Register of Localities

The localities herein include all of those represented in the collection of the National Museum of Natural History, Smithsonian Institution (under the locality numbers of the United States National Museum). Inasmuch as some of the material was derived from other museums and the United States Geological Survey, locality numbers of these organizations are also added, but the specimens belong to the National Museum of Natural History.

R. E. KING LOCALITIES

Through the kindness of Dr. C. O. Dunbar, Yale University, the locality maps of R. E. King were lent for use in our studies. We have augmented this list of King’s localities with additional map measures, which will help the reader to locate many of his collecting spots. Also, the stratigraphic assignments are those of King, but we have expanded them by giving the modern formation names in brackets. Finally, we have given the equivalent United States National Museum (USNM) numbers in brackets where they coincide with King’s numbers. Special notes or comments, if needed, are in brackets at the end of the entry. This system of punctuation is used throughout all of the locality lists in this register.

1. Hess [=Skinner Ranch Formation]: Small hill 1 mile (0.9) NW (N 33° W) of summit of Iron Mountain. 1.4 miles N 80° W of Skinner Ranch, Altuda quadrangle.
2. Wolkamp (upper) [=Lenox Hills Formation]: Section 14, hill W of Iron Mountain, 2.28 miles S 57° W of Skinner Ranch, Altuda quadrangle.
3. Leonard (about 50 feet above base) [=Skinner Ranch Formation]: 1 mile (0.9) W (N 78° W) of summit of Iron Mountain, Altuda quadrangle [=USNM 723h].
4. Hess? [=Skinner Ranch Formation]: 0.6 mile (0.58) N (N 11° E) of hill 5021, second hill W of Iron Mountain, Altuda quadrangle [=USNM 717f].
5. Leonard (below soft shale of the Clay Slide about 250 feet below top) [=Cathedral Mountain Formation]: Section 14, W of Iron Mountain, below soft shale of Clay Slide. 0.47 mile 5 4° W of hill 4910, Altuda quadrangle [=R. E. King 307]: approximately USNM 717g.
6. Word [=lower Road Canyon Formation]: Section 14, near Clay slide, 0.4 mile S 15° W of hill 4910, Altuda quadrangle [=R. E. King 301].
7. Leonard (bed 16) [=Cathedral Mountain Formation]: Section 14, W of Iron Mountain, Altuda quadrangle [number not on King's map].
9. Leonard (below middle limestone layer of bed 9) [=Cathedral Mountain Formation]: 1.05 miles S 14° E of hill 4910, section 14, W of Iron Mountain, Altuda quadrangle.
10. Leonard (middle limestone layer of bed 9 and top of bed 12) [=Cathedral Mountain Formation]: Section 14, second hill W of Iron Mountain, same as above, Altuda quadrangle [number not on King's map].
11. Leonard (between middle limestone layer of bed 9 and top of bed 12) [=Cathedral Mountain Formation]: Section 14, same as above, second hill W of Iron Mountain, Altuda quadrangle [number not on King's map].
12. Leonard [=Cathedral Mountain Formation]: Section 14, top of bed 12, same as above, second hill W of Iron Mountain, Altuda quadrangle [number not on King's map].
13. Leonard (base of bed 14) [=Cathedral Mountain Formation]: Section 14, same as above, second hill W of Iron Mountain, Altuda quadrangle [number not on King's map].
14. Leonard (lower part bed 15) [=Cathedral Mountain Formation]: Section 14, same as above, second hill W of Iron Mountain, Altuda quadrangle [number not on King's map].
16. Leonard [=Skinner Ranch and Cathedral Mountain Formation]: Section 15, slightly above or near the base, hill 5280 W of Iron Mountain, Altuda quadrangle.
17a. Lower part projecting spur of range just W of Sullivan Ranch road, Altuda quadrangle [=USNM 707].
17b. Middle of spur of range just W of Sullivan Ranch road, Altuda quadrangle.
17c. Top of projecting spur of range W of Sullivan Ranch road, Altuda quadrangle.
19. Leonard (basal) [=Poplar Tank Member]: Section 12, bed 1, E end of Lenox Hills, 0.8 mile N 82° E of hill 5300, Altuda quadrangle.
20. Leonard (bed 1) [=Poplar Tank Member, by map location]: Section 12, 0.8 mile N 73° E of hill 5300, E end of Lenox Hills, Altuda quadrangle.
21. Leonard (near middle of bed 24) [=Third and Fourth Limestone Members=Cathedral Mountain Formation]: Section 12, same as above, E end of Lenox Hills, Altuda quadrangle. (The locality descriptions and map locations of localities 21—25 are not in complete accordance with P. B. King’s (1931266) section 21. All localities are given as bed 24 [=Third and Fourth Limestone Members]. Localities 20—22 are on the edge of the hill 1 mile east-northeast of hill 5300 at about an elevation of 5000 feet and are at the level of the Sullivan Peak Member. Localities 23—25 are in hill 4920, and 24 and 25 are certainly in the Third and Fourth Limestone Members. Locality 23, on the other hand, located at the base of the hill, may be in the top of the Skinner Ranch Formation (Sullivan Peak Member).)
22. Leonard (middle of bed 24) [=Cathedral Mountain Formation]: Section 12, same as above, E end of Lenox Hills, Altuda quadrangle [see, R. E. King 21].
23. Leonard (near middle of bed 24) [=Cathedral Mountain Formation]: Section 12, below hill 4920 and N of locality 21, 0.18 mile S of hill 4920, Lenox
Hills, Altuda quadrangle [see, R. E. King 21].
24. Leonard (some distance above middle of bed 24 but below top of hill 4920) [=Skinner Ranch Formation?]: Section 12, 0.1 mile S of top of hill 4920, Altuda quadrangle [see R. E. King 21; the list of fossils indicates Skinner Ranch, but the map location is in the Cathedral Mountain].
25. Leonard (upper part bed 24, SW side of hill 4920) [=Cathedral Mountain Formation?]: Section 12, 0.25 mile S 58° E of top of hill 4920, Altuda quadrangle [=see R. E. King 21].

