

NODDING OF THE TERMINAL HEADS OF *SILPHIUM LACINIATUM*.

JOHN H. SCHAFFNER.

During the past summer, while botanizing in Kansas, my attention was attracted to a peculiar eastward tipping of the terminal heads of *Silphium laciniatum* L. I had noticed such a phenomenon before in the common sunflower, in which the terminal heads, especially of small plants, normally tip to the north-east.

In the compass plant, anthesis begins in the terminal heads and a strong eastward nodding was observed to be almost universal in these although the lateral heads appear to have the property to only a slight extent. On July 7th and 8th, a large number of plants was observed in an open prairie lot near Mayetta. The wind was from the east-southeast at the time and it is difficult to see how it could have had anything to do with the phenomenon. Of 135 plants in bloom at the time, the terminal heads of 123 faced in an easterly direction and 12 in other directions. But of these 12, several had imperfect peduncles. So the percentage of indifferent normal heads was very small.

The compass plant often grows in clusters of half a dozen or more. Frequently the terminal heads of all the plants in a group are in bloom at the same time and are tipping to the east. In such cases the appearance becomes striking when contemplated in connection with the north and south direction commonly taken by the basal leaves.

Later other observations were made at various places as opportunity afforded and always a very large percentage of the terminal heads were found nodding towards the east.

In the common sunflower, the exposure of the large green involucre in the most favorable position with respect to the rays of light must be a decided advantage to the plant. But in *Silphium laciniatum* the involucre is rather insignificant and appears to be of little importance as a photosynthetic organ.