

BREEDING BIRD CENSUS

1971

JUNIPER-SAGE UPLAND. - Location: Oregon; about 11 miles north of Frenchglen, west of State Highway 205; 42°59'N, 118°53'W. Size: 16.2 ha = 40 acres (square). Description of Area: Steep, rocky rangeland typical of much of eastern Oregon. Western Juniper (Juniperus occidentalis) covers approximately 30% of the plot. About 650 junipers (16 stems per acre) are present on the plot, with most trees varying from 6 to 18 inches DBH and averaging 15 to 20 feet in height. Big Sage (Artemisia tridentata) is the dominant species of shrub, with small amounts of heavily browsed Saskatoon Serviceberry (Amelanchier alnifolia), Choke Cherry (Prunus virginiana), Golden Currant (Ribes aureum) and Gray Horsebrush (Tetradymia canescens) also present. Grasses include Thurber Needle Grass (Stipa thurberiana), Idaho Fescue (Festuca idahoensis), Sandberg Blue Grass (Poa secunda), Cheat Grass (Bromus tectorum), Bottlebrush Squirreltail (Sitanion hystrix), Blue-bunch Wheat Grass (Agropyron spicatum), and Great Basin Giant Wild Rye (Elymus cinereus). Needle Grass predominates on open gradual slopes, while Idaho Fescue forms the primary grass cover on north-facing slopes. Wild rye is found widely scattered, especially along portions of the intermittent stream bed. Cheat Grass frequents open areas throughout the plot, but is heaviest on southern exposures. Numerous annual and perennial forbs bloom in profusion during the spring. Several species of crustose lichens survive on the rock substrate. An average annual rainfall of approximately 9 inches, coupled with the thin and rocky soil, results in keen competition

among plants for the little available moisture. This is reflected by relatively wide spacing of trees and shrubs and large areas of bare space exposed. Scientific names are from Hitchcock, Cronquist, Ownbey, and Thompson Vascular Plants of the Pacific Northwest, 1961 -.

Edge: Essentially similar habitat conditions surround the plot, except for the presence of a massive rhyolite rim and talus slope towering above the plot to the west. Topography: Varies from approximately 4,200 feet in elevation at the eastern end of the old stream bed to approximately 4,550 feet at the head of the ridge to the south. Many different combinations of slope and aspect are

represented in the widely varied terrain. Coverage: April 22; May 2, 6, 14, 23; June 3, 4, 12, 30. Hours varied from 5:04 a.m. to 9:30 p.m. All counts in morning except evening count on June 3. Field work man-hours, 72; census man-hours, 48. Census: Rock Wren, 10 (62, 25); Chipping Sparrow, 3 (19, 8); W. Meadowlark, 2.5; California Quail, 2; Chukar, 2; Brown-headed Cowbird, 2; Lark Sparrow, 2; House Finch, 1.5; Mourning Dove, 1; Ash-throated Flycatcher, 1; Black-billed Magpie, 1; Com. Bushtit, 1; Robin, 1; Green-tailed Towhee, 1; Brewer's Sparrow, 1; Sparrow Hawk, 0.5; Great Horned Owl, 0.5; Com. Nighthawk, 0.5; Loggerhead Shrike, 0.5; Lazuli Bunting, 0.5; Red-tailed Hawk, +; Prairie Falcon, +.

Total: 22 species; 34.5 territorial males (213 per square kilometer, 86 per 100 acres). Visitors: Average number seen/number of censuses seen: Turkey Vulture, 3/6; Marsh Hawk, 1/2; Red-shafted

Flicker, 2/3; W. Kingbird, 1/2; Say's Phoebe, 4/1; Dusky Flycatcher, 3/1; Barn Swallow, 1/3; Com. Raven, 1/8; Mountain Chickadee, 1/1; Ruby-crowned Kinglet, 5/4; Cedar Waxwing 2/1; Orange-crowned Warbler, 1/1; Townsend's Warbler, 3/1; Wilson's Warbler, 3/1; Red-winged Blackbird, 7/1; Bullock's Oriole, 1/1; Brewer's Blackbird, 3/1; W. Tanager, 2/2; Rufous-sided Towhee, 1/1; Oregon Junco, 2/2; White-crowned Sparrow, 2/1. Remarks: An unusually cold, windy spring gave way in June to stifling summer heat, so it never became apparent just when the peak of territorial singing was reached. On early visits Ruby-crowned Kinglets gave the impression that they intended to nest, but later disappeared to higher altitudes. A Black-billed Magpie nest containing 3 eggs was located in a W. Juniper on April 22. It contained 7 eggs on May 6 but was inexplicably empty on May 14. A Lark Sparrow nest under a Big Sage contained 5 eggs on June 4, and 5 young on June 12. A Chipping Sparrow nest with 4 young was found in a Big Sage on June 12. Two adult Loggerhead Shrikes were accompanied by 3 young, still incapable of sustained flight, on June 30. A pair of Rock Wrens protectively flanked 2 fledglings on June 30, and several pairs were observed carrying food. The Prairie Falcons nested on a rock ledge high on the rhyolite rim. Two downy chicks and an apparently infertile egg were observed in the nest on May 23; the young birds were fledged but were in the vicinity of the eyrie on June 30. Canyon Wrens also nested on the rim adjacent to the study plot. Other vertebrate species observed within the study area were

Black-tailed Jackrabbit, Mountain Cottontail, Golden-mantled Ground Squirrel, Least Chipmunk, Deer Mouse, Coyote, Badger, Spotted Skunk, Mule Deer, Blue Racer, Bull Snake, W. Fence Lizard, and Sagebrush Lizard. Our appreciation is due Eldon McLaury, who assisted with vegetational analysis. - WALT and BECCI ANDERSON, Malheur National Wildlife Refuge, P.O. Box 113, Burns, Ore. 97720.

COLOR CODING OF TRIPS

4/22 - DK. GREEN

5/2 - MAGENTA

5/6 - GRAY

5/14 - BLUE

5/23 - BROWN

6/3 - YELLOW

6/4 - RED

6/12 - LT. GREEN

6/30 - ORANGE

SYMBOLS USED ON TRIP MAPS

W Simple sight or sound contact with a bird of species W (♂ or ♀ added as necessary)

W Contact on basis of any vocal utterance (except song) thought to have territorial significance.

⊙ Contact with a singing bird of species W which has been seen or precisely located by song.

⊙ W A singing bird of species W not precisely located.

⊙ WW An aggressive encounter between 2 birds of species W.

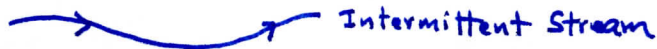
W → W 2 contacts with the same bird, arrow indicating movement.

W ---- W Contemporary contact of 2 different birds of species W (used to separate males or pairs, not different members of one pair or family group).

