polita, anticè striis cincta; vertice obtuso, impresso, imperforato; basi acutè rotundato. Apertura antrorsum dilatata; labro vix reducto; columellâ curtâ, imperforatâ. Axis 4 millim.; diam. 2 millim. From China Seas. W. S.

Cylichna consobrina. T. cylindracea, abbreviata, anticè angustata, posticè truncata, solidula, albida epidermide fugacissimo induta, transversim striatula; vertice indentato, angulato. Apertura angusta, recta, labro ad apicem planulato; columellâ abbreviatâ, tortâ. Axis 6 millim.; diam. 2+ millim. Taken on the west coast of Jesso. L. M. Squires. Size and general form of *C. triticea*, but less rounded at extremities and pillar fold less obvious. *C. corticata*, Müll. is nearly the same.

Actæon secale. T. parva, elongato-ovata, tenuis, straminea, posticè polita vel lineâ subsuturali insculpta, anticè striis punctatis cincta; anfr. 4 tabulatis ultimo $\frac{3}{4}$ long. testæ: apice obtuso. Apertura $\frac{1}{2}$ long. testæ vix superans, auriculata, posticè acuta, anticè benè rotundata; columellâ conspicuè tortâ. Axis 4 millim.; diam. 2 millim. From the China Seas. W. S.

Buccinulus strigosus. T. ellipsoidea, elongata, solidula, sulcis volventibus punctatis arata, interspatiis fusco et albido catenatis, et fasciâ albidâ medianâ, suturali et anticali ornatâ; anfr. 5, ultimo $\frac{3}{4}$ long. testæ adæquante. Apertura $\frac{2}{3}$ long. testæ, perangusta; columellâ profundè excavatâ. Axis 8 millim; diam. 3 millim. Inhabits Loo Choo and Kagosima. W. S.

Remarkable for its small size and slender form. Some specimens are much shorter than others and nearly without the slaty lines; so that the species appears to be quite variable.

Liotia solidula. T. ovato-conica, depressa, solida, albida, modicè umbilicata ad 12-plicata, lirâ ad peripheriam, alterâ subsuturali, alterâ basali foveata; umbilico dentato; anfractibus quinque. Apertura verticalis; columellâ tenui, profundè abditâ; labro crasso simplici. Axis 5 millim.; diam. 8 millim. Dredged in 25 fathoms off the coast of China. W. S. Allied to *L. Peronii* and *L. cidaris*, but differing in the umbilicus.

Liotia loculosa. T. parva discoidea, solida, cinerea; anfr. 4 citò crescentibus, benè discretis, ultimo ad peripheriam biangu-

lato, costis ad angulos tubuloso-nodosis lyrato; suturâ crenulatâ; umbilico amplo, profundo, crenulato. Apertura circularis; labro reflexo quadricristato. Axis 2 millim.; diam. 5 millim. Inhabits Loo Choo. W. S.

Liotia fulgens. T. parva, discoidea, aureo-margaritacea, laminâ calcareâ ochraceâ incrustata; anfr. 3+ citò crescentibus, ultimo ad peripheriam carinis binis acutis rufo-tessellatis cincto, interspatio concavo; subtus crateriformis. Apertura ampla circularis inferior; labro expanso, lobulato. Axis 2 millim.; diam. 5 millim.

Inhabits St. Simon's Bay, Cape of Good Hope. W. S. Very like *Delphinula bicarinata*, Ad. and Rv., which has a more elevated spire and unequal keels.

Liotia asteriscus. T. minutissima, solida, alba, conica, costis elevatis acutis obliquis ad 20 sulco subsuturali sulco utroque ad peripheriam et sulco umbilicum ambiente aratis; anfr. 4 convexis. Apertura circularis; peristomate crasso duplici radiante; fauce margaritaceâ. Diam. 1.5 millim.; axis 1 millim. Inhabits Hong Kong. W. S. Very minute, but evidently adult and perfectly well characterized.

