DROSOPHILA AND SPECIATION

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One of the duties of the office of vice-president, if not the only one, is that of giving the address on the occasion of the annual Zoologists' dinner. Examination of a number of the papers which have been read by my predecessors in office shows that the speaker has entire freedom in the selection of his subject and the method of its presentation. The several addresses which were examined deal with various topics, with some enlivened by much subtle humor and others revealing evidence of serious efforts to plumb the depths of the philosophy of biology. For me it seems safer to pursue a middle course.

I have selected for discussion a subject which, although venerable, is still capable of holding the attention of biologists. It is now more than eighty years since Charles Darwin posed the question of the origin of species, but until recently we did not have experimental proof of the exact method by which a given animal species might have arisen among wild populations. Following the appearance of Darwin's classical work, and prior to the development of the modern theory of Mendelian inheritance, most investigators were concerned with the problem of establishing the fact of evolution. They used largely the descriptive methods of comparative anatomy, embryology, paleontology and taxonomy coupled with geography. All this work was fundamental and im-