

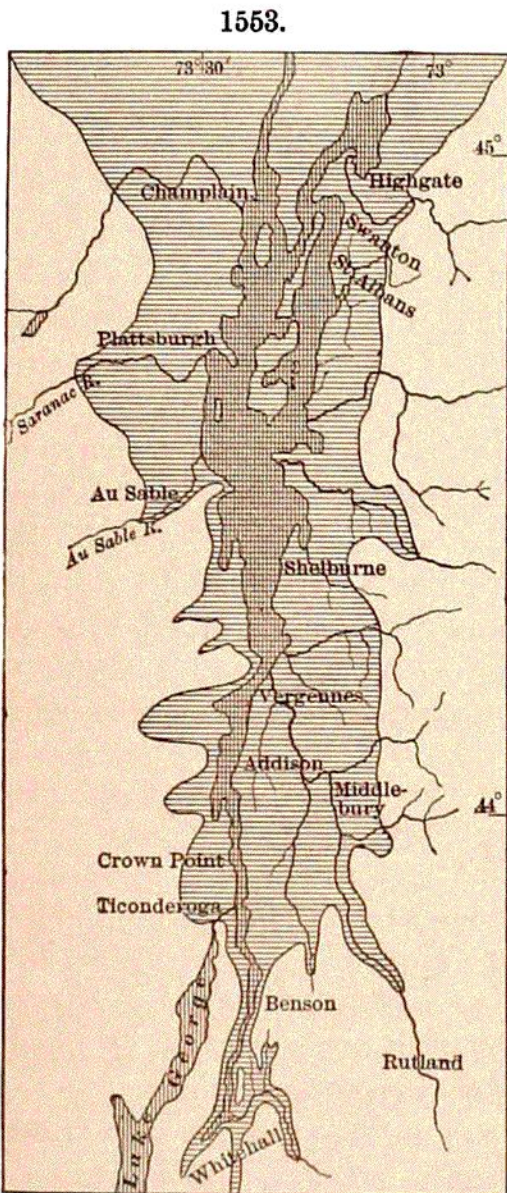
height northward, to 260 feet at a distance of 200 miles from Long Island Sound.

Again, at the mouth of Hudson River, according to F. J. H. Merrill, there is evidence of a Champlain subsidence of 70 feet; 35 miles up the river, at Croton Landing, of 100 feet; 50 miles up, of 180 feet; 140 miles up, about Albany, of 335 feet. Farther north the divide between the Albany plain and that of the Champlain region, was evidently covered for awhile by fresh water as stated by S. P. Baldwin; and hence the rise in level along the Hudson may be regarded as continued along Lake Champlain. A reduced

copy of a map of Lake Champlain of the Champlain period is here inserted from a paper on the terraces of the lake by Baldwin (1894). On the southern part of the lake, at Benson Landing, terraces extend to 370 feet; at Orwell, 410 feet; at Charlotte, Vt., near the middle of the lake, 415 and 450 feet, and they contain marine shells; at St. Albans, near its north end, 500 feet. Marine shells occur in the terraces of the Vermont side to Addison, or through the northern two thirds of the lake, and at Plattsburgh on the west side.

On the St. Lawrence, near Montreal, 30 miles distant in a nearly north direction from Lake Champlain, shell-beds occur at 520 feet; and up the St. Lawrence, according to Dawson, nearly to Lake Ontario, west of Lake Champlain, at 600 feet. The increase in the height of the terraces northward, as well as landward, is here apparent.

But these heights of beaches and terraces represent but a small part of the actual change of level. For the land in the *preceding* period stood higher than now. Adding to the above the minimum estimate of that elevation, the actual amount of subsidence for southern New England is 160 to 170 feet; for the coast



Map of Lake Champlain in the Champlain period (transversely lined), with the existing lake (cross-lined).

of Maine, 1000 feet or more; at Montreal, 1500 feet at least, and 1200 feet or more for the Lake Champlain region. A similar addition is required also for the deductions from the heights of all terraces and beaches, including those of the region of the Great Lakes. The facts prove that ice barriers were not concerned in making limits for the lakes; for the ice had retreated