

p. 316), gives a brief but complete summary, except that he does not mention the possibility of obtaining successive roots by starting alternately on the two curves. He also demonstrates the geometric representation, shows that $\phi^n(x)$ may approach "in regular succession to different limits," and notes the connection of iteration with many parts of algebra and the calculus.

More recently, L  meray has a series of papers on the functional side of the theorem. In one of the earliest of these ("l'Interm  diaire des Math  maticiens," June, 1894) he considers in detail the conditions of convergence of $\phi^n(x)$, but thinks that the method is not generally applicable for the solution of equations (which is incorrect). In this and succeeding papers he gives ample geometric illustrations, including both the "staircase" and the "spiral" procession, but exhibits few examples. He deals at length with the "stagnating spiral" procession.

It will thus be seen that the first paper of Prof. Heymann mentioned by Herr Sattler has about the same date as the first paper by L  meray. Many other papers have followed. According to Heymann, Isenkrahe described (1897) both the "staircase" and "spiral" process under those names (which have been used by me). Mr. Stott has found other references (which we have not yet been able to verify), especially Anostschenko (1901), Pellet (1901), and Bugaieff, who appears to have published a series of papers since 1896, covering the whole subject of successive approximation (in Russian).

The work by Prof. Heymann which Herr Sattler sends me (No. 5) is dated 1904. It commences by describing the process, with both forms of approach; discusses the determination of imaginary roots, hastening of convergence, Newton's method, expedients for calculation, and some of the literature of the subject; considers the "stagnating" spiral, and gives examples and figures, being thus the most thorough paper which I have seen on the equation side of the theorem.

It would seem, then, that the method has been known to many writers since the time of Dary and Newton, but none of them appears to have carried it much further than the more obvious deductions to be drawn from the original theorem, as shown in my note. I think, however, that some further developments, both on the theoretical and the practical side, remain to be considered, but it would be scarcely useful to mention them until we have been able to examine all the literature.

We shall be very glad to receive any further references on the subject. If an amateur may say so, it is extraordinary that so beautiful and general a method should have received so little attention in the text-books.

RONALD ROSS.

University of Liverpool, January 11.

A February Meteoric Shower.

FEBRUARY cannot offer the same attraction as January and April in regard to the occurrence of a meteoric shower of special importance; but large meteors are fairly abundant during the month, and though no exceptionally rich streams are in evidence, there are a number of minor systems in play, and these will well repay attentive observation.

For a great many years I have suspected a strong shower in this month, but have never thoroughly investigated it. Meteors have been prolific from the direction of the bright star α Aurig   (Capella), and the dates over which the display extends appear to be from the 5th to the 20th. This year the moon will not much interfere with observation between February 10 and 25, and the sky should be carefully watched on clear nights for these Aurigids. They are brilliant, slow-moving meteors, and occasionally take rank as fireballs.

It will be important to determine the date of maximum and the exact place of the radiant. I found the position at $75^\circ + 41^\circ$ from various meteors seen from Bristol in the month of February in various years, but I have never watched the shower with sufficient thoroughness to learn much of its aspect or discover the epoch of its richest presentation; but I think it is decidedly a stream of rather notable character, and one which obviously needs further attention.

W. F. DENNING.

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Women and the Fellowship of the Chemical Society.

It has come to our notice that a report has been widely circulated and credited to the effect that the movement in favour of the admission of women to the fellowship of the Chemical Society is directly connected with the present strenuous agitation for the political enfranchisement of women. We, the undersigned women (actively engaged in chemical teaching and research), beg to ask for the hospitality of your columns in order emphatically to deny any such connection. The following facts, we venture to think, should conclusively prove the independence of the two movements:—

(1) Five years ago, when some of us petitioned the council of the Chemical Society to admit us to the fellowship, the agitation in favour of "Woman Suffrage" was not prominently before the public.

(2) The petition recently presented to the council originated within the Chemical Society itself, and was signed exclusively by fellows of the society. Moreover, we as a body have no knowledge of the political opinions and aspirations held by individual members; any such knowledge we should consider to be quite irrelevant, since the only link which unites us is a common interest in the science of chemistry.

We are glad to take this opportunity of recording our thanks to those fellows of the Chemical Society who have expressed themselves in favour of admitting women to the fellowship of the society.

Signed: MARY BOYLE, B.Sc., Lecturer and Demonstrator in Chemistry, Royal Holloway College; K. A. BURKE, B.Sc., Assistant in Department of Chemistry, University College, London; LOUISA CLEAVERLEY; MARGARET D. DOUGAL, Indexer of the Publications of the Chemical Society; C. DE B. EVANS, D.Sc., Lecturer in Chemistry, London School of Medicine for Women; E. ELEANOR FIELD, M.A., Senior Staff Lecturer in Chemistry, Royal Holloway College; EMILY L. B. FORSTER, Private Assistant to Prof. Huntington, King's College, London; IDA FREUND, Natural Science Tripos, Cambridge, Staff Lecturer in Chemistry, Newnham College; MAUD GAZDAR; HILDA J. HARTLE, B.Sc., Lecturer in Chemistry, Homerton Training College, Cambridge; E. M. HICKMANS, M.Sc.; ANNIE HOMER, B.A., Fellow and Associate of Newnham College, Cambridge; IDA F. HOMFRAY, B.Sc.; E. S. HOOPER, B.Sc., F.I.C., Assistant Lecturer and Demonstrator, Portsmouth Municipal College; EDITH HUMPHREY, B.Sc., Ph.D., Chemist to A. Sanderson and Sons; ZELDA KAHAN, B.Sc.; NORAH E. LAYCOCK, B.Sc., Demonstrator in Chemistry, London School of Medicine for Women; EFFIE G. MARSDEN; MARGARET MCKILLOP, M.A., Lecturer in Chemistry, King's College, Women's Department; AGNES M. MOODIE, M.A., B.Sc.; NORA RENOUF, Salters' Research Fellow, School of Pharmacy; IDA SMEDLEY, D.Sc., Assistant Lecturer and Demonstrator in Chemistry, Victoria University, Manchester; ALICE E. SMITH, B.Sc., Assistant Lecturer and Senior Demonstrator in Chemistry, University College of North Wales, Bangor; MILLICENT TAYLOR, B.Sc., Lecturer in Chemistry, Ladies' College, Cheltenham; M. BEATRICE THOMAS, M.A., Lecturer in Chemistry, Girton College, Cambridge; M. A. WHITELEY, D.Sc., A.R.C.S., Demonstrator in Organic Chemistry, Royal College of Science, London; SYBIL T. WIDDOWS, B.Sc., Head of Practical Chemistry Department, London School of Medicine for Women; KATHARINE I. WILLIAMS.

Fog and Rime on January 27-28.

THE great fog which enveloped the neighbourhood of London as well as a large part of England on January 27 and 28 was remarkable in rural and outer-suburban districts for the beautiful decking of the trees, even the tallest elms, with a great thickness of rime.

Here at Northwood, sixteen miles to the north of London, twigs and branches were heavily laden on their windward side—or rather that which faced the direction of the feeble anti-cyclonic air-flow. At night time, when