

glaucous green above, and a reddish glaucous green below. The stalks are reddish. It is invariably found in the deepest shade of underbrush, and usually growing up through dead brush. As it is exceedingly brittle, a strong puff of wind being sufficient to break off the tips when entangled, this habit of growing in brush makes it exceedingly difficult to secure entire specimens. I have been unable to secure more than one frond out of three in a presentable condition. It fruits during the middle of October, the fruit forming a deep black margin to the lightish colored segments. —HENRY H. RUSBY.

On the Colors of some Western Flowers.—There are a good many mistakes about them in the books. *Cordylanthus Wrightii*, Gray, for example, is everywhere described as having a purplish corolla, whereas it is of a fine, light-sulphur yellow, which stands in showy contrast with the commonly rich, dark purple calyx which half encloses it.

Orthocarpus purpureo albus, Gray, is said to have corollas "purple and often partly white;" the truth being that they are always clear white on opening, and that after the first day they change to rose-purple.

In the January GAZETTE under *Ribes pinetorum*, Greene, I said that the flowers of *R. leptanthum*, Gray, are "white, not yellow, as said by Mr. Watson in Bot. King." But Mr. Watson writes to me that he has seen acres of it with yellow flowers. Now though the species occurs plentifully west of the Rocky Mountains I do not happen to have met with it but in Colorado and New Mexico, the locality whence it was first obtained, and I have never seen it but with white flowers, though there is usually a tip, or marking of decided green. The dubious var. *brachyanthum*, Gray, of California shows a tinge of purple. Will not our botanists in different parts of our western field take notice, the coming season, and all tell us through the GAZETTE what they find to be the color of flowers in *R. leptanthum*? Of course they may vary in different localities, but if this be the case, it should be established clearly. —EDWARD LEE GREENE.

Carnivorous Plants. IV.—EXPERIMENT NO. IX.—Placed upon the center of the disk of a very vigorous and large leaf a small crumb of bread made from wheat flour, at 2:45 P. M., June 11, '79.

- 30 min. a few of the submarginal tentacles had bent slightly.
 90 " these tentacles were standing about at right angles with the plane of the surface of the blade of the leaf.
 3 hrs. many of the marginal tentacles had moved some.
 7 " a few of the submarginal tentacles were so inflected as to touch the specimen; also the marginal were much inflected.
 10 " but little changed from the last note.
 17 " all of the submarginal, marginal and outer disk tentacles had inflected to such a degree that nearly all of them touched the specimen; the edges of the leaf were also incurved greatly.
 24 " leaf completely closed; substance of the bread soft and pulpy.

- 41 " there was apparently no further change.
- 47 " a few of the marginal tentacles had partly reflexed.
- 67 " the reflection was more marked but quite irregular, i. e., some of the tentacles were reflexed to a greater degree than others that commenced the reflex action at the same time; the substance upon the leaf was more liquid and not so opaque as at 24 and 41 hrs.
- 91 " all the tentacles were more or less inflexed but apparently were rapidly reflexing.
- 98 " there was but little change.
- 137 " many of the marginal tentacles were entirely reflexed; the outer disk and submarginal tentacles were, in the main, standing at an angle of 90° with the plane of the blade.
- 148 " mostly reflexed; tentacles and leaf were somewhat shrunken; substance formed a white incrustation on the disk; no secretion.
- 186 " the tentacles had again inflected slightly and one or two were so bent as to touch the remains of the bread *
- 220 hrs. the substance of the bread had turned a dark brown color.
- 244 " no trace of the bread remained.
- 388 " the tentacles were practically reflexed.
- 508 " the ends of the tentacles were somewhat dried and thus bent inward but the blade was natural; no secretion.
- 532 " there was but little change from the last note except that upon the tentacles that were not dried (some 5 or 6) the secretion had appeared.
- 580 " the whole leaf was nearly natural.
- 652 " the leaf, blade and tentacles, was natural with a copious secretion.