Cyclostrema modestum. T. parva, discoidea, solidula, lactea, supra convexiuscula, infra leniter concava, perforata; anfr. 4 sulcis volventibus clathratis cinctis quorum subsuturali majori. Apertura circularis; labro crenulato. Diam. 4 millim.; axis 2 millim. Inhabits Hong Kong. W. S.

Mr. C. J. Sprague presented the following:—

List of Plants collected by Emanuel Samuels, in Sonoma County, California, in 1856. By Asa Gray, M. D.

The plants named below were gathered by Mr. Samuels during a year's residence in California, and form part of the collections made under the auspices of the Boston Society of Natural History and the Smithsonian Institution at Washington. Mr. Samuels made collections in all the departments of Zoölogy and Botany, and the frequent rarities in his small but interesting collection bear testimony to his close observation and assiduity.

Although there are no undescribed species, several have been but recently discovered during the Pacific Railroad Exploring Expeditions, and are described in the Government Reports of those Expeditions.

1. Thalictrum dioicum, *L.* ?
2. Ranunculus Californicus, *Benth.*
3. " repens, *L. var.*
4. Aquilegia Canadensis, *L.*
5. Delphinium nudicaule, *Torr. & Gr.*
6. Delphinium azureum, *Mx.*
7. " patens, *Benth.*
8. " simplex, *Doug. var.* strictum.
9. Delphinium decorum, *Fisch. & Mey.*
10. Eschscholtzia Californica, *Cham.*
11. Platystemon Californicum, *Benth.*
12. Nasturtium lyratum, *Nutt.*
13. Turritis glabra, *L.*
14. Cardamine paucisecta, *Benth.*
15. " tenuisecta, *Benth.*
16. Sisymbrium deflexum, *Harvey?*
17. Tropidocarpum scabriusculum, *Hook.*
18. Erysimum asperum, *DC.*

18 *a*. Erysimum elatum, *Nutt.*

19. Lepidium nitidum, *Nutt.*
20. Viola pedunculata, *Torr. & Gr.*
21. " sarmentosa, *Doug.*
22. " adunca, *Sm.*
23. Silene Gallica, *L.*
24. Alsine Douglasii, *Fenzl.*
25. Sagine procumbens, *L.*
26. Calandrinia Menziesii, *Hook.*
27. Claytonia perfoliata, *Don.*
28. Lewisia rediviva, *Purzh.*
29. Sidalcea diploscypha, *Gray.*
30. " malvæflora, *Gray.*
31. " humilis, *Gray.*
32. Linum Californicum, *Benth.*
33. Geranium Carolinianum, *L.*
34. Erodium macrophyllum, *Hook. & Arn.*
35. Erodium cicutarium, *L'Her.*
36. Oxalis corniculata, *L.*
37. " stricta, *L.*
38. Limnanthes Douglasii, *R. Br.*
39. Rhus Californica, *Nutt.*
40. " diversiloba, *Torr. & Gr.*
41. Mesembryanthemum dimidiatum, *Harvey.*
42. Vicia exigua, *Nutt.*
43. " truncata, *Nutt.*
44. " gigantea, *Hook.*
45. Lathyrus venosus, *Muhl.*
46. " polymorphus, *Nutt.*
47. Psoralea physodes, *Dougl.*
48. " orbicularis, *Lindl.*
49. Trifolium albopurpureum, *Torr. & Gr.*
50. Trifolium ciliolatum, *Benth.*
51. " tridentatum, *Lindl.*
52. " variegatum, *Nutt.*
53. " fucatum, *Lindl.*
54. Hosackia bicolor, *Doug. & Benth. var.* gracilis.
55. Hosackia parviflora, *Benth.*
56. " subpinnata, *Torr. & Gr.*
57. " Purshiana, *Benth.*
58. " gracilis, *Benth.*
59. Lupinus nanus, *Dougl.*
60. " micranthus, *Dougl.*
61. " densiflorus, *Benth.*
62. " latifolius, *Agardh.*
63. " ?
64. Thermopsis fabacea, *DC. var.* tomentosa.
65. Nuttallia cerasiformis, *Torr. & Gr.*
66. Acæna trifida, *Ruiz & Pav.*
67. Potentilla anserina, *L.*
68. " glandulosa, *Lindl.*
69. Fragaria Chilensis, *Ehrh.*
70. Rubus vitifolius, *Cham. & Schlecht.*
71. Cratægus sanguinea, *Pallas. var.* Douglassii, *Torr. & Gr.*
72. Œnothera densiflora, *Sm.*
73. " dentata, *Cav.*
74. " ovata, *Nutt.*
75. " cheiranthifolia, *Hornem.*
76. " Lindleyi, *Dougl.*
77. " purpurea, *Curtis.*
78. " decumbens. *Dougl.*
79. Clarkia elegans, *Lindl.*
80. Megarrhiza Californica, *Torrey.*
81. Tillæa minima, *Miers.*
82. Lithophragma parviflora, *Nutt.*

