NEWSLETTER

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COLLECTING SPECIMENS

RECENTLY, SOME OF US WORKING IN MUSEUMS ON PROBLEMS OF EVOLUTION IN BIRDS HAVE BEEN ASKED QUESTIONS WHICH, IN ESSENCE, MAY BE SUMMARIZED AS FOLLOWS: WHY DO YOU KILL SO MANY BIRDS? THE MOTIVATION FOR PUTTING SUCH A QUESTION ALWAYS VARIES WITH THE INDIVIDUAL ASKING IT, BUT THE SEVERAL MOTIVES CAN ALMOST ALWAYS BE PLACED IN THE FOLLOWING LIST OF THREE. (1) COLLECTING SPECIMENS OF BIRDS IS THOUGHT TO UNDULY DEPRESS POPULATIONS (OR TO BE AN UNNATURAL CAUSE OF MORTALITY TO WHICH POPULATIONS ARE NOT ADAPTED); (2) THE KINDS OF KNOWLEDGE THAT CAN BE GAINED FROM SPECIMENS ARE THOUGHT TO BE WON FROM EXTANT SPECIMENS, OBVIATING FURTHER COLLECTING; (3) KILLING IS THOUGHT TO BE ETHICALLY INDEFENSIBLE AND MORALLY WRONG.

IT IS THE PURPOSE OF THE FOLLOWING REMARKS TO EXAMINE THE REASONS WHY SPECIMENS ARE COLLECTED AND TO ASSESS THE VALIDITY OF THE THREE OBJECTIONS TO COLLECTING LISTED ABOVE.

REASONS FOR COLLECTING SPECIMENS.—PRESENT DAY COLLECTING OF ANIMAL SPECIMENS IS FOR THE PORPOSES OF:

(A) PRESERVING SOME OR ALL OF THE MORPHOLOGY OF AN INDIVIDUAL ORGANISM IN ORDER TO STUDY THAT MORPHOLOGY. SUCH STUDIES ARE ORDINARILY MADE IN THE FRAMEWORK OF EVOLUTIONARY BIOLOGY, WHEREIN DEGREES OF LIKENESS OR DISSIMILARITY ARE ASSESSED FOR INSIGHT INTO RELATIONSHIPS OF ORGANISMS THROUGH DESCENT FROM COMMON ANCESTORS AND WHEREIN ADAPTATION IS STRESSED FOR THE INSIGHT IT MAY LEND IN UNDERSTANDING THE EVOLUTIONARY PROCESS; AND

(B) DOCUMENTING THE TEMPORAL AND SPATIAL OCCURRENCE OF AN INDIVIDUAL ORGANISM, WHICH IS ALWAYS IN PART A REFLECTION OF THE ECOLOGY OF AN AREA AND THE ADAPTATIONS OF SPECIES, BOTH BEING GENERAL SETS OF PHENOMENA KNOWN TO CHANGE IN TIME AND HENCE REQUIRING CONTINUING DOCUMENTATION.

IT IS HERE HELD AS A MATTER OF PRINCIPLE THAT STUDIES IN EVOLUTIONARY BIOLOGY ARE WORTH OUR TIME AND EFFORT, NO MATTER HOW GREAT THE EXPENSE, AND THAT STUDIES IN MORPHOLOGY AND DISTRIBUTION ARE DESIRABLE ASPECTS OF EVOLUTIONARY STUDY. IF A PERSON NOW DOES NOT AGREE THAT THESE ASPECTS OF SCHOLARLY ENDEAVOR ARE WORTH DOING, HE CANNOT PROFITABLY READ FURTHER, FOR THE PHILOSOPHIC VALIDITY OF SUCH STUDIES MUST BE GRANTED AT THE OUTSET FOR INTELLIGENT DISCUSSION TO OCCUR. NO MORE USEFUL OUTLINE TO THE PHILOSOPHY OF EVOLUTIONARY STUDY IS AVAILABLE THAN CHARLES DARWIN'S ON THE ORIGIN OF SPECIES..., PUBLISHED MORE THAN 100 YEARS AGO BUT STILL EFFECTIVELY TO THE POINT.