W* Nest of species W



Rocky Rim



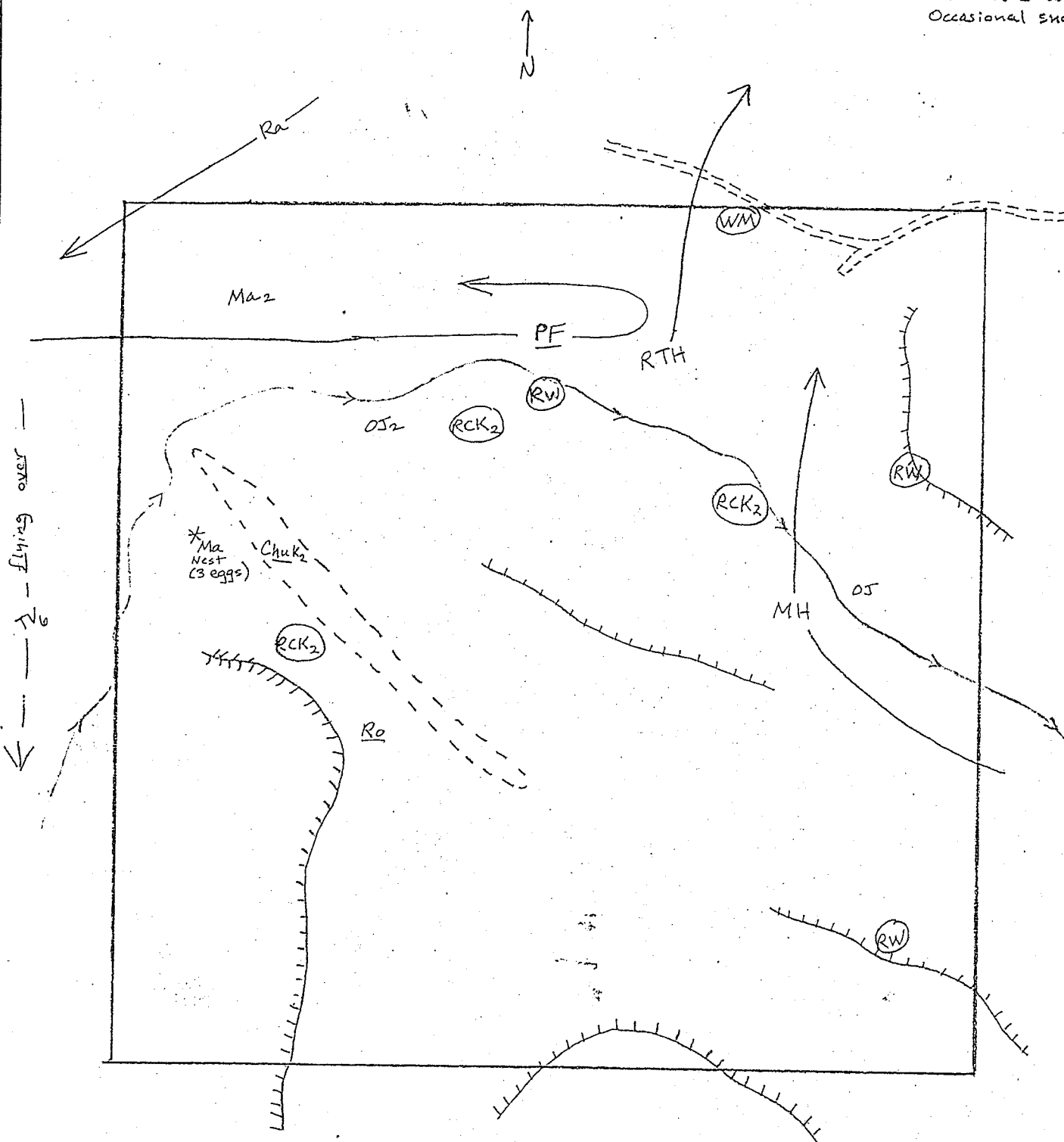
Intermittent Stream

SCALE ON TRIP MAPS : 24 inches = 1 mile

COUNT #1

4/22/71

0900-1400
(mapping + count)
High clouds, cool (45°)
Variable wind
Occasional snow patches

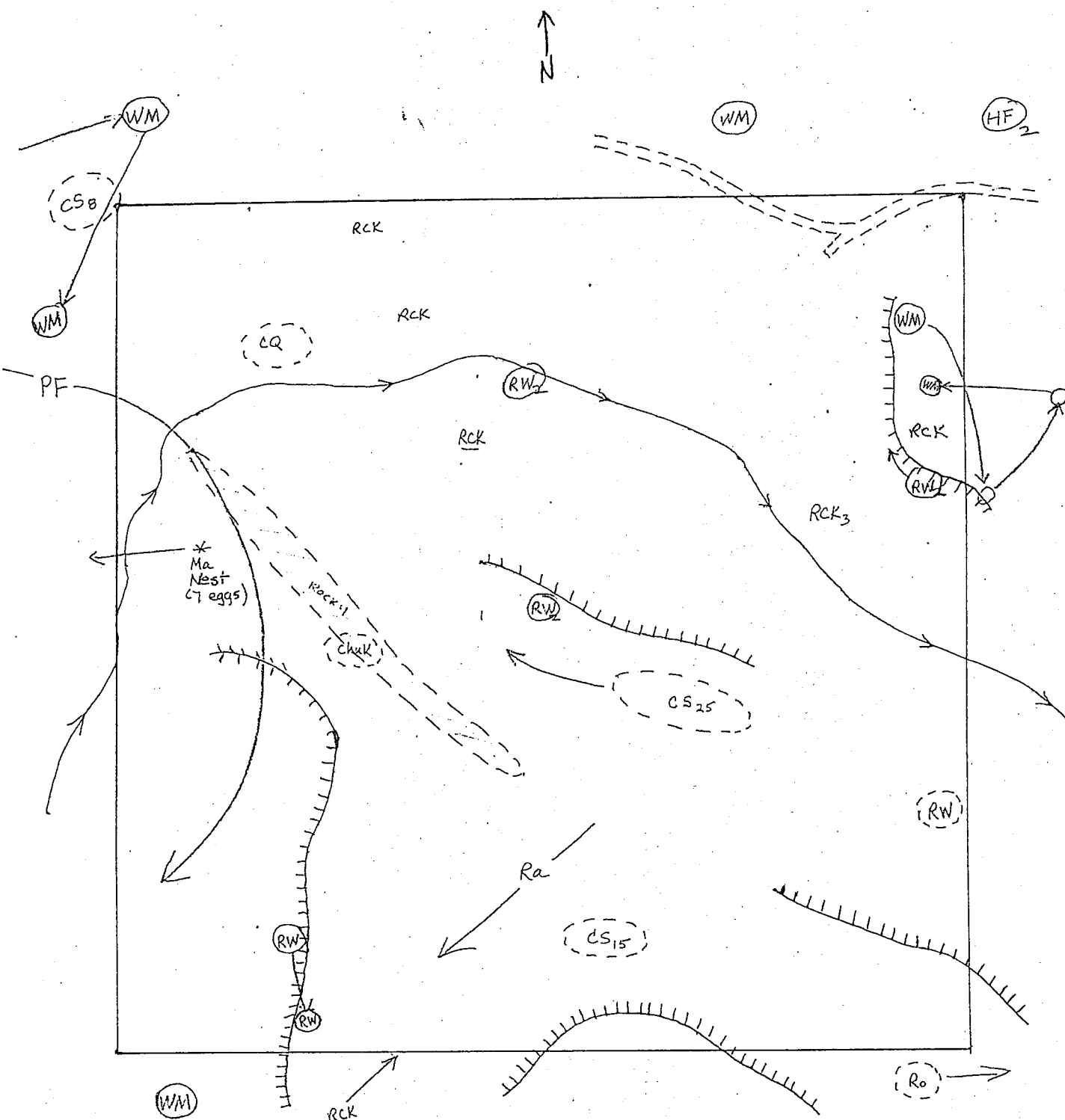


Count Results:

Chuk = Chukar 2
CW = Canyon Wren (near area) 1
Ma = Black-billed Magpie 3
(nest with 3 eggs)
MH = Marsh Hawk (flying) 1
OJ = Oregon Junco 3

PF = Prairie Falcon (flying) 1
Ra = Common Raven (") 1
RCK = Ruby-crowned Kinglet 6
R0 = Robin 1
RTH = Red-tailed Hawk 1
RW = Rock Wren 3
TV = Turkey Vulture (flying) 6
WM = Western Meadowlark 1

0735-1005 hrs.
35°-40°
Still, changing to E.
Wind 10 mph with rain



COUNT RESULTS ;

