

In the exposure of the lower and more calcareous beds of the Cardiff shales, immediately overlying the Stafford limestone at Lancaster the following species of fossils were found by Wood:

<i>Ceratopora dichotoma</i> Grabau	<i>Meristella barrisi</i> Hall
<i>Chonetes lepidus</i> Hall	<i>Pterochaenia fragilis</i> (Hall)
<i>Liorhynchus limitare</i> (Vanuxem)	<i>Styliolina fissurella</i> (Hall)
<i>Atrypa reticularis</i> (Linné)	<i>Orthoceras aegea</i> Hall
<i>Ambocoelia umbonata</i> (Conrad)	<i>Phacops rana</i> (Green)

Tornoceras uniangulare and *Orbiculoidea minuta* are common fossils in this horizon in Livingston and Ontario counties.

Hamilton beds

Skaneateles shale

This term was applied by Vanuxem to the beds immediately overlying the upper Marcellus (Cardiff) shale and exposed on both sides of the north end of Skaneateles lake. It subsequently fell into disuse when the term Hamilton group, employed by Vanuxem for certain beds of shales at West Hamilton, Madison co. had been extended to all the formations lying between the Onondaga and Tully limestones. When recently the State survey found itself compelled to adopt more exact and refined classification of the strata than that hitherto in use, the term Skaneateles shale was reapplied in its original meaning and scope. The Skaneateles shale is the lowest division of the Hamilton beds.

At the base the shales are hard, dark bluish or black and calcareous, passing into somewhat lighter and softer beds above, and containing several rows of small concretions. On the lake shore south of Bay View the division is 40 feet thick. It increases toward the east and has a thickness of 125 feet in Ontario county and of 335 feet in the Onondaga valley in Onondaga county.

The entire section of the Skaneateles shale is exposed in the cliff along the lake shore between the Bay View and Athol roads and along the south branch of Smoke's creek, 1 mile east of Blasdell. The Skaneateles shale also outcrops along the north branch of Smoke's creek $\frac{1}{2}$ mile west of Reserve and along Cazenovia creek $\frac{1}{2}$ mile east of Reserve.

At Blossom, 3 miles beyond the eastern boundary of this quadrangle, a bed of hard limestone 4 feet thick at or near the base of the Skaneateles shale contains many cyathophylloid corals and other fossils. The bed becomes softer toward the west and the corals disappear. It is a shaly limestone where it outcrops on the