

Coeloclema alternatum (a)	Rafinesquina alternata (r)
commune (a)	Trematis millepunctata (r)
Hallopora nodulosa (c)	Zygospira cincinnatiensis (c)
onealli (a)	modesta (c)
onealli communis (r)	
onealli sigillarioides (c)	Byssonychia radiata (r)
Heterotrypa ulrichi (a)	
Peronopora vera (c)	Acidaspis sp. (c)
Rhinidictya parallela (r)	Calymene callicephala (c)
Stigmatella clavis (r)	Isotelus maximus (c)
Stomatopora arachnoidea (r)	

PART III. COMPLETE REVISED LIST OF SPECIES REPORTED FROM THE CINCINNATI SERIES OF INDIANA, WITH THEIR HORIZONS, SO FAR AS KNOWN.*

SPONGIÆ AND COELENTERATA.

1. *Beatricea nodulosa* Billings. Saluda.
2. *Beatricea undulata* Billings. Saluda.
3. **Calapoezia cribriformis* (Nicholson). Liberty.
4. **Climacograptus typicalis* Hall. Southgate.
5. **Columnaria alveolata* Goldfuss. Upper Waynesville, Liberty and Saluda.
6. *Dystactospongia madisonensis* Foerste. Saluda.
7. *Labechia montifera* Ulrich. Upper Richmond.
8. **Protarea vetusta* (Hall). Waynesville, Liberty, Saluda and Whitewater.
9. *Strephochetus richmondensis* (Miller). Whitewater.
10. **Streptelasma divaricans* (Nicholson). Upper Waynesville, Liberty and Whitewater.
11. **Streptelasma rusticum* (Billings). Waynesville, Liberty, Saluda and Whitewater.
12. **Tetradium minus* Safford. Saluda and Whitewater.

ECIPIINODERMATA.

13. *Anomalocrinus incurvus* Meek and Worthen. Richmond (?).
14. *Dendrocrinus casei* Meek. Richmond.
15. *Dendrocrinus polydactylus* (Shumard). Richmond.
16. *Ectenocrinus simplex* (Hall). Richmond.
17. **Glyptocrinus decadactylus* Hall. Waynesville.
18. *Heterocrinus juvenis* Hall. Lower Richmond.
19. *Heterocrinus heterodactylus* Hall. Eden and Maysville.
20. **Iocrinus subcrassus* Meek and Worthen. Southgate, Richmond (?).
21. *Lepadocrinus moorei* (Meek). Richmond.
22. *Lepidodiscus faberi* Miller. Richmond.
23. *Lichenocrinus crateriformis* Hall. Eden, Richmond (?).

* The species marked by an asterisk are found in the Tanner's Creek Section.

24. *Lichenocrinus dyeri* Hall. Richmond.
25. *Lichenocrinus pattersoni* Miller. Richmond.
26. **Lichenocrinus tuberculatus* Miller. Whitewater.
27. *Palaester wycoffi* Miller and Gurley. Richmond.
28. *Palaesterina speciosa* Miller and Gurley. Richmond.
29. *Urasterella grandis* (Meek). Richmond.
30. *Xenocrinus baeri* (Meek). Richmond.

ANNELIDA.

31. **Cornulites flexuosus* (Hall). Eden and Maysville.
32. *Cornulites minor* (Nicholson). Lower Maysville.
33. **Cornulites richmondensis* (Miller). Arnheim and Richmond.
34. **Nereidavus varians* Grimmel. Southgate.
35. **Œnonites cuneatus* Hinde. McMicken.

BRYOZOA.

