

cuted by the United States Coast and Geodetic Survey for the control of its coast work. For the eastern part of the state, including all the Atlantic coastal plain, this triangulation is adequate for control. Its points are sufficiently numerous and well distributed. It does not, however, extend west of the Blue Ridge at Harper's Ferry. Thence westward the United States Geological Survey found it necessary to extend triangulation for the control of its work, and owing to the difficult character of the country, this extension of triangulation was quite expensive, especially in the western counties comprised in the Alleghany plateau.

From these primary triangulation points secondary points were determined by triangulation with the plane-table, wherever it was practicable to do so, but outside of the mountain and piedmont regions the level character of the country precludes this method of making locations.

The roads, railroads and other minor features were located by traverses run by plane-table, connected at as frequent intervals as possible with triangulation points for the elimination of cumulative errors. Measurements of elevations for the location of contour lines were carried on by vertical angles, measured upon the vertical circles of theodolites, by spirit-level lines, and, for details, by aneroids.

The sketching of topography was carried on in the main in connection with the running of traverse lines.

The work of mapping the state was commenced at the western extremity, in Garrett county, and was carried generally eastward. The first work done was by a party in charge of Mr. S. H. Bodfish. Subsequently, upon the failure of Mr. Bodfish's health, Mr. W. T. Griswold took charge of the party and carried on the work during the latter part of the season of 1883 and the seasons of 1884 and 1885. In 1886 Mr. Merrill Hackett made a revision of the area surveyed by Mr. Walling, adding cultural details. In 1887 the Baltimore, East Washington and West Washington quadrangles were surveyed, the former by Mr. S. H. Bodfish, the latter by Mr. D. J. Howell. In 1888 the Frederick quadrangle was surveyed by Mr. Hackett. In 1890 and 1891 the quadrangles on the west shore of Chesapeake Bay were