83. Lithophragma heterophylla, *Hook. & Arn.*
84. Bowlesia lobata, *Ruiz & Pav.*
85. Eryngium articulatum, *Hook.*
86. Sanicula bipinnatifida, *Dougl.*
87. " Menziesii, *Hook. & Arn.*
88. " laciniata, *Hook. & Arn.*
89. " arctopoides, *Hook. & Arn.*
90. Edosmia Gairdneri, *Torr. & Gr.*
91. Pencedanum leiocarpum, *Nutt.*
92. " caruifolium, *Torr. & Gr.*
93. Pencedanum utriculatum, *Nutt.*
94. " macrocarpon, *Nutt.*
95. Daucus pusillus, *Mx. var.* scaber, *Torr. & Gr.*
96. Osmorrhiza nuda, *Torr.*
97. Lonicera involucrata, *Banks.*
98. " Californica, *Torr. & Gr.*
99. Symphoricarpus occidentalis, *Br.*
100. Symphoricarpus ciliatus, *Nutt.*
101. Sambucus glauca, *Nutt.*
102. Galium Aparine, *L.*
103. " Californicum, *Hook. & Arn.*
104. Plectritis congesta, *Lindl.*
105. Erigeron Canadense, *L.*
106. " Douglasii, *Torr. & Gr.*
107. Solidago Californica, *Nutt.*
108. Grindelia hirsutula, *Hook. & Arn.*
109. Stylocline gnaphalioides, *Nutt.*
110. Psilocarphus tenellus, *Nutt.*
111. Blennosperma Californicum, *Fisch. & Mey.*
112. Wyethia angustifolia, *Nutt.*
113. Monolopia major, *DC.*
114. Burrielia chrysostoma, *Torr. & Gr.*
115. Burrielia gracilis, *DC.*
116. " uliginosa, *Gray.*
117. Helenium puberulum, *DC.*
118. Achyrachæna mollis, *Schauer.*
119. Layia (Callichroa) platyglossa, *Gray.*
120. Layia (Calliglossa) Douglasii, *Gray.*
121. Hemizonia congesta, *DC.*
122. Madia racemosa, *Nutt.*
123. " sativa, *Molina.*
124. Achillea Millefolium, *L.*
125. Matricaria discoidea, *DC.*
126. Chrysanthemum (introduced).
127. Artemisia Ludoviciana, *Nutt.* vel vulgaris, *var.*
128. Gnaphalium Californicum, *DC.*
129. " purpureum, *L.*
130. " luteo-album, *L.*
131. Senecio aronicoides, *DC.*
132. Echinais carlinoides, *Cass. var.* nutans (introduced).
133. Cirsium Californicum, *Gray.*
134. Calais Bigelovii, *Gray.*
135. " sylvatica, *Benth.*
136. Macrorhynchus retrorsus, *Benth.*
137. " heterophyllus, *Nutt.*
138. Sonchus oleraceus, *L.*
139. " asper, *Vill.*
140. Downingia elegans, *Torr.*
141. Githopsis calycina, *Benth. var.* hirsuta, *Nutt.*
142. Plantago maritima, *L.*
142 *a*. Plantago Patagonica, *var.* gnaphalioides.
143. Armeria vulgaris, *Willd. var.* Californica.
144. Dodecatheon Meadia, *L.*
145. Linaria Canadensis, *Dum.*
146. Scrophularia nodosa, *L.*
147. Collinsia bartsiæfolia, *Benth.*
148. " bicolor, *Benth.*
149. Mimulus (Diplacus) glutinosus, *Nutt.*
150. Mimulus luteus, *L.*
151. Eunanus Douglasii, *Benth.*
152. Veronica Anagallis, *L.*
153. " peregrina, *L.*
154. Castilleia hispida, *Benth.*
155. " Douglasii ?
156. Orthocarpus densiflorus, *Benth.*
157. " castilleioides, *Benth.*
158. " faucibarbatus, *Gray.*
159. " purpurascens, *Benth.*
160. Pedicularis attenuata, *Benth.*
161. Verbena prostrata, *R. Br.*
162. Monarda villosa, *var.* leptosiphon, *Torr.* (M. Sheltoni, *Torr.*)
163. Pogogyne Douglasii, *Benth.*
164. " multiflora, *Benth.*
165. Brunella vulgaris, *L.*
166. Salvia Columbariæ, *Benth.*
167. Scutellaria tuberosa, *Benth.*
168. " pycnantha, *Benth.*