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26. Leonard (bed 26) [=Cathedral Mountain Formation]: Section 12, SW side of hill 4929, 0.25 mile S 85° W of top of hill 4920, Altuda quadrangle. [Localities 26—29 are marked on R. E. King's map on the north slope of hill 4920 near the top, but the various bed numbers in section 12 are not in accordance with the map location. See also R. E. King 21].
28s. Middle Leonard [=Cathedral Mountain Formation]: Same as above, S of Sullivan Peak, Altuda quadrangle [C. Schuchert collector].
27. Leonard (beds 19—24) [=Cathedral Mountain Formation]: Section 12, same as locality 26, W side of hill 4920, Altuda quadrangle [see R. E. King 21].
28. Leonard (middle of bed 24) [=Cathedral Mountain Formation]: Same locality as 26, SW side of hill 4920 [see R. E. King 21].
29. Leonard (bed 28) [=Cathedral Mountain Formation]: Section 12, same locality as 26, Altuda quadrangle [see R. E. King 21].
30. Leonard (bed 28) [=Cathedral Mountain Formation]: Section 12, 1.4 miles S 1° W of Sullivan Peak, Altuda quadrangle.
31. Leonard (bed 34) [=Cathedral Mountain Formation]: Section 12, same as above, Altuda quadrangle [=USNM 710].

