

circled over the Low Valley for at least 7 times. The geese  
 separated and 50% continued n out of sight the other 50%  
 are circling the Rock Creek - Gap Point area. <sup>4:43</sup> A flock (1/2 mile  
 long) flew from E to W over reservoir at about Gap Point area and  
 estimate 10,000 individuals. 4:45 to 4:50 a period of  
 stable numbers at main aggregate. 4:49 Snows and blues  
 returning from the n. On the entire time I have been in this  
 area have observed only 6 ring-billed gulls and the 1 Glaucous.  
 These gulls are generally singles and just passing by. 4:54  
 shadows from W ridge about 1/2 way from ridge to main  
 aggregate of mallards. Sun about 10-12 minutes above horizon.  
 4:59 shadow now at aggregate and placing all mallards in  
 shadow. At this point in time and shadow change, there  
 was an abrupt change in the direction of departing ducks.  
 up to 4:59 all ducks were arriving and departing from and to  
 the SW. At precisely the time the sun disappeared from the  
 aggregate of mallards, there was a decided change in the direction  
 of departing birds. They now are flying directly n where they  
 gain an elevation of about a hundred feet and then gliding  
 down to the open water in the Gap Point area. This new  
 direction was instantaneous and the ducks left in a con-  
 tinuous flow without interruption. This behavior was  
 in contrast to the flight to the SW when groups would leave  
 as by ~~erratic~~ <sup>erratic</sup> external motivation followed by periods of  
 quiescence. In other words the flight after the shadows  
 appeared (or disappearance of sun) seemed a more instinctive  
 behaviorism and not influenced by external influence.  
 These ducks that flew n always appeared to be farther n of  
 than the Gap Point open water than they actually were. The  
 birds appeared to be at least 3/10 of a mile beyond the open water  
 at the time they started their glide to the pond from the S.  
 Although mallards are moving n there is still mallards arriving  
 from the SW to the main aggregate. 5:02 The bald eagle was  
 first seen flying n just beyond the main aggregate but did not  
 investigate the raft. It flew to north pond, inspected it and then  
 flew W. A lone Canada left main raft and flew SW. 5:07  
 28 Canada geese left main raft and flew SW. Sun now off  
 outlet gates & ridge to E of lake. 5:10 Mallards still leaving  
 at regular ~~intervals~~ <sup>intervals</sup> and flying to north pond. Incoming  
 ducks slowing down. 5:15 incoming ducks about 50 per  
 minute; ducks flying to n in continuous flight. 5:16 approx 1000