169. Amsinckia spectabilis, *Fisch. & Mey.*
170. Eritrichium fulvum, *A. DC.?*
171. " Chorisianum, *DC.?*
172. " sp.
173. Cynoglossum grande, *Dougl.*
174. Nemophila parviflora, *Benth.*
175. " atomaria, *Fisch. & Mey.*
176. " insignis, *Benth.*
177. Phacelia tanacetifolia, *Benth. var.* tenuifolia, *Thurber.*
178. Phacelia circinata, *Jacquin.*
179. Eutoca divaricata, *Benth.*
180. Collomia gracilis, *Benth.*
181. Navarretia cotulæfolia, *Hook. & Arn.*
182. Navarretia leucocephala, *Benth.*
183. " squarrosa, *Hook. & Arn. var.*
184. Gilia achilleæfolia, *Benth.*
185. " multicaulis, *Benth.*
186. " androsacea, *Steud.*
187. " (leptosiphon), sp.
188. " sp.
189. Erythræa Muhlenbergii, *Griseb.*
190. Convolvulus Californicus, *Choisy.*
191. Solanum umbelliferum, *Eschsch.*
192. Chenopodium anthelminticum, *Linn.*
193. Eriogonum elongatum, *Benth.*
194. Chorizanthe pungens, *Benth.*
195. " Douglasii, *Benth.*
196. " sp.
197. Euphorbia dictyosperma, *Fisch. & Mey.*
198. Alisma Plantago, *L.*
199. Luzula campestris, *DC.*
200. Juncus bulbosus, *Pursh.*
201. " bufonius, *L.*
202. Sisyrinchium Bermudiana, *L.*
203. Iris macrosiphon, *Torr.*
204. Anticlea Fremontii, *Torr.*
205. Scoliopus Bigelovii, *Torr.*
206. Fritillaria lanceolata, *var.* floribunda, *Benth.*
207. Calochortus luteus, *Dougl.*
208. Allium acuminatum, *Hook.*
209. Brodiæa grandiflora, *Sm.*
210. " capitata, *Benth.*
211. " multiflora, *Benth.*
212. " congesta.
213. Seubertia laxa, *Kunth.*
214. Calliprora lutea, *Lindl.*
215. Cyclobothra elegans, *Lindl.*
216. Trillium ovatum, *Pursh.*
217. Carex, sp.
218. Scirpus lacustris, *L.*
219. Agrostis, sp.
220. Aira danthonioides, *Trin.*
221. Melica imperfecta, *Trin.*
222. Bromus carinatus, *Hook. & Arn.*
223. Elymus Canadensis, *L. var.*
224. Hordeum pratense, *Hudson.*
225. Sitanion elymoides, *Raf.*
226. Phalaris Californica, *Hook. & Arn.*
227. Kœleria cristata, *Pers.*
228. Polypodium intermedium, *Hook. & Arn.*
229. Adiantum Capillus-Veneris, *L.*
230. " Chilense, *Kaulf.*
231. Pteris aquilina, *L.*
232. Gymnogramma triangulare, *Kaulf.*
233. Aspidium argutum, *Kaulf.*
234. Funaria hygrometrica, *Hedwig.*
235. Ramalina Menziesii, *Taylor.*
236. Chorda filum.
237. Ceramium rubrum.
238. Rhodomenia laciniata.