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32. Wolfcamp (Uddenites zone: Uddenites-bearing Shale Member, 1.65 miles S 54° W of Sullivan Peak, Altuda quadrangle. Altuda quadrangle.
33. [Not described in R. E. King's locality list (19311134) and not recorded on his map; several species recorded in text]
34. Leonard: 0.5 mile S of tank at locality 4555 [identifiable and not on King's map, but several species recorded in text].
35. Hess [=Decie Ranch Member]: 0.48 mile S 8° W of hill 5300 at base of escarpment, S edge of Altuda quadrangle [part of USNM 707a].
36. Leonard: Section 11, bed 4, on hill 5300, Altuda quadrangle [no fossils recorded].
37. Leonard (bed 10) [=Cathedral Mountain Formation]: Section 15, tank W of N end of Iron Mountain, 1.15 miles N 50° E of hill 4910, Altuda quadrangle. Leonard (basal) [=Skinner Ranch with some Cathedral Mountain]: 0.25 mile S 79° E of hill 5300, center of Lenox Hills, Altuda quadrangle [approximately USNM 708c; map location indicates Poplar Tank or Sullivan Peak Members, but list includes Cathedral Mountain Formation species].
39. Hess (top of bed 1) [=Decie Ranch Member]: Section 10, 1.2 miles S 20° W of hill 5300, Lenox Hills, Altuda quadrangle [approximately USNM 727u].
40—43. All Altuda Member [no fossils recorded]
44. Word (lower limestone) [=Road Canyon Formation]: Section 12, 0.70 mile S 37° E of Sullivan Peak, Altuda quadrangle [approximately USNM 731v].
45. Word (lower, beds 1 and 2) [=Road Canyon Formation]: Section 12, 1.7 miles S 48° W of Sullivan Peak, Altuda quadrangle [=USNM 710].
46. Word (lower, bed 3) [=Road Canyon Formation]: Section 11, 1.65 miles S 50° W of Sullivan Peak, Altuda quadrangle.
47. Word (lower) [=Upper Word Formation?]: 1.1 miles SSW of hill 5935, 3.19 miles S 62° W of Sullivan Peak, same horizon as R. E. King 54, Altuda quadrangle.
50. Capitan [no fossils recorded in text].
51. Word (lower limestone) [=Road Canyon Formation]: NE of Clay Slide, 0.2 mile due W of hill 4910, Altuda quadrangle [=near USNM 7243].
52. Leonard: Section 12, bed 37, lower part, calcareous sandstone, bearing ammonoids, 1.2 miles S 84° E, S of Sullivan Peak, Altuda quadrangle.
53. Word (lower, beds 1 and 2) [=Road Canyon Formation]: 1.7 miles S 48° W of Sullivan Peak, Altuda quadrangle [=USNM 710].
54. Word (lower, bed 3) [=Road Canyon Formation]: Section 11, 1.65 miles S 50° W of Sullivan Peak, Altuda quadrangle.
55. Word (lower) [=Upper Word Formation?]: 1.1 miles SSW of hill 5935, 3.19 miles S 62° W of Sullivan Peak, same horizon as R. E. King 54, Altuda quadrangle.
56. Capitan: 0.4 mile NNW of hill 5935, W end of Cathedral Mountain, Altuda quadrangle [=no fossils listed].
57. Capitan (Altuda Member): 1.5 miles NE of Altuda, Altuda quadrangle [=USNM 718a].
58. Word (lower) [=Road Canyon Formation]: S side of Cathedral Mountain, Altuda quadrangle [not recorded on map].
59—68. [No fossils recorded]
69. Wolfcamp (lower shale): Just N of igneous plug, Hess Ranch horst [no fossils recorded].
70. Wolfcamp (middle-upper) [=Lenox Hills Formation]: Base of range about 1 mile (0.75) S 83° E of hill 5300, W of Sullivan (Yates) Ranch Road, E end of Lenox Hills, Altuda quadrangle [USNM 708n].
71. Wolfcamp [=Decie Ranch Member]: At base of escarpment between Sullivan (Yates) Ranch Road and a point 0.5 mile to 1V, 1.38 miles N 70° E of hill 5300, Altuda quadrangle [=USNM 707g, 707v].
72—74. Wolfcamp: [no fossils recorded].
75. Wolfcamp [=Gaptank Formation]: 0.85 mile N 38° W of summit of Iron Mountain (Skinner) Ranch, Altuda quadrangle.
76. Wolfcamp (upper) [=Lenox Hills Formation]: Westernmost outcrop of Wolfcamp on Leonard Mountain bed containing large Schwagerina, 1.65 miles N 33° E of top of Iron Mountain (Skinner) Ranch, Altuda quadrangle.
77. Wolfcamp (upper, lowest beds above basal conglomerate) [=Lenox Hills Formation]: 0.2 mile E of locality 76, 1 mile N 84° W of bench mark 5860 on Leonard Mountain W edge of Hess Canyon quadrangle. 78—81. [No fossils recorded]
95. Wolfcamp (bed 13, Uddenites—bearing Shale Member) [=Gaptank Formation]: Section 27, about 300 feet S 30° E of hill 4752, Brooks Ranch, 4.4 miles NE of hill 5060, Hess Canyon quadrangle [=USNM 721—1].
96. Wolfcamp [=Neal Ranch Formation]: Lowest beds near Gap Tank, 0.25 mile E of the E edge of Hess Canyon quadrangle in Stockton Cap.
97. Wolfcamp [=Neal Ranch Formation]: Basal beds, 0.25 mile SE of Gap Tank, Stockton Cap.
98. Hess (20 feet above Wolfcamp) [=Decie Ranch Member]: W end of Glass Mountains, Monument Spring quadrangle [not on map].
99. Hess: E end of Dugout Mountain, along downfaulted spur [no fossils recorded].
100. Hess [=Decie Ranch Member]: W end of Dugout Mountain, Monument Springs quadrangle.
101. [No fossils recorded]