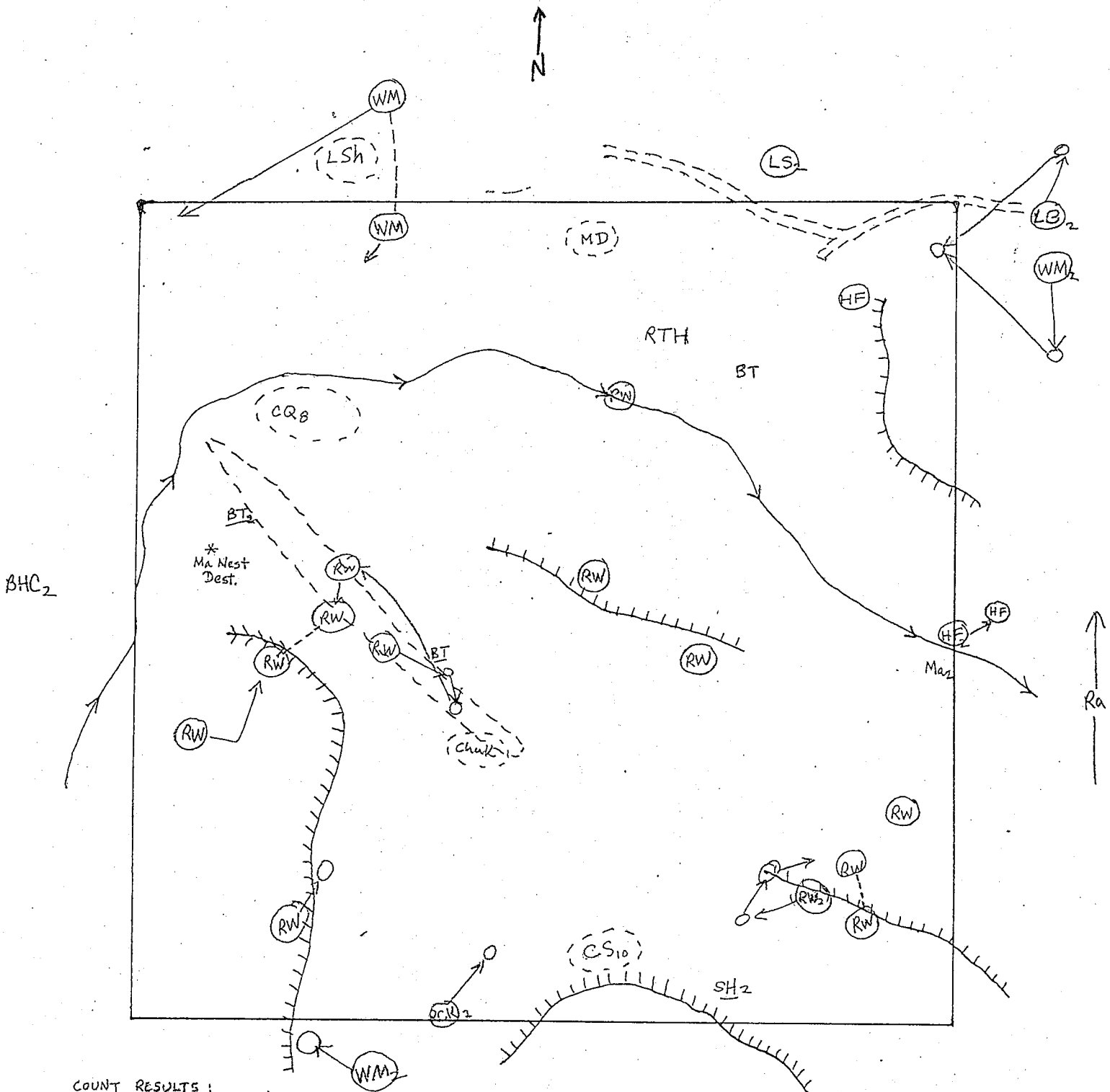
chuk = Chukar 1
 CQ = Calif. Quail 1
 CS = Chipping Sparrow 48
 CW = Canyon Wren (outside area)
 HF = House Finch 2
 Ma = Black-billed Magpie - Nest, 7 eggs
 PF = Prairie Falcon 1

RA = Common Raven 1
 RCK = Ruby-crowned Kinglet 8
 RO = Robin 1
 RTH = Red-tailed Hawk (near area) 1
 RW = Rock Wren 8
 TV = Turkey Vulture 1
 WM = W. Meadowlark (near area) 4

5/14/71

COUNT #4

0630-0915 hrs.
Clear, sunny, light frost
Temp 32°F, Gentle E. breeze

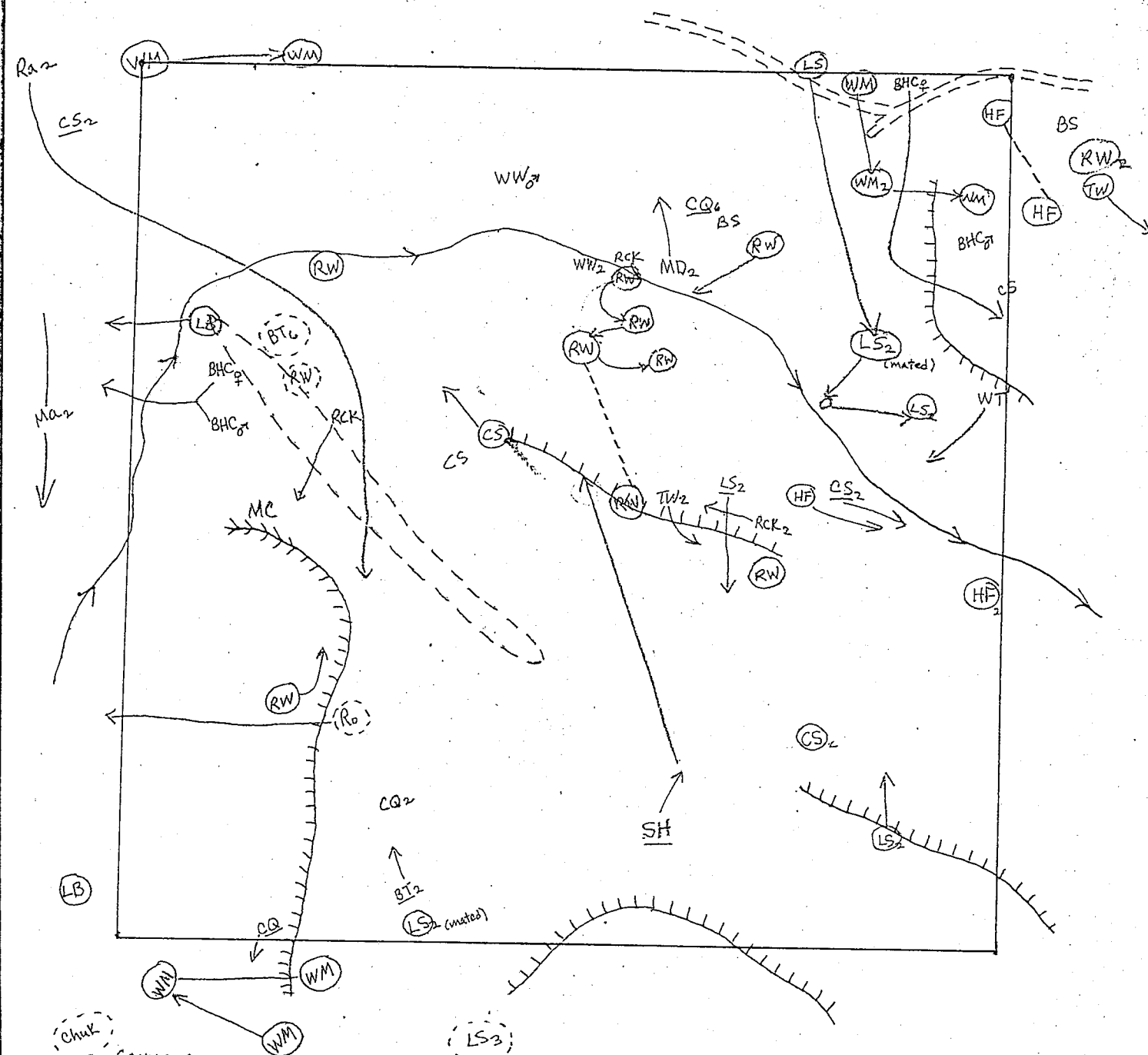


COUNT RESULTS:

BHC = Brown-headed Cowbird (♂ + ♀) 2
BSW = Barn Swallow (flew over) 1
BT = Common Bushtit 4
Chuk = Chukar (calling) 1
CQ = Calif. Quail 8
CS = Chipping Sparrow 10
HF = House Finch 3
LB = Lazuli Bunting 2
LS = Lark Sparrow 2

LSH = Loggerhead Shrike 1
Ma = Black-billed Magpie 2 (Nest was destroyed)
MD = Mourning Dove 1
Ra = Common Raven (Flying) 1
RCK = Ruby-crowned Kinglet 2
RTH = Red-tailed Hawk 1
RW = Rock Wren 10
SH = Sparrow Hawk (courting?) 2
WM = Western Meadowlark 5

6640-0930 hrs.
Still, 45°
Clear, sunny



COUNT RESULTS:

BHC = Brown-headed Cowbird
BS = Brewer's Sparrow
BSw = Barn Swallow (flew over)
BT = Common Bushtit
CQ = Calif. Quail
CS = Chipping Sparrow
HF = House Finch
LB = Lazuli Bunting

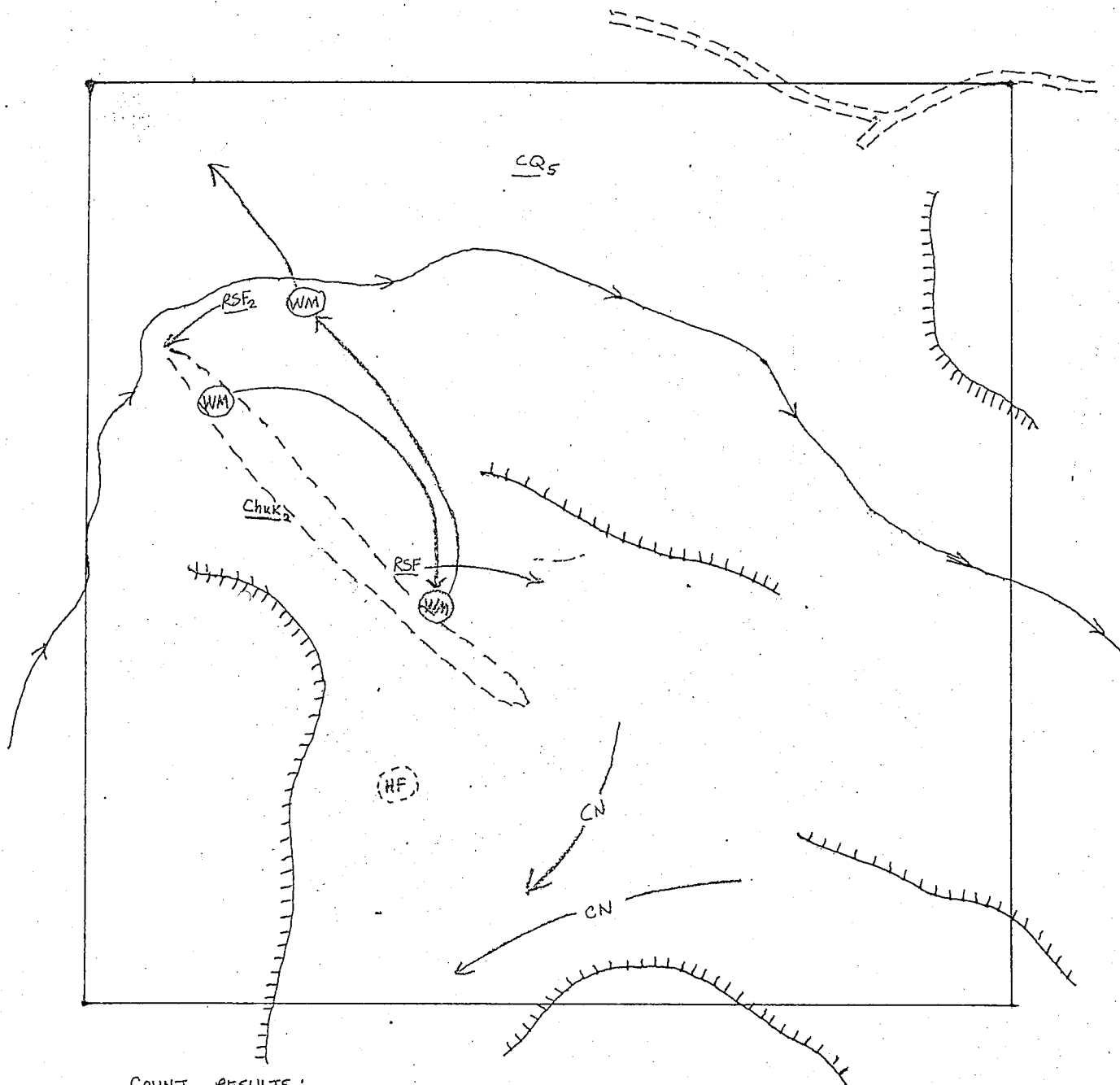
4
2
1
8
8.
9
4
2

LS = Lark Sparrow (2 prs. copulated) 11
MC = Mt. Chickadee 1
MD = Mourning Dove 2
PF = Prairie Falcon (near area) 2
RA = Common Raven (flying) 2
RCK = Ruby-crowned Kinglet 3
RO = Robin 1

RW = Rock Wren	8
TV = Turkey Vulture (near area)	4
TW = Townsend's Warbler	3
WM = Western Meadowlark	4
WT = W. Tanager	1
WW = Wilson's Warbler	3

COUNT # 6

6/3/71
1930-2100 hrs.



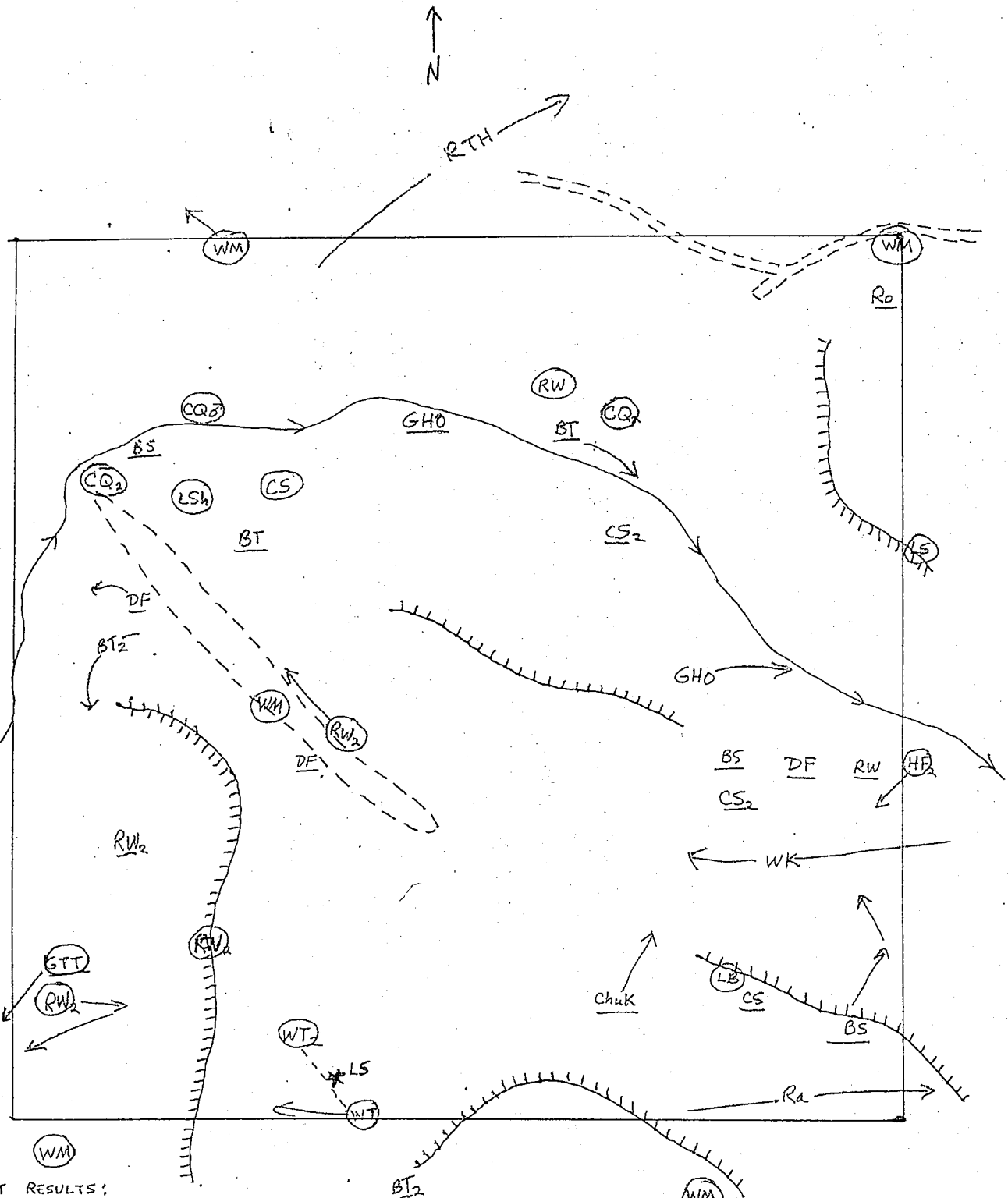
COUNT RESULTS:

