

were necessary to avoid the objections which might be founded upon the influence of humidity or any other atmospheric variation. They were kept in the dark during the whole day; when the days preceding the full moon arrived, they were carried, after 8 A. M., always to the same place to be exposed to its rays: but two of the pots were uncovered, and two protected from the rays by an opaque body; the others were freely exposed to the open air and all its influence.

After six nights' exposure, the difference in the coloration was very marked: the little plants constantly protected from the influence of light were white; and those exposed to the lunar rays had a yellowish tint, which appeared to be changing to the green colour.

I desired to repeat also the experiment of Vassalli. I had only made observations upon leaves perfectly closed, and little shoots, of no vigour, drooping over the edges of the pots wherein they had germinated. After that, I tried exposing various specimens of *Mimosa pudica* to the action of the moon's rays for an hour during full moon. I was delighted to see the little shoots rise after a quarter of an hour's exposure; the plants were at the distance of a few millemetres from the edge of the pot; in half an hour the stems were straighter, and in an hour and a half they had attained the height of more than 2 inches; but I could not detect any sensible opening of the leaves. This experiment appeared necessary in order to confirm what has been said of the influence of the rays of the moon upon the growth of the *Mimosa*, because this fact, more or less established by Vassalli, has not been received with entire confidence by other authors; and in this last experiment I took precaution of placing near the *Mimosa* exposed to the lunar rays another of the same plants covered with an opaque body, which shielded it from the light: in this no movement was produced. The experiment was repeated six times with constant results. We may therefore believe that the growth of the little stems of the *Mimosa* is to be attributed solely to the influence of the moon's rays.

I made these experiments in the summer of 1847; and I have thought it necessary to enter into details, because I was able to make certain, by a great number of observations, frequently repeated, that the difference of temperature, of the movement of the air, and exposure to different degrees of light, had an influence upon the more or less prompt and more or less perfect manner in which the leaves of the *Mimosa* open and close.

One morning in the month of July, about 5 o'clock, in the Botanic Garden of Venice, two plants of *Mimosa pudica*, kept in a conservatory (perfectly expanded), presented an aspect of luxuriant vegetation. Another, exposed in the open air, had its leaves entirely closed and the stems bent. A fourth, placed in another part of the garden was half-closed. On the day preceding, the gardener had, at my orders, shut up the last in a dark place three hours before sunrise.

I took care also to verify the influence exerted upon the *Mimosa* by the artificial light of a lamp, and I found the growth was from 3 to 5 centimetres.

#### CARPENTERIA AND DUJARDINIA.

The number of the *Annals of Natural History* for November, contains an interesting communication from Dr. J. E. Gray of the British Museum, on the discovery of an animal forming a connecting link between Rhizopoda (Foraminifera) and