36. **Amplexopora ampla* Ulrich and Bassler. Maysville.
37. **Amplexopora cingulata* Ulrich. Arnheim.
38. **Amplexopora filiosa* (American authors). Middle and upper Maysville.
39. **Amplexopora granulosa* n. sp. Lower Liberty.
40. *Amplexopora persimilis* Nickles. Southgate.
41. **Amplexopora petasiformis* (Nicholson). McMicken.
42. *Amplexopora petasiformis welchi* (James). Southgate.
43. **Amplexopora pumila* n. sp. Upper Waynesville and lower Liberty.
44. **Amplexopora pustulosa* Ulrich. Upper Maysville and lower Richmond.
45. **Amplexopora robusta* Ulrich. Maysville.
46. **Amplexopora septosa* (Ulrich). McMicken, Mt. Hope and Fairmount.
47. **Amplexopora septosa maculosa* n. var. McMicken and Mt. Hope.
48. **Amplexopora septosa minima* n. var. McMicken, Mt. Hope and Fairmount.
49. **Amplexopora septosa multispinosa* Cumings. McMicken, Mt. Hope and Fairmount.
50. **Arthropora cincinnatiensis* (James). McMicken, Mt. Hope and Fairmount.
51. **Arthropora cleavelandi* (James). Upper Eden.
52. **Arthropora shafferi* (Meek). Throughout the Cincinnati.
53. **Arthrostylus tenuis* (James). McMicken.
54. **Aspidopora areolata* Ulrich. Southgate.
55. **Aspidopora eccentrica* (James). Southgate.
56. **Aspidopora newberryi* (Nicholson). Southgate and McMicken.
57. **Atactopora hirsuta* Ulrich. Southgate.
58. **Atactopora intermedia* n. sp. McMicken.
59. **Atactoporella multigranosa* (Ulrich). Fairmount, Mt. Auburn and Arnheim.
60. **Atactoporella mundula* (Ulrich). Bellevue, Arnheim.
61. **Atactoporella newportensis* (Ulrich). Lower Eden.

62. **Atactoporella ortonii* (Nicholson). Bellevue, Corryville, Mt. Auburn and Arnheim.
63. **Atactoporella schucherti* Ulrich. Richmond.
64. *Atactoporella typicalis* Ulrich. Lower Eden.
65. **Batostoma implicatum* (Nicholson). Middle and upper Eden and lower Maysville.
66. **Batostoma jamesi* (Nicholson). Middle and upper Eden. Lower Maysville (?).
67. **Batostoma prosseri* Cumings and Galloway. Upper Waynesville.
68. **Batostoma variabile* Ulrich. Whitewater.
69. **Batostoma varians* (James). Arnheim, Waynesville and Liberty.
70. **Bernicea primitiva* Ulrich. Upper Maysville and Richmond.
71. **Bernicea vesiculosa* Ulrich. Southgate.
72. **Bythopora arctipora* (Nicholson). Middle and upper Eden, Mt. Hope-Fairmount. (c)
73. **Bythopora delicatula* (Nicholson). Corryville-Arnheim and Richmond. (c)
74. **Bythopora gracilis* (Nicholson). Maysville. (c)
75. **Bythopora meeki* (James). Waynesville, Liberty and Whitewater.
76. **Bythopora parvula* (James). Southgate, McMicken, Mt. Hope-Fairmount. (r)
77. **Bythopora striata* Ulrich. Bellevue, Corryville-Arnheim, Richmond. (r)
78. *Callopora circularis* (James). Lower Richmond.
79. **Ceramoporella distincta* Ulrich. Eden, Maysville and Waynesville. (c)
80. **Ceramoporella granulosa* Ulrich. Upper Waynesville. (r)
81. **Ceramoporella granulosa milfordensis* (James). McMicken. (r)
82. **Ceramoporella ohioensis* (Nicholson). Throughout the Cincinnati. (c)
83. **Ceramoporella triloba* n. sp. McMicken. (r)
84. **Ceramoporella tubulosa* n. sp. McMicken. (r)
85. **Ceramoporella whitei* (James). Arnheim, Waynesville. (r)
86. **Chiloporella flabellata* (Ulrich). Bellevue, Corryville. (c)
87. **Coeloclema alternatum* (James). Southgate, McMicken. (a)
88. **Coeloclema* cf. *alternatum*. Corryville-Arnheim. (c)
89. **Coeloclema commune* Ulrich. Southgate and McMicken. (a)
90. **Coeloclema oweni* (James). Mt. Auburn. (a)
91. **Constellaria constellata* (Van Cleve) Dana. McMicken, Mt. Hope-Fairmount.
92. **Constellaria constellata prominens* Ulrich. Base of Mt. Hope.
93. **Constellaria limitaris* (Ulrich). Upper Waynesville. (c)
94. **Constellaria polystomella* Nicholson. Waynesville and Liberty.
95. **Corynotrypa delicatula* (James). Fairmount, Corryville-Arnheim.
96. **Corynotrypa inflata* (Hall). Maysville.
97. *Crepipora simulans* Ulrich. Southgate.
98. **Crepipora solida* Ulrich. Fairmount.
99. **Dekayia appressa* Ulrich. Fairmount to middle of Arnheim. (c)
100. **Dekayia aspera* Edwards and Haine. McMicken, Mt. Hope-Fairmount (a), Arnheim (?).

