

shale and directly above, mainly from rains of last night. This same level supported ice and icicles earlier this season. Cardinal and 3 crows here. 8:10 noted a small snake 10 inches in length at 4 inches above the water level. It was torpid and barely able to move up slope because of temperature. air 58, water 51°F. This snake was not *Thamnophis* but probably *Natrix*. 8:28 drainage left about 8' wide and water 2' deep and flowing. Chickadee 3, 2 crows, cardinal. 8:37 great horned owl, 3 cardinals, 4 crows chasing the owl. 8:40 drainage right. 1 titmouse, 4 chickadees, 1 cardinal. 8:45 opis of bend (just off lower edge of map). 4 cardinals, 2 vultures, 3 crows. 8:53 6 cardinals. The wounded mallard of yesterday, left water down-stream. robin, mourning dove. Flock 80 redwing blackbirds mainly ♂♂. 8:56 old bridge (raised). redtail, great horned owl, 5 cardinals, 3 chickadees. 9:00 bedrock and good rapids. 9:03 2 large adult beavers left debris 2 feet above level of water. 4 bluejays, 5 cardinals. 9:06 at bend just above no 12 of USGS map. ^{injured} mallard left water. Flock 9 grackles and 4 redwing blackbirds, 4 cardinals, 3 chickadees, 2 redbellied woodpeckers. 9:12 4 redbellied woodpeckers, 3 cardinals, Carolina wren, 2 song sparrows. Clouds obscuring sun and becoming very dark. 9:20 3 cardinals, 2 bluejays, 1 turkey vulture. 9:20 good rapids and good area for unionids (best so far) at section line intersection with river. 2 song sparrows. 9:22 Cardinal, 2 mourning doves, song sparrow. 9:50 Cedar Creek, ^{injured mallard (9 miles from first contact)} On last straight stretch counted 4 song sparrows (2 groups 2 each), 4 pairs redbellied woodpeckers, 9 chickadees (3-6), 15 single cardinals, 2 redtails together, 1 great horned owl. For last 15 minutes it has been raining but now temporarily stopped. 10:05 Valley Falls bridge, having covered approx 5 miles from Camp and 7 1/2 miles from Half Mounds or 20 1/2 miles from Muscatash. Continues down stream under ^{old + new} railroad bridge. Water in river thru this area seemed higher, ^{+ faster} than usual and not much of a choice of slower water. I could see that the left hand side of river was running too fast with turbulence and fast water against the bank, so chose to run the right or west side. Here the water was fast but there were no particular turbulent ^{waters} or major barriers. 10:10 After committing myself to a particular course starting down the 2/10 mile long rapids. The following diagrams indicate the details of swamping the course on this run, a swamping that occurred within 5 seconds.