The Catskill High Peaks (58y), capped by erosion-resistant sandstones and conglomerates, form a prominent feature in the eastern part of the state. The highest peak is Mount Marcy, with an elevation of 5352 feet. Red spruce, balsam fir, and yellow birch are the most abundant tree species in this region. Other notable species include black-backed woodpecker, blackpoll warbler, red-backed vole, and snowshoe hare. The foothills have a more rounded and rolling profile than the upended Taconic Mountains (58a), which are part of the Appalachian system. Appalachian oak forest is found on drier slopes, while northern hardwood-conifer forest predominates on moist slopes, ravines, and valleys. The region is known for its diverse collection of fish and mussels, some threatened or endangered.

The Champlain Lowlands (83) include the Champlain Valley, which extends from the Canadian border to Lake Ontario. The Mohawk River flows north to the St. Lawrence River (e.g., the Salmon, St. Regis, Raquette, and Oswegatchie rivers). This region is characterized by a generally flat landscape with glacial outwash channels. The volcanic intrusions known as trap rock create dikes and palisades in the area, adding to the diversity of the landscape.

The Lakeshore Ecoregion enters the region below Lake Ontario and includes the eastern end of Seneca Lake, Cayuga Lake, and Keuka Lake, all of which are part of the Finger Lakes. The region is bordered by the Rensselaer Plateau and includes portions of Massachusetts' Wasatch and Uinta Mountains. The Rideau River, which flows into Lake Ontario, is a significant feature of the ecoregion. The eastern part of the region is called the Eastern Great Lakes Lowlands (81). The Oswegatchie River is one of several major river systems that flow through this area. The region is known for its diverse wildlife, including species that are endangered due to farmland clearing and urban and recreational development pressures.