List of a Collection of dried Plants made by L. J. Xantus, at Fort Tejon, and Vicinity, California, near Lat. 35°, and Long. 119,° 1857–8. By Asa Gray, M. D.

1. Clematis ligusticifolia, *Nutt.*
2. Delphinium Menziesii, *DC.*
3. Eschscholtzia Californica, *Cham.*
4. Eschscholtzia tenuifolia, *Benth.*
5. Dicentra (Chrysocapnos, *Torr.*) chrysantha, *H. & A.*
6. Meconopsis heterophylla, *Benth.*
7. Streptanthus heterophyllus, *Nutt.*

8. Erysimum asperum, *DC. var.* (elatum, *Nutt.*)
9. Raphanus sativus, *Linn.* "In cañons, &c."
10. Isomeris arborea, *Nutt.*
11. Viola pedunculata, *var.* petalis 2 superioribus extus præsertim fusco-purpureis.
12. Silene Californica, *Durand*, (*var.* of S. laciniata.)
13. Calandrinia Menziesii, *Hook.*
14. Claytonia perfoliata, *Don.*
15. Sidalcea malvæflora, *Gray.*
16. Fremontia Californica, *Torr.*
17. Erodium cicutarium, *L'Her.*
18. Frangula Californica, *Gray.*
19. Rhus diversiloba, *Torr. & Gr.*
20. Æsculus Californica, *Nutt.*
21. Lupinus microcarpus, *Sims.*
22. " bicolor, *Lindl.*
23. " leptophyllus, *Benth. var.* foliolis latioribus.
24. Hosackia Purshiana, *Benth.*
25. " scoparia, *Nutt.*
26. Cercocarpus parvifolius, *Nutt.*
27. Œnothera biennis, *L. var.*
28. " bistorta, *Nutt.?*
29. " tenella, *Cav.*
29 *a.* " rubicunda, *Lindl.*
30. Clarkia elegans, *Lindl.*

31. Clarkia Xantiana (sp. nov.): foliis linearibus seu lanceolatis; floribus quasi racemosis; calycis tubo ore villosissimo; petalis cuneatis altè bilobis cum lancinulâ subulatâ interpositâ deorsum in unguiculam latam edentatam sensim angustatis; staminibus 8 fertilibus; stigmatis lobis latè ovalibus brevibus; capsulâ sessili.—An interesting species from its holding an intermediate position between the original *Clarkia pulchella* and *C.* (*Phæostoma*, Spach.) *elegans*; the foliage (which, with the ovaries and flower-buds, is minutely cinereous-puberulent) resembling the former, as do the lobed petals, but here the middle lobe is reduced to a mere lacinula, and the broader and shorter claw is toothless; while the blossoms are racemosely disposed along the simple stem or branches as in *C. elegans*, in bud strongly drooping. There are no scales at the base of the filaments; but the throat of the short funnel-form tube of the calyx is evenly and densely bearded with villous hairs. Petals purple or pink, often with a deeper-colored spot toward the base of the blade. Capsules rather slender, sessile, or the lowest subsessile.

