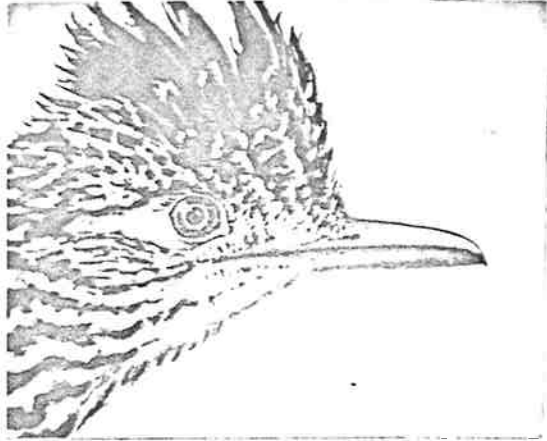




EL PASO BIRD STUDY CLUB

THE ROADRUNNER



HOW FAST CAN A ROADRUNNER RUN? OF THE FISH & WILDLIFE SERVICE SAYS, THE ROADRUNNER ~~IS~~ "NO MORE THAN 20 MILES PER HOUR" AND ITS CRUISING SPEED, SO TO SPEAK, IS ONLY 11 TO 12 MPH. THE BEST RECORD ATTAINED BY ANY ROADRUNNER WAS A SPEED OF 22 MPH, WHICH WAS MADE BY A BIRD CLOCKED WHILE PURSUED ACROSS A BRIDGE FROM WHICH IT COULD NOT ESCAPE. AFTER MAKING THE RECORD THE UNFORTUNATE BIRD FELL DEAD AT THE OTHER END OF THE BRIDGE.

THE MARCH MEETING

THE SPEAKER OF THE EVENING WAS DR ANTON BERKMAN, WHO DISCUSSED THE LIFE ZONES OF THE EL PASO REGION. UNFORTUNATELY, THE OTHER TWO MEMBERS SCHEDULED TO TAKE PART IN THE PROGRAM WERE UNABLE TO ATTEND. DR BERKMAN'S TALK WAS FOLLOWED BY A SUPPOSED DISCUSSION OF CERTAIN ASSIGNED SPECIES OF THE SPARROW FAMILY BY VARIOUS CLUB MEMBERS. THIS PART OF THE PROGRAM WAS NO GREAT SUCCESS HOWEVER, BECAUSE ONLY A VERY FEW OF THOSE PRESENT WERE PREPARED TO TALK. MRS SLATER TENDERED HER RESIGNATION AS CLUB TREASURER.

THE APRIL MEETING

THE NEXT CLUB MEETING WILL BE HELD MONDAY EVENING, APRIL 6, AT 7:45 IN ROOM 504 MILLS BLDG. WE ARE HONORED TO HAVE AS SPEAKER FOR THE EVENING MR ARTHUR F HALLORAN, REFUGE MANAGER OF THE SAN ANDRES NATIONAL WILDLIFE REFUGE, WHO WILL TELL US SOMETHING OF CONDITIONS AT THIS BIG GAME REFUGE IN THE MOUNTAINS NORTH OF LAS CRUCES, NEW MEXICO. ALSO WE HOPE MRS ALLEN WILL BE ABLE TO GIVE US HER FINDINGS ON ALBINISM SCHEDULED FOR THE LAST MEETING. TIME PERMITTING, THERE WILL BE A CONTINUATION OF THE ASSIGNED DISCUSSIONS ON SPECIES OF THE SPARROW TRIBE. IT IS EARNESTLY HOPED THAT A LARGE ATTENDANCE WILL GREET MR HALLORAN ON HIS FIRST VISIT TO US.

CONCERNING OUR ERSTWHILE REFUGE

THE FOLLOWING IS A LETTER RECEIVED BY MISS MARY BELLE KEEFER FROM CONGRESSMAN THOMASON.

JANUARY 31, 1942

HON. R.E. THOMASON
HOUSE OF REPRESENTATIVES
MY DEAR MR THOMASON

"I HAVE RECEIVED YOUR LETTER OF JANUARY 22 WITH ENCLOSED LETTER OF JANUARY 17 TO YOU FROM MISS MARY BELLE KEEFER OF EL PASO, TEXAS, CONCERNING THE ESTABLISHED OF THE PROPOSED REFUGE IN THE VICINITY OF EL PASO.

"IT IS APPRECIATED THAT THE UNSEEMLY DELAY IN THE ISSUANCE OF THE ORDER ON THIS AREA MAY HAVE SERVED TO DISCOURAGE MISS KEEFER AND OTHER PROPONENTS OF THE REFUGE. THE LANDS INCLUDED IN THE PROJECT ARE UNDER THE PRIMARY JURISDICTION OF SEVERAL AGENCIES OF THE GOVERNMENT, AND WITH OUR OWN SHORTHANDEDNESS, IT HAS BEEN IMPOSSIBLE TO COMPLETE THE DETAILS OF THE NEGOTIATIONS AND THE PREPARATION OF THE NECESSARY ORDER, I AM PLEASED, HOWEVER, TO ADVISE THAT THE ORDER IS NOW IN FINAL FORM AND THAT ACTION LOOKING TOWARD ITS FINAL APPROVAL IS NOW BEING INITIATED BY THIS SERVICE. IT MAY TAKE SOME TIME BEFORE APPROVAL IS OBTAINED, BUT IT IS HOPED THAT NO FURTHER UNUSUAL DELAYS WILL OCCUR.

