

It may be useful to put down a number of the coldest of these days (reckoned by maxima). Here are 12 :

	Max.	Min.	Diff.
1. Jan. 5, '94 ...	19°0	12°8	6°2
2. Jan. 4, '67 ...	21°2	7°7	13°5
3. Dec. 21, '55 ...	23°2	17°0	6°2
4. Dec. 22, '90 ...	23°7	13°4	10°3
5. Dec. 22, '55 ...	24°2	16°9	7°3
6. Jan. 10, '91 ...	24°4	12°0	12°4
7. Dec. 31, '74 ...	24°5	18°5	6°0
8. Jan. 7, '94 ...	24°5	18°1	6°4
9. Jan. 16, '81 ...	24°6	17°7	6°9
10. Jan. 15, '81 ...	24°8	14°0	10°8
11. Mar. 13, '45 ...	24°8	13°1	11°7
12. Jan. 14, '67 ...	24°9	13°9	11°0

These minima, it will be seen, range from 7°7 to 18°5. I do not enter on the question as to the coldest days measured by minima; but from a table by Mr. Charles Harding, giving the minimum at Greenwich in each winter, 1841-89 (*Quart. Journ. of R. Met. S.* vol. xvi. p. 165), extended to '93, I take the following cases (adding the maxima since '44):

	Min.	Max.	Diff.
(Jan. 9, '41 ...)	4°0	.	.
1. Jan. 5, '67 ...	6°6	32°5	25°9
2. Feb. 12, '45 ...	7°7	29°3	21°6
3. Dec. 25, '60 ...	8°0	30°0	22°0
4. Dec. 25, '70 ...	9°8	28°2	18°4
5. Feb. 19, '55 ...	11°1	33°4	22°3
6. Feb. 12, '47 ...	11°2	39°6	28°4

The lowest (4°0) was in '41, and so beyond our fifty years' limit. It will be observed that those six maxima are all higher than any in our first list, exhibiting a wide range in the temperature of the very cold days thus measured.

In the present remarkable season, there have been, up to February 27, 17 of our "very cold" days, viz. 6 in January, and 11 in February (an unprecedented case). The lowest maximum is 27°0, occurring on February 6, 7, and 9; and 9; the respective minima, 15°1, 9°6, and 10°2. A. B. M.

Hesper and Phosphor.

IN his "History of the Inductive Sciences" (vol. i. p. 149, London, 1847), Whewell says:—"Pythagoras is said to have maintained that the evening and morning stars are the same body, which certainly must have been one of the earliest discoveries on this subject; and indeed, we can hardly conceive men noticing the stars for a year or two without coming to this conclusion" (*cf.* "The Planet Venus," by W. J. L., in *NATURE*, vol. xlix. p. 413). Now, what Whewell deemed so hardly conceivable appears to have actually occurred in old China. Wang Chung, the philosopher (*circa* 27-97 A.D.), in his work, renowned for its total repudiation of the then current errors, writes as follows:—"In the 'Book of Poems' it is said, 'Ki-ming (Phosphor) exists in the east, and Chang-kang (Hesper) in the west.' In fact, however, they are but the phases of Jupiter and Venus, which, appearing now in the east, now in the west, received such distinct names from the ignorant bards" ("Lun-hang," Miura's edition, Kyôto, 1748, tom. xvii. pp. 12-13). Two facts are manifested in this passage. First, it shows that, celebrated for their astronomical acquirements in very archaic ages, as they are, the fact that the evening and morning stars are the same body, was not known to the Chinese of the eighth century B.C., when the poem entitled "Ta-tung" was composed, comprising the above-quoted line. Secondly, it shows that, even after the identity was established of the evening and morning stars, some Chinese, so well learned as Wang Chung, were ignorant of their own error: affirming that Jupiter as well as Venus appears now as Phosphor, now as Hesper, they have admitted the existence of two distinct Phosphori and two distinct Hesperii, and of a Phosphor essentially different from a Hesper. It is probable that some later scholars have tried to evade this intricacy by arbitrarily apportioning the two phases between the two planets; thus, Minamoto-no-Shita-zau, the Japanese poet and glossarist (909-983 A.D.), referring to a Chinese work "Kien-ming-yuen," which is perhaps lost now, identifies Jupiter (in Chinese: Sui-sing) with Phosphor (in

Japanese: Aka-boshi), and Venus (in Chinese: Tai-peh) with Hesper (in Japanese: Yûtsutsu) ("Wamyô Ruijushô," Nawa's edition, Kyôto, 1667, tom. i. p. 1).

February 22. KUMAGUSU MINAKATA.

The Recent Storm in the United States.

THE storm of February 4-9 in the United States was notable for its extent and severity, recalling the memorable blizzard of March 1888. The Government Weather Bureau gives the following comparison of the two:—

	1888.	1895.
Snow	2 feet	5½ inches
Wind	50 miles	60 miles
Temperature at New York	4·8 above	3 below
Area!... ..	400 miles radius	1600 miles radius

It will be seen that the recent storm was more severe in everything except the amount of snow, and far more extensive. The entire southern portion of the country experienced severe cold, destroying fruits and vegetables to the value of 15,000,000 dols. in Florida alone. The zero line extended below the middle of Arkansas, and well down into Texas.

The storm reached New York on Thursday, February 7. On the previous afternoon, at about four o'clock, I observed at Brooklyn the unusual phenomenon of a double rainbow.

Brooklyn, February 11. WM. H. HALE.

SOME SUGGESTIONS ON THE ORIGIN AND EVOLUTION OF WEB-SPINNING IN SPIDERS.

IT cannot be reasonably doubted that one of the most interesting features connected with the natural history of spiders, is their habit of gaining a livelihood by spreading nets for the capture of prey. It may be that the large share of the attention of naturalists that this habit has attracted, is to be attributed to the fact that it appears to be confined in the animal world to spiders and men. This circumstance is of itself sufficiently remarkable to call for special comment; but its interest is not a little enhanced by the reflection, that since spiders made their appearance in the history of animal life vast ages before man came upon the scene, none of us can justly claim that any member of our own kind was the first in the field in the invention of the art of netting. Possibly, indeed, the oft-repeated and unavoidable observation of the efficacy of a spider's web for the purpose of catching otherwise unobtainable prey, may have roused in the brain of some intelligent hunter amongst our ancestors, the idea of the practical utility of a similar instrument for the capture of fish or other eatable forms of life. But if this be so, civilised man has long forgotten the debt of gratitude he owes to spiders. For, to the average individual amongst us, a spider is a thing to be looked upon and spoken of with fear and dislike amounting to loathing, and to be ruthlessly destroyed when a safe chance of destruction is afforded.

It is, perhaps, on account of this widespread repugnance that the science of arachnology has claimed within the last century far fewer students than many another less instructive branch of zoology. Moreover, such attention as it has received, is no doubt largely due, as suggested above, to the wonderful web-building powers that spiders possess. But those who have devoted their time to the study of webs, have, for the most part, contented themselves with observing and recording the structure and method of formation of the various types of nests and snares, and in claiming or disputing their value as a basis for a natural classification of the animals that make them. This has resulted, if in nothing else, at least in the accumulation of an array of facts sufficiently vast to