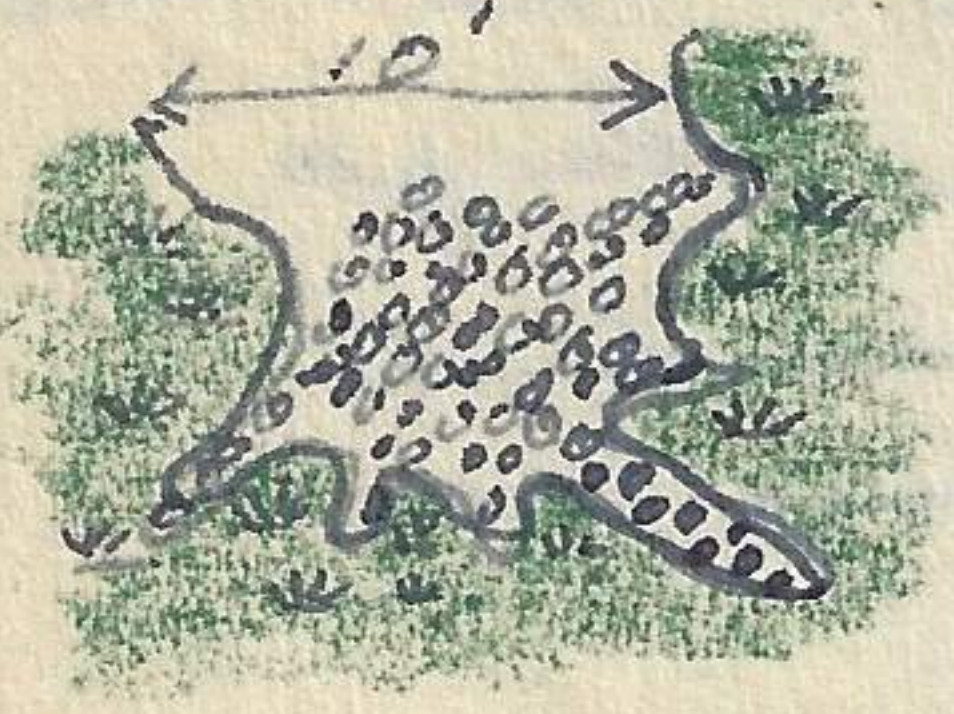


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sandhills, ^{were still in} the field. One of them was running back and forth between the other two and fanning each one with a partial nuptial dance. One of the two favoured reacted sometimes. The marsh hawk was seen all day but at times not visible. It used the entire marsh area. The roven seem to have left the marsh but have noticed that occasionally they were flying across the area during other parts of the day. noticed one area that had been worked by the rats and suggest that they were responsible for the formation and establishing of the small ponds. The area was being dried and had left an old pond with about $\frac{1}{4}$ inches of water. The muskrats had enlarged this pond by pulling the roots of the scirpus and scattering them in long trailing patches behind.



Mr. Harrison says that if the rats become too numerous they will completely devastate the plant life. The rats also keep large channels thru the scirpus. They are not noticed in many cases but can be told by the higher growth of scirpus. The bottoms are solid and afford a way thru an otherwise impassible mass of sedge. Some of these large $1\frac{1}{2}$ feet trails support fast moving water that comes from the main creek. The rats are also responsible for the many subterranean water chamber adjacent the creek edge. Measured one sandhill.

Crane foot as follows. At 8:45 two sandhills still remained in the grain field. At 9:05 a curlew called for first time this morning. Occasionally a western yellowthroated rail, one definitely from a Tragopogon patch. No marsh wrens in evidence. At 9:05 noticed that there were no sandhills in fields. In following up the creek to head noticed that very few ducks used it except a few lost (?) and a pair of sleeping mallards. The ♂ mallard noticed me at 28 feet and swam out into the creek to remain at 30 feet. The ♀ continued to sleep until I disturb her. Mrs. Harrison had three young 5 day old mallard duck and am wondering if this pair of mallards could have been their parents and were shaking off their sorrows by sleeping. At 9:15 two sandhills were observed flying east as if from the grain fields. They lit in marsh and remained alert for 4 minutes before they started to feed. They remained about 20 feet apart. As they fed they could not be seen but only when they took their periodic survey of the land. Two curlews fed in waters among alkali coated desulphing grasses and junipers. They flew & sailed 80 feet and after making a deliberate landing started to feed again. Some of these forms at Fish Springs appear to be harder than the birds in other areas of the state. Back to camp at 11:00 A.M. The birds now seem less active and fewer in evidence. Marsh pleasant and without mosquitoes. Sky cloudless but cool. A small biting black fly outside of marsh. Particularly noticeable on hillside. While at camp for dinner Mrs. Harrison reports the