lapse @@(a), the foliola or little leaves moving at their base till they come into contact, and then applying themſelves cloſe together, if the leaf be touched with a little more force, the oppoſite leaf will exhibit the ſame appearance. If a little more force be applied, the partial footſtalks bend down towards the common foot­ſtalk from which they iſſue, making with it a more acute angle than before. If the touch be more violent ſtill, all the leaves ſituated on the ſame side with the one that has been touched will inſtantly collapſe, and the partial footſtalk will approach the common footſtalk to which it is attached, in the ſame manner as the partial footſtalk of the leaf approaches the ſtem or branch from which it iſſues ; ſo that the whole plant, from ha­ving its branches extended, will immediately appear like a weeping birch.

2. Theſe motions of the plant are performed by means of three diſtinct and ſenſible articulations. The firſt, that of the foliola or lobes to the partial footſtalk ; the second, that of the partial footſtalk to the common one ; the third, that of the common footſtalk to the trunk. The primary motion of all which is the cloſing of the leaf upon the partial footſtalk, which is performed in a ſimilar manner, and by a ſimilar articulation. This, however, is much leſs visible than the others. Theſe motions are wholly independent on one another, as may be proved by experiment. It appears that if the par­tial footſtalks are moved, and collapſe toward the petioli, or theſe toward the trunk, the little leaves, whoſe motion is uſually primary to theſe, ſhould be affected alſo ; yet experiment proves that it is poſſible to touch the footſtalks in ſuch a manner as to affect them only, and make them apply themſelves to the trunk, while the leaves feel nothing of the touch ; but this cannot be, unleſs the footſtalks are ſo diſpoſed as that they can fall to the trunk, without ſuſſering their leaves to touch any part of the plant in their paſſage, becauſe, if they do, they are immediately affected.

3. Winds and heavy rains make the leaves of the ſenſitive plant contract and cloſe ; but no ſuch effect is produced from flight ſhowers.

4. At night, or when expoſed to much cold in the day, the leaves meet and cloſe in the ſame manner as when touched, folding their upper ſurfaces together, and in part over each other, like ſcales or tiles, ſo as to expoſe as little as poſſible of the upper ſurface to the air. The oppoſite ſides of the leaves (foliola) do not come cloſe together in the night, for when touched they apply themſelves cloſer together. Dr Darwin kept a ſenſitive plant in a dark place for ſome hours after day­break ; the leaves and footſtalks were collapſed as in its moſt profound ſleep; and, on expoſing it to the light, above 20 minutes paſſed before it was expanded.

5. In the month of Auguſt, a ſenſitive plant was carried in a pot out of its uſual place into a dark cave, the motion that it received in the carriage ſhut up its leaves, and they did not open till 24 hours afterwards ; at this time they became moderately open, but were afterwards ſubject to no changes at night or morning, but remained three days and nights with their leaves in the same moderately open ſtate. At the end of this time they were brought out again into the air, and there re­covered their natural periodical motions, ſhutting every night, and opening every morning, as naturally and as ſtrongly as if the plant had not been in this forced ſtate ; and while in the cave, it was obſerved to be very little leſs affected with the touch than when abroad in the open air.

6. The great heats of summer, when there is open ſunſhine at noon, affect the plant in ſome degree like cold, cauſing it to ſhut up its leaves a little, but never in any very great degree. The plant, however, is leaſt of all affected about nine o’clock in the morning, and that is conſequently the propereſt time to make experi­ments on it. A branch of the ſenſitive plant cut off, and laid by, retains yet its property of ſhutting up and opening in the morning for ſome days ; and it holds it longer if kept with one end in water, than if left to dry more ſuddenly.

7. The leaves only of the ſenſitive plant ſhut up in the night, not the branches; and if it be touched at this time, the branches are affected in the ſame manner as in the day, ſhutting up, or approaching to the ſtalk or trunk, in the ſame manner, and often with more force. It is of no conſequence what the ſubſtance is with which the plant is touched, it anſwers alike to all ; but there may be obſerved a little ſpot, diſtinguiſhable by its paler colour in the articulations of its leaves, where the greateſt and niceſt ſenſibility is evidently placed.

8. Duhamel having obſerved, about the 15th of September, in moderate weather, the natural motion of a branch of a ſenſitive plant, remarked, that at nine in the morning it formed with the ſtem an angle of 100 degrees ; at noon, 112 degrees ; at three afternoon, it returned to 100 ; and after touching the branch, the angle was reduced to 90. Three quarters of an hour after it had mounted to 112 ; and, at eight at night, it deſcended again, without being touched, to 90. The day after, in finer weather, the ſame branch, at eight in the morning, made an angle of 135 degrees with the ſtem ; after being touched, the angle was diminiſhed to 80 ; an hour after, it roſe again to 135 ; being touched a ſecond time, it deſcended again to 80 ; an hour and a half after, it had riſen to 145 ; and upon being touched a third time, deſcended to 135 ; and remained in that poſition till five o’clock in the afternoon, when being touched a fourth time it fell to 110.

9. The parts of the plants which have collapſed af­terwards unfold themſelves, and return to their former expanded ſtate. The time required for that purpose varies, according to the vigour of the plant, the ſeaſon of the year, the hour of the day, the ſtate of the atmoſphere. Sometimes half an hour is requisite, ſome- times only ten minutes. The order in which the parts recover themſelves varies in like manner : ſometimes it is the common footſtalk ; ſometimes the rib to which

@@@(a) As the nature of the ſenſitive plant is curious, we wiſh to make the deſcription of it intelhgible to thoſe who are not acquainted with the technical language of botany. We have therefore uſed the word *leaf* inſtead of foliolum, or lobe.