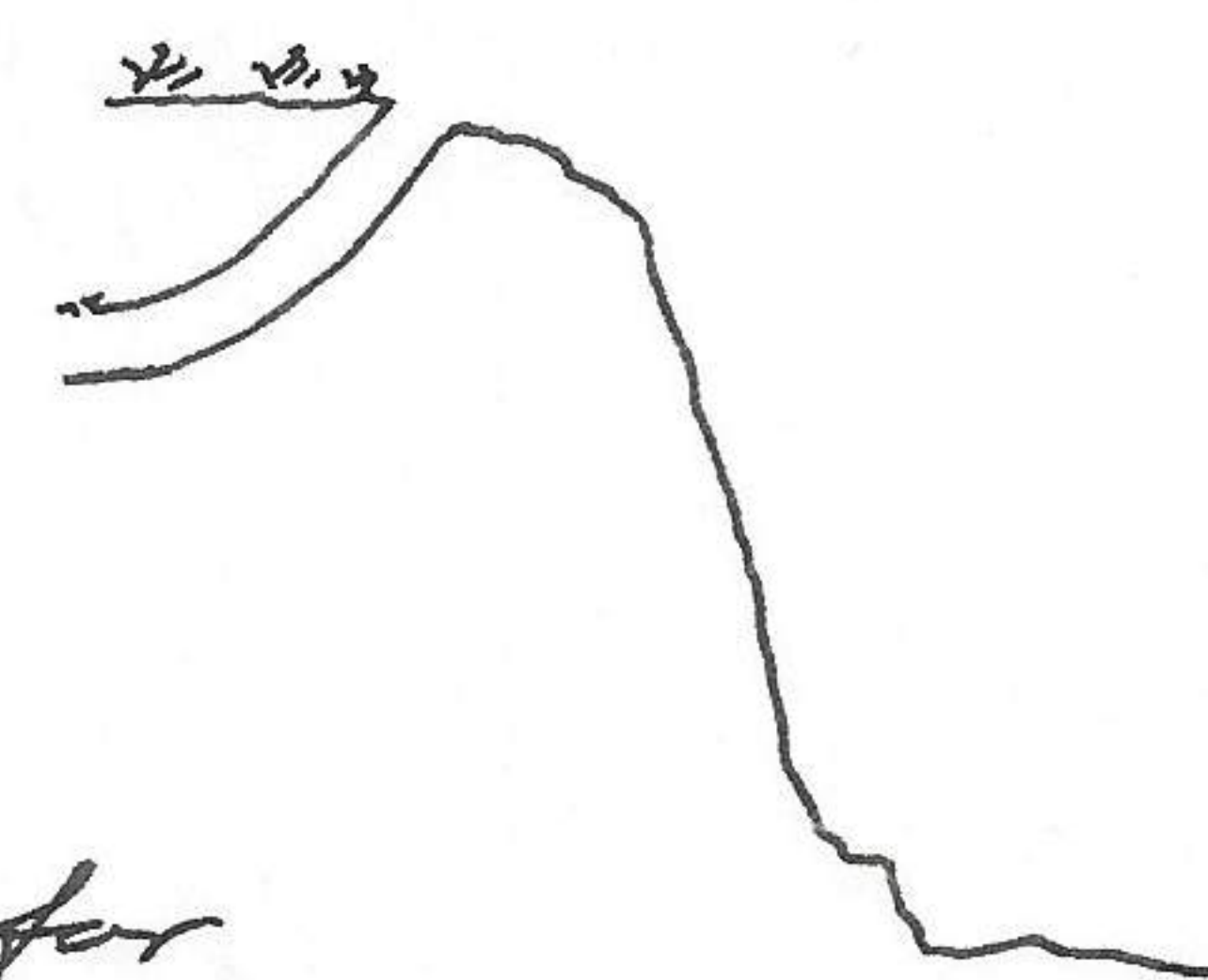


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One nest which was isolated (3 feet) from ^{another nest} 680509-50 held one fresh egg and one egg on outside of hole in sand 4 feet below. There is a tendency for fracture systems to be elevated. One example: area between holes continuously pecked. Except for a recently dug hole at top and toward the east end of colony, there was no other sign of predators concerned with the colony. A fox track was in sand at edge of river but it did not inspect colony. Excrement of swallows increased in amount from occasional dropping at edge of water to a frequency of 1 per every 4 inches at base of cliffs. The dry appearing sands associated with active elevation had now merged into general caliche of sands. The hole at top of cliff is most likely a coyote but there were no tracks of any kind of animal associated with the hole.

It is a beaver, is a most unlikely place. The diameter was about beaver size. In the immediate area of the colony noted a spotted sandpiper, an eastern kingbird that made contact with water of river on 4 occasions either for pecking up insects or drinking; it flew \rightarrow across river, 2 pairs of dickcissels, ^{Indigo bunting in plowed field.} 2 pairs savanna sparrows δ & f , δ & f Baltimore Oriole (some 1/10 or more miles from trees) feeding on insects of weeds song sparrow in log pile below with ruffled feathers of head.



at edge of bank. They flew out and around as I passed by and also on return. These birds were in short weeds in a corridor of 10-15 feet between the bank and cultivated fields to S and E. The following birds were noted in the river bottoms and sidehill forests at the edge of the valley associated with the general area of the colony: dickcissel, eastern flycatcher, spotted sandpiper, bank swallow, blue jay, Baltimore Oriole, redtail, meadowlark, mourning dove, redtail hawk, grackle, redwing blackbird, red-bellied woodpecker, downy woodpecker, Eng. sparrow, Indigo bunting, savanna sparrow, chipping sparrow, lark sparrow, song sparrow, pewee, cardinal, black capped chickadee, titmouse, cowbird, starling, robin, Swainson thrush, brown thrasher, crow, turkey vulture, barn swallow, loggerhead shrike, horned lark, mockingbird, eastern bluebird, bobwhite, goldfinch, sparrow hawk,

Lawrence, Douglas Co., Kansas

May 17, 1968

Rose-breasted grosbeak on campus and feeding low in elm tree.

May 18, 1968

There is a sequence of appearance of parts of pine tree influence and leaf development and one should test this sequence by placing a capture basin under the tree. This terminal evidence may be more meaningful than initial development of flower & leaf forms. This type of information would test cone development, leaf shedding, cone shedding etc.