"PLEASE ASSURE MISS KEEFER THAT DEFINITE ACTION MAY BE EXPECTED IN THE NOT TOO DISTANT FUTURE.

VERY TRULY YOURS,
W. C. HENDERSON
ACTING DIRECTOR
FISH & WILDLIFE SERVICE
U. S. DEPT. OF THE INTERIOR
WASHINGTON, D. C.

(ED. NOTE_ WE ARE FORCED TO BELIEVE THAT THERE IS A CONSIDERABLE BIT OF STALLING GOING ON SOMEWHERE IN THE SERVICE CONCERNING THIS MATTER, & IT SEEMS UNFORTUNATE THAT THOSE OF US WHO HAVE BEEN SO CONCERNED IN THE MATTER CANNOT BE DEALT WITH MORE FRANKLY AND SQUARELY. OUR CHIEF REASON FOR THIS BELIEF IS THE FACT THAT IN SEPTEMBER, 1940, YOUR EDITOR HAD A PERSONAL CONFERENCE WITH MR. J. CLARK SALYER, CHIEF OF THE REFUGE DIVISION OF THE SERVICE, IN WASHINGTON, IN WHICH WE WERE POSITIVELY ASSURED THAT THE ORDER FOR THIS REFUGE HAD ALREADY THEN BEEN THROUGH ALL OF THE PRELIMINARY STAGES OF PREPARATION AND HAD BEEN APPROVED BY THE SERVICE, AND WAS AT THAT TIME AWAITING ONLY THE SIGNATURE OF THE PRESIDENT TO PUT IT INTO EFFECT. MR SALYERS ASSURANCES WERE OF SUCH A FIRM NATURE, IN FACT, THAT WE WERE PROMPTED IMMEDIATELY TO FILE A TELEGRAM OF THE NEWS TO THE THEN PRESIDENT OF OUR CLUB, MISS KEEFER. EVIDENTLY WE WERE BEING POLITICKED THEN, OR ARE NOW, OR BOTH. AT ANY RATE, THE REFUGE IS STILL A MATTER OF CONJECTURE.)

WAR _ AGAINST HITLER OR THE DUCKS?

"WITH EVERY OUNCE OF EXPLOSIVES NEEDED FOR THE DEFENSE OF AMERICA, WHY SHOULD VAST QUANTITIES BE WASTED THIS YEAR IN DUCK SHOOTING?

CONSERVATIONISTS, AND ALL OTHERS WHO WANT AMERICAN FIRE POWER CONCENTRATED AGAINST JAPAN AND HITLER, SHOULD WRITE TO THE HON. HAROLD ICKES, SECRETARY OF THE INTERIOR, WASHINGTON, D.C., AND ASK THAT A CLOSED SEASON ON WATERFOWL BE PROCLAIMED FOR 1942..

THIS WILL BE FOR THE BENEFIT OF THE COUNTRY, THE HUNTERS, AND THE DUCKS. IT HAS BEEN ESTIMATED THAT ONE CLOSED SEASON WILL DO AS MUCH FOR THE RESTORATION OF WATERFOWL AS FIVE YEARS OF STRICT REGULATION OF HUNTING. THIS IS THE YEAR WHEN EVERYBODY, CONSERVATIONISTS AND HUNTERS ALIKE, SHOULD FAVOR A CLOSED SEASON..

DUCK SHOOTING NOW BENEFITS ONLY OUR NATIONS ENEMIES."
EMERGENCY CONSERVATION COMMITTEE

THE EL PASO BIRD STUDY CLUB

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CONTRIBUTIONS TO THE ROADRUNNER ARE ALWAYS WELCOME.

APROPOS OF DR BERKMANS DISCUSSION OF LIFE ZONES AT THE MARCH MEETING OF THE CLUB, WE HERE REPRINT AN ARTICLE APPEARING IN THE CURRENT NUMBER OF THE AUDUBON MAGAZINE, TO WHICH WE HEREBY EXPRESS OUR GRATITUDE. WE HAVE TAKEN THE LIBERTY OF SLIGHT ABRIDGEMENT.