OBJECTIONS TO THE PRACTICE OF COLLECTING SPECIMENS.—AS IS SUGGESTED ABOVE, THERE ARE THREE COMMON OBJECTIONS TO TAKING BIRD SPECIMENS. THESE WILL BE CONSIDERED IN ORDER OF THEIR IMPORTANCE.

1. "THE TIME FOR COLLECTING IS PAST; ALL KNOWLEDGE THAT CAN BE GOTTEN FROM SPECIMENS CAN BE GAINED FROM EXTANT SPECIMENS." THIS OBJECTION PRESUPPOSES THAT SPECIMENS DO NOT CHANGE ONCE THEY ARE PRESERVED; BUT, THEY DO. THIS OBJECTION FURTHER PRESUPPOSES THAT ANY COLLECTING EFFORT IS EQUIVALENT TO ANY OTHER; THIS IS NOT TRUE FOR THE FOLLOWING REASONS: SPECIMENS TAKEN AT DIFFERENT TIMES OF THE YEAR SHOW DIFFERING ASPECTS OF FEATHER COAT DEPENDING ON HOW RECENTLY THE INDIVIDUALS HAD MOLTED OLD AND GROWN NEW FEATHERS, BIRD SPECIMENS ARE OF DIFFERENT SIZES AND COLORS (WITHIN A SPECIES) DEPENDING ON THE GEOGRAPHIC LOCALITY SAMPLED, COLLECTIONS OF SKINS, OF SKELETONS, AND OF SPECIMENS IN SPIRIT ARE INTENDED FOR AND SERVE DIFFERING PURPOSES AND ONLY LIMITED SUBSTITUTION IS POSSIBLE, AND, FINALLY, ONE MAN'S ADEQUATE SAMPLE SIZE MAY BE QUITE INADEQUATE TO ANOTHER OWING TO THE FACT THAT PURPOSES TO WHICH SPECIMENS ARE PUT VARY, AS DO THE STATISTICAL ASSESSMENTS OF RESULTS OF A STUDY.

2. "COLLECTING BIRD SPECIMENS UNDULY DEPRESSES THE POPULATIONS SAMPLED AND/OR IS AN UNNATURAL CAUSE OF MORTALITY TO WHICH THE POPULATIONS ARE NOT ADAPTED." THIS OBJECTION PRESUPPOSES BIRD POPULATIONS TO BE ADVERSELY SENSITIVE TO EXTREMELY SMALL AMOUNTS OF MORTALITY; THIS ARGUMENT HAS NO SUPPORT FROM STUDIES IN POPULATION ECOLOGY, AS MAY BE EVIDENT FROM THE FOLLOWING CONSIDERATION, WHICH DEALS WITH RATE OF INCREASE IN MUSEUM COLLECTIONS AND AVERAGE POPULATION MORTALITY IN THE FIRST YEAR OF LIFE OF THE BIRDS.

THE AVERAGE NUMBER OF BIRD SPECIMENS CATALOGED IN THE TWENTY LARGEST MUSEUMS IN NORTH AMERICA IS MORE THAN 500 AND LESS THAN 5,000 PER YEAR; SUCH A TOTAL IS DRAWN FROM ALL THE WORLD'S BIRDS, SOME 8600 SPECIES. IF WE ASSUME THAT 3,000 SPECIMENS REPRESENTS THE YEARLY INCREASE IN EACH OF THE MUSEUMS (AND THIS FIGURE IS DESIGNEDLY IN EXCESS OF THE PROBABLE FIGURE, BY PERHAPS 2X), THEN SOME 60,000 SPECIMENS ARE ADDED ANNUALLY TO THESE 20 LARGEST COLLECTIONS. THUS, ON THE AVERAGE, ABOUT SEVEN SPECIMENS OF EACH BIRD SPECIES ARE TAKEN ANNUALLY; THIS MEANS AT ONE LEVEL THAT MOST LARGE MUSEUMS DO NOT ADD EVEN ONE SPECIMEN OF MOST SPECIES OF BIRDS, BUT, AND MORE TO THE POINT, HOW MUCH DOES SEVEN SPECIMENS PER SPECIES REPRESENT TO THE POPULATIONS FROM WHICH THEY ARE TAKEN?

