

variance with the text, the text with itself. Hence, to quote a few out of innumerable instances, such alternatives as Yezd and Yuzd, Dalaki and Dulukee, Mahamadan and Mahomedan, Geeach and Giach, Tabaz and Tubbuzz, Ghain and Ghaeen. Then such old friends as Meshed, Bushire, Turcoman, Hari-rud, disguised as Mushud, Bushuhr, Turkmun, Hurri Rood, without any conceivable advantage. It may be stated that owing to these eccentricities the spelling in the passages here quoted has necessarily been reduced to system.

A. H. KEANE

OUR BOOK SHELF

*Catechism of Agricultural Chemistry and Geology.* By the late J. F. W. Johnston. An Entirely New Edition, Revised and Enlarged by C. A. Cameron, M.D. Seventy-eighth Thousand. (Edinburgh and London: Blackwoods, 1879.)

THIS popular and useful little book has been decidedly improved by the additions and alterations which Dr. Cameron has made. Since the author's death, about a quarter of a century ago, this catechism had been once revised (in 1863) by Dr. Voelcker, but the time had long since arrived for further changes. If the present editor had been less scrupulous in adhering to the original form and substance of Prof. Johnston's work, this issue would have justly merited the description on the title-page of "An entirely new edition, revised and enlarged." There are, it is true, two fresh pages in the present edition, corresponding to a few new tables of the composition of cattle foods, but we fail to find the numberless small changes and additions which the progress of science demanded. Every sentence of the book should have been rigorously scrutinised and thoroughly amended, or even excised, where necessary. All expressions such as these: "Rancid butter is said to be sweetened" (p. 73), "It is said that if a cow be liberally supplied with whey" (p. 74), "The feeding with whey thickened with meal is said" (p. 74), should be removed. Statements of which the teacher is not sure should not find a place in an elementary catechism. Again, the table, on p. 34, of the ash-constituents removed from an acre by various crops needs emendation. On turning to page 53 we find two other tables showing the produce of corn and straw in certain field experiments with various manures. We do not think the omission of these tables would entail any loss, while their place might be profitably occupied by a series of conclusions deduced from the really satisfactory experiments on crops made at Rothamsted or at some of the continental agricultural stations. For, indeed, what lesson can be learnt from the statement (p. 53) that in an unnamed locality, on an undescribed soil, during a season of which the rainfall and temperature are unrecorded, and by the use of a wheat manure the composition of which is not furnished to the reader, 42 bushels of wheat were produced per acre? Without duplicates and without repetition in different localities and in different seasons, field-trials of manures are positively misleading. But when once such tables as those on pages 34 and 53 have got into a popular work and remained there fifteen years, they have a good chance of remaining fifty.

The statement on p. 67 that parsnips contain no starch will not stand, while we conclude that it was by some oversight that a tabular account of the constituents of various root-crops has been omitted by Dr. Cameron in re-casting and amplifying the data given by Dr. Voelcker in previous editions on page 65. We note here that question 363 on page 63 is repeated in question 374 on page 67, and that the statistics (p. 74) of cheese production in the United Kingdom are no longer correct.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

Palisa's Comet

I INCLOSE an ephemeris of the comet which was discovered at Pola by Herr Palisa on August 21, thinking that it may be of interest to some of your readers.

The ephemeris is calculated from observations made at my observatory on the nights of August 26, 27, and 28, by Dr. R. Copeland and Herr Lohse.

The comet is easily visible in a 4-inch telescope.

Ephemeris of Palisa's Comet

Berlin midnight.	R. A. <sup>♂</sup> h. m.	Decl. <sup>♂</sup>	Log. Δ.	Log. r.	Bright-ness.
Sept. 5 ...	11 43'6 ...	+44 47'0 ...	0'2219 ...	0'0393	
6 ...	50'4 ...	44 15'8 ...	'2191 ...	'0362 ...	1'7
7 ...	11 57'2 ...	43 42'7 ...	'2163 ...	'0331	
8 ...	12 3'9 ...	43 7'8 ...	'2137 ...	'0301	
9 ...	10'6 ...	42 31'1 ...	'2112 ...	'0272	
10 ...	17'3 ...	41 52'5 ...	'2088 ...	'0243 ...	1'8
11 ...	23'9 ...	41 12'1 ...	'2065 ...	'0215	
12 ...	30'4 ...	40 30'0 ...	'2043 ...	'0187	
13 ...	36'8 ...	39 46'1 ...	'2023 ...	'0161	
14 ...	43'2 ...	39 0'5 ...	'2004 ...	'0136 ...	2'0
15 ...	49'5 ...	38 13'3 ...	'1987 ...	'0111	
16 ...	12 55'7 ...	37 24'5 ...	'1971 ...	'0087	
17 ...	13 1'8 ...	36 34'2 ...	'1957 ...	'0064	
18 ...	7'8 ...	35 42'4 ...	'1945 ...	'0042 ...	2 1
19 ...	13'7 ...	34 49'2 ...	'1934 ...	'0021	
20 ...	19'5 ...	33 54'8 ...	'1925 ...	0'0001	
21 ...	25'2 ...	32 59'2 ...	'1917 ...	9'9983	
22 ...	30'8 ...	32 2'4 ...	'1911 ...	'9965 ...	2'3
23 ...	36'3 ...	31 4'6 ...	'1907 ...	'9948	
24 ...	41'7 ...	30 5'8 ...	'1905 ...	'9932	
25 ...	47'0 ...	29 6'2 ...	'1904 ...	'9919	
26 ...	52'2 ...	28 5'7 ...	'1906 ...	'9906 ...	2'3
27 ...	13 57'3 ...	27 4'7 ...	'1909 ...	'9895	
28 ...	14 2'3 ...	26 3'0 ...	'1914 ...	'9885	
29 ...	7'1 ...	25 0'8 ...	'1920 ...	'9877	
30 ...	14 11'9 ...	+23 58'2 ...	0'1928 ...	9'9869 ...	2'3

47, Brook Street, September 5

LINDSAY

Insect Swarms

IT may be worth mentioning in connection with Mr. J. Clarke Hawkshaw's interesting account of the wonderful insect-swarm at Trouville, on August 12 and 13, that the two species which composed it were noticed in immense profusion about the same time in the West of England.

On the 13th ult. (which was one of the very few summer days of the season) I was driving with a friend from Exmouth to Budleigh-Salterton, on the South Devon coast, when our attention was attracted by the enormous multitude of insects (moths and butterflies) which were fluttering over the flowery margin of the road. The butterfly was at once recognised as the "Painted Lady;" the moth was not determined, but from its general appearance, its companionship, and all the circumstances of the case, I have no doubt that it was the *Plusia gamma*. The swarm attended us, with little variation in the numbers, throughout almost the whole of our journey (a distance of five miles), and on reaching Budleigh we found *P. cardui* clustering thickly on the flowers in the brilliant little gardens facing the sea.

Along the road the moth was in the greatest profusion, the numbers being frequently so great as to form a perfect cloud.

The effect of the quick, restless, irregular movements of the great host, stretching on mile after mile, was very curious. The butterflies were, of course, less plentiful, but still their numbers must have been immense. They seemed to be finely coloured and in very perfect condition.

The direction in which the swarm was travelling was not specially noted; indeed if food was the object sought it might