LIFE ZONES, BIOMES, OR LIFE FORMS
BY ROGER TORY PETERSON

WHEN DR CLINTON HART MERRIAM AND HIS COLLEAGUES CLIMBED SAN FRANCISCO PEAK IN ARIZONA, A HALF CENTURY AGO, THEY FOUND THAT THE BIRD & ANIMAL LIFE CHANGED AS THEY CLIMBED. WHEN THEY LEFT THE LOW DESERT, MANY SPECIES DROPPED OUT OF THE PICTURE. NEW ONES REPLACED THEM AMONG THE PINON PINES, AND OTHERS, NOT SEEN BEFORE, APPEARED AS THEY REACHED THE COOL FIR FORESTS. THE BIRDS AND ANIMALS SEEMED TO BE TIED UP IN SOME WAY WITH THE PLANTS, AN OBVIOUS FACT THAT MANY NATURALISTS HAD NOTICED LONG BEFORE, BUT MERRIAM STROVE FOR SOME SORT OF ORDER OR SYSTEM BY WHICH HE COULD DESCRIBE THE DISTRIBUTION OF THESE PLANTS AND ANIMALS. HE SEPARATED THE AREA AROUND SAN FRANCISCO PEAK INTO SEVEN MAJOR ZONES 1)ALPINE, 2)SUBALPINE, (TIMBERLINE), 3)HUDSONIAN (SPRUCE), 4)CANADIAN (BALSAM), 5)NEUTRAL (PINE), 6)PINON-PINE, 7)DESERT. THE FIRST FOUR ZONES HAD CERTAIN AFFINITIES, CERTAIN NORTHERN INFLUENCES IN COMMON. THESE HE DESIGNATED AS THE BOREAL DIVISION. ZONES 6 & 7 WERE COMMON IN CERTAIN SOUTHERN TENDENCIES, AND WERE CALLED THE SONORAN DIVISION. ZONE 5, THE NEUTRAL ZONE, REPRESENTED A MERGING OF NORTHERN AND SOUTHERN INFLUENCES. THIS WAS LATER TO BECOME KNOWN AS THE TRANSITION ZONE.

IN EXPLAINING THE REASONS OF THE ZONES, MERRIAM STATED THAT "TEMPERATURE AND HUMIDITY ARE THE MOST IMPORTANT CAUSES GOVERNING DISTRIBUTION, AND THAT TEMPERATURE IS MORE IMPORTANT THAN HUMIDITY."

WITHIN THE NEXT SEVERAL YEARS MERRIAM EXTENDED HIS SYSTEM TO INCLUDE ALL OF NORTH AMERICA UNTIL HE HAD ARRIVED AT THE ZONAL TERMINOLOGY THAT WE ALL KNOW SO WELL -

- I. BOREAL REGION
 1. ARCTIC-ALPINE ZONE
 2. HUDSONIAN ZONE
 3. CANADIAN ZONE
- II. AUSTRAL REGION
 1. TRANSITION ZONE
 - (A) ALLEGHANIAN FAUNAL AREA
 - (B) ARID TRANSITION FAUNAL AREA
 - (C) PACIFIC COAST FAUNAL AREA
 2. UPPER AUSTRAL ZONE
 - (A) CAROLINIAN FAUNAL AREA
 - (B) UPPER SONORAN FAUNAL AREA
 3. LOWER AUSTRAL ZONE
 - (A) AUSTRORIPARIAN FAUNAL AREA
 - (B) SEMITROPICAL FAUNAL AREA
 - (C) LOWER SONORAN FAUNAL AREA
- III. TROPICAL REGION

LATELY, DR MERRIAM'S WORK HAS BEEN CRITICIZED BY MANY BIOLOGISTS. ONE OBJECTION WAS THAT HIS ZONES EXTENDED FROM THE WESTERN MOUNTAINS RIGHT ACROSS THE GREAT PLAINS TO THE EASTERN MOUNTAINS AND THE COAST. THIS MEANT THEN, THAT THE GREAT GRASSLAND REGION WHICH STRETCHES UP THROUGH THE CENTER OF THE CONTINENT FROM THE GULF OF MEXICO INTO CANADA, WAS DIVIDED INTO THREE ZONES. EACH ZONE WAS LINKED WITH ONE OR MORE VERY DIFFERENT TYPES OF VEGETATION ON EITHER SIDE OF THE GRASSLAND BELT. IN THE TRANSITION ZONE, FOR EXAMPLE, THE GRASSLAND IS TIED UP WITH PINE FOREST AND SAGEBRUSH TO THE WEST AND WITH DECIDUOUS FOREST TO THE EAST. THIS IS HARDLY REASONABLE, AS IT WOULD LOGICALLY INFER THAT THIS SECTOR OF GRASSLAND IS MORE CLOSELY RELATED TO THESE OTHER KINDS OF PLANT GROWTH THAN TO THE REST OF THE GRASSLAND TO THE NORTH AND SOUTH.

MERRIAM BASED HIS LOGIC ON THE IDEA THAT AVERAGE TEMPERATURE IS THE CONTROLLING INFLUENCE ON PLANT GROWTH AND HIS ZONAL MAPS WERE CONSEQUENTLY BASED ON TEMPERATURE SUMMATIONS AND THEIR ISOTHERMS. BUT EXPERIMENTING BOTANISTS HAVE RECENTLY FOUND THAT TEMPERATURE SUMMATION HAS NO GREAT SIGNIFICANCE, AND THAT TEMPERATURE EXTREMES HAVE MUCH MORE INFLUENCE ON PLANTS, ESPECIALLY THE LOWEST WINTER TEMPERATURES.

WHAT IS A BIOME?

