

CHARACTER OF BEDS, THE THICKNESS, &C.

These upper measures consist of very soft, brittle and friable bituminous shales holding <i>Triarthrus Becki</i> , Green and other fossils.	(Shales.) Thirty inches.
Band of hard compact impure limestone teeming with the remains of <i>Conularia Trentonensis</i> , Hall, and holding also <i>Zygospira Headi</i> , Bill, <i>Leptæna sericea</i> , Sow. <i>Orthis testudinaria</i> Dal. <i>Calymene senaria</i> , Con., &c., &c.	(Limestone) One inch.
Zone of <i>Siphonotreta Scotica</i> . Band of black impure bituminous limestones gradually passing into a series of calcareo-argillaceous shales, at other times compact and breaking with a conchoidal fracture, holding abundance of fossils. (See lists.)	(Limestone.) Zone of <i>Siphonotreta</i> . Varies from eight to twelve inches.
Black and brittle impure (calcareo-argillaceous) shales, bituminous and holding the remains of <i>Asaphus Canadensis</i> , Chapman.	(Shales.)
Band of impure limestone.	(Limestone.)
Shales, very bituminous and brittle.	(Shales.)
Band of impure limestone.	(Limestone.)
Brownish-black beds of shales, very brittle and bituminous.	(Shales.)
Two bands of an irregular and unevenly bedded limestone containing <i>Orthocera</i> and other fossils but poorly preserved; limestone dark and somewhat bituminous.	(Limestone.)

From the band of impure limestone holding *Siphonotreta* the following species of fossils have also been found intimately associated therewith:—

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| 1. <i>Batostoma erraticum</i> Ulrich. | 10. <i>Zygospira</i> (probably a new form). |
| 2. <i>Lingula curta</i> , Hall. | 11. <i>Conularia Trentonensis</i> , Hall. |
| 3. " <i>elongata</i> , Hall. | 12. <i>Asaphus Canadensis</i> , Chapman. |
| 4. " <i>quadrata</i> , Eichwald. | 13. " <i>platycephalus</i> , Stokes. |
| 5. <i>Leptæna sericea</i> , Sowerby. | <i>vel megistos</i> , Locke. |
| 6. <i>Strophomena alternata</i> , Conrad. | 14. <i>Calymene senaria</i> , Conrad. |
| 7. <i>Orthis testudinaria</i> , Dalman. | 15. <i>Beyrichia oculifera</i> , Hall. |
| 8. <i>Zygospira Headi</i> , Billings. | 16. <i>Leperditia cylindrica</i> , Hall. |
| 9. " <i>modesta</i> , Say. | |

A mere glance at the fauna which thus characterizes the zone of *Siphonotreta Scotica* in America is sufficient to indicate that the measures whence they came belong to the Utica Formation, in the upper portion of the Cambro-Silurian or Ordovician System. A single hand specimen showed the following interesting association of species:—

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| 1. <i>Siphonotreta Scotica</i> , Dav. | 3. <i>Zygospira Headi</i> , Bill. |
| 2. <i>Leptæna sericea</i> , Sow. | 4. <i>Asaphus Canadensis</i> , Chap. |