Rhizopoda and *Infusoria*, are the classes of the sub-kingdom PROTOZOA. Dr. Grant proposed to divide *Porifera* into three orders, according to the material of which the skeleton is composed, whether horny, calcareous, or siliceous. This division furnishes to Dr. Bowerbank the orders of his class, under the names of *Calcarea*, *Silicea*, and *Keratosa*. *Calcarea* is the smallest in numbers as well as the lowest in position of these orders: it includes only the Sponges which formed Fleming's genus *Grantia*, now divided by Bowerbank, according to the structure of the skeleton, into four genera. The second order, *Silicea*, is far more extensive, and is divided according to the structure of the skeleton, into seven sections or sub-orders, several of which contain numerous genera. In these the skeleton is characterised as being either: 1. Spiculo radiate; 2. Spiculo-membranous; 3. Spiculo-reticulate; 4. Spiculo-fibrous; 5. Compound-reticulate; 6. Siliceo-fibrous; or, 7. Canaliculated Siliceo-fibrous.

The third order, *Keratosa*, consisting of Sponges with horny skeletons, is likewise divided into seven sub-orders, according as the skeleton is solid non-spiculate kerato-fibrous; solid semi spiculate kerato-fibrous; solid spiculate kerato-fibrous; simple fistulo-fibrous; compound fistulo-fibrous; regular semi-areno-fibrous; or irregular, entirely areno-fibrous.

Under these divisions, both the genera previously received and those established by himself are carefully characterised by Dr. Bowerbank, in accordance with their anatomical structure. He has added a dissertation on the discrimination of species, with a review of the portions of the organisation that may be employed with advantage in their scientific determination, and directions for the examination and preservation of specimens.

Dr. Bowerbank's series of papers communicated to the Royal Society, supplies a desideratum in the literature of Natural History, and his further communications will be awaited with much interest. W. H.

METEOROLOGY.

MEAN RESULTS OF METEOROLOGICAL OBSERVATIONS AT HAMILTON, C. W., FOR THE YEAR 1861.

	THERMOMETER.					BAROMETER.			DAYS.			YEARS.
MONTHS.	Mean 9 A.M.	Mean 9 P.M.	M. of both.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Rainy	Slight Shrs.	Dry.	Mean Temperature.
January.	20.64°	22.61°	21.129°	45°	-16°	29.628	30.25	29.00	4	9	18	1849... 48.105°
Feb	28.00	29.10	28.550	60	-16	.550	.02	.08	6	7	15	1850.....48.732
March ...	29.12	29.90	29.510	68	- 4	.608	.10	.10	5	10	16	1851.....48.756
April.....	43.66	44.06	43.860	75	27	.570	.07	.16	4	9	17	1852.....48.248
May	53.00	51.03	52 015	78	36	.566	29.97	28.76	4	6	21	1853.....49.474
June.....	68 53	66.03	67.289	90	45	.625	.80	29.30	1	5	24	1854.....49.103
July	72.35	71.00	71.679	93	42	.632	.88	.33	1	5	25	1855.....47.316
August...	70.25	69.90	70.080	98	53	.714	.92	.48	4	7	20	1856.....44.888
Sept.....	62.53	62.63	62.580	85	43	.692	30.10	.18	4	6	20	1857.....45.868
October..	50.51	51.61	51 060	75	30	.648	.05	.02	3	8	20	1858.....48.142
Nov	38.43	39.00	38.710	62	26	.506	29.92	.10	1	7	22	1859.....46.996
Dec.....	31.90	35.80	33.850	62	11	.736	30.16	.22	2	5	24	1860.....47.357
Mean temp. of year. 47.525			M. height 29.623						39	84	242	