BOTANISTS, PULLING AWAY FROM THE LIFE ZONE IDEA, GRADUALLY ARRIVED AT THE BIOME CONCEPT. BIOMES ARE, ACCORDING TO SHELFORD, "THE LARGEST PLANT AND ANIMAL COMMUNITIES IN DYNAMIC EQUILIBRIUM IN THE FINAL CLIMAX STATE." BIOMES ARE THE MAJOR LANDSCAPE UNITS, SUCH AS GRASSLAND, DECIDUOUS FOREST, TUNDRA, ETC. BETWEEN EACH IS A BROAD TRANSITION-BAND WHERE THE BIOMES BLEND. THESE ARE CALLED ECOTONES. THUS ASPEN PARK LAND OF OUR WESTERN FOOTHILLS BECOMES THE ECOTONE BETWEEN THE CONIFEROUS FOREST BIOME AND THE GRASSLAND BIOME, AND SO ON.

WITHIN THE BIOMES ARE SMALLER AREAS, OR DEVELOPEMENTAL STAGES. THESE FINALLY END IN THE CLIMAX OF THE BIOME AGAIN, THE STAGE BEYOND WHICH THERE IS NO FURTHER CHANGE. FOR EXAMPLE, IF THE CLIMAX SPRUCE WOODS OF THE CONIFEROUS BIOME ARE BURNED, THEY SPRING BACK INTO LOW BRUSH, LATER INTO ASPEN AND BIRCH AND FINALLY DEVELOP INTO SPRUCE WOODS AGAIN. THE ASPEN AND BIRCH GROWTH, ALTHOUGH DECIDUOUS IN NATURE, IS NOT A PART OF THE DECIDUOUS BIOME, BUT IS REALLY A DEVELOPEMENTAL STAGE OF THE CONIFEROUS BIOME. THE BIOME CONCEPT, THEN, TAKES INTO ACCOUNT THE SUCCESSION OF PLANTS AND INCLUDES BOTH THE DEVELOPEMENTAL AND FINAL STAGES IN ITS GROUPINGS.

IN COMPARING A MAP OF THE LIFE ZONES OF NORTH AMERICA AND ONE OF THE BIOMES, A MAJOR DIFFERENCE IS QUICKLY NOTICEABLE - LIFE ZONES TEND TO STRETCH FROM EAST TO WEST, ACROSS THE CONTINENT, WHILE THE BIOMES, WITHIN THE UNITED STATES AT LEAST, TEND TO GO NORTH AND SOUTH.

THE BIGGEST DIFFERENCE IS IN THE GREAT GRASSLANDS THAT EXTEND FROM THE TEXAS COAST TO THE PRAIRIE PROVINCES OF CANADA. THIS IS ONE BIOME, THE GRASSLANDS BIOME. MERRIAM HAD SPLIT THIS INTO THREE LIFE ZONES.

AT FIRST GLANCE, IT WOULD SEEM THAT AS FAR AS THE MORE NORTHERN PARTS OF THE CONTINENT ARE CONCERNED, THE BIOME THEORY IS ALMOST A DIRECT SUBSTITUTION OF TERMS FOR MERRIAM'S LIFE ZONES. IN THE BIOME THEORY, THE TUNDRA BIOME IS SUBSTITUTED FOR THE ARCTIC-ALPINE ZONE, THE SUB-ARCTIC FOREST ECOTONE IS SUBSTITUTED FOR THE HUDSONIAN ZONE, AND THE CONIFEROUS FOREST BIOME IS SUBSTITUTED FOR THE CANADIAN ZONE. THIS IS DUE, NOT TO A SIMILARITY IN CONCEPT, BUT TO THE FACT THAT IN THESE AREAS LIFE ZONES, WHICH ARE BASED ON TEMPERATURE, COINCIDENTALLY AGREE WITH THE VEGETATION.

DO BIRDS FIT THE BIOME IDEA?

AS REGARDS PLANT DISTRIBUTION, THE BIOME CONCEPT SEEMS TO BE AN IMPROVEMENT OVER THE LIFE ZONE IDEA, BUT CAN BIRDS AND OTHER ANIMALS BE MADE TO CONFORM TO IT, AS THE BIO-ECOLOGISTS ARE SUGGESTING? IT WOULD APPEAR TO BE THE ORDER OF THE DAY TO TRY TO FIT THE DISTRIBUTION OF PLANTS AND ANIMALS INTO FORMULAS. BUT NATURE IS DYNAMIC, FULL OF VARIANTS WHICH MAKE IT DIFFICULT TO LAY DOWN SIMPLE RULES BY WHICH ALL THINGS CAN BE NEATLY PIGEON-HOLED. EACH OF THE DISTRIBUTIONAL CONCEPTS THAT HAS BEEN ADVANCED SEEMS TO HAVE A CERTAIN AMOUNT OF LOGIC, AND MANY BIRDS CAN BE MADE TO FIT IT QUITE WELL, BUT I AM QUITE SURE THAT IF A COMPOSITE MAP WERE MADE, OUTLINING THE CONTOURS OF THE DISTRIBUTION OF ALL NORTH AMERICAN BIRDS, THE NUMEROUS LINES LIMITING THEIR RANGES WOULD SUGGEST THE MERGING OF THE COLORS OF THE SPECTRUM. THERE