AN ANSWER TO THIS MAY BE APPROACHED THROUGH A HYPOTHETICAL LIFE TABLE (A SORT OF ACTUARIAL TABLE) FOR A HYPOTHETICAL, "AVERAGE" SPECIES. LET US START WITH A POPULATION OF 1,000 INDIVIDUALS IN THEIR FIRST YEAR OF LIFE; WE WILL FIND ABOUT 85 PER CENT MORTALITY IN THAT FIRST YEAR. HENCE, IF MORTALITY IS EVENLY DISTRIBUTED THROUGH TIME, SEVEN INDIVIDUALS IS THE NUMBER THAT DIE ON ONLY THREE DAYS OF THE YEAR. IF THE POPULATION WERE OF 100 INDIVIDUALS AT THE BEGINNING, SEVEN WOULD REPRESENT ABOUT ONE MONTH'S MORTALITY. POPULATIONS OBVIOUSLY ARE ADAPTED TO WITHSTAND A RATE OF LOSS OF THIS MAGNITUDE — A SHARP-SHINNED HAWK TAKES SEVEN ASSORTED SPARROWS A WEEK, PARTLY IRRESPECTIVE OF POPULATION SIZE.

IN A POPULATION OF ADULT BIRDS WE CAN EXPECT ONLY 40 TO 50 PER CENT ANNUAL MORTALITY. THUS, 45 OF EACH 100 DIE EACH YEAR (A LITTLE LESS THAN 4 PER MONTH), OR 450 OF EACH 1,000 DIE EACH YEAR (A LITTLE MORE THAN ONE A DAY).

8. "KILLING BIRDS IS ETHICALLY DEPAUPERATE." THIS OBJECTION PRESUPPOSES A COMMON ETHIC, WHICH DOES NOT IN FACT EXIST. CONSEQUENTLY, IT IS NOT STRICTLY NECESSARY TO MAKE ANSWER TO THIS OBJECTION.

PERSONS WHO HOLD THIS VIEW WILL NOT BE SATISFIED THAT IT IS AN IRRELEVANT VIEW SIMPLY BECAUSE ETHICAL POSITIONS VARY. TO THESE PERSONS WE MAY SAY ONLY THAT THE FOLLOWING CONSIDERATIONS MUST BE WEIGHED IF THEIR VIEW IS TO BE TAKEN SERIOUSLY. FIRST, IT IS LOGICALLY IMPOSSIBLE TO EXEMPT ANY CLASS OF KILLING FROM THIS OBJECTION. SOME PEOPLE WOULD EVEN INCLUDE PLANTS, BUT THESE PEOPLE ARE NOT NUMEROUS. IN ANY EVENT, A PROPONENT OF ETHICAL NON-VIOLENCE MUST HOLD AGAINST THE KILLING OF ANY ANIMAL LIFE, NOT CATTLE AND NOT SHEEP, AND NOT MOSQUITOS OR HOUSE FLIES OR ANTS OR TERMITES, NOR EVEN PARASITIC ROUNDWORMS OR FLATWORMS OR FLUKES ORPROTOZOA. HE MUST NOT KILL ANY OF THOSE KINDS OF ANIMALS IF HE IS TO HAVE A LEGITIMATE ARGUMENT ON THE BASIS OF MORALS OR EITHICS. OTHER ARGUMENTS OR CONSIDERATIONS COULD BE BROUGHT TO BEAR ON THE PRESENT POINT, BUT WHAT WE HAVE MENTIONED IS PERHAPS SUFFICIENT TO INDICATE SOME OF THE EXTENT TO WHICH COLLECTING BIRD SPECIMENS IS ESSENTIALLY REFRACTORY TO ETHICAL CENSURE.

