

SPRING MEETING

REMEMBER: THE ANNUAL SPRING MEETING OF THE K.O.S. SOCIETY WILL BE HELD IN MANHATTAN, KANSAS, MAY 7 AND 8. THE CLUB WILL BE THE GUESTS OF DR. ZIMMERMAN AND KANSAS STATE UNIVERSITY. ALL MEMBERS ARE URGED TO ATTEND AND TO BRING THEIR FRIENDS.

## SOME ARRIVAL DATES FOR BIRDS IN LAWRENCE, KANSAS

|                     |      |                    |      |                      |      |
|---------------------|------|--------------------|------|----------------------|------|
| PIED-BILLED GREBE   | 3/21 | RING-NECKED DUCK   | 3/10 | AUDUBON'S WARBLER    | 3/2  |
| WHITE-FRONTED GOOSE | 3/21 | CANYASBACK         | 3/20 | RED-WINGED BLACKBIRD | 2/12 |
| SNOW GOOSE          | 3/9  | LESSER SCAUP       | 3/10 | RUSTY BLACKBIRD      | 3/13 |
| MALLARD             | 2/20 | COMMON GOLDENEYE   | 3/27 | COMMON GRACKLE       | 3/16 |
| GADWALL             | 3/21 | BUFFLEHEAD         | 3/21 | BROWN-HEADED COWBIRD | 3/8  |
| PINTAIL             | 2/20 | COMMON MERGANSER   | 3/21 | SAVANNAH SPARROW     | 3/17 |
| GREEN-WINGED TEAL   | 3/21 | AMERICAN COOT      | 3/21 | FIELD SPARROW        | 3/3  |
| BLUE-WINGED TEAL    | 3/27 | KILLDEER           | 2/20 | FOX SPARROW          | 2/20 |
| AMERICAN WIDGEON    | 3/17 | GREATER YELLOWLEGS | 3/29 | LINCOLN'S SPARROW    | 2/24 |
| SHOVELLER           | 3/17 | MOURNING DOVE      | 2/21 | SWAMP SPARROW        | 3/10 |
| WOOD DUCK           | 3/21 | EASTERN PHOEBE     | 3/17 | LAPLAND LONGSPUR     | 2/13 |
| REDHEAD             | 3/21 | PURPLE MARTIN      | 3/24 |                      |      |

THE UNUSUALLY COLD WEATHER DURING THE MONTH OF MARCH APPARENTLY RETARDED THE ARRIVAL OF MANY SPECIES.

## HYBRID BIRDS IN KANSAS

ANIMAL SPECIES ARE THE FUNDAMENTAL UNITS THAT ARE STUDIED BY BIOLOGISTS. YET, SOMETIMES IT IS DIFFICULT TO RECOGNIZE WHAT A SPECIES IS. MOST STUDENTS OF BIOLOGY HAVE FOUND IT USEFUL TO DEFINE A SPECIES AS A POPULATION OF ANIMALS THAT FREELY INTERBREEDS IN THE WILD. WITHIN SUCH A POPULATION THERE IS, HOWEVER, NATURALLY-OCCURRING VARIATION. ANYONE WHO HAS STUDIED ANIMALS KNOWS THIS: SOME SQUIRRELS ARE LARGER THAN OTHERS; SOME CARDINALS ARE REDDER THAN OTHERS; SOME MICE HAVE LONGER TAILS THAN OTHERS. MANY OF THESE VARIATIONS CAN BE INHERITED AND CAN BE PASSED ON FROM GENERATION TO GENERATION. WHILE CERTAIN TYPES OF VARIATION MAY BE HARMFUL OR LETHAL, IN GENERAL, VARIATIONS ARE VALUABLE TO A SPECIES BECAUSE THEY MAKE THE SPECIES FLEXIBLE ENOUGH TO ADAPT TO NEW OR CHANGING ENVIRONMENTS. THUS, IF THERE IS A GENERAL COOLING TREND, AND IF LARGER ANIMALS SURVIVE LONGER IN COOLER ENVIRONMENTS THAN DO SMALLER ANIMALS, LARGER ANIMALS WITHIN THE POPULATION WILL TEND, IN TIME, TO REPLACE SMALLER ONES. FURTHER, IF GROUPS OF INDIVIDUALS FROM A POPULATION IMMIGRATE TO A NEW REGION, THE IMMIGRANTS ARE LIKELY TO ENCOUNTER CLIMATIC AND BIOLOGICAL CONDITIONS DIFFERENT FROM THOSE USUAL FOR THE SPECIES. THE NEW IMMIGRANT GROUP WILL TEND TO BECOME DISTINCT FROM THE ORIGINAL GROUP AS CERTAIN VARIANTS THAT ARE PECULIARLY ADAPTED IN SOME WAY TO THE NEW ENVIRONMENT ARE SELECTED FOR. AFTER TIME, THIS IMMIGRANT GROUP MAY BECOME SO DISTINCT THAT PEOPLE STUDYING THEM MAY NAME THEM AS DIFFERENT SPECIES. HOWEVER, SUCH A PROCESS OF DIVERGENCE IS GRADUAL, AND EVEN BY STUDYING TWO POPULATIONS OF ANIMALS AT THE SAME TIME, IT IS NOT ALWAYS EASY TO DETERMINE WHETHER THE TWO POPULATIONS ARE TWO SPECIES OR MERELY UNITS OF ONE SPECIES. IF THESE TWO POPULATIONS HAVE SECONDARILY COME TO OCCUPY THE SAME GEOGRAPHICAL RANGE, HOWEVER, HYBRID INDIVIDUALS CAN BE LOOKED FOR. IF SUCH HYBRIDS, OR INTERMEDIATE INDIVIDUALS, ARE COMMONLY FOUND, THEN MOST BIOLOGISTS CONSIDER THAT THE TWO GROUPS BELONG TO THE SAME SPECIES. THIS DECISION IS SOMEWHAT ARBITRARY, BUT NONETHELESS SEEMS TO BE A USEFUL WAY TO GROUP THE ANIMALS.