Chuk = Chukar 2
CN = Common Nighthawk 2 (flying)
CQ = Calif. Quail 5
HF = House Finch 1
RSF = Red-shafted Flicker 3
WM = Western Meadowlark 1

COUNT # 7

6/4/71

0555-0930 hrs.
80% overcast, 45°F.
Wind 0-12 mph, W to N



COUNT RESULTS:

BS = Brewer's Sparrow 3
BSW = Barn Swallow (flying) 2
BT = Common Nighthawk 4
Chuk = Chukar 1
CQ = Calif. Quail 5
CS = Chipping Sparrow 8
DF = Dusky Flycatcher 3
GH = Great Horned Owl 2
STT = Green-tailed Towhee 1

HF = House Finch 2
LB = Lazuli Bunting 1
LS = Lark Sparrow 3
(nest with 5 eggs)
LSH = Loggerhead Shrike 1
Ma = Black-billed Magpie 2 (flying)
PF = Prairie Falcon 2
(flying)
Ra = Common Raven 1

Ro = Robin 1
RTH = Red-tailed Hawk 1
RW = Rock Wren 10
TV = Turkey Vulture 3
(flying)
WK = Western Kingbird 1
(flying)
WM = W. Meadowlark 5
WT = W. Tanager 3

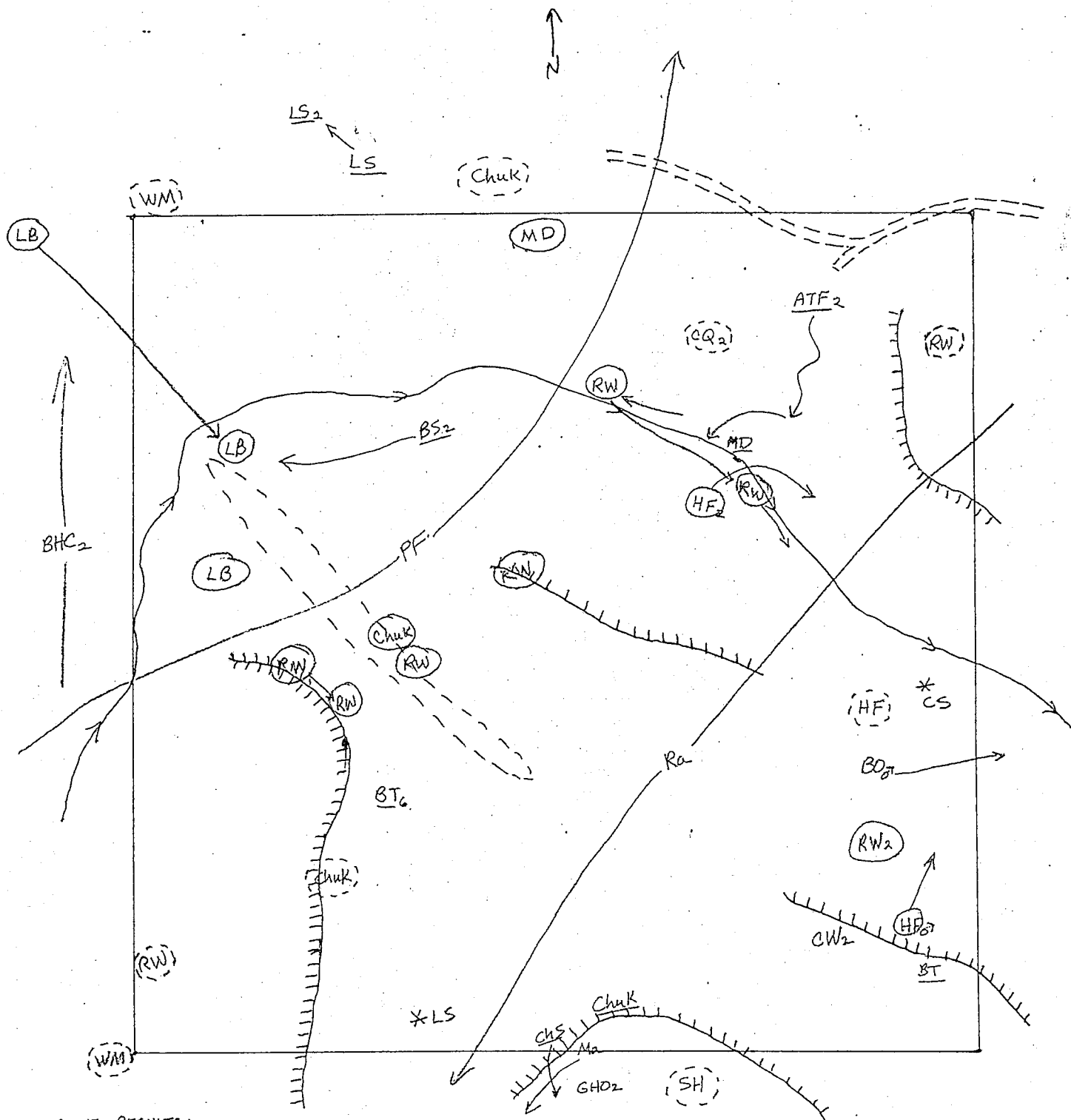
COUNT # 8

6/12/71

0550 - 0850 hrs.

50% high cirrus

Still, $45^{\circ}-65^{\circ}\text{F}$



COUNT RESULTS :

ATF = Arch-throated Flycatcher	2
BHC = Brown-headed Cowbird (flying)	2
BO = Bullock's Oriole (♂)	1
BS = Brewer's Sparrow	2
BT = Common Bushtit	7
Chuk = Chukar	4
CQ = Calif. Quail	2

CS = Chipping Sparrow - nest + 4 yg,	
CW = Cedar Waxwing	2
GHO = Great Horned Owl	2
HF = House Finch	3
LB = Lazuli Bunting ♂	2
LS = Lark Sparrow (5 young ^{in nest})	6
LSh = Loggerhead Shrike	2

Ma = Black-billed Magpie 1
MD = Mourning Dove 1
PF = Prairie Falcon (flew through) 1
Ra = Common Raven (flying) 1
RW = Rock Wren 8
SH = Sparrow Hawk 1
TV = Turkey Vulture (flying) 4
WM = W. Meadowlark 2

