typical barrens, including one on Miscou island, one at the head of Saint Simon inlet, and one near Point Escuminac. Natural cross sections of these bogs, cut by the sea, were inspected, and many soundings were made with a Davis peat sampler, with the expectation that the deposits would prove to extend to a considerable depth.

On Miscou island, half a mile inland from Miscou point, at a place where the surface of the barren is about ten feet above high tide mark, the sounding instrument penetrated decayed sphagnum to a depth of thirteen feet, where it struck something hard. Another group of borings 150 feet away from the first one, at the edge of a tidal "pond," gave the following section:—

Surface; typical salt marsh, with *Juncus gerardi* (?) the dominant grass; at mean high tide.
0 to 6 inches; brown, spongy peat, containing very little sediment, with many vertical fibres (salt marsh).
6 to 12 inches; brown, very compact, woody peat, without sediment; splits horizontally.
12 to 18 inches; reddish brown, very soft, fibrous peat (sphagnum).
18 to 24 inches; no core (frequently the case in boring through soft sphagnum deposits).
24 to 30 inches; same rotten, reddish brown peat.
30 to 36 inches; stiffer, rather firm, reddish-brown peat.
36 to 42 inches; brown, slippery, muddy peat in upper two inches, followed below by watery mud.
42 to 48 inches; muddy brown sand, with hard, gritty sand below, through which the sounder could not be driven.

The significant points about this section are: (*a*) that the salt marsh is merely a thin veneer over the bog peat. This agrees with the physiographic evidence that this "pond" is one of the numerous fresh-water pools on the barren, which has very recently been invaded by an advance of the sea, cutting back the cliffs into one end of it; (*b*) that the sphagnum deposit extends to a depth of only three feet and a half below mean high tide. This much submergence does not prove coastal subsidence. The bog may have grown up in a basin whose floor, although below high tide mark, was above mean tide level, and whose water, consequently, was fresh, and supported fresh-water vegetation. Later, as the sea cut its way into the pond and flooded it to high tide mark, opportunity came for a salt marsh deposit to form on top of the fresh peat, around the border of the pond.