IN KANSAS, MANY GROUPS OF BIRDS HAVE, IN THE PAST, BEEN GEOGRAPHICALLY DIVIDED INTO SEPARATE EASTERN AND WESTERN POPULATIONS. MANY OF THESE HAVE BECOME QUITE DISTINCTIVE, EVEN IN THE FIELD: THE YELLOW-SHAFTED AND RED-SHAFTED FLICKERS; THE BALTIMORE AND BULLOCK ORIOLES; THE INDIGO AND LAZULI BUNTINGS; THE ROSE-BREADED AND BLACK-HEADED GROSBILLS; THE RED-EYED AND SPOTTED TOWNEES. ALL OF THESE APPARENTLY CLOSELY RELATED SPECIES HAVE RECENTLY COME TO OCCUPY SOME COMMON GEOGRAPHICAL RANGE IN KANSAS AND HYBRIDIZE IN THE STATE TODAY. THUS, WHILE THESE SPECIES APPARENTLY HAD SEPARATE RANGES IN THE PAST, AND APPARENTLY DEVELOPED DISTINCTIVE PLUMAGES WHILE THEY WERE SEPARATE, THEY DID NOT DIVERGE ENOUGH TO RETAIN THEIR DISTINCTIVENESS ONCE THEY SECONDARILY CAME TO OCCUPY THE SAME RANGE.

THE BULK OF THE HYBRIDS BETWEEN BALTIMORE AND BULLOCK ORIOLES OCCUR IN A ZONE BETWEEN THE RANGES OF THE "PURE" BALTIMORE AND BULLOCK TYPES. WITHIN THIS ZONE OF HYBRIDIZATION, THERE IS A GRADUAL CHANGE FROM BULLOCK-LIKE TO BALTIMORE-LIKE INDIVIDUALS AS YOU MOVE FROM WEST TO EAST. HOWEVER, HYBRID ORIOLES OR BULLOCK ORIOLES ARE RARE IN EASTERN KANSAS. THE HYBRID ZONE OF THE FLICKERS, ON THE OTHER HAND, IS NOT SO DISTINCT. CERTAIN FLICKERS THAT BREED IN EASTERN KANSAS AND "PINK-SHAFTED", AND MANY FLICKERS THAT BREED IN WESTERN KANSAS ARE APPARENTLY "PURE" YELLOW-SHAFTED. THESE DIFFERENCES IN THE HYBRID ZONES MAY REFLECT THE DIFFERENT HABITS OF THE SPECIES OF BIRDS INVOLVED, OR THEY MIGHT INDICATE THAT FLICKERS HAVE BEEN HYBRIDIZING IN KANSAS FOR A LONGER TIME THAN HAVE ORIOLES. BIRDMATCHERS IN KANSAS SHOULD BE ON THE LOOKOUT FOR HYBRID BIRDS, FOR THESE ARE INTERESTING AND THEY MAY TELL US SOMETHING ABOUT THE NATURE OF THE SPECIES INVOLVED.

WE SOLICIT YOUR NOTES ON THE SPRING MIGRATION.—J. D. RISING, ASS'T. ED.