EXPERIMENT NO. X.—A piece of fried steak was placed upon a leaf at 2:45 P. M., June 11, '79.

- 5 min. the submarginal tentacles and also the outer disk ones, for about $\frac{1}{4}$ the circumference of the leaf, had inflected and touched the meat; many of the remaining tentacles were much inflected.
- 30 " all of the submarginal tentacles had moved more or less.
- 17 hrs. all the tentacles had inflected and touched the specimen; the edge of the leaf was much incurved;
- 24 " the leaf was completely closed; meat white and pulpy.
- 68 " the tentacles were reflexing, a few being completely reflexed; the remaining part of the leaf not so soft as under 24 hrs.
- 92 " on one side all the tentacles had reflexed; on the other for about $\frac{1}{3}$ the circumference of the leaf the tentacles were standing at an angle of 90° with the plane of the blade.
- 138 " the meat having dried had fallen off; tentacles were nearly all reflexed, and apparently somewhat dried.
- 162 " the leaf had assumed nearly its natural form.

*The cause of this secondary inflection I cannot assume to assert positively although it seems probable that in watering the plant the remains of the bread were soaked thus revealing some nourishment that had not already been absorbed.

286 " in all respects the leaf was natural as to the position of its parts.†

EXPERIMENT No. XI.—A drop of reagent acetic acid ($\text{HC}_2\text{H}_3\text{O}_2$ -sp. gr. 1.04) was placed upon a leaf at 3:45 P. M., June 17, '79.

- 15 min. the solution had assumed the color of the leaf; 4 or 5 submarginal tentacles were inflected.
- 25 " many of the third row of tentacles had inflected so as to touch the drop of acid.
- 45 " all of the submarginal tentacles were inflected more or less; the spot where the acid was placed was somewhat depressed, the acid itself had disappeared.
- 75 " nearly all the submarginal and many of the marginal tentacles had inflected and touched the spot where the acid had been placed.
- 16 hrs. the whole leaf somewhat withered, the tentacles except the marginal still inflected as in the last note; leaf yellow.
- 25 " the marginal tentacles had all reflexed assuming the normal position; leaf apparently dead.
- 146 " the whole leaf was withered and dead.*

Maryland Fungi. I.—In the vicinity of Baltimore, Maryland, the months of June and July, 1880, were comparatively poor in fleshy fungi. The very mild winter and early spring seemed to give promise that the coming season would yield an abundant harvest; but in the early summer several heavy rain storms either destroyed the mycelium or interfered with its development. The mycelium of a fungus is exceedingly delicate and plants are often exterminated from its having in some way been roughly dealt with. A moderate amount of atmospheric heat and moisture is all that is necessary to produce an abundant crop of fungi, an excessive amount of either will cause an almost entire failure. That they often fail us in the requirement of heat is proved by some coming in very cold weather. The largest and most perfect specimens of *Coprinus comatus*, Fr., that I ever saw came as late as December. As a further instance of their Arctic taste, showing the severity of the weather, a bucket of water that stood beside them was coated over with ice. They grew in a flower garden among the perishing and withered phenogamous plants which with the exception of a few very hardy ones had ceased to bloom.

In the early part of June, *Phallus Dæmonum*, Rumph., appeared about twenty yards from the spot where I found it in June 1878, but it was dwarfed in size. In the January number of the GAZETTE, 1880, I published a description of this plant under the name *Phallus duplicitatus*, Bosc. The deep reticulated veil deceived me. After the publication of my article a very kind friend informed me of my mistake. *Phallus impudicus*, L., came a few days later, large and perfect. These plants are very imposing in appearance and generally select open

†The secretion did not appear on the tentacles until 24 hrs. after the last observation.

*The peculiar fact connected with this experiment is that while the submarginal and disk tentacles seemed to inflect and then become paralyzed and incapable of reflex action, those of the marginal row not only inflected but afterwards reflexed. The acid was rather too strong for a favorable observation of its true action upon the leaf.