

An Informal History of Statistics

*N. W. Simmonds**

9 McLaren Road
Edinburgh, EH9 2BN
Scotland

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I. INTRODUCTION

A. General

The object of this review is to present a general, informal essay on the history of statistics as an element of biology, agriculture, and plant breeding. There is little or no mathematics because the subject is both beyond my competence and in any case unnecessary for the purpose. I am an agricultural botanist and plant breeder by profession, not a statistician, and some readers may feel that I have done less than full justice to recent mathematical and, more especially, computing developments. This may be true, but I believe that all the more important events took place before World War II, especially in the hands of Sir Ronald A. Fisher. This belief dominates the structure of this review. A critical survey of the most recent statistics has yet to be written. The essay was partly provoked by a profound liking for the subject, stretching now over 50 years, and a growing appreciation of its importance; *statistics*, as the word is used by scientists, is now fundamental for biology and agriculture, and it starts at least to impinge on all other empirical sciences. There is also the question of the curious history of the very word itself, which I hope to explain below and which will probably be unfamiliar to most readers.

I found, in the course of wide reading, now spread over many years, that it was often hard to find terse biographies of eminent probabilists and statisticians and they were not collected in one place. So I concocted a biographical list for ready reference and present it below (Section VII) in the hope that readers will find it useful.

The literature on the subject is vast and I had to be very selective in choosing what to cite. No comprehensive general bibliography is available. In practice, although I scanned many original sources, I have chosen nearly always to cite secondary sources, especially those easy of access and broad in scope. Some 18 works covered a good deal of the subject and they are cited, with an indication of content, in Table 6.1. The references in the columns of the table are to the relevant sections of this article. Other references are given in the text in the usual way. Full treatment of the mathematics of the subject will be found in Hald (1990, 1998).

There are also seven weighty works which I have consulted frequently but which are not conveniently cited in the text. They are as follows. Two biographical compilations have been useful, both of mathematicians in general but including many statisticians, namely Bell (1953) and Gillispie (1970–1980); the latter (16 volumes) is especially comprehen-