101. **Dekayia maculata* James. McMicken, Mt. Hope.
102. **Dekayia magna* Cumings. Bellevue, Arnheim.
103. **Dekayia multispinosa* Ulrich. Maysville.
104. **Dekayia obscura* (Ulrich). McMicken.
105. **Dicranopora emacerata* (Nicholson). Maysville, Richmond.
106. **Dicranopora fragilis* (Billings). Waynesville.
107. **Dicranopora meeki* (James). Southgate, McMicken.
108. **Eridotrypa simulatrix* (Ulrich). Corryville-Arnheim, Waynesville. (c)
109. **Escharopora acuminata* (James). Southgate.
110. **Escharopora falciformis* (Nicholson). McMicken, Mt. Hope-Fairmount.
111. **Escharopora pavonia* (Edwards and Haime). McMicken, Mt. Hope-Fairmount.
112. **Fenestella granulosa* Whitfield. Waynesville, Liberty and Whitewater.
113. **Graptodictya perelegans* (Ulrich). Waynesville.
114. **Hallopora andrewsi* (Nicholson). Maysville.
115. **Hallopora dalei* (Edwards and Haime). McMicken, Mt. Hope-Fairmount. (a)
116. *Hallopora frondosa* (Cumings). Whitewater.
117. **Hallopora nodulosa* (Nicholson). McMicken, Mt. Hope-Fairmount.
118. **Hallopora onealli* (James). Southgate and McMicken.
119. **Hallopora onealli communis* (James). Southgate, McMicken. (aa)
120. **Hallopora onealli sigillarioides* (Nicholson). Southgate and McMicken. (c)
121. **Hallopora ramosa* (d'Orbigny). Maysville. (aa)
122. **Hallopora cf. ramosa*. Waynesville and Liberty. (c)
123. **Hallopora ramosa rugosa* (Edwards and Haime). Middle and upper Maysville. (c)
124. **Hallopora subnodosa* (Ulrich). Arnheim and Richmond. (c)
125. **Hallopora subplana* (Ulrich). McMicken, Mt. Hope-Fairmount. (c)
126. **Helopora elegans* Ulrich. Liberty.
127. **Helopora harrisi* James. Arnheim and Waynesville.
128. **Heterotrypa affinis* (Ulrich). Waynesville.
129. **Heterotrypa frondosa* (d'Orbigny). Maysville, abundant in the Bellevue.
130. **Heterotrypa inflecta* Ulrich. Fairmount.
131. **Heterotrypa microstigma* n. sp. Waynesville.
132. **Heterotrypa paupera* (Ulrich). Maysville.
133. **Heterotrypa pelliculata* (Ulrich). Fairmount and Bellevue.
134. **Heterotrypa prolifica* Ulrich. Waynesville, abundant and characteristic.
135. **Heterotrypa singularis* Ulrich. Waynesville.
136. **Heterotrypa scitaria* Ulrich. Fairmount and Bellevue.
137. **Heterotrypa subfrondosa* (Cumings). Mt. Hope-Fairmount.
138. **Heterotrypa subpulchella* (Nicholson). McMicken, Mt. Hope-Fairmount.
139. **Heterotrypa subramosa* (Ulrich). Waynesville, Whitewater. (c)

