36 and 37.

## EXPLANATION OF THE LETTERS USED IN THE PLATES.

Cot.=cotyledon; H.=hypocotyl; R.=primary root; L¹=first leaf succeeding cotyledon; PL.=plumule; B.=bud; S.=scutellum; E.=epiblast.

## EXPLANATION OF FIGURES.

## Plate VII.

"20. Liriodendron Tulipijera L.  "21. "Sarracenia purpurea L. 6x " "  "22. "Dionæx muscipula Ellis. 6x " "  23. "Catalpa bignonioides Walt. " "  24. "Ipomæa hederacea Jacq. 2 of " "  25. "Tilia Americana L. 2 of " "  26. "Aralia spinosa L. 3x " "  27. "Claytonia megarrhiza Parry. "  Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size. " 29. "Sanguinaria Canadensis L. " " " " " " " " " " " " " " " " " "	Fig	. 19.	Seedling of	Platanus occidentalis L	,	Vatura	1 cizo
21. Sarracenia purpurea L. 6 x " " 22. "Diona muscipula Ellis. 6 x " " 23. "Catalpa bignonioides Walt.  24. "Ipoma hederacea Jacq. 2 of " " 25. "Tilia Americana L. 3 of " " 26. "Aralia spinosa L. 3 x " " 27. "Claytonia megarrhiza Parry.  Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size.  29. "Sanguinaria Canadensis L. " " 30. "Dentaria laciniata Muehl. " " 31. "Podophyllum peltatum L. " " 32. "Erigenia bulbosa Nutt. " " 33. "Claytonia Virginica L. " "	**	20.		Liriodendron Tulipifera I.	•		
" 22.  " Dionæ1 muscipula Ellis.	**	21.	**	Sarracenia purpurea I	6		**
23. Catal pa bignonioides Walt.  24. Ipomara hederacea Jacq. 25. Tilia Americana L. 26. Aralia spinosa L. 27. Claytonia megarrhiza Parry.  Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. 29. Sanguinaria Canadensis L. 30. Dentaria laciniata Muehl. 31. Podophyllum peltatum L. 32. Erigenia bulbosa Nutt. 33. Claytonia Virginica L. 33. Claytonia Virginica L. 33. Claytonia Virginica L. 34. " 35. " 36. " 37. " 38. " 39. " 39. " 30. " 30. " 31. " 31. " 32. " 33. " 33. " 33. " 34. " 35. " 35. " 36. " 36. " 37. " 38. " 39. " 39. " 39. " 30. " 30. " 30. " 31. " 32. " 33. " 34. " 35. " 35. " 36. " 36. " 37. " 38. " 38. " 39. " 30. "	**	22.		Dionga muscipula Filia		44 -	
" 24. " Ipomara hederacea Jacq.	44	23	**	Catalta bismail IIIIs.	. 0 X		
" 25. " Tilia Americana L. 3 of " " 26. " Aralia spinosa L. 3 x " " 27. " Claytonia megarrhiza Parry.  Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size.  " 29. " Sanguinaria Canadensis L. " " 30. " Dentaria laciniata Muehl. " " " 31. " Podophyllum peltatum L. " " 32. " Erigenia bulbosa Nutt. " " 33. " Claytonia Virginica L. " "		21		Calaipa oignomoides Walt.			
Plate VIII.  Fig. 28. Seedling of Aristolochia Scrpentaria L.  " 29. " Sanguinaria Canadensis L.  " 30. " Dentaria laciniata Muehl.  " 31. " Podophyllum peltatum L.  " 32. " Erigenia bulbosa Nutt.  " 33. " Claytonia Virginica L.  " 33. " Claytonia Virginica L.  " 4."  " 4."  " 5. Tilia Americana L.  " 3 of  " 3 x  " "  " 3 x  " "  " 3 x  " "  " 3 x  " "  " 3 x  " "  " 3 x  " "  " "		24.		I pomara hederacea Jacq.	3 of	**	**
Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size.  29. Sanguinaria Canadensis L.  31. Podophyllum peltatum L.  32. Erigenia bulbosa Nutt.  33. Claytonia Virginica L.  """  """  """  """  """  """  """		25.		Tilia Americana L.	7 of	**	**
Plate VIII.  Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size.  29. "Sanguinaria Canadensis L. ""  30. "Dentaria laciniata Muehl. ""  31. "Podophyllum peltatum L. ""  32. "Erigenia bulbosa Nutt. ""  33. "Claytonia Virginica L. ""	**	26.		Aralia spinosa L.	9	44	**
Fig. 28. Seedling of Aristolochia Serpentaria L. Natural size.  '29. Sanguinaria Canadensis L. "  '30. Dentaria laciniata Muehl. "  '31. Podophyllum peltatum L. "  '32. Erigenia bulbosa Nutt. "  '33. Claytonia Virginica L. "  "		27.		Claytonia megarrhiza Parry.			"
" 30. " Dentaria laciniata Muehl. " " " 31. " Podophyllum peltatum L. " " " 32. " Erigenia bulbosa Nutt. " " " 33. " Claytonia Virginica L. " "				Plate VIII.			
" 30. " Dentaria laciniata Muehl. " " " 31. " Podophyllum peltatum L. " " " 32. " Erigenia bulbosa Nutt. " " " 33. " Claytonia Virginica L. " "	Fig.	28.	Seedling of	Aristolochia Serpentaria L.	1	Natural size	
" 30. " Dentaria laciniata Muehl. " " " 31. " Podophyllum peltatum L. " " " 32. " Erigenia bulbosa Nutt. " " " 33. " Claytonia Virginica L. " "	**	29.	"	Sanguinaria Canadensis I.	•		Size.
" 31. " Podophyllum peltatum L. " " " 32. " Erigenia bulbosa Nutt. " " " 33. " Claytonia Virginica L. " "	**	30.	**	Dentaria laciniata Muchl			**
" 32. " Erigenia bulbosa Nutt. " " " " " " " " " " " " " " " " " "	44		**				
" 33. " Claytonia Virginica L " "				Podopnytium petiatum L.			
33. Claytonia Virginica L. " "				Erigenia bulbosa Nutt			**
				Claytonia Virginica L		44	"
" 34 and 35. Ranunculus abortivus L 3 x " "	- "	34 an	nd 35.	Ranunculus abortivus L.	 . 3 x	**	**

## GALL MIDGES OF THE GOLDENROD.

Gillenia trijoliata Moench...

By E. P. Felt, State Entomologist, Albany, N.Y.

Goldenrod or Solidago, a dominant characteristic American genus, represented by numerous species and varieties, supports an extensive fauna. This is particularly true of the Cecidomyiidae or gall midges dependent for sustenance upon members of this extensive genus. Every portion of the plant is subject to levy, including the blossom and leaf buds, the leaves, the young branches, the larger stems and even the subterranean rootstock, some species producing galls on several portions of the plant. This is particularly true of Asphondylia monacha which may breed in apparently unaffected florets, inhabits the small apical rosette galls on the branches of Solidago graminifolia and may also be found in peculiar oval cells formed between two adherent leaves on several species of Solidago. These latter galls are evidently caused by the parent depositing eggs between the loosely apposed leaves of unfolding apical buds. The activity of the larva causes the leaf tissues to fuse around the point of injury and, as a result, the affected leaves adhere even after the natural growth of the plant separates their bases and causes them to assume an approximately horizontal position.