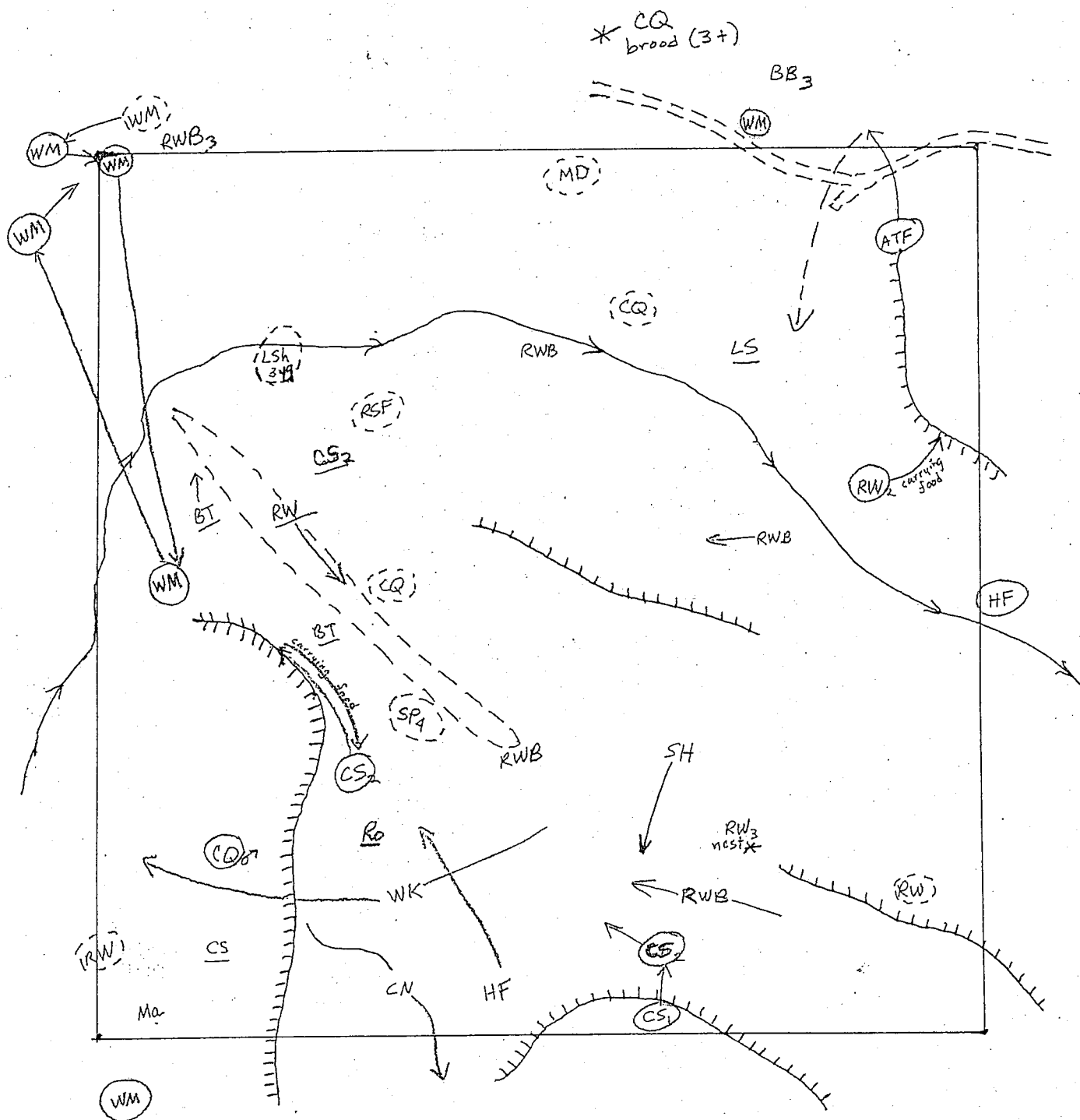
COUNT # 9

6/30/71

0504-0720 hrs.

Clear, 42°

Breeze 5 mph NW



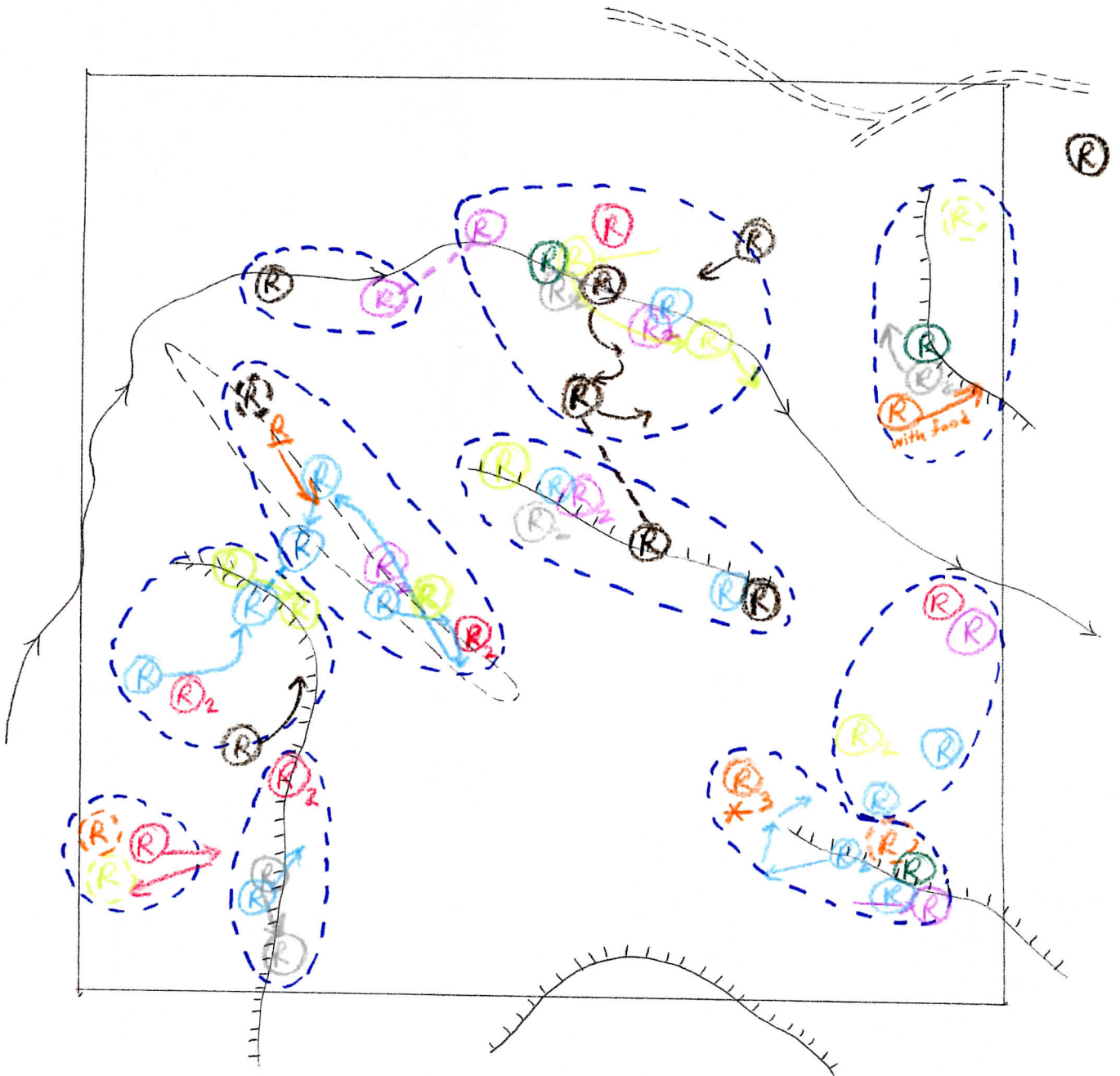
COUNT RESULTS :

ATF = Ash-throated Flycatcher 1
 BB = Brewer's Blackbird 3
 BT = Common Bushtit 2
 Chuk = Chukar pheasant calling in area
 CN = Common Nighthawk (flying) 1
 CQ = Calif. Quail 3
 CS = Chipping Sparrow 5
 HF = House Finch 2

LS = Lark Sparrow 1
 LSh = Loggerhead Shrike 3 imm. + 2 ad.
 Ma = Black-billed Magpie 1
 MD = Mourning Dove 1
 MH = Marsh Hawk (flying) 1
 Ra = Common Raven (flying) 1
 Ro = Robin 1
 RSF = Red-shafted Flicker 1