140. **Heterotrypa ulrichi* Nicholson, McMicken, (a), Mt. Hope-Fairmount. (r)
141. **Heterotrypa ulrichi lobata* (Cumings), McMicken and lower Maysville.
142. **Heterotrypa ulrichi robusta* (Foord), McMicken, Mt. Hope-Fairmount.
143. **Homotrypa alta* n. sp. Mt. Hope-Fairmount.
144. **Homotrypa austini* Bassler, Waynesville, Liberty and Whitewater.
145. **Homotrypa cincinnatiensis* Bassler, Mt. Hope-Fairmount.
146. **Homotrypa communis* Bassler, Waynesville, Liberty. (c)
147. **Homotrypa constellariformis* Cumings, Whitewater.
148. **Homotrypa curvata* Ulrich, Fairmount, Bellevue and Corryville.
149. **Homotrypa curvata praecipua* Bassler, McMicken, Mt. Hope-Fairmount.
150. **Homotrypa cylindrica* Bassler, Liberty and Whitewater.
151. **Homotrypa dawsoni* (Nicholson), Waynesville, Whitewater.
152. **Homotrypa dumosa* Bassler, Mt. Hope-Fairmount.
153. **Homotrypa flabellaris* Ulrich, Arnheim, Waynesville, Liberty and Whitewater. (c)
154. **Homotrypa flabellaris spinifera* Bassler, Fairmount, Waynesville and Whitewater (?).
155. **Homotrypa frondosa* Bassler, Corryville-Arnheim, Waynesville.
156. **Homotrypa glabra* n. sp. McMicken, Mt. Hope-Fairmount.
157. **Homotrypa grandis* Bassler, Upper Maysville.
158. **Homotrypa nicklesi* Bassler, Whitewater.
159. **Homotrypa nitida* Bassler, Whitewater.
160. **Homotrypa nodulosa* Bassler, Waynesville and Liberty.
161. **Homotrypa obliqua* Ulrich, McMicken (?) and Maysville.
162. **Homotrypa pulchra* Bassler, Corryville-Arnheim.
163. **Homotrypa ramulosa* Bassler, Liberty and Whitewater.
164. **Homotrypa richmondensis* Bassler, Upper Waynesville, Liberty and Whitewater.
165. **Homotrypa spinea* n. sp. Mt. Hope-Fairmount.
166. **Homotrypa wortheni* (James), Richmond, Whitewater (aa).
167. **Homotrypa wortheni prominens* Bassler, Liberty, (?) Elkhorn.
168. **Homotrypella hospitalis* (Nicholson), Waynesville (c), Liberty and Whitewater.
169. **Homotrypella rustica* Ulrich, Waynesville, Liberty and Whitewater.
170. **Leptotrypa calceola* (Miller and Dyer), Lower Maysville.
171. **Leptotrypa clavacoidea* (James), Upper Maysville.
172. **Leptotrypa discoidea* (Nicholson), Maysville.
173. **Mesotrypa orbiculata* n. sp. Arnheim.
174. **Mesotrypa patella* (Ulrich), Liberty.
175. **Monticulipora epidermata* Ulrich and Bassler, Liberty, Saluda and Whitewater. Characteristic of the Whitewater.
176. **Monticulipora mammulata* d'Orbigny, Fairmount to Mt. Auburn.
177. **Monticulipora parasitica* Ulrich, Waynesville, Liberty and Whitewater.
178. **Nicholsonella vaupeli* (Ulrich), Maysville, Waynesville, Liberty and Whitewater.

179. **Nicholsonella peculiaris* n. sp. Arnheim.
 180. **Peronopora pavonia* (d'Orbigny). Middle and upper Maysville and Richmond.
 181. **Peronopora vera* Nickles. Eden, Mt. Hope-Fairmount.
 182. **Peronoporella dubia* n. sp. Bellevue to middle of Arnheim.
 183. **Petigopora asperula* Ulrich. Upper McMicken to middle Waynesville.
 184. **Petigopora gregaria* Ulrich. Upper Maysville.
 185. **Petigopora petechialis* (Nicholson). McMicken, Maysville and Waynesville.
 186. **Phylloporina variolata* (Ulrich). Southgate and McMicken.
 187. **Proboscina autoporoides* (Nicholson). Maysville, Waynesville and Liberty.
 188. **Proboscina confusa* (Nicholson). Southgate.
 189. **Proboscina frondosa* (Nicholson). Eden, Maysville and Richmond.
 190. **Ptilodictya plumaria* James. Waynesville, Whitewater.
 191. **Rhinidictya lata* (Ulrich). Waynesville.
 192. **Rhinidictya parallela* (James). Southgate.
 193. *Rhombotrypa crassimuralis* (Ulrich). Whitewater.
 194. **Rhombotrypa quadrata* (Rominger). Waynesville, Liberty and Whitewater. (c)
 195. **Rhombotrypa subquadrata* (Ulrich). Upper Waynesville and lower Liberty.
 196. **Rhopalonaria venosa* Ulrich. Arnheim, Waynesville and Liberty. (r)
 197. **Spatiopora aspera* Ulrich. Top of Waynesville.
 198. *Spatiopora maculosa* Ulrich. Lower Maysville.
 199. *Spatiopora tuberculata* (Edwards and Haine). Maysville and Richmond.
 200. **Stictoporella flexuosa* (James). Southgate.
 201. **Stigmatella alaicornis* n. sp. Fairmount.
 202. **Stigmatella catenulata* n. sp. Arnheim.
 203. **Stigmatella clavis* (Ulrich). Eden and lower Maysville.
 204. **Stigmatella crenulata* Ulrich and Bassler. Waynesville.
 205. **Stigmatella dychei* (James). Mt. Auburn.
 206. *Stigmatella irregularis* (Ulrich). Lower Maysville.
 207. **Stigmatella incrustans* n. sp. Liberty.
 208. **Stigmatella nicklesi* Ulrich and Bassler. Southgate.
 209. *Stigmatella personata* Ulrich and Bassler. Elkhorn.
 210. **Stigmatella spinosa* Ulrich and Bassler. Waynesville.
 211. **Stigmatella sessilis* n. sp. Fairmount.
 212. **Stomatopora arachnoidea* (Hall). Throughout the Cincinnati.

