

of gravel and coarse sand enters into the construction of the delta proper. Over the bottom of the lake or bay the clays carried out in suspension are constantly coming to rest at distances from the delta margin determined by the presence and velocity of the currents and the time taken for the particles to fall through the water. For some distance over the bottom in the path of the stream-made current, the finer particles of sand which have not at once been drawn by gravity down on the delta talus will come to rest, forming a deposit of very fine sand extending outward from that part of the base of the delta. Around the remaining portion of the area confronting the delta base, clays will deposit as elsewhere over the floor of the water body. In the course of

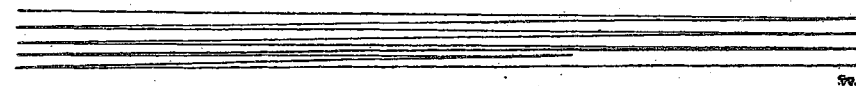


Fig. 22 Cross-section of interstratified clay and sand on lake or bay bottom in advance of a delta

a few days or weeks or months, dependent on velocity, load, and the area of its delta fan, the stream will have moved laterally across its delta to the opposite side. The fine sands will now have been deposited over the entire area in front of the delta base while clays will have been deposited on that side where sand was previously going down. Still later, the stream will have swung back to the left of the delta and sands will be depositing along that portion of the basin floor, while clays are deposited over all the area on the right. The stream thus swings to the left and right of its delta, strewing fine sand over the bottom in advance of the delta. These changes will continue so long as the stream is building up its delta and the water body is unfilled with sediment. There will thus be built up on the floor of the basin an alternation of layers of clay and fine sand, whose stratification seen in a cross-section drawn transverse to the axis of the delta will be that shown in figure 22, in which the black line represents the sand layers, the white banding, the clays.

Where the stream halts, the sand layer will be thicker than where the stream has moved steadily along in its lateral motion. At the extreme right and left, where the stream has halted and turned back on its course, the sand bands should be thicker than in the middle of its shifts.