WOULD BE A TENDENCY FOR A LARGE NUMBER OF BIRDS TO CLUSTER WITHIN THE CONFINES OF THE VARIOUS PROPOSED ZONES, BUT MANY SPECIES WOULD NOT SEEM TO CONFORM AT ALL; THEY WOULD OCCUPY MORE THAN ONE LIFE ZONE, BIOME, BIOTIC AREA, OR ENVIRONMENT, OR ONLY PART OF ONE. IT IS VERY DOUBTFUL WHETHER ANY TWO NORTH AMERICAN BIRDS OCCUPY EXACTLY THE SAME RANGE.

...THE BIOME SEEMS SCARCELY MORE SATISFACTORY THAN THE LIFE ZONE IN DESCRIBING BIRD DISTRIBUTION, AND...MOST LAND BIRDS APPEAR TO CONFORM MUCH MORE READILY TO THE PHYSICAL ASPECT OF THE VEGETATION, OR LIFE FORM, AS SOME AUTHORS HAVE CALLED IT. WE MIGHT SIMPLY REFER TO THIS PREFERENCE BY THE OLD FAMILIAR TERM HABITAT OR HABITAT NICHE. BIRDS DO FIT LIFE FORMS.

...HABITAT NICHES THAT MAKE UP THE DEVELOPMENTAL STAGES OF A BIOME ARE FREQUENTLY FOUND IN SEVERAL BIOMES, AND LIKEWISE THE BIRDS THAT OCCUPY THESE NICHES ALSO OCCUR IN SIMILAR SITUATIONS IN THEIR BIOMES. TO ILLUSTRATE THIS, WE MIGHT TAKE THE REDSTART, WHICH LIVES IN THE BIRCH AND ASPEN SUB-CLIMAX OF THE CONIFEROUS FOREST. THE REDSTART ALSO PREFERS SECOND-GROWTH TREES IN THE DECIDUOUS FOREST BIOME. THE IMPORTANT THING SEEMS TO BE TREES OF A SIMILAR PHYSICAL ASPECT - DECIDUOUS TREES 20 OR 30 OR 40 YEARS OLD.

THE HORNED LARK IS ANOTHER ILLUMINATING EXAMPLE. ITS VARIOUS RACES ARE FOUND ALL THE WAY FROM THE HIGHLANDS OF COLOMBIA TO THE ARCTIC. IT IS FOUND THROUGH AT LEAST FIVE LIFE ZONES, FROM THE HOT TEXAS COAST TO THE COOL ARCTIC TUNDRA. IT BREEDS IN SEVERAL DIFFERENT BIOMES; THE IMPORTANT FACTOR IN ITS DISTRIBUTION IS BROAD EXPANSES OF SHORT GRASS. THE EXTENSION OF RANGE OF THE PRAIRIE HORNED LARK INTO FIELDS IN THE DECIDUOUS BIOME SHOWS THAT NEITHER THE BIOME NOR THE TEMPERATURE IS THE FUNDAMENTAL LIMITING FACTOR, FOR AS SOON AS THE SETTLERS CAME IN AND CLEARED THE LAND, THE BIRD MOVED EASTWARD.

IT IS IN CLIMAX, OR LATE SUB-CLIMAX, GROWTHS THAT BIRDS SEEM BEST TO FIT THE BIOME CONCEPT. IT IS ALSO IN CLIMAX GROWTHS WHERE THE LIFE ZONE CONCEPT SEEMS TO WORK BEST, ESPECIALLY IN THOSE AREAS...WHERE TEMPERATURE COINCIDENTALLY AGREES WITH VEGETATION. BUT IT SEEMS TO ME THAT EVEN HERE IT IS THE LIFE-FORM OF THE VEGETATION THAT IS THE MORE IMPORTANT FACTOR. THE FACT IS THAT IN MANY BIOMES THE CLIMAX IS NOT FOUND OUTSIDE THAT BIOME, WHEREAS THE DEVELOPMENTAL STAGES ARE OFTEN FOUND IN MORE THAN ONE BIOME.

MORE BESIDES HABITAT TO RECKON WITH.

I DO NOT WISH TO GIVE THE IMPRESSION THAT BIRDS ARE CONTROLLED ENTIRELY BY HABITAT PREFERENCE. FOR EXAMPLE, ON LONG ISLAND, NEW YORK, THERE EXISTS MUCH SUITABLE, BUT UNUTILIZED, BREEDING HABITAT FOR MANY SPECIES OF BIRDS. THERE MUST BE SOME OTHER LIMITING FACTOR, THEREFORE, EITHER CLIMATIC, HISTORIC, OR GEOGRAPHIC (SUCH AS THE BARRIER OF THE HUDSON RIVER IN THE CASE OF THE TITMOUSE), OR PERHAPS SOME SORT OF INTERSPECIFIC COMPETITION.