BRACHIOPODA.

213. *Catazyga headi* (Billings). Waynesville.
 214. **Crania albersi* Miller. Southgate.
 215. **Crania laelia* Hall. Liberty.
 216. **Crania scabiosa* Hall. Maysville and Richmond.
 217. **Dalmanella emacerata* (Hall). Upper Eden.
 218. **Dalmanella meeki* (Miller). Corryville-Arnheim (nc) and Waynesville (a).
 219. **Dalmanella multisepta* (Meek). Eden (a), Mt. Hope-Fairmount (r).

220. **Dinorthis retrorsa* (Salter). Top of the Arnheim. (c)
221. **Dinorthis subquadrata* (Hall). Upper Waynesville, lower Liberty (c), Whitewater (r).
222. **Hebertella insculpta* (Hall). Top of the Waynesville (aaa), lower Liberty (r).
223. **Hebertella occidentalis* (Hall). Upper Waynesville, Liberty (a), Saluda and Whitewater (r).
224. **Hebertella sinuata* (Hall). Fairmount, Bellevue (c), and Richmond.
225. **Leptaena rhomboidalis* (Wilckens). Arnheim and Waynesville, very common at the top of the Waynesville.
226. **Leptobolus iepis* Hall. Southgate and Corryville.
227. **Lingula cincinnatiensis* (Hall and Whitfield). Arnheim.
228. **Lingula covingtonensis* (Hall and Whitfield). Arnheim.
229. **Lingula modesta* Ulrich. Southgate.
230. *Orthis fissicosta* Hall. Maysville.
231. **Platystrophia acutilirata* (Conrad). Waynesville, Liberty and Whitewater.
232. *Platystrophia acutilirata senex* Cumings. Upper Whitewater.
233. **Platystrophia costata* (Pander). Mt. Hope-Fairmount.
234. *Platystrophia cypha* James. Upper Maysville.
235. **Platystrophia laticosta* Meek. McMicken, Maysville and Richmond.
236. **Platystrophia lynx* (Eichwald). Maysville. Characteristic of the Bellevue and Mt. Auburn.
237. *Platystrophia moritura* Cumings. Characteristic of the Elkhorn.
238. **Plectambonites sericeus* (Sowerby). Southgate (c), Mt. Hope-Fairmount, Mt. Auburn, Waynesville, and lower Liberty (aaa).
239. **Plectorthis ella* (Hall). Maysville.
240. **Plectorthis plicatella* (Hall). Top of the McMicken, Mt. Hope-Fairmount. Characteristic of the lower Maysville.
241. **Plectorthis triplicatella* (Meek). Lower Maysville. (c)
242. **Rafinesquina alternata* (Emmons). Throughout the Cincinnati.
243. **Rafinesquina alternata fracta* (Meek). Maysville. Characteristic of the Bellevue, Corryville and Arnheim.
244. **Rafinesquina alternata loxorhytis* (Meek). Arnheim and Waynesville.
245. **Rafinesquina nasuta* (Conrad). Middle Maysville.
246. **Rafinesquina alternata ponderosa* Cumings. Bellevue (c), and Waynesville (?).
247. *Retzia granulifera* Meek. Upper Eden.
248. **Rhynchotrema capax* (Conrad). Upper Waynesville, lower Liberty (aa), and Whitewater. (c)
249. **Rhynchotrema dentata* (Hall). Upper Waynesville (rr), and Whitewater (a).
250. *Schizocrania filosa* (Hall). Trenton to Maysville.
251. *Strophomena nutans* Meek. Liberty.
252. **Strophomena planoconvexa* (Hall). Fairmount.
253. **Strophomena planumbona* (Hall). Waynesville, Liberty (a), and Whitewater.
254. **Strophomena sinuata* Meek. Lower Maysville.
255. **Strophomena subtenta* (Hall). Waynesville and Liberty.