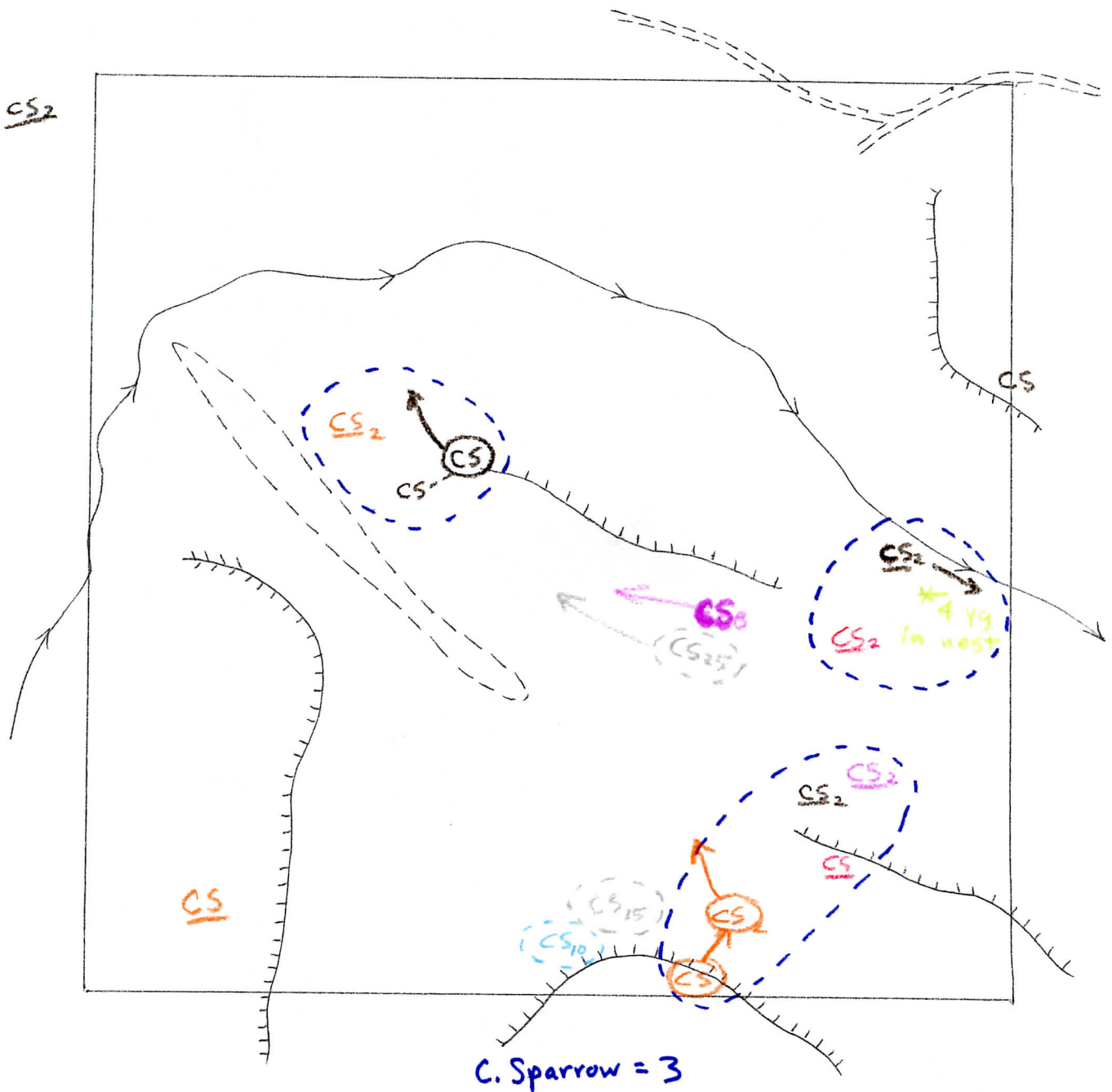
RW = Rock Wren (1 nest + 2 birds carrying food) 6
 RWB = Red-winged Blackbird 7
 SH = Sparrow Hawk 1
 SP = Say's Phoebe 4
 WK = Western Kingbird 1
 WM = Western Meadowlark 3

Rock Wren

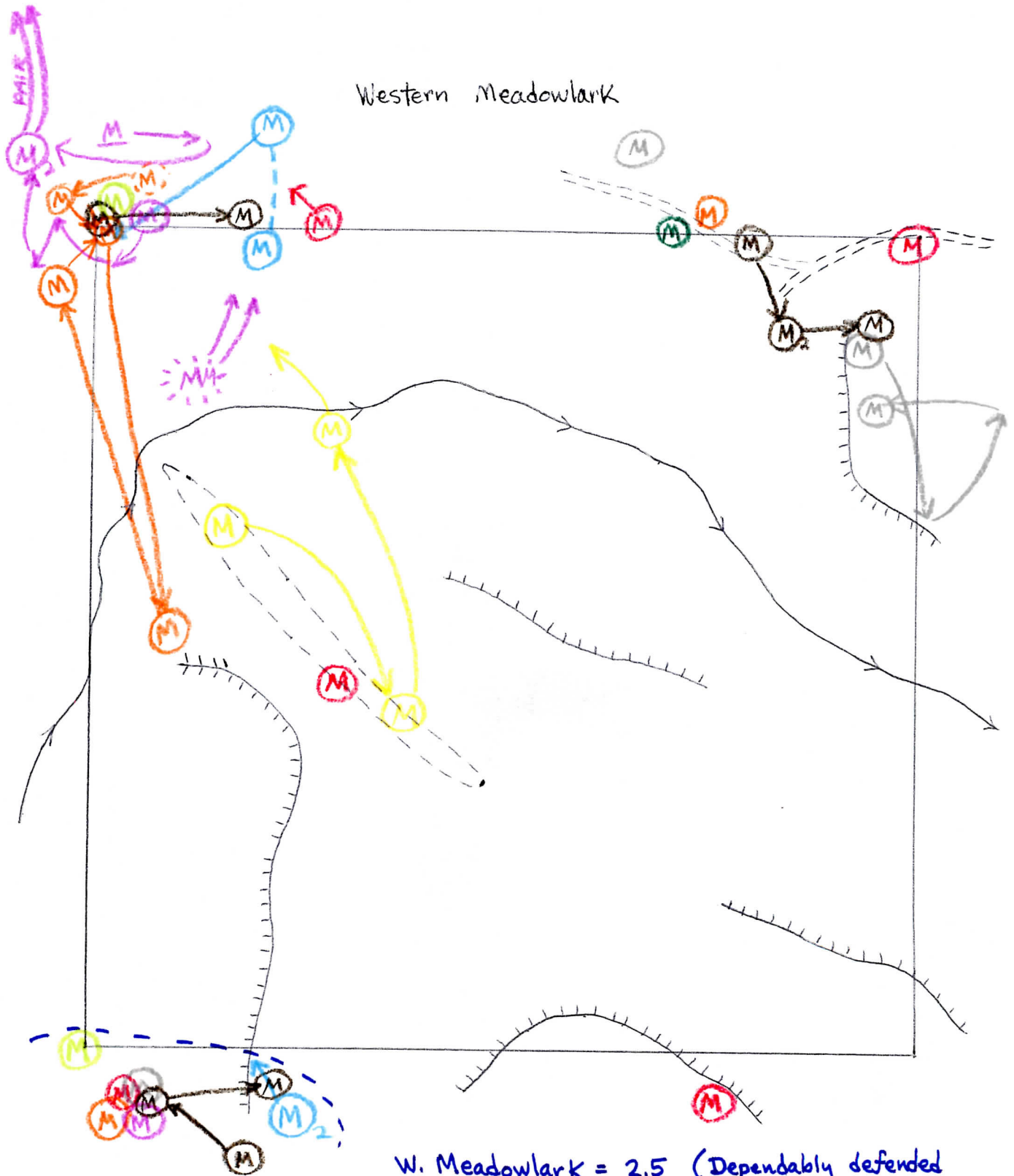


R. Wren = 10 (Conspicuously territorial)

Chipping Sparrow (CS)