32. Zauschneria Californica, *Presl.*
33. Epilobium coloratum, *Muhl.*
34. Mentzelia albicaulis, *Dougl.*
35. Megarrhiza Californica, *Torr.*
36. Cicuta maculata, *L.*
37. Berula angustifolia, *Koch.*
38. Edosmia Gairdneri, *Nutt.*
39. Peucedanum utriculatum, *Nutt.*
40. Galium boreale, *L. var.*
41. Erigeron Douglasii, *Torr. & Gray.*
42. Balsamorhiza deltoidea, *Nutt.*
43. Leptosyne Douglasii, *DC.*
44. Helianthus lenticularis, *Dougl.*
45. Chœnactis glabriuscula, *DC. var.* megacephala, *Gray, in Pl. Whippl.*
46. Burrielia gracilis, *DC.*
47. Bahia confertiflora, *DC.*
48. " Wallacei, *Gray, in Pl. Whippl.*
49. Monolopia major, *DC.*
50. Layia gaillardioides, *Hook. & Arn. var.* pappo albo; foliis pinnatifidis.

51. Madaria corymbosa, *DC.*
52. Achillea Millefolium, *L.*
53. Senecio Douglasii, *DC.*
54. Sonchus asper, *Vill.*
55. Calais linearifolia, *DC.*
56. Macrorhynchus grandiflorus, *Nutt.*
57. Arctostaphylos glauca, *Lindl.*
58. Collinsia bicolor, *Benth.*
59. " " *var.* parviflora.
60. Scrophularia nodosa, *L.*
61. Pentstemon centranthifolius, *Benth.* fol. latioribus.

62. PENTSTEMON BREVIFLORUS, *Lindl. var.* Shrubby; lower leaves short (half an inch or less in length,) oblong or somewhat obovate, very obtuse; sepals glandularvillous (as they are, less conspicuously, in Douglas's specimens); corolla strongly bearded, especially at the summit of the lobes, with long and glandular hairs. The expression "labio superiore villoso" does not adequately express it.

63. PENTSTEMON TERNATUS (*Torr. in Mex. Bound. Surv.*) glaber, basi fruticosus; caulibus floridis ramisve virgatis simplicissimis glaucis; foliis ternato-verticillatis lineari-lanceolatis (pollicaribus) utrinque acutis subsessilibus rigidis cartilagineo-serratis denticulatisve, floralibus subulatis; paniculâ angustatâ; calyce (segmentis lanceolato-ovatis) pedicellisque glanduloso-puberis; corollâ (purpureâ? extus pruinoso-puberulâ) longè cylindricâ, limbo brevi, labiis æquilongis, superiore oblongo erecto apice bifido, inferiore tripartito, segmentis patentibus angustè oblongis; filamento sterili corollâ dimidio breviore hinc valdè barbato.—Stems or simple branches slender, one or two feet long, leafy to the inflorescence, the leaves about the length of the internodes. Flowers in a virgate panicle. Tube of the corolla an inch long, only two lines in diameter, scarcely ampliate at the summit, the lobes and upper lip only three lines long. Fertile filaments glabrous except at their base, where they are sparsely hirsute; anthers scarcely exserted, glabrous; sterile filament very strongly bearded on the posterior side for its whole length. A very distinct species of Bentham's section *Elmigera;* the leaves in threes in all the specimens.

64. PENTSTEMON LÆTUS (sp. nov.): pallidus, puberulus, supernè glandulosus; caulibus subpedalibus adscendentibus; foliis integerrimis crassiusculis, inferioribus spatulatis seu oblanceolatis in petiolum marginatum attenuatis, superioribus oblongo-lanceolatis basi latâ arctè sessilibus, floralibus parvis; paniculâ laxâ; pedunculis sæpius trifloris; calycis segmentis oblongis herbaceis immarginatis; corollâ cœruleâ supernè campanulato-

ampliatâ, lobis rotundatis subæqualibus; antheris (§ Saccantheræ) rimâ hispido-ciliatis juxta insertionem villosulis; filamento sterili glaberrimo apice dilatato.—A depauperate specimen of this is what, in the account of Lieut. Beckwith's collection, (Pacific Railroad Explorations, 2, p. 122,) I doubtfully referred to *P. heterophyllus.* It proves to be a very distinct species of the same section, and a handsome one, the (apparently bright blue) corolla over an inch in length.