256. **Strophomena sulcata* (Verneuil). Liberty and Whitewater. (c)
 257. **Strophomena vetusta* James. Liberty and Whitewater.
 258. **Trematis millepunctata* Hall. Rare throughout the Cincinnati.
 259. *Trematis reticularis* (Miller). Maysville.
 260. **Zygospira cincinnatiensis* Meek. Southgate, McMicken, and Fairmount.
 261. **Zygospira modesta* (Hall). Throughout the Cincinnati. (c)

PELECYPODA.

262. **Allonychia jamesi* (Meek). Bellevue.
 263. **Anomalodonta cestata* (Meek). Middle Maysville.
 264. **Anomalodonta gigantea* Miller. Waynesville, Whitewater.
 265. **Byssonychia alveolata* Ulrich. Middle and upper Maysville and lower Richmond.
 266. **Byssonychia grandis* Ulrich. Arnheim, Waynesville, and Whitewater (?).
 267. **Byssonychia obesa* Ulrich. Waynesville (?), Whitewater.
 268. *Byssonychia praeursora* Ulrich. Upper Maysville.
 269. **Byssonychia radiata* (Hall). Eden, Maysville and Richmond.
 270. **Byssonychia richmondensis* Ulrich. Waynesville, Liberty and Whitewater.
 271. **Byssonychia suberecta* Ulrich. Lower and middle Richmond.
 272. **Byssonychia tenuistriata* Ulrich. Arnheim.
 273. **Chidophorus fabula* (Hall). Maysville.
 274. *Chionychia excavata* Ulrich. Richmond.
 275. *Ctenodonta cingulata* (Ulrich). Waynesville.
 276. **Cynatonota typicalis* Ulrich. Waynesville, Whitewater (?).
 277. *Cyrtodonta cuneata* (Miller). Richmond.
 278. **Eridonychia crenata* Ulrich. Whitewater (?), lower Richmond.
 279. *Ischyrodonta decipiens* Ulrich. Whitewater.
 280. **Ischyrodonta elongata* Ulrich. Middle Richmond.
 281. *Ischyrodonta miseneri* Ulrich. Whitewater.
 282. *Ischyrodonta modioliformis* Ulrich. Whitewater.
 283. **Ischyrodonta ovalis* Ulrich. Waynesville.
 284. *Ischyrodonta truncata* Ulrich. Whitewater.
 285. *Ischyrodonta unionoides* (Meek). Lower Maysville.
 286. **Modiolodon declivis* Ulrich. Arnheim (?), Waynesville.
 287. *Modiolopsis concentrica* Hall and Whitfield. Waynesville.
 288. **Modiolopsis versaillesensis* Miller. Waynesville.
 289. **Opisthoptera casei* (Meek and Worthen). Richmond.
 290. *Opisthoptera obliqua* Ulrich. Richmond.
 291. *Orthodesma canaliculatum* Ulrich. Richmond.
 292. *Orthodesma rectum* Hall and Whitfield. Lower Richmond.
 293. *Orthodesma subangulatum* Ulrich. Richmond.
 294. *Orthodontiscus milleri* (Meek). Lower Richmond.
 295. **Ortonella hainesi* (Miller). Whitewater.
 296. *Pterinea corrugata* (James). Waynesville.
 297. **Pterinea demissa* (Conrad). McMicken, Maysville and Richmond
 298. **Pterinea mucronata* Ulrich. Southgate.
 299. **Rhitimya byrnesi* (Miller). Richmond.

