avenue

Offices in Principal Cities