65. Mimulus cardinalis, *Dougl.*
66. " luteus, *Linn.*
67. Eunanus Fremonti, Benth. *var.*
68. Castilleia affinis, *Hook. & Arn.*
69. " hispida, *Hook. & Arn.*
70. " candens, *Durand & Hilgard, in Pacif. R. R. Expl.* 5, pp. 12, 13?
71. Castilleia linariæfolia, *Benth.* (Folia floralia sæpius trifida; calyx posticè etiam bifidus; corolla nunc bipollicaris.)
72. Orthocarpus purpurascens, *Benth.*
73. Solanum umbelliferum, *Eschsch.*
74. Datura meteloides, *DC.*
75. Nicotiana, n. sp.? N. plumbaginifolia, *var.?* Bigelovii, *Torr. in Pacif. R. R. Expl.* 4, p. 127.
76. Mentha Canadensis, *Linn.*
77. Monardella candicans, *Benth.*
78. Salvia Columbariæ, *Benth.*
79. " carduacea, *Benth.*
80. Stachys pycnantha, *Benth. & var.* foliis albo-tomentosis.
81. Amsinckia spectabilis, *Fisch. & Meyer.*
82. Amsinckia spectabilis, *var.* minor.
83. Eritrichium fulvum, *A. DC.*
84. Krynitzia leiocarpa, *Fisch. & Meyer.*
85. Eritrichium angustifolium, *Torr. in Pacif. R. R.* 5, p. 363.
86. Eritrichium, n. sp.? too young to characterize.
87. Nemophila insignis, *Dougl.*
88. Ellisia membranacea, *Benth.*
89. Phacelia circinata, *Jacq.*
90. " tanacetifolia, *Benth.*
91. " " *var.* tenuifolia, *Thurber.*
92. Phacelia ramosissima, *Benth.* forma evoluta.
93. Emmenanthe penduliflora, *Benth.*
94. Eriodyction tomentosum, *Benth.*
95. Gilia densifolia; etiam G. elongata. *Benth.*
96. Gilia achilleæfolia, *Benth.*
97. " tricolor, *Benth.*
98. " (Linanthus) dichotoma, *Benth.*
99. Gilia (Leptosiphon) androsacea, *Benth.*
100. Apocynum cannabinum, *Linn.*
101. Acerates (Anantherix) tomentosa, *Torr. Mex. Bound. Surv.*
102. Asclepias fascicularis, *Decaisne.*
103. Mirabilis (Quamoclidion) multiflora, *Torr.*
104. Blitum Bonus-Henricus, *Moq. var.* (Chenopodium anthelminticum, *var.?* hastatum, *Moquin.*)
105. Eriogonum polifolium, *Benth.*
106. " angulosum, *Benth.*
107. Chorizanthe procumbens, *Nutt.* (An C. staticoides, *var.?*)

108. Chorizanthe (Mucronea) perfoliata (sp. nov.): glabella; foliis chartaceis, caulinis triangulatis trilobisve sæpissimè perfoliatis; involucro tetraquetro quadridentato, dentibus subæqualibus subulato-aristulatis; perigonii segmentis exterioribus 2–4–dentatis leviter erosis, interioribus magis laciniato-fim-