300. *Sedgwickia fragilis* Meek. Lower Maysville. May not occur in Indiana.
 301. *Sphenolium richmondense* Miller. Middle Richmond.
 302. *Tellinomya hilli* Miller. Saluda.
 303. *Whiteavesia cincinnatiensis* (Hall and Whitfield). Eden.
 304. *Whiteavesia pholadiformis* (Hall). Richmond.
 305. *Whitella obliqua* Ulrich. Lower Richmond
 306. *Whitella umbonata* Ulrich. Lower Richmond.

GASTROPODA AND P. EROPODA.

307. **Bellerophon gorbyi* Miller. Southgate, Maysville (?)
 308. *Bellerophon mohri* Miller. Middle Richmond.
 309. *Bellerophon subangularis* Ulrich. Middle Richmond.
 310. *Bucania crassa* Ulrich. Whitewater.
 311. *Bucania simulatrix* Ulrich. Whitewater.
 312. *Clathrospira subconica* (Hall). Maysville and Richmond.
 313. **Conradella dyeri* (Hall). Richmond.
 314. **Comularia formosa* Miller and Dyer. Arnhem.
 315. **Cyclonema bilix* (Conrad). Arnhem and Waynesville.
 316. **Cyclonema bilix fluctuatum* James. Waynesville.
 317. **Cyclonema bilix humerosum* Ulrich. Upper Maysville and Richmond.
 318. **Cyclonema bilix mediale* Ulrich. Lower Maysville.
 319. **Cyclora minuta* Hall. Maysville and Richmond.
 320. *Cyclora parva* (Hall). Richmond.
 321. *Cyclora pulcella* Miller. Liberty.
 322. **Cyrtolites ornatus* Conrad. Upper Fairmount and Bellevue.
 323. *Helicotoma marginata* Ulrich. Elkhorn.
 324. *Holopea hubbardi* Miller. Saluda.
 325. **Homotoma gracilis* (Hall). Southgate.
 326. *Hyolithes* (?) *dubius* Miller and Faber. Richmond.
 327. *Hyolithes versaillesensis* Miller and Faber. Richmond.
 328. *Liospira vitruvia* (Billings). Throughout the Cincinnatian.
 329. *Lophospira acuminata* Ulrich. Middle Richmond.
 330. *Lophospira ampla* Ulrich. Richmond.
 331. *Lophospira bicincta* (Hall). Richmond.
 332. **Lophospira bowdeni* (Safford). Maysville.
 333. *Lophospira hammeli* (Miller). Saluda.
 334. *Lophospira tropidophora* (Meek). Whitewater.
 335. **Microceras inornatus* Hall. Maysville and Richmond.
 336. *Oxydiscus magnus* (Miller). Richmond.
 337. *Protowartha cancellata* (Hall). Throughout the Cincinnatian.
 338. *Protowartha subcompressa* Ulrich. Lower Richmond.
 339. *Raphistoma richmondensis* Ulrich. Middle Richmond.
 340. *Salpingostoma richmondensis* Ulrich. Whitewater, upper part.
 341. *Schizolopha moorei* Ulrich. Whitewater.
 342. *Trochonema madisonense* Ulrich. Richmond.
 343. *Tryblidium indianense* Miller. Richmond.
 344. *Tryblidium madisonense* Miller. Richmond.

CEPHALOPODA.

345. **Cyrtoceras amoenum* Miller. Richmond.
 346. *Cyrtoceras hitzi* Foerste. Saluda.
 347. *Cyrtoceras tenuiseptum* Faber. Richmond.
 348. *Cyrtoceras thompsoni* Miller. Upper Richmond (?)
 349. *Cyrtoceras madisonensis* Miller. Saluda.
 350. **Eudoceras proteiforme* Hall. Throughout the Cincinnati.
 351. **Gomphoceras indianensis* Miller and Faber. Richmond.
 352. *Gyroceras baeri* (Meek and Worthen). Middle Richmond.
 353. **Orthoceras bilineatum* Hall. Richmond.
 354. **Orthoceras byrnesi* Miller. Upper Maysville.
 355. *Orthoceras carleyi* Hall and Whitfield. Upper Maysville. (?)
 356. **Orthoceras duseri* Hall and Whitfield. Lower Richmond.
 357. *Orthoceras gorbyi* Miller. Horizon unknown.
 358. *Orthoceras hammeli* Foerste. Saluda.
 359. *Orthoceras hitzi* Foerste. Saluda.
 360. *Orthoceras junceum* Hall. Lower Eden. Probably does not occur in Indiana.
 361. *Orthoceras mohri* Miller. Waynesville.