MANY BIRDS SEEM TO CONFORM TO THE OUTLINES OF THE AREA OCCUPIED BY THEIR PREFERRED VEGETATIONAL LIFE FORM, WHILE OTHERS OCCUPY ONLY PARTS OF IT, AND REACH THEIR NORTHERN OR SOUTHERN LIMITS DEEP WITHIN IT. THIS INDICATES THAT THEY ARE NOT ENTIRELY RESTRICTED IN THEIR DISTRIBUTION BY DOMINANT FORMS OF VEGETATION. THIS THEN, MIGHT LEAVE ROOM WITHIN THE VEGETATIONAL CONCEPT FOR THE APPLICATION OF SOMETHING LIKE MERRIAM'S TEMPERATURE IDEA, OR SOME OTHER MODIFICATION.

THERE ARE CASES, TOO, WHERE BIRDS OF THE SAME SPECIES OCCUPY TOTALLY DIFFERENT AND SEEMINGLY UNRELATED ENVIRONMENTS IN DIFFERENT PARTS OF THEIR RANGE. THE OLIVE-BACKED THRUSH IS A TYPICAL BIRD OF THE CONIFEROUS FOREST IN CANADA AND THE WESTERN MOUNTAINS. ON THE OTHER HAND, ONE OF ITS RACES BREEDS IN DECIDUOUS WOODLANDS AND THICKETS THROUGHOUT THE LOWLANDS OF CALIFORNIA...HOWEVER DEPARTURES OF THIS SORT ARE IN THE MINORITY, EXCEPT IN VERY WIDELY DISTRIBUTED SPECIES. PERHAPS THEY ARE THE THROW-OFFS, THE ADAPTABLE ADVENTURERS THAT EVENTUALLY EVOLVE INTO NEW AND SUCCESSFUL SPECIES. HERE IS A FASCINATING FIELD OPEN FOR CONJECTURE AND RESEARCH.

THESE THOUGHTS SHOULD NOT BE CALLED CONCLUSIONS, AS THEY ALL NEED FURTHER TESTING, LOTS OF IT. THEY CLOSELY PARALLEL MANY OF THE IDEAS BROUGHT OUT IN THE ILLUMINATING ARTICLE BY FRANK PITELKA ("DISTRIBUTION OF BIRDS IN RELATION TO MAJOR BIOTIC COMMUNITIES" AMERICAN MIDLAND NATURALIST, JAN., 1941, PP. 113-137). THE PROBLEM IS STILL THERE IN ALL ITS PUZZLING ASPECTS. THE AUDUBON BREEDING-BIRD CENSUSES, NOW PUBLISHED FOR FIVE YEARS, WILL BECOME A VITAL SOURCE OF INFORMATION IN HELPING THROW MORE LIGHT ON THESE THINGS.

OUTSTANDING BIRDING AREAS OF THE SOUTHWEST (CONTINUED)

THE CHIRICAHUA MOUNTAINS OF SOUTHEASTERN ARIZONA

BY PROCLAMATION OF PRESIDENT COOLIDGE IN 1924 THE FAMED WONDERLAND OF ROCKS WAS MADE THE CHIRICAHUA NATIONAL MONUMENT TO PRESERVE AND PROTECT AN AREA OF SPECTACULAR ROCK FORMS ERODED FROM LAYERED AND JOINTED

LAVA FLOWS OF TERTIARY TIMES. IN ADDITION, THE MONUMENT CONTAINS A WIDE VARIETY OF PLANT AND ANIMAL LIFE.

THE ONE HIGHWAY, WHICH APPROACHES FROM THE WEST, ENTERS THE MONUMENT AREA THROUGH A VERDANT CANYON, AT THE MOUTH OF WHICH LIES THE FARAWAY RANCH, WHERE COMFORTABLE OVERNIGHT ACCOMODATIONS AND EXCELLENT MEALS MAY BE OBTAINED. THE AREA ABOUT THE RANCH ITSELF IS VERY GOOD FOR BIRDING, AND SEVERAL OF OUR RAREST BIRD TREATS HAVE BEEN IN THE FRONT YARD OF THE RANCH HOUSE. THE HIGHWAY LEADS ON UP THE CANYON PAST THE HEADQUARTERS AND MUSEUM BUILDING OF THE NATIONAL RESERVATION, AND THE PUBLIC CAMPGROUND, UP SCENIC BONITA CANYON TO MASSAI POINT AT THE TOP OF THE RANGE. THE RED BANK ON THE RIGHT ABOUT THREE MILES PAST THE HEADQUARTERS IS THE CROSS-SECTION OF SEDIMENTS IN AN OLD LAKE BED. THE RED COLOR IS DUE TO OXIDES OF IRON, THE WHITE VEINS ARE GYPSUM.