AS THIS DISCUSSION MAY ALREADY HAVE SUGGESTED, AT THE BASE OF THE DISAGREEMENT THAT EXISTS THERE IS ONLY THE ULTIMATE VALUE JUDGEMENT CONCERNING THE WORTH OF PURSUING STUDIES IN EVOLUTIONARY BIOLOGY. IT REALLY IS AS SIMPLE AS THAT — THE COLLECTING OF BIRD SPECIMENS IS OR IS NOT WORTH WHILE IN THE STUDY OF EVOLUTION. IT IS THEREFORE IMPORTANT TO REALIZE ONE MAN'S WANTON SLAUGHTER OF BIRDLIFE IS ANOTHER'S EFFORT TO OBTAIN A MEANINGFUL SAMPLE OF SPECIMENS IN ORDER TO INVESTIGATE VARIOUS ASPECTS OF ADAPTATION, AND THAT THERE IS NO COMMON GROUND FOR THESE DISPARATE VIEWS TO OCCUPY. — R. F. J.

A LETTER FROM BEN KING TO THE HEDGED (JANUARY 1, 1965)

[MANY MEMBERS OF THE K.O.S. REMEMBER BEN KING, THE BRIGHT, YOUNG BIRD-WATCHING PROTEGE OF HAROLD HEDGES OF LAKE QUIVIRA, KANSAS. FOLLOWING ARE PORTIONS OF LETTER DESCRIBING HIS LATEST ADVENTURES. MARY LOUISE MYERS, WHO SENT THE LETTER TO K.O.S., ENCLOSED HIS ADDRESS. PERHAPS SOME OF THE MEMBERS WHO KNEW HIM MAY WANT TO DROP HIM A FEW LINES:

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"WE SPENT 35 DAYS DURING AUGUST AND SEPTEMBER, DRIVING, BIRDING AND BANDING ALONG THE ENTIRE LENGTH OF THE THAI PORTION OF THE MALAY PENINSULA. THE WORLD IS CERTAINLY GETTING LESS WILD; MORE THAN HALF THE DISTANCE IS COVERED ON AN ASPHALT ROAD. HOWEVER, IT STILL HAS ITS MUDHOLES AND BRIDGES MADE UP OF TWO LOGS, ETC. THERE ARE STILL MAGNIFICENT AREAS OF JUNGLE. WE CAUGHT THE EXTREMELY RARE MALAYAN HONEYGUIDE ON THIS TRIP. I ALSO SHOT A PAIR OF SWIFTLETS PREVIOUSLY UNKNOWN FROM THAILAND.

"IN THE LATTER PART OF SEPTEMBER, I FLEW TO HONG KONG TO ATTEND THE ASIAN SECTION MEETING OF THE INTERNATIONAL COMMITTEE FOR BIRD PRESERVATION. AFTER THAT I FLEW TO TAIPEI, TAIWAN FOR A MEETING OF THE ASIAN ORNITHOLOGISTS WHO ARE COOPERATING IN THIS BIRD-BANDING PROGRAM.

"WE SPENT OCTOBER ON OUR FIRST REAL EXPEDITION. WE WERE ON DOI INTHANEN, THAILAND'S HIGHEST MOUNTAIN FROM 28 OCTOBER TO 27 DECEMBER. IT TOOK THREE DAYS OF WALKING TO REACH THE 5700' LEVEL, AND WE HAD 50 PORTERS AND FIVE ELEPHANTS CARRY OUR EQUIPMENT IN. WE CAMPED AT 5700' FOR NEARLY THREE WEEKS, AND THEN CAMPED ON THE SUMMIT (8400?) FOR TWO WEEKS, AND THEN WORKED OUR WAY DOWN, CAMPING AT 4800', 3900', 2600', AND 1800'. WE FOUND TIGER TRACKS SEVERAL TIMES NEAR OUR CAMP. FOR CHRISTMAS DINNER WE HAD GRILLED COBRA. IT WAS A SMALL ONE, ONLY FIVE FEET LONG, AND THERE WASN'T MUCH MEAT, BUT IT WAS QUITE GOOD. THE LARGEST COBRA KNOWN FROM THIS PART OF THE WORLD IS 18 FEET.