102. Hess (near top) [=Cathedral Mountain Formation]: Section 17, 0.15 mile N 50° W of bench mark 5860 on Leonard Mountain, Hess Canyon quadrangle.
103. Hess (or Leonard): Float on Wolfcamp at foot of escarpment about 1 mile W of Marathon-Sullivan (Yates) Ranch road, 0.75 mile N 89° E of hill 5300, Lenox Hills, Altuda quadrangle.
104. Leonard [=Cathedral Mountain Formation]: 2.73 miles N 55° E of Hess ranch on N side of the escarpment, 1.22 miles W of hill 5725, Hess Canyon quadrangle [=USNM 7131].
105. Hess [=Sklinder Ranch Formation]: 0.65 mile N 21° E of hill 5305, 2.4 miles N 22° E of Hess Ranch, on W end of Hess Ranch Horst, Hess Canyon quadrangle [=approximately USNM 7165].
107. Hess (upper) Perrinites compressus horizon [=Taylor Ranch Member]: Escarpment W of Hess Canyon fault, from upper fissiliferous horizon, immediately below a conspicuous layer of massive limestone, 3.81 miles N 65.5° E of Hess Ranch, just SE of hill 5725, Hess Canyon quadrangle [=USNM 702d].
108. Hess (upper) [=Taylor Ranch Member]: Between, and S of, hills 5767 and 5821, 4.75 miles N 68° E of Hess Ranch, Hess Canyon quadrangle [=USNM 702m].
109—111. [No fossils recorded]

112. Hess (upper): About 0.5 mile S of forks of Hess Canyon, 1.35 miles S 52° W of Old Word Ranch, Hess Canyon quadrangle.
113. Hess (middle, bed 6) [=Lenox Hills Formation]: Section 27, 3.15 miles S of hill 4752, Conoly Brooks Ranch, Hess Canyon quadrangle.
114—116. [No fossils recorded]
118. [No fossils recorded]
119. Leonard (upper) [=Cathedral Mountain Formation]: Below, and to the W of, Clay Slide, 0.6 mile S 10° W of hill 4910, Altuda quadrangle.
120. Leonard (middle-lower Perrinites horizon) [=Cathedral Mountain Formation]: 0.6 mile due E of hill 4910, NE of Clay Slide, Altuda quadrangle [=approximately USNM 72111]. [R. E. King gives this location in his text (1931:135) as 0.6 mile due east of hill 4910, but his map shows the location as 0.6 mile farther north. Our USM locality 721 is approximately 0.6 mile east of hill 4910, and its fauna agrees with King's list. The map location is probably wrong; we could not find the fossils listed by King at his map point marked "120."]