THE CHIRICAHUAS WERE ONCE INHABITED BY A FAMOUS BAND OF APACHES. THE NAME OF COCHISE, ONE OF THEIR WAR CHEIFS, HAS BEEN IMMORTALIZED IN THE GREAT MASS OF ROCK, COCHISE HEAD, WHICH DOMINATES THE NORTHERN SKY LINE. FROM MASSAI POINT TO THE WEST MAY BE SEEN THE WIDE SULPHUR SPRINGS VALLEY WITH THE DRAGOON MOUNTAINS TO THE NORTHWEST AND THE RINCONS AND CATALINAS APPROXIMATELY 90 MILES TO THE SOUTHWEST. EASTWARD THE VIEW EXTENDS OVER 100 MILES INTO THE STATE OF NEW MEXICO.

I VISITED THE CHIRICAHUAS WITH MRS. LENA MCBEE ON MARCH 29 AND 30, 1941, STOPPING OVERNIGHT AT THE FARAWAY RANCH. A DRIVE UP THE CANYON ROAD LATE AT NIGHT ON THE 29TH REVEALED MANY DEER, A RED FOX, AND SEVERAL HORNED OWLS. NEXT MORNING MRS MCBEE WAS UP BEFORE THE SUN, AND HER JOURNAL REVEALS THE FOLLOWING NOTES -

EARLY MORNING SONGS - THRASHER, MOCKINGBIRD, BEWICK WREN, VERMILION FLYCATCHER, CANYON TOWHEE, CHIPPING SPARROW, HOUSE FINCH, JUNCO, ROBIN, PHOEBES, JAYS, TITMICE, AND KINGLETS.

SEEN - SPARROW HAWK, TURKEY VULTURE, MOURNING DOVE, MEARN WOODPECKER, RED-NAPE SAPSUCKER, SAY PHOEBE - TWO NESTS, ONE PLASTERED AGAINST ADOBE HOUSE NEAR THE ROOF HAD FOUR PINKISH-WHITE EGGS, BLACK PHOEBE, VERMILION FLYCATCHER - PAIR, FINISHING NEST NEAR TOP OF A 40 FOOT TREE, MALE SEEN FLITTING AND SINGING MOSTLY, FEMALE MOSTLY WORKING ON NEST.

SEVERAL TRIPS TO THE NEST WERE MADE BY ONE OR BOTH BIRDS WHILE THE CAMERA WAS BEING SET UP ON THE NEARBY ROOF. A FEW TIME THE FEMALE SET TLED ON THE NEST. SHE WAS STILL BRINGING STRAW FOR THE LINING, AND NO EGGS HAD AS YET BEEN LAID. IN THE SAME TREE WAS A CASSIN VIREO NEST AND ANOTHER THAT MIGHT HAVE BEEN THAT OF A PYRRHULOXIA, APPARANTLY BUILT THE PREVIOUS YEAR.

THE FEMALE VERMILION ON THE NEST LOOKED MUCH LIKE THE FEMALE SCISOR-TAILED FLYCATCHER, THE HEAD AND BILL APPEARING LARGE ABOVE THE NEST RIM.

CASSIN KINGBIRD, 3 TOGETHER ON FENCE IN ORCHARD
ARIZONA JAY, NUMEROUS IN SURROUNDING LIVE OAK WOODS
WESTERN FLYCATCHER, ALONG STREAM AT BACK OF RANCH
WRIGHT FLYCATCHER, SAME PLACE AS THE WESTERN
VIOLET-GREEN SWALLOW, NUMEROUS FLYING AROUND ABOVE THE HOUSE
TITMICE, PROBABLY THE BRIDLED, HEARD ONLY
ROCKY MOUNTAIN NUTHATCH, ON TRUNK OF LIVE OAK
BEWICK WREN, NUMEROUS, AND SINGING VOCIFEROUSLY

W. MOCKINGBIRD, ONLY ONE

PALMER'S THRASHER

W. ROBIN, SEVERAL IN NESTING ACTIVITY

WESTERN GNATCATCHER

PLUMBEOUS GNATCATCHER

RUBY-CROWNED KINGLET

ARIZONA LEAST VIREO

STEPHEN'S (?) VIREO - SONG SIMILAR TO WHITE-EYED

VIRGINIA'S WARBLER

WORM-EATING WARBLER - APPARENTLY THE FIRST SIGHT-RECORD FOR THE

CASSIN'S PURPLE FINCH

MONTANA JUNCO

ARIZONA (RED-BACKED) JUNCO

CANYON TOWHEE

SPURRED TOWHEE - HEARD ONLY

W. WOOD PEWEE

LATER IN THE MORNING WE PROCEEDED ON UP THE CANYON TO MASSAI POINT AND THEN HIKE BACK DOWN VIA ANOTHER CANYON ON A STEEP MOUNTAIN TRAIL. THE FOLLOWING BIRDS WERE NOTED -

RED-TAILED HAWK, DESERT SPARROW HAWK, WOODPECKER (EITHER WHITE-BREASTED OR BATCHELDER'S), WESTERN FLYCATCHER, W. WOOD PEWEE, ARIZONA JAY, LONG-TAILED CHICKADEE, BRIDLED TITMOUSE, LEAD-COLORED BUSH-TIT, LLOYD'S BUSH-TIT, CANYON WREN, ROCK WREN, WESTERN GNATCATCHER, RUBY-CROWNED KINGLET, RUFOUS HUMMINGBIRD, VIOLET-GREEN SWALLOW, WHITE-THROATED SWIFT, BLACK-THROATED GRAY WARBLER.