"WE ADDED THREE SPECIES TO THE THAI LIST THIS TIME: A FINCH FROM THE HIMALAYAS, A ROBIN FROM CHINA, AND THE STEPPE EAGLE. WE GOT SEVERAL OTHER BIRDS, NOT YET IDENTIFIED, WHICH MAY BE NEW FOR THAILAND, AND DOZENS OF SPECIES THAT HAD PREVIOUSLY BEEN DOCUMENTED BY BUT A FEW SKINS. WE BANDED 4300 BIRDS. WE CAUGHT THE BIRDS WITH MIST NETS, USING BETWEEN 175 AND 200 NETS (MOSTLY 40 FOOT NETS) WHICH COMBINED TO MAKE OVER A MILE OF MIST NETS. WE ORIGINALLY HAD HOPED TO KEEP EIGHT EXTRA WORKERS TO HELP WITH THE NETTING FOR THE ENTIRE TRIP, BUT THIS NUMBER RANGED FROM 3 TO 10 IN ONE WEEK AND ACTUALLY GOT DOWN TO ONE ON ONE OCCASION. IF NOT WATCHED, OUR HELPERS ATE THE NETTED BIRDS.

"NOT COUNTING MANY SPECIES NOT YET IDENTIFIED, WE RECORDED 260 SPECIES ON THE TRIP. MY TOTAL THAI LIST FOR THE YEAR IS ABOUT 450-500. DR. JOE MARSHALL ACCOMPANIED US FOR THE FIRST TWO WEEKS OF OUR MOUNTAIN TRIP. HE IS GOOD TO WORK WITH, AND I AM LEARNING A LOT FROM HIM. WE SHARE AN OFFICE IN BANGKOK. DR. MARSHALL IS STUDYING BIRD-BORNE VIRUSES.

SECOND SPECIMEN OF THE AUDUBON WARBLER FROM EASTERN KANSAS.—ALTHOUGH THE AUDUBON WARBLER (DENDROICA AUDUBONI) IS A FAIRLY REGULAR TRANSIENT IN THE WESTERN 1/3 OF KANSAS, THERE ARE FEW RECORDS OF ITS OCCURRENCE IN THE EASTERN PORTION OF THE STATE. ON FEBRUARY 28, 1965, MICHAEL J. MAHER SAWAN AUDUBON WARBLER IN HIS YARD AT 742 INDIANA, LAWRENCE, DOUGLAS CO., KANSAS. THE BIRD VISITED HIS SUET FEEDER REGULARLY ON THAT DAY, AND AGAIN ON MARCH 1 AND MARCH 2 WHEN IT WAS COLLECTED. THE SPECIMEN (KU 47584) WAS AN ADULT MALE, WEIGHING 14.9 GRAMS, AND CONTAINING FAIRLY HEAVY FAT. ELIZABETH COLE FOUND A DEAD AUDUBON WARBLER IN PRAIRIE VILLAGE, JOHNSON CO., KANSAS, IN JANUARY, 1962. THIS SPECIMEN (KU 40377) WAS DESICCATED AND COULD NOT BE SEXED. THERE ARE THREE SIGHT RECORDS FROM THE KANSAS CITY REGION: MAY 3, 1956 (WHAL); APRIL 19, 1959 (ISENBERGER); LATE NOVEMBER, 1961 (RICE).

WE SOLICIT YOUR ARTICLES AND FIELD OBSERVATIONS FOR THE NEXT NUMBER OF THE NEWSLETTER. J.D.RISING, ASS'T. ED.