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121. Leonard (middle, bed 13 near top) [=Cathedral Mountain Formation]: Section 17, N of Leonard Mountain, 1.96 miles N 1° E of Iron Mountain (Skinner) Ranch, E edge of Altuda quadrangle.
122. Hess or Leonard (limestone below lower Leonard Shale) [=Sklinder Ranch Formation]: On Leonard Mountain, 0.3 mile N 72° W of bench mark 5860 on Leonard Mountain, Hess Canyon quadrangle [=R. E. King 231].
123. Leonard (lower bed 14) [=Cathedral Mountain Formation]: Section 17, 1.2 miles NE of bench mark 4627, 2.05 miles due N of Iron Mountain (Skinner) Ranch, E edge of Altuda quadrangle [=USNM 711h].
125. Leonard (upper) [=Cathedral Mountain Formation]: 0.5 mile S of hill 5611, 2.24 miles S 73.5° W of Old Word Ranch, S of Hess Canyon, Hess Canyon quadrangle.
128. Leonard [=Cathedral Mountain Formation]: 0.2—0.3 mile N 50° E of Split Tank, 1.7 miles N 55° E of Old Word Ranch, Hess Canyon quadrangle [=USNM 702 (part); also from same horizon 1 mile ENE of Split Tank].
129. Leonard (upper) [=Cathedral Mountain Formation]: N of hill 4627, NE corner of Hess Canyon quadrangle.
130. [No fossils recorded]
131. Word (First Limestone, bed 1) [=Road Canyon Formation]: Section 17, Leonard Mountain section, 2.23 miles N 3° W of Iron Mountain (Skinner) Ranch, Altuda quadrangle.
132. Word (First Limestone, bed 7) [=Willis Ranch Member]: Section 17, SE end of hill 5779, mountain N of Leonard Mountain, W edge, 2.60 miles N 6° W of Iron Mountain (Skinner) Ranch, Altuda quadrangle.
133. Word (Third Limestone, bed 70) [=Willis Ranch Member]: Section 17, same as above, mountain N of Leonard Mountain, Altuda quadrangle.
134. Word (Third Limestone) [=Willis Ranch Member]: Section 17, mountain N of Leonard Mountain, 2.5 miles N 45° W of Iron Mountain (Skinner) Ranch, E edge of Altuda quadrangle.
135. Word (Third Limestone) [=Willis Ranch Member]: Section 17, 0.53 mile due E of bench mark 4973, top of hill, S of junction of Road and Gilliland canyons, Altuda quadrangle.
136. Word: Float at junction of Road and Gilliland canyons, Altuda quadrangle.
140. [No fossils recorded]
141. Word (Lower Limestones) [=Road Canyon Formation]: Above Clay Slide, section 14 [=R. E. King 6].
142. Word (Fourth Limestone) [=Apell Ranch Member]: 0.6 mile N 47° E of Willis Ranch, Hess Canyon quadrangle.
143. Word (Fourth Limestone) [=Apell Ranch Member]: E and W of hill 5578, 2 miles NE of Willis Ranch, Hess Canyon quadrangle.
144. Word (Second Limestone) [=Willis Ranch Member]: 0.5 mile N 42° W of hill 5611, 4.03 miles N 33° E of Hess Ranch, Hess Canyon, Hess Canyon quadrangle [=approximately USNM 7066]. [Identified as Second Limestone Member of Word Formation by R. E. King, but mapped as Third Limestone Member of the Word]
145. Word (Second Limestone) [=China Tank Member]: 1.5 miles N 60° W of Old Word Ranch house, 0.33 mile WSW of hill 5507, Hess Canyon quadrangle.
146. Word (Third Limestone) [=Willis Ranch Member]: 5 and W of S part of Comanche outlier, 0.75 mile N 64° W of Old Word Ranch house, Hess Canyon quadrangle.
147. Word (First Limestone) [=Road Canyon Formation]: In channel of Hess Canyon near Leonard-Word contact [not shown on R. E. King’s map].
148. Word (Fourth Limestone) [=Apell Ranch Member]: 1.08 miles N 5° E of Old Word Ranch house, Hess Canyon quadrangle.
150. Word (Fourth Limestone) [=Apell Ranch Member]: 0.5 mile SW of hill 5360, 2.2 miles N 24° E of Old Word Ranch, Hess Canyon quadrangle.
151. Leonard [=Cathedral Mountain Formation]: 0.22 mile NE of Split Tank, 1.68 miles N 56° E of Old Word Ranch, Hess Canyon quadrangle.

152. Word (upper) [=Appel Ranch Member]: 3.08 miles N 36° E of Word Ranch house, Hess Canyon quadrangle.

153. Word (First Limestone) [=Road Canyon Formation]: S side of hill 5611, W side of Hess Canyon, 1.8 miles S 72° W of Old Word Ranch, Hess Canyon quadrangle.


155. Word (upper): E of big fault, 5.03 miles N 47° E of Old Word Ranch, as far as hill 4902, from W side of latter hill, Hess Canyon quadrangle.

