WEEKLY CALENDAR.

Weather near London in 1862.

Day of M'nth	Day of Week.	MARCH 31—APRIL 6, 1863.	Barometer.	Thermom.	Wind.	Rain in Inches.	Sun Rises.	Sun Sets.	Moon Rises and Sets	Moon's Age.	Clock before Sun.	Day of Year.
				degrees.			m. h.	m. h.	m. h.		m. s.	
31	Tu	Wood Sorrel flowers.	29.623—29.479	60—34	S.W.	.08	41 af 5	28 af 6	41 3	12	4 21	90
1	W	Water Fennel flowers.	29.844—29.769	58—48	S.W.	.02	38 5	31 6	5 4	13	4 2	91
2	Th	Early Orchis flowers.	29.939—29.467	57—36	S.W.	.24	36 5	32 6	24 4	14	3 44	92
3	F	Good Friday.	29.786—29.576	63—35	S.W.	—	34 5	33 6	46 4	15	3 26	93
4	S	Spider Orchis. [1804.	30.041—29.980	60—38	S.W.	—	32 5	35 6	rises 4	○	8 8	94
5	Sun	Easter Sunday. W. Gilpin died.	30.050—29.883	56—47	S.W.	.04	29 5	37 6	51 4	17	2 50	95
6	M	Easter Monday.	29.944—29.865	56—46	S.W.	.12	27 5	38 6	7 10	18	2 33	96

Meteorology of the Week.—At Chiswick, from observations during the last thirty-six years, the average highest and lowest temperatures of these days are 55.7° and 38.3° respectively. The greatest heat, 78°, occurred on the 3rd, in 1848; and the lowest cold, 16°, on the 1st, in 1838. During the period 143 days were fine, and on 109 rain fell.

FERTILISATION OF ORCHIDS.

AD Mr. Anderson asked me two days ago for any facts illustrative of his case of unopened flowers of Cattleya crispa and Dendrobium cretaceum producing seed-capsules, I could have given no sort of information; nor can I now explain the fact. By an odd coincidence, yesterday I received a very interesting letter from Dr. Hermann Cruger, the Director of the Botanic Garden at Trinidad, who informs me that certain native species, and native species alone, of Cattleya, Epidendrum, and Schomburgkia, "are hardly ever known to open their flowers, but which nearly always set fruit." In answer to Dr. Cruger, I have asked him to look at the seed or send me some, and inform me whether it appears good.

Will Mr. Anderson have the kindness to send me a few seeds produced by his unopened flowers?

I further asked Dr. Cruger whether these Orchids in their native haunts *never* open their flowers. I can hardly believe that this can be the case, seeing how manifestly adapted the structure of their organs of fructification is to the action of insects. But it is known that several plants, such as Violets, Campanulas, Oxalis, &c., produce two kinds of flowers: one sort adapted for self-fertilisation, and the other sort for fertilisation by insect agency or other means. In some cases the two kinds of flowers differ very little in structure; and it occurs to me as possible that something of this kind may occur with Orchids.

Dr. Cruger further informs me that with certain Orchids, as in those which do not open their flowers, the pollen-masses after a time become pulpy; and though remaining still *in situ*, emit their pollen-tubes, which reach the stigma, and thus cause fertilisation.

An excellent observer, Mr. J. Scott, of the Royal Botanic Gardens of Edinburgh, will, I am sure, permit me to state that he has been making similar observations, and has seen the pollen-tubes emitted from the pollen-masses whilst still in their proper positions.

These facts were all unknown to me when I published my small work on the Fertilisation of Orchids; but I ought, perhaps, to have anticipated their occurrence, for I saw the pollen-tubes emitted from the pollen within the anthers in the Bird's-nest Orchid, and likewise in *monstrous* flowers of the Man Orchis. This latter fact seems related to Mr. Anderson's remark, that flowers of an imperfect character, wanting a petal or sepal, had a great tendency to produce seed-capsules.

These curious observations by Dr. Cruger, Mr. Anderson, and Mr. Scott, convince me that I have in my work underrated the power of tropical Orchids occasionally to produce seed without the aid of insects; but I am not shaken in my belief that their structure is mainly related to insect agency. With most British Orchids this conclusion may be looked on as established.

I will only add that since the publication of my work, a number of persons have set seed-capsules with various tropical Orchids.

Charles Darwin, *Down, Bromley, Kent.*

HISTORY AND CULTURE OF THE CHRYSANTHEMUM.

Mr. Glenny wrote, about eighteen months since, a very interesting article on the introduction of the Chinese Chrysanthemum into England. He says it flowered for the first time in this country at Mr. Colville's Nursery, King's Road, Chelsea, in November, 1795, in which year the name Chrysanthemum (Golden Flower) was first given to it by Linnæus, who distinguished two species, calling the one with a small flower, indicum; and the other with a large flower, sinense. But after his time a diversity of opinions arose among botanists as to the proper name, some of them saying the plant belonged to the Anthemis grandiflora, Anthemis artemisiæfolia, and Anthemis stipulacea (Camomiles). Modern English writers call it Chrysanthemum, with the exception of Sweet, who considers it a species of Pyrethrum, or Feverfew, and places it under the head of Dendrathema (shrubby kinds). These differences of opinion arise from the small membranous scales resembling chaff found on the receptacle of the flowers of the Chinese Chrysanthemum at the base of the florets, such being characteristic of the genus Anthemis, while the receptacle of the true genus Chrysanthemum is without chaff-like scales. Nevertheless, they are in my opinion both the same genus.

In the "Horticultural Society's Transactions" of 1831, a history of the Chrysanthemum is given by Mr. Sabine, who says they were cultivated in the gardens of Holland, and described by the celebrated Breynius as far back as 1688. He calls it Matricaria japonica, and speaks of six varieties. They appear afterwards to have been lost, as no gardener in 1821 knew anything of them.

In January, 1826, Mr. Sabine, again referring to the Chrysanthemum, says, speaking of the rapid progress the flower had made in this country in a few years, that the shows of the flower at the Society's gardens in 1824 and 1825, had been acknowledged by all admirers to be, taking them as a mass, the most splendid and gorgeous exhibitions ever seen even in the gayest time of the year. The Show consisted of seven hundred pot plants. They began to bloom in October, and continued till December, with now and then changing a few of them for later-blooming ones, thus enlivening the garden at a period when there was nothing else to attract attention. Many of these varieties were collected by Mr. Parks in China and Bengal during 1821, and some of them were sent home by the Society's gardener, Mr. John Potts.