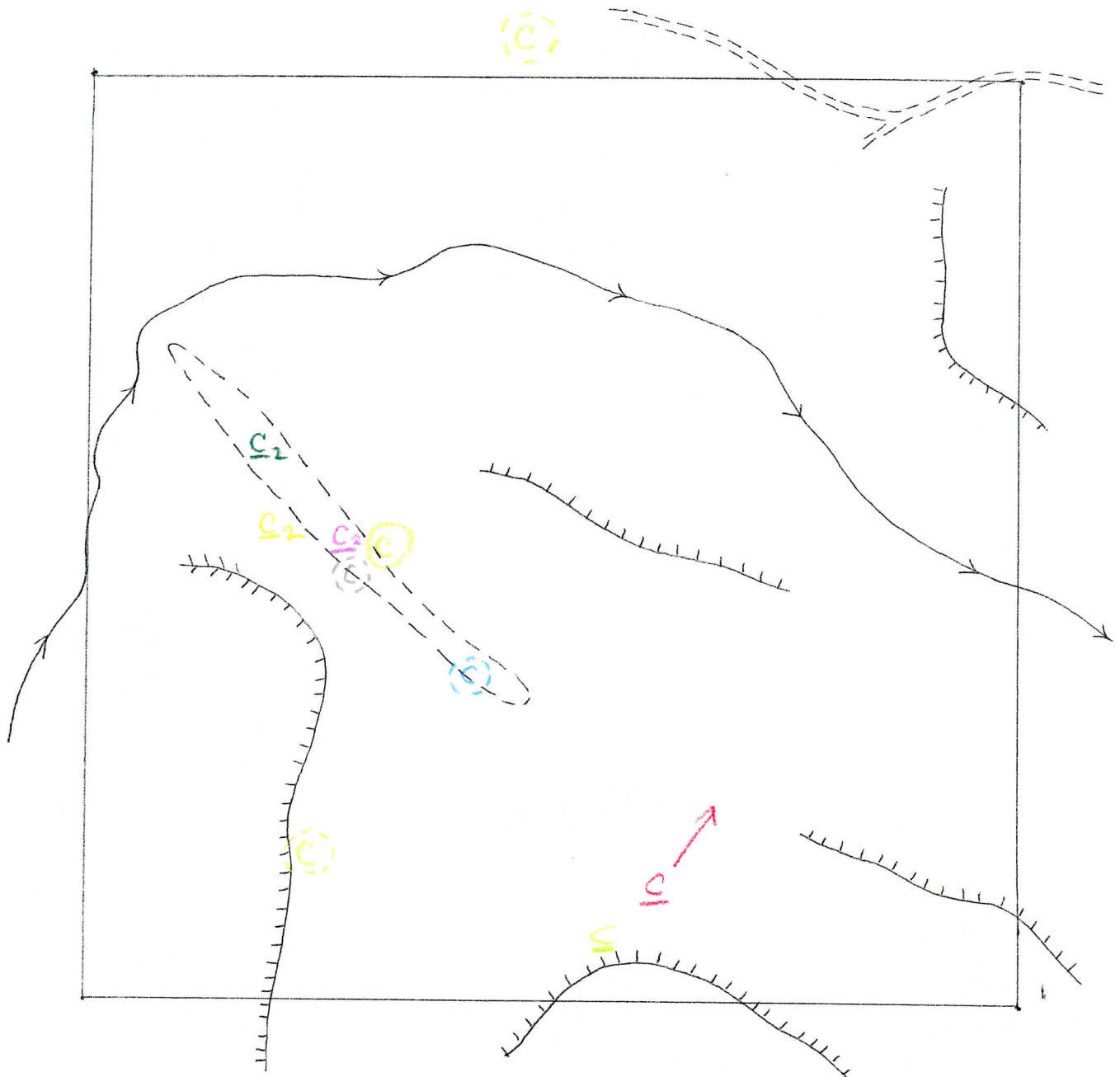


Western Meadowlark



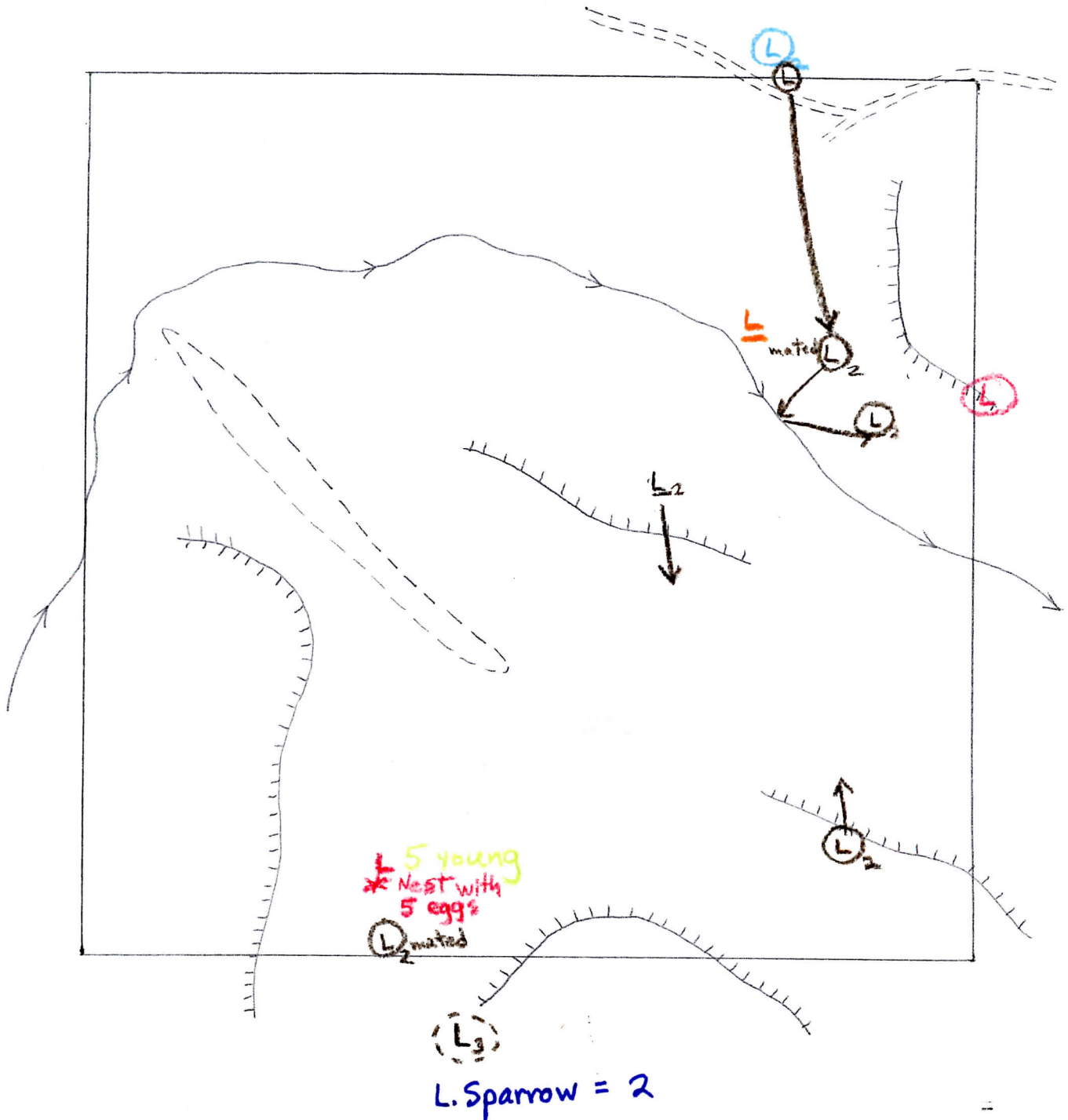
W. Meadowlark = 2.5 (Dependably defended territories)

Chukar

