

	Feet.
7. Arenaceous and argillaceous slates, black, bluish-black, drab, and yellowish-green. This exposure is extensive, the opportunity for finding fossils excellent, and the slates afford a beautiful matrix for their preservation, but none were observed	700
8. Light-gray quartzite and quartzitic sandstone in layers varying from 10 feet to 2 inches, the thin layers occurring as partings between the more massive bands of layers. In some places the quartzitic sandstone shows grains, and in others they are lost. Stains of purple, iron-rust, reddish-brown, and buff color occur	2,700
9. Black, sandy, arenaceous, slightly micaceous shales	75
10. Gray, compact, quartzitic sandstone	700
11. Purplish and reddish-brown quartzitic sandstone	75
12. Gray, compact, quartzitic sandstone	3,000
13. Hard, silico-argillaceous shales, a little sandy in places	250
Fossils: <i>Cruziana</i> sp. ?, <i>Lingulella Ella</i> , <i>Katorgina pannula</i> , <i>Hyalithes Bilingi</i> , <i>Lepordilia Argenta</i> , <i>Olenellus Gilberti</i> , <i>Ptychoparia quadrans</i> , and <i>Bathyriscus producta</i> .	
Total	12,000

§ 75. A band of mixed sandy and calcareous rocks rests conformably on 13 of the section, and carries a fauna which refers it to the Lower Silurian (Ordovician).

§ 76. The faunal horizon of the fauna contained in the shales of 13 is at once located by a comparison with the faunas of the Highland Range section. Five out of the eight species are identical, and their stratigraphic position in relation to the great underlying quartzite is the same in both sections; *Olenellus* comes first, and then *Lingulella Ella*, *Bathyriscus producta*, &c.

§ 77. The 250 feet of sediment of 13 of the section represent the entire 1,000 feet of Cambrian strata above the quartzite of the Highland Range section that I have included in the Georgia horizon; and the 2,000 to 3,000 feet of the Upper Cambrian of the Eureka and Highland Range sections have no equivalent in the Cambrian section of the Wasatch Mountains. The same condition appears in the Oquirrh Range, next west of the Wasatch, and, from the conformity of the overlying Silurian strata, it appears that during the later Cambrian times there was an area of non-deposition, and as far as known a period of slight or total non-erosion of the Cambrian. The latter statement is largely qualified by the small amount of detailed information we have on the line of contact between the Cambrian and Silurian. That there is a great unconformity, by absence of strata, there is no doubt. One of the most important results of the study of the shales of 13 of the section is the locating of a horizon by which we can compare the section. At Eureka, Highland Range, and Timpahute Range, Nevada, the quartzite of 12 terminated the section below, but now we have 11,750 feet of strata in a conformable series that extend down to the granite (probably Archean).

§ 78. The section in the Oquirrh Range, above Ophir City, shows a