MR1943162 (2003k:01014) 01A60 01A50

Schubring, Gert (D-BLF-DK)

Argand and the early work on graphical representation: new sources and interpretations.

Around Caspar Wessel and the geometric representation of complex numbers (Copenhagen, 1998).

Mat. Medd. Danske Vid. Selsk. **46** (2001), *no.* 2, 125–146.

Jean Argand (1768–1822) published a book dated to 1806 on the geometric representation of complex numbers, and published an article dealing with the same subject in 1813 in a French journal. Schubring establishes that the existing biographical information on Argand is unreliable (we are not even sure of his first name), and documents the limited influence of Argand's book (the only two copies of the original known to exist belonged to the mathematician and editor Joseph Gergonne (1771–1859)). He adduces evidence to show that Argand was a watchmaker and not a bookseller; that he may not have been Swiss; that he may have been born several years later than his reported birth date of 1768; and that there is a slight chance his book may actually have been printed a few years later than 1806. Schubring also examines several authors before Argand who worked on geometric representations of imaginary numbers, including John Wallis (1616–1703), François Daviet de Fonceux (1733–1799), Wenceslaus Karsten (1732–1787), and Adrien Buée (1748–1826).

The view that Argand had little or limited influence is encountered in books on the history of mathematics, and it is expressed by some of Schubring's co-contributors in this volume of essays. Schubring's own findings concerning the 1806 book may seem to support this view. Nevertheless, Argand presented his construction in a prominent journal in 1813, and it was also described in the same year and same journal by Jacques Français (1775–1833). Adrien Legendre (1752–1833) was familiar enough with Argand's ideas to have communicated a short account of them to Français' brother. Although Argand's invention had been preceded by work of Caspar Wessel (1745–1818), it seems clear that Argand deserves credit for being the first to have communicated the idea effectively to the mathematical world. *Craig G. Fraser*