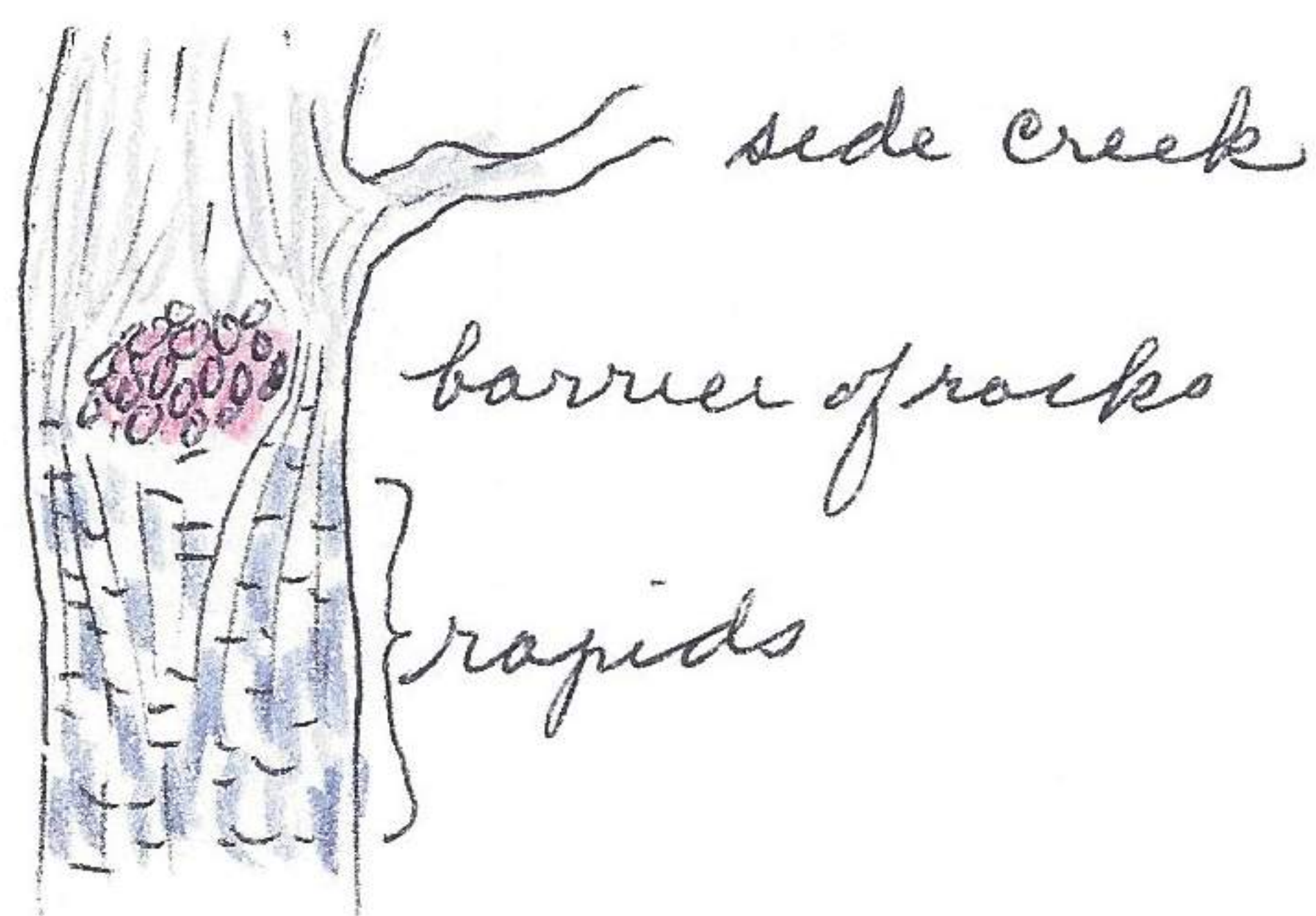


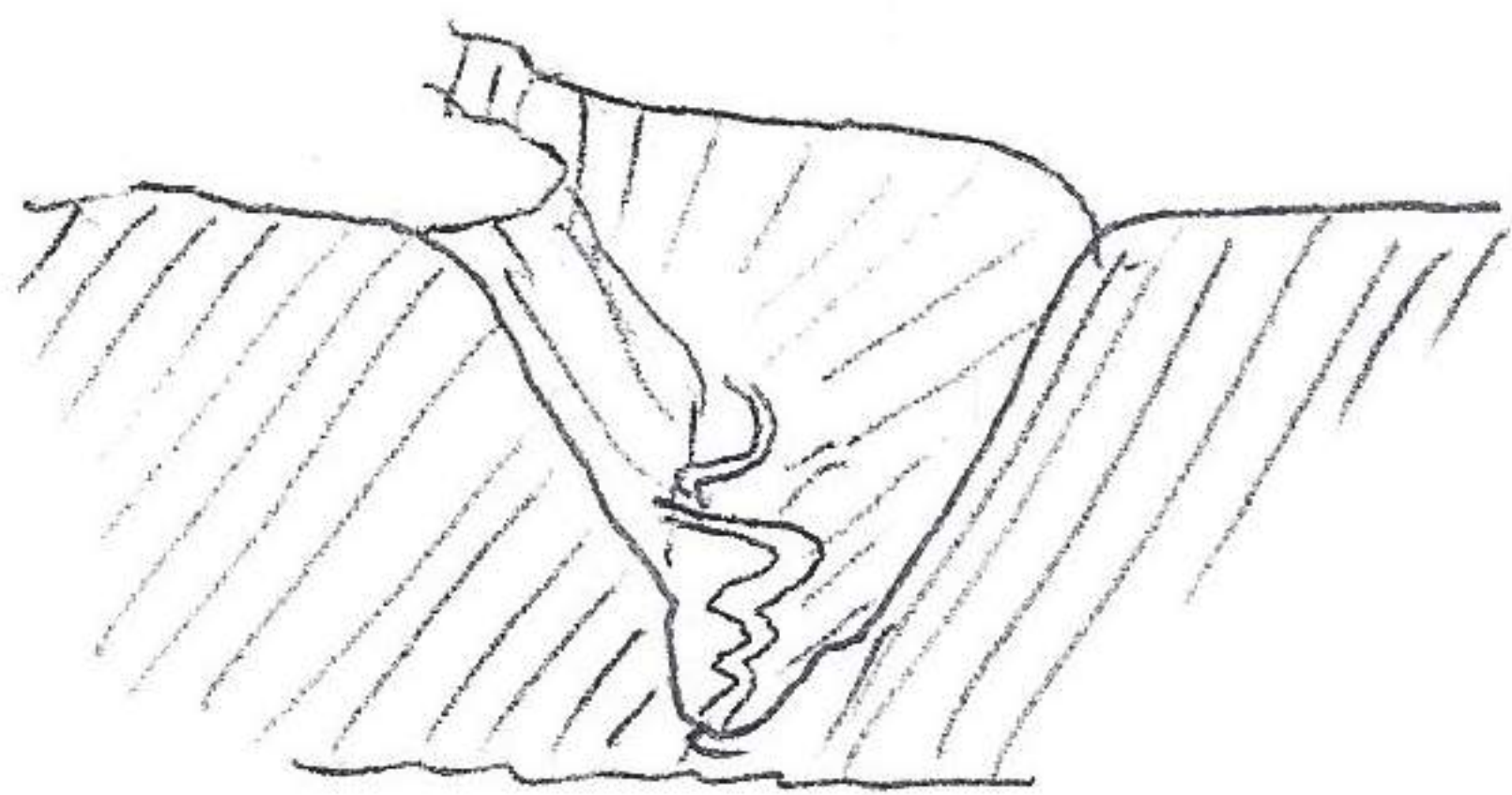
lightning, strong wind for short while and then rain showers into late night. Morning of 11th sky clear & blue, temp cold, no wind but fallowed by sudden clouding of sky in mid-morning fallowed by cold rain, sleet and considerable wind. At noon skies partly cleared and high wind for rest of day. The wind is only partly felt in low entrenched creek except on long exposed course.

Departed Richland (bridge) at 7:30 A.M. 8:23 A.M. first ~~cascades~~ ^{rapids} below a rock barrier placed in Wakarusa river by creek entering from the north. This was to be the pattern of many ~~cascades~~ rapids encountered today. The



limestone boulders are deposited about 10-20 feet downstream from ^{individual north} mouth of small creek and may be a few inches high or 3 or more feet. Size of rocks are governed by the carrying capacity of the side or lateral streams. The barrier is generally in center

of stream and water passes on each side. The profile of these creek are a V shape and are graded to ^{low water level of the} the Wak-



arusa (larger ones). Smaller ones enter at a steeper grade.

8:26 A.M. G.H. owl left tree and flew down creek. 8:34 18 ducks fly by overhead but had no intention of using river. 8:50 2nd rapids, 3

crows beyond trees and annoying 2 great horned owls. 9:15 4th cascade. 9:30 now along base of cliffs on south side of valley. In the heavily timbered area along south side of valley noted a colony of great blue heron nests placed in three adjacent sycamore trees on south side of river. Largest tree with 16 nests, second largest 6 nests and smallest 1 nest. The nests all in upper and generally outer branches of tree nesting tree in secluded woody section and not at all like those in the west which are in isolated stands of trees. 15 minutes beyond hut on switchback of creek noted one single nest in a tall sycamore. It would have been easy to have missed this nest in summer. 9:48 1 great horned owl harassed by 16 crows. 11:00 first

