

A comparison of the Ithaca and Portage faunas shows that nearly all of the typical Portage species occur, though less abundantly, in the Ithaca fauna. Some of the most abundant species of the Ithaca fauna, *Cyrtina hamiltonensis* and *Strophodonta mucronata*, are present in the Portage. A few of the most distinctive species of the Ithaca fauna as *Cryptonella eudora* and *Spirifer mesacostalis*, are not found in the Portage and the Ithaca shale. The prevalence of the Ithaca shale conditions and the *Lingula* fauna probably led to the shifting of some of the Portage species, since they appear to be absent from the Ithaca shale; with the return of sandy sediments, the Portage species, some of which were thinned almost to extinction, were accompanied by Hamilton species which were probably derived from the east and by others not before known from the New York system, giving rise to the cosmopolitan Ithaca fauna.

An examination of the Chemung fauna also reveals its close relationship to the Ithaca fauna. Several of the species are common to both. There is, however, a smaller per cent. of species common to the Chemung and Ithaca, than of those common to the latter and the Portage fauna. This together with the fact that Portage species occur in the Ithaca group, and that a typical Portage fauna occurs above the Ithaca, seem to indicate that the latter has a closer relationship to the Portage and should be classed in the Portage epoch.

A LIST OF THE MORE IMPORTANT PAPERS AND WORKS CONSULTED IN THE PREPARATION OF THIS WORK.

1838. Hall, Jas. 2d Ann'l Rep't 4th Geol. Dist. of N. Y., pp. 287-373.
1839. Conrad, T. A. 2d Ann'l Rep't Geol. Surv. of N. Y., vol. iii, pp. 57-60.
1841. Conrad, T. A. 5th Ann'l Rep't on the Paleont. Dep't, Geol. Surv. of N. Y., vol. v, pp. 25-57.
1842. Conrad, T. A. Obs. on Sil. & Dev. Systems of U. S., with descriptions of new organic remains; Jour. Acad. Nat. Sci. Phila., vol. viii, part ii, pp. 228-280.
1842. Hall, Jas. Explanation of two sections at Portage; Amer. Jour. Sci., vol. xlv, pp. 329-330.
1843. Hall, Jas. Surv. 4th Geol. Dist. of N. Y., pp. 224-227, 414-449.
1846. De Verneuil, Ed. Note sur le parallélisme des roches