

# SCIENCE

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## THE LIMITATIONS OF TAXONOMY<sup>1</sup>

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.

<sup>1</sup> Address of the retiring president of the Entomological Society of Washington.



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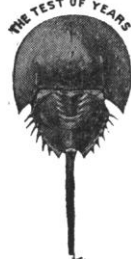
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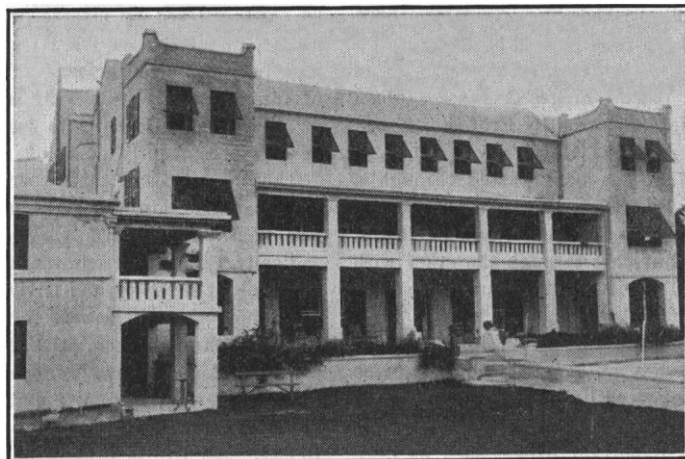
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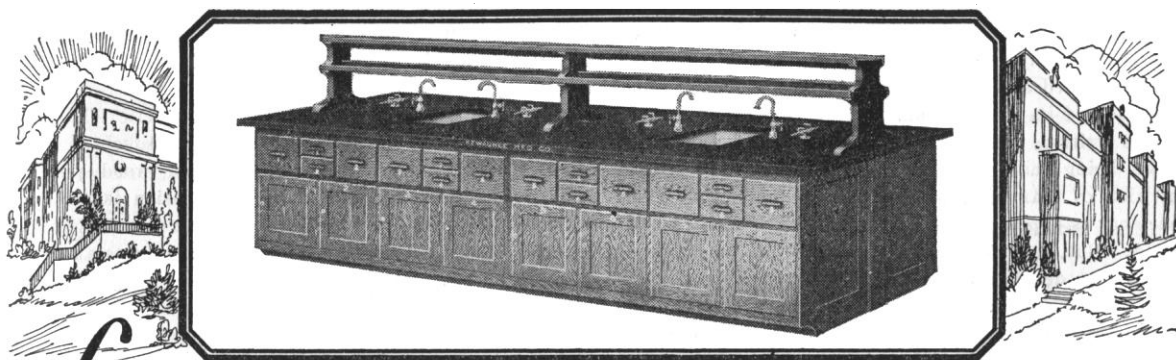
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