

COMPASS PLANTS OF OHIO.

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The name "compass plant" was first given to *Silphium laciniatum*, commonly called Compass plant or Rosin-weed, one of the family Compositæ and found on the prairies of North America. It is the best known of this class of plants and affords perhaps the best illustration of them. The name originated with the hunters on the prairies who observed that the leaves had a peculiar vertical position with the edges pointing north and south. Even under cloudy skies they were able to make use of this peculiarity as a guide to directions.

The vertical position of the leaves is due to the twisting of the leaf-blades; this seems to be confined to those plants which prefer open, sunny places and which grow in the warmest parts of the year, and to this we may look for an explanation of the phenomenon. The full effect of the sun's rays upon the leaf during the hottest part of the day, especially on the prairies where the temperature sometimes rises very high, would cause an over-heating and an excessive amount of transpiration which would be exceedingly injurious to the plant and might cause its death. To avoid this the leaves twist so that they have what is called the "profile position," the sun's rays falling directly upon the edges at mid-day and upon the surfaces only at morning and evening. It is interesting to note that when compass plants are found growing in damp, shady places, the leaves have the ordinary position, i. e., not vertical or twisted. This placing of the leaves horizontally in the shade and vertically in dry, sunny places may be seen in many plants, including shrubs and trees, though in only a few of them do the leaves have a north and south position. The name "compass plant," however, is not restricted these last.

The following is a list of our Ohio compass plants :

- Lactuca Scariola* L. Prickly Lettuce.
- Lactuca virosa* L. Strong-scented Lettuce.
- Silphium laciniatum* L. Compass-plant, Rosin-weed.
- Erigeron Philadelphicus* L. Philadelphia Fleabane.
- Lacinaria scariosa* (L.) Hill, Button Snakeroot.
- Grindelia squarrosa* (Ph.) Duval. Broad-Leaved Gum-plant.

Of these, *Lactuca virosa* (formerly confused with *L. Scariola*) and *Erigeron Philadelphicus* are very common. In the latter the twisting of the leaves is especially noticeable in the spring, although they do not have a north and south position. *Silphium laciniatum* is found on the prairies in the northwestern part of the State.