157. [No brachiopods recorded]

159. Word (upper): Chert 0.65 mile S 84° E of hill 4800, NE part of Hess Canyon quadrangle.

161. [No brachiopods recorded]


163—167. [No fossils recorded]

168. Wolfcamp [=Neal Ranch Formation]: Section 24, Gray Limestone Member [=bed 2 at Wolf Camp], 0.25 mile S 87° W of hill 5060, Hess Canyon quadrangle.

169a. Wolfcamp [=Neal Ranch Formation]: Just above Gray Limestone Member (bed 2), 0.75 miles S 78° W of hill 5060, Wolf Camp, Hess Canyon quadrangle.

170. Word (upper): Thick prominent limestone 700 feet below top, N of Dugout Mountain, Monument Spring quadrangle.

171. Word (lower) [=Road Canyon Formation]: 0.4 mile N 78° W of Old Payne Ranch, NW of Dugout Mountain, Monument Spring quadrangle.

173. [No brachiopods recorded]

174. Leonard [=Cathedral Mountain Formation]: Section 27, 0.5 mile E of hill 5157, 4.58 miles N 48° of Old Word Ranch, just W of longitude 103° 05', Hess Canyon quadrangle.

175. Wolfcamp (below Gray Limestone Member) [=Gaptank Formation, Uddenites-bearing Shale Member]: About 0.25 mile S 71° W of hill 5060, Wolf Camp Hills, Hess Canyon quadrangle.

175a. Wolfcamp (yellow-brown limestone in shale underlying Gray Limestone Member) [=Gaptank Formation, Uddenites-bearing Shale Member]: NE of locality 88, Wolfcamp Hills, Hess Canyon quadrangle.

176—191. [No fossils recorded]

192. Word (Fourth Limestone) [=Appel Ranch Member?]: N of junction of Road and Gilliland Canyons, Altuda quadrangle. [Number not on R. E. King's map; the Fourth Limestone Member is not mapped north of the junction of these two canyons, nor is it recorded in Section 17.]

193. Wolfcamp (upper) [=Lenox Hills Formation]: S of high point on Dugout Mountain, 2.64 miles S 40.5° W of Lenox, Monument Spring quadrangle [=USNM 715].

194. Wolfcamp (upper): Float on S side of high point of Dugout Mountain (same as above), Monument Spring quadrangle.

195. Wolfcamp (lower shale) [=Neal Ranch Formation]: 0.5 mile SW of hill 5816, Hess Ranch Horst, Hess Canyon quadrangle [number not shown on map].

196. Wolfcamp (upper) [=Lenox Hills Formation]: 0.5 mile N 43° E of hill 5305, 2.23 miles N 29° E of Hess Ranch, Hess Ranch Horst, Hess Canyon quadrangle [=USNM 716f].

197. Wolfcamp [=Lenox Hills Formation]: 0.25 mile N 33° E of hill 5305, 2.03 miles N 26.5° E of Hess Ranch. Hess Ranch Horst, Hess Canyon quadrangle [not listed by King, but present on his map].

198. Wolfcamp (upper) [=Lenox Hills Formation]: Graben near middle of Hess Ranch Horst, and same bed to W of graben, 0.25 mile S 62° E of hill 5816, 2.85 miles N 47° E of Hess Ranch, Hess Canyon quadrangle.

199. Wolfcamp (Uddenites member, basal brown limestone about 15 feet above Gaptank limestone) [=Gaptank Formation, (Uddenites-bearing Shale Member): 0.3 mile N 23° E of hill 5060 Wolf Camp Hills, Hess Canyon quadrangle [=USNM 701i].

200. [No fossils recorded]

201. Wolfcamp [=Gaptank Formation]: Brown limestone near base of hill, 0.38 mile S 36° W of hill 4815, about 4 miles NE of Wolf Camp, Hess Canyon quadrangle [=USNM 701u].

202. Wolfcamp (directly below base of Hess) [=Uddenites bearing Shale Member]: 0.8 mile W of E end of quadrangle, 1.2 miles N 78° E of hill 5202, Hess Canyon quadrangle.

203. Wolfcamp (beds below Gray Limestone Member) [=Gaptank Formation]: On range of foothills at E edge of quadrangle, 1.97 miles N 81° E of hill 5022, Hess Canyon quadrangle.

