SHORTER NOTICES

Curve Sgembe Speciali Algebriche e Transcendenti. Volume primo:
   Curve algebriche. By Gino Loria. Bologna, N. Zanichelli, 1925.
   x+374 pp.

The monumental treatise on plane curves* by the same author has
now been followed by the first volume of an extensive work of a similar
nature on curves of three-dimensional space. The first chapter contains
a fairly full derivation of the ordinary differential theory of space curves
in general, followed by another on curves derived from a given one,
such as radial curves, evolutes, filar and planar, pedals, parallel curves,
medians of two given curves, etc. Most of these properties are not
made further use of, and for. This reason it is curious to find them
in a book with this title.

The subject of the book proper begins with a short chapter on the
conic in space, treated parametrically, followed by one hundred and
thirty pages on the cubic; first the general projective theory, then
a detailed consideration of each metric type. The treatment is very
elementary and complete. Then come the elliptic and the rational
quartics, and finally a brief outline of quintics, and scarcely more than
a mention of certain sextics and a few other isolated curves.

While the text is well supplied with historical and bibliographical
notes, it is by no means exhaustive; it does include a number of quite
recent papers, including some from our BULLETIN and TRANSACTIONS.

The characteristics of space algebraic curves, analogous to Plücker's
numbers for the plane, are not given; in several cases rather primitive
methods of deriving some of them are employed, when they could be
read out of tables uniquely from others already known.

The book is not provided with an index, either of names or of
subject matter. In a work of this kind, such indexes are particularly
useful. The matter is so arranged, however, that a topic can be found
without undue effort.

The mechanical execution is excellent, and the type large and clear.
On the whole but very few typographical errors were noticed, and of
these none would be liable to confuse the reader. The citation of
German titles suffers most heavily in this regard.

VIRGIL SNYDER

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* *Spezielle algebraische und transcendente ebene Curven, Theorie und
Geschichte, Autorisierte, nach dem italienischen Manuscript bearbeitete
deutsche Ausgabe von Fritz Schütte,* 1902; 2nd edition in two volumes,
1910–1911.