THE BIRD WHICH WAS OUTSTANDINGLY ABSENT DURING OUR VISIT WAS THE PAINTED REDSTART; PERHAPS THIS WAS MORE NOTICEABLE BECAUSE WE HAD BEEN PARTICULARLY ANXIOUS TO BECOME ACQUAINTED WITH THIS UNUSUAL AND HIGHLY RESTRICTED SPECIES, AND BECAUSE IT WAS REPORTED BY SEVERAL OTHERS DURING OUR VISIT.

THE CHIRICAHUA MOUNTAINS ARE IN A PECULIAR SITUATION BOTH BIOLOGI

CALLY AND GEOGRAPHICALLY; FOR, JUDGING BY THE FLORA AND FAUNA OF THE AREA, WHICH IS TYPICALLY MEXICAN, AND QUITE DIFFERENT FROM THAT OF NEARBY RANGES, IT IS ONE OF THE ONLY TWO PLACES OF ITS KIND WITHIN THE BOUNDARY OF THE UNITED STATES - THE OTHER IS THE CHISOS MOUNTAIN RANGE IN THE TEXAS BIG BEND AREA. IN THESE TWO PLACES, WHICH ARE LITERALLY TOPOGRAPHICAL "TAIL-ENDS" OF THE GREAT SIERRA MADRE RANGE WHICH FORMS THE BACK-BONE OF MEXICO, THE PLANT AND PARTICULARLY THE ANIMAL LIFE OF THE SIERRA MADRES HAVE FOLLOWED NORTHWARD ALONG THE MOUNTAIN CHAIN, CROSSING THE INTERNATIONAL BOUNDARY IN THE ONLY TWO PLACES WHERE HIGH MOUNTAINS CROSS IN AN ALMOST UNBROKEN BRIDGE.

FOR THIS REASON, AS FAR AS IS KNOWN, THERE ARE SEVERAL SPECIES OF BIRDS RECORDED IN THE UNITED STATES ONLY IN THE CHISOS AND THE CHIRICAHUAS, AND STILL OTHERS RECORDED WITHIN OUR BOUNDARIES ONLY IN THE CHIRICAHUAS. AMONG THESE ARE THE FOLLOWING:

COPPERY-TAILED TROGON	RIVOLI HUMMINGBIRD
THICK-BILLED PARROT	WHITE-EARED HUMMINGBIRD

AT THE SAME TIME, THE CHIRICAHUAS ARE HIGH ENOUGH AND TIMBERED PROPERLY TO PROVIDE SUITABLE HABITATS FOR SUCH NORTHERN SPECIES AS

BAND-TAILED PIGEON	RED-BREASTED NUTHATCH
ALPINE THREE-TOED WOODPECKER	BLACK-EARED NUTHATCH
ROCKY MOUNTAIN JAY	BRIDLED TITMOUSE
CLARKE'S NUTCRACKER	TOWNSEND SOLITAIRE
W. EVENING GROSBEAK	WATER OUZEL (DIPPER)

THE CHIRICAHUAS ALSO ARE WITHIN THE RANGES OF THE RARE RED-FACED WARBLER AND PAINTED REDSTART.

TYPICAL TREES OF THE REGION ARE:

ARIZONA CYPRESS	MEXICAN OAK
DOUGLAS SPRUCE	ARIZONA SCRUB OAK
PINON PINE	HACKBERRY
APACHE PINE	BLACK WILLOW
ONE-SEEDED JUNIPER	COTTONWOOD
ALLIGATOR-BARKED JUNIPER	NEW MEXICAN LOCUST
ARIZONA WHITE OAK	ARIZONA MADRONE
NET LEAF OAK	ARIZONA SYCAMORE

IT SEEMS APPARENT FROM THE ABOVE NOTES THAT THIS IS TRULY AN OUTSTANDING BIRDING AREA OF THE SOUTHWEST, AND CERTAINLY ONE WHICH NO BIRD STUDENT OR NATURALIST SHOULD MISS.

MR A. C. BENT, IN HIS LIFE HISTORIES OF NORTH AMERICAN BIRDS, MAKES FREQUENT REFERENCES TO RECORDS FROM THE CHIRICAHUAS, PARTICULARLY A CERTAIN SPOT KNOWN AS "FLY PARK", WHICH REFERENCE TO A DETAIL MAP WILL SHOW TO BE A REMOTE WILDERNESS AREA IN THE TOP OF THE RANGE TO THE SOUTH OF THE NATIONAL MONUMENT. IT IS ACCESSIBLE ONLY BY FOOT OR HORSE BACK, AND SEEMS TO BE MORE THAN A DAY'S TRIP FROM A SUPPLY BASE, BUT ACCOUNTS OF THE BIRDS FOUND THERE MAKE IT MOST ALLURING.

PUT THE CHIRICAHUAS ON YOUR MUST-SEE LIST FOR ANY SEASON OF THE YEAR.

TOM M. KIRKSEY

APRIL, 1942