204. Wolfcamp [=Neal Ranch Formation]: 0.5 mile S of Allison and Gilbert Ranch [see geological map, King, 1931].

205. Hess [=Decie Ranch Member]: Foot of cliff of Dugout Mountain, 0.75 mile S 49° W of summit, 3.25 miles S 44° W of Lenox, Monument Spring quadrangle.

206. Hess (uppermost) [=Decie Ranch Member]: 1 mile NE of Lenox, Monument Spring quadrangle.

207. Hess (upper) [=Skinner Ranch Formation]: W side of fault on spur N of high point, 0.28 mile N 9° W of bench mark 5860 on Leonard Mountain, Hess Canyon quadrangle [approximately USNM 714a].

208. Hess [=Skinner Ranch Formation]: 0.6 mile N 17° W of Hess Ranch, Hess Canyon quadrangle [=USNM 705a].

209. Hess (150—200 feet below top) [=Skinner Ranch Formation]: 0.49 mile due N of bench mark 5860 on Leonard Mountain, directly below Leonard outlier on E side of fault, Hess Canyon quadrangle.

210. Hess [=base of Skinner Ranch Formation on top of Lenox Hills Formation]: White limestone at top of section on Hess Ranch horst, N of NE end of igneous intrusion, 0.22 mile N 54° E of hill 5816, Hess Canyon quadrangle.

211. Hess [=Skinner Ranch Formation]: 0.8 mile N 32° E of hill 5305, on Hess Ranch horst, 1.57 miles N 26° E of Hess Ranch, Hess Canyon quadrangle [approximately USNM 720e].

212. Hess (upper fossiliferous horizon) [=Taylor Ranch Member]: 0.6 mile S 62° W of hill 5725, 3.28 miles N 66° E of Hess Ranch, Hess Canyon quadrangle.

213—214. [No fossils recorded]

215. Hess (upper fossiliferous horizon) [=Taylor Ranch Member]: Top of section, 0.6 mile S 71° E of hill 5632, Hess Canyon quadrangle.

216—221. [No brachiopods recorded]

222. Hess (upper fossiliferous horizon) [=Taylor Ranch Member]: Scarp E of head of E fork of Hess Canyon about 0.17 mile S 37.5° W of hill 5767, 4.35 miles N 67.5° E of Hess Ranch, N of Wolf Camp, Hess Canyon quadrangle [=USNM 716m].

223. Hess (uppermost): 1.0 mile S 58° W of Old Word Ranch house, Hess Canyon quadrangle [=USNM 726n].

224. Leonard (First Limestone Member or slightly below) [=Sullivan Peak Member]: W end of Dugout Mountain, 0.75 mile S 85° W of high point (hill 5195), 3.15 miles S 50° W of Lenox, Monument Spring quadrangle.

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225. [No brachiopods recorded]

226. Leonard (First Limestone Member) [=Sullivan Peak Member]: Central part of Dugout Mountain, 1.63 miles S 44° W of Lenox, Monument Spring quadrangle.

227. Leonard (Second Limestone Member) [=Dugout Mountain Member]: 0.5 mile N 69° W of high point, 2.8 miles S 51° E of Lenox, Dugout Mountain,
Monument Spring quadrangle.

228. Leonard (horizon of First Limestone) [=Sullivan Peak Member]: E of fault at E end of Dugout Mountain, 1.8 miles S 41° W of Lenox, Monument Spring quadrangle.

229. [No brachiopods recorded]

230. Leonard (or uppermost Hess) [=Skinner Ranch Formation, probably mixed with Cathedral Mountain Formation]: Limestone containing chert pebbles directly below Leonard shale on S face of mountain, 0.25 mile N 65° W of bench mark 5860 on Leonard Mountain, Hess Canyon quadrangle [=R. E. King 122].

231. Leonard: Location same as above. Hess Canyon quadrangle [=USNM 7090].

232. Leonard (basal) [=Cathedral Mountain Formation]: On spur N of high point on E side of fault at E end of mountain, 0.45 mile N 8° W of bench mark on Leonard Mountain, Hess Canyon quadrangle.

233. Leonard (uppermost) [=Cathedral Mountain Formation]: Section 24, 1 mile W of Old Word Ranch house, Hess Canyon quadrangle.

234. Leonard (top of Skinner Ranch Formation or base of Cathedral Mountain Formation): Location same as above. Hess Canyon quadrangle [=R. E. King 245].

