15 months period. I tabulated the values by successive lines of 15 months in length, and took means. The means of the columns indicated an irregular periodic fluctuation of about 0.0005 calorie in amplitude. As all the 14 periodicities enumerated in Table 31 of *Annals* 6 are nearly aliquot parts of 273 months, I thought it would be better to retabulate the values for a period of $\frac{273}{18}$ or 15.2 months. The resulting curve of this period was smoother than that for 15.0 months, and had a slightly larger amplitude. It then occurred to me to try a period of $\frac{273}{17}$, or approximately 16.0 months. And now I obtained the following series of mean values of the tabulation. The numbers below are given in units of $\frac{1}{10{,}000}$ calorie.

Month	1	2	3	4	5	6
Values	−62	−74	−74	−118	−158	−154
Month	7	8	9	10	11	12
Values	−180	−162	−144	−92	−70	−44
Month	13	14	15	16		
Values	−14	+40	+48	+13		

This defines a curve, which, as the reader may see by plotting the values, is very smooth, has its maximum at month 15, which corresponds to June, 1921, and minimum at month 7, which corresponds to November, 1920.

I have recomputed the 16-month period from unsmoothed values of the residuals "D." A slightly different and less perfect curve of about the same amplitude resulted. Recalling that "D" stands for *synthetic minus observed* solar constant values, and giving partial weight to the phases found in computations from unsmoothed data, I now set the initial dates of maximum and of minimum of the solar constant for the 16-month periodicity at October, 1920, and May, 1921, respectively. The amplitude, 0.00228 calorie, is 0.12 per cent. of the solar constant. This amplitude gives the new 16-month periodicity a standing of 1.7 times the importance of the periodicity of 9.79 months, and 1.3 times the importance of the periodicity of $8\frac{1}{3}$ months, as they are listed in Table 31, *Annals* 6.

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QUININE FROM REMIJIA BARK

A REPORT on cinchona exploration in South America recently appeared in your columns.[1] In this, surprise was expressed at finding in the bark of *Remijia pedunculata* "up to 3 per cent. of quinine sulfate (*sic*) with very little admixture of other alkaloids."

I should like to direct attention to the well-documented fact that this and related species of *Remijia* have for about seventy-five years been known to be quinini ferous.[2] Indeed, for several years beginning in 1879 many thousands of tons of the bark of these trees were exported to Europe for the extraction of quinine. Most went to England, some being transshipped to the Continent. F. A. Flückiger stated[3] that in 1881, out of 100,000 bales (*surons, colli*) of quinine-containing barks shipped into London, 60,000 bales of 50 kilos weight each consisted of "Cuprea Bark" (*Remijia* species), or a total for that one year alone of 3,307 tons. Of the approximately seven and a half thousand tons of bark shipped from northern South America in 1881, cuprea bark was the chief part.[4]

It appears that after several years the trade in cuprea or *Remijia* bark waned as a result of the depletion of readily available forests. Thus, in the course of a comparatively few years, little heed was paid to this once important botanical raw material until the exigencies of war have again focussed attention on it.[5]

Species of *Remijia* were introduced into India to furnish raw material to the quinine industry (Sikkim plantations, *ca.* 1888).[6]

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CENTENNIAL OF WOOD'S "CLASS-BOOK OF BOTANY"[1]

THE year 1870 was not only the birth year of the Dartmouth Scientific Association but also the twenty-fifth anniversary of an event closely associated with the scientific interests of Dartmouth. The year 1945 is therefore the centennial of that scientific event—the publication of the first edition of Wood's "Class-Book of Botany" at Claremont, N. H. Before the end of its usefulness, this famous text-book and manual had gone into its fiftieth edition and been sold to over a hundred thousand students.

Dartmouth has a double claim for recognition of its contribution to the development of this book—the first botany text to be approved by the American public.

[1] W. C. Steere, SCIENCE, n.s., 101: 177–8, 1945.

[2] F. A. Flückiger, *Vorwerks Neues Jahrb. f. Pharmacie u. verwandte Fächer*, 36, 1871.

[3] "The Cinchona Barks," p. 52, 1884.

[4] *Ibid.*, p. 55.

[5] D. Howard and J. Hodgkin, *Pharm. Jour.*, (3) 12: 578–9, 1881; *idem, Jour. Chem. Soc.*, 41: 66–8, 1882; Whiffen, *Pharm. Jour.*, (3) 12: 497, 1881; Triana, *Jour. de Pharm. et de Chim.*, (5) 5: 565–75, 1882; Arnaud, *ibid.*, (5) 5: 560–4, 1882; G. Planchon, *Jour. de Pharm. et de Chim.*, (5) 10: 329–336, 419–432, 1884; Watt's Dictionary of the Economic Products of India, II, 289–316. *ca.* 1896.

[6] Watt's Dictionary of the Economic Products of India, II, pp, 314, 5.

[1] Read at the meeting of the Dartmouth Scientific Association on March 21, 1945.