briatis.—Repeatedly dichotomous from the annual root, divaricate-diffuse, a sessile and solitary involucrum in each fork; on the branchlets the involucres rather crowded and somewhat spicate or panicled, through the less forking and the gradual reduction of the leaves to bracts. Radical leaves spatulate. The cauline leaves are larger, less lobed, more amplexicaul, (and most of them really perfoliate,) and the angles or lobes less awn-pointed than in *C.* (*Mucronea*, Benth.) *Californica;* the four triangular teeth of the involucre also tipped with a shorter awn, not exceeding the perigonium when that is fully developed; the divisions of the latter, especially the three inner ones, conspicuously fimbriate-laciniate. Otherwise this plant closely resembles Bentham's *Mucronea Californica*, and confirms his doubts of the distinctness of the genus from *Chorizanthe*, notwithstanding the peculiarity of habit. *Centrostegia*, with a similar habit, is distinguishable only by the spurred appendages of the involucrum, and is probably to be reduced, along with *Mucronea*, to a section of *Chorizanthe*. To this, however, does not belong Remy's *C. commissuralis*, which differs from true *Chorizanthe* merely in the laxer inflorescence. *Acanthogonum*, Torr. (which has a short-pedicelled flower and nine stamens,) is an interesting link, plainly connecting *Lastarriæa*, Remy, with the other Eriogoneous genera. The verticillate upper leaves of the latter answer to the involucre, which, however, incloses a proliferous shoot as well as a flower.

109. Anemonopsis Californica, *Nutt.*
110. Euphorbia albomarginata, *Torr.* (E. stipulacea, *Engelm.*)
111. Quercus lobata, *Née*, (Q. Hindsii, *Benth.*) Foliage only.
112. Ephedra antisyphilitica, *Berl.*
113. Epipactis Americana, *Lindl.*
114. Brodiæa capitata, *Benth.*
115. Calliproa lutea, *Lindl.*
116. Tritelia laxa, *Lindl.*
117. Calochortus venustus, *Benth.*
118. Juncus xiphioides, *E. Meyer.*
119. Polypogon Monspeliensis, *Linn.*
120. Triticum repens, *Linn.*
121. Elymus dasystachys, *Trin. ex Munro in Pl. Hartw.*, p. 342, (= forma luxurians, *Hartw.* No. 2032.)
122. Allosorus andromedæfolius, *Kaulf.*

Dr. C. T. Jackson announced that the wax-plant of Japan (*Rhus succedaneum*) had been made to vegetate at the forcing houses in Washington; it grows there vigorously, and will doubtless prove suitable for the Southern States generally. He also stated that the experiment

of the introduction of the tea-plant bids fair to be successful in the United States.

An engraving of Linnæus, at the age of twenty-five, in his Lapland costume, was presented in the name of Mr. William Sharswood, of Philadelphia. It was executed in Berlin, from a photograph taken from an oil painting in the Library of the Zoölogical Society at Amsterdam. It represents the young naturalist holding in his hand the plant *Linnæa borealis*, and with his girdle ornamented with various botanical and entomological implements.

September 7, 1859.

Dr. C. T. Jackson, Vice-President, in the Chair.

Mr. T. J. Whittemore read some notes taken at Mohawk, Herkimer Co., N. Y., in August, 1859.

Mohawk is situated on the delta of what was probably a considerable stream, at an early period, flowing into the Mohawk valley, and may have been a lake or estuary; Fulmer's creek, on which it is situated, is now a small mountain stream. Dr. Lewis, in Vol. 6 of the Proceedings, gives 87 species of 17 genera of shells found in this region, embracing Little Lakes, and Schuyler's Lake; 18 species have since been added.

"Little Lakes," in Warren township, are 800 feet above the river, the area of which formerly extended over much which is now swamp, underlaid with soil of the same character as the bottom of the lakes. The upper of the two lakes is about three quarters of a mile long, and its whole bottom is of marl, and filled with living and dead shells, many of which are fossil. This marl is 14 feet deep, by examination; the lake is shallow, and furnishes fine pickerel and other fish, and numerous shells,—the lower lake contains more of a black muck bottom; the shells, fishes, and reptiles are the same in both lakes, but the shells grow