235. Leonard (uppermost) [=Cathedral Mountain Formation]: Section 24, 1 mile W of Old Word Ranch, Hess Canyon quadrangle.

236. Leonard (basal) [=Cathedral Mountain Formation]: On spur N of high point on E side of fault at E end of mountain, 1.45 mile N 8° W of bench mark on Leonard Mountain, Hess Canyon quadrangle.

237. Word (middle limestone) [=probably Cathedral Mountain Formation]: 2.4 miles S 36° W of Old Payne Ranch, Del Norte Mountains, Monument Spring quadrangle.

238. Word (Third Limestone Member) [=Willis Ranch Member]: Mountain N of Leonard Mountain, S side of Road Canyon, W of divide separating drainage of Gilliland and Hess Canyons, 3.7 miles N 45° W of Skinner Ranch, W edge, Altuda quadrangle.

239. Word (Third Limestone Member) [=Willis Ranch Member]: Capping mountain N of Leonard Mountain, along line of section 18, NE side of hill 5801, 1.63 miles N 53° W of Hess Ranch, Hess Canyon quadrangle.

240. Word (First Limestone Member) [=Road Canyon Formation]: Mountain N of Leonard Mountain, S base of hill 5801, 1.4 miles N 60° W of Hess Ranch, Hess Canyon quadrangle.

241. Word (Second Limestone Member) [=China Tank Member]: Section 23, 1.68 miles S 72° W of Old Word Ranch, NE of Hess Ranch Horst, Hess Canyon quadrangle [=R. E. King 264].

242. Word (First Limestone Member) [=Road Canyon Formation]: 0.75 mile S 69° W of Old Word Ranch on section 24, Hess Canyon quadrangle.

243. Word (Fourth Limestone Member) [=Appel Ranch Member]: E side of Hess Canyon, near northernmost outcrop of formation, Hess Canyon quadrangle [number not on King's map].

244. Word (Fourth Limestone Member) [=Appel Ranch Member]: E side of Hess Canyon, near northernmost outcrop of formation, Hess Canyon quadrangle [number not on King's map].

245. Word (Fourth Limestone Member) [=Appel Ranch Member]: E of hill 5473 on N side of Hess Canyon, Hess Canyon quadrangle [=USNM 715].

246. Word (Fourth Limestone Member) [=Appel Ranch Member]: E side of Hess Canyon near its angle, 1.72 miles N 47° W of Old Word Ranch, Hess Canyon quadrangle.

247. Word (Fourth Limestone Member) [=Appel Ranch Member]: E side of Hess Canyon, near northernmost outcrop of formation, Hess Canyon quadrangle [number not on King's map].

248. Word (Fourth Limestone Member) [=Appel Ranch Member]: E side of Hess Canyon, near northernmost outcrop of formation, Hess Canyon quadrangle [number not on King's map].

249. Word (Second Limestone Member) [=China Tank Member]: Section 23, 1.68 miles S 72° W of Old Word Ranch, NE of Hess Ranch Horst, Hess Canyon quadrangle [=R. E. King 264].

250. Word (First Limestone Member) [=Road Canyon Formation]: 0.75 mile S 69° W of Old Word Ranch on section 24, Hess Canyon quadrangle.

251. Word (Fourth Limestone Member) [=Appel Ranch Member]: On line of section 24, west of Comanche outlier N of Old Word Ranch, Hess Canyon quadrangle.

252. Word (Fourth Limestone Member) [=Appel Ranch Member]: 1.15 miles N of Old "70rd Ranch, E and W of Comanche outlier for a short distance, Hess Canyon quadrangle.

253. Word: [Not listed, number not on King's map; possibly Road Canyon Formation or a mixture]

254. Word (or Leonard): 0.58 mile N 65° E of hill 4627, lower part of hill in a broad valley in NE corner of Hess Canyon quadrangle.

255. Word (middle and upper beds): 0.6 mile N 56° E of hill 4627, hill in middle of broad valley in NE corner of Hess Canyon quadrangle.

256. Word (Second Limestone Member) [=China Tank Member]: [Same as Locality 250].

301. Leonard (midpart of Clay Slide): [=Cathedral Mountain Formation at R. E. King 60.]