TRILOBITA.

362. *Acidaspis ceralepta* (Anthony). Eden.
 363. **Acidaspis cincinnatiensis* Meek. Throughout the Cincinnati.
 364. **Acidaspis crosotus* (Locke). Southgate.
 365. **Calymene callicephala* Green. Common throughout the Cincinnati, especially at the top of the Waynesville.
 366. *Ceraurus icarus* (Billings). Whitewater.
 367. **Ceraurus pleurexanthemus* Green. Lower Maysville and Waynesville.
 368. **Dalmanites breviceps* Hall. Southgate (?), Waynesville.
 369. *Dalmanites callicephalus* (Hall). Probably not found in the Cincinnati.
 370. **Isotelus maximus* Locke. Rather common throughout the Cincinnati.
 371. **Proetus spurlocki* Meek. Southgate and lower Maysville.
 372. **Trinucleus concentricus* (Eaton). Throughout the Eden.

OSTRACODA.

373. **Bollia persulcata* Ulrich. Southgate.
 374. **Bollia pumila* Ulrich. Southgate (?), middle Richmond.
 375. **Bythocypris cylindrica* (Hall). Southgate (aa).
 376. **Ceratopsis chambersi* (Miller). Southgate, McMicken, Waynesville.
 377. *Ceratopsis chambersi robusta* Ulrich. Lower Richmond.
 378. **Ceratopsis oculifera* (Hall). Economy, McMicken.
 379. **Ctenobolbina ciliata* (Emmons). Eden, Waynesville.
 380. *Ctenobolbina ciliata hammeli* (Miller and Dyer). Arnheim.
 381. *Entomis madisonensis* Ulrich. Saluda.
 382. **Eurychilina striatomarginata* (Miller). Saluda.
 383. **Leperditia caecigena* Miller. Eden (?), Richmond.

384. **Primitia centralis* Ulrich. Southgate.
 385. **Primitia cincinnatiensis* (Miller). Richmond.
 386. **Primitia impressa* Ulrich. Arnheim and Waynesville.
 387. *Tetradella quadrilirata* (Hall and Whitfield). Lower Richmond.
 388. **Tetradella quadrilirata simplex* Ulrich. Richmond.

CIRRIPIEDIA.

389. **Lepidocoleus jamesi* (Meek). Southgate, Waynesville.

PART IV. PALEONTOLOGY.

Under this heading we consider the points of special interest of the more important genera and species. The major part of our study has been devoted to the Bryozoa, on account of their abundance, their value as zone markers, and the fascinating interest they lend to paleobiology. The Bryozoa of the Cincinnati exceed all other groups in number of species and individuals.

No attempt has been made in this paper to differentiate the smaller subdivisions of many old species, as has recently been done by Foerste, as it suits our present purpose better to retain the long-used names.

CORALS.

Protarea vetusta (Hall). This coral makes its first appearance, in the Cincinnati, in the middle of the Waynesville. In the upper 17 feet of this division and in the upper Liberty it occurs abundantly, and rarely in the Saluda and Whitewater. Foerste calls this species *Protarea richmondensis*.

BRACHIOPODA.

Dalmanella meeki (Miller) (= *Dalmanella jugosa* (James)), makes its first appearance in the Fairmount. This is the form recognized by Foerste as *Dalmanella fairmountensis*. *D meeki*, the typical form, comes in in the Corryville and increases in abundance to the base of the Waynesville. In this formation it is the dominant fossil. It disappears at the base of the Liberty.

Dalmanella multisecta (Meek). This form ranges throughout the Eden and up into the Fairmount. It is the characteristic brachiopod of the Eden.

Dinorthis retrorsa (Salter) (= *D carleyi* (Hall)), occurs apparently in a single layer near the top of the Arnheim at the top of Cut 11. The variety *D. carleyi insolens* Foerste, which occurs