velopment of the modern ideas of parallax and aberration and with special attention to the contributions of Lacaille, Lalande, and Römer.

VI. Modern problems.

The work is, of course, merely the briefest kind of survey. Only forty-one names are mentioned, and under the prominent names there could not be, under the limitations imposed, more than a mere indication of the work accomplished by each. Nevertheless, for general students of mathematics and of astronomy, the book will furnish some interesting reading and some valuable information. There is a helpful bibliography, mostly of German sources, but including several translations from the English and French.

<div align="right">DAVID EUGENE SMITH.</div>

Natural Tangents. By Emma Gifford. Manchester, England, 1920. iv + 90 pp.

It is now seven years since Mrs. Gifford issued her table of natural sines to every second of arc and to eight places of decimals. This appeared in the spring of 1914, before the war began. The demands upon the time and strength of everyone in England were so great during the years that followed that Mrs. Gifford's projected table of natural tangents was greatly delayed, and the present volume is only the beginning of a work that will be as complete as was the former one. The table extends only to 15°, but the progress will now be more rapid and we may hope soon to see the work completed.

Mrs. Gifford has taken the natural tangents for every 10″ from the *Opus Palatinum* of Rheticus, published in 1596. She has then found the tangents to 1″ through interpolation by the aid of a calculating machine. The computation was in each case carried to ten places for the purpose of establishing the eighth place. The arrangement is that of the Chambers logarithmic tables, which is more convenient than the semi-quadrantal plan commonly found in this country, although it makes the book more bulky.

Mrs. Gifford is so well known as a careful computer that the work will be welcome to all who have need for an eight-place table of natural tangents. Such a table is suggestive of the diminishing relative importance of the logarithm with the rapid improvement in mechanical calculation.

<div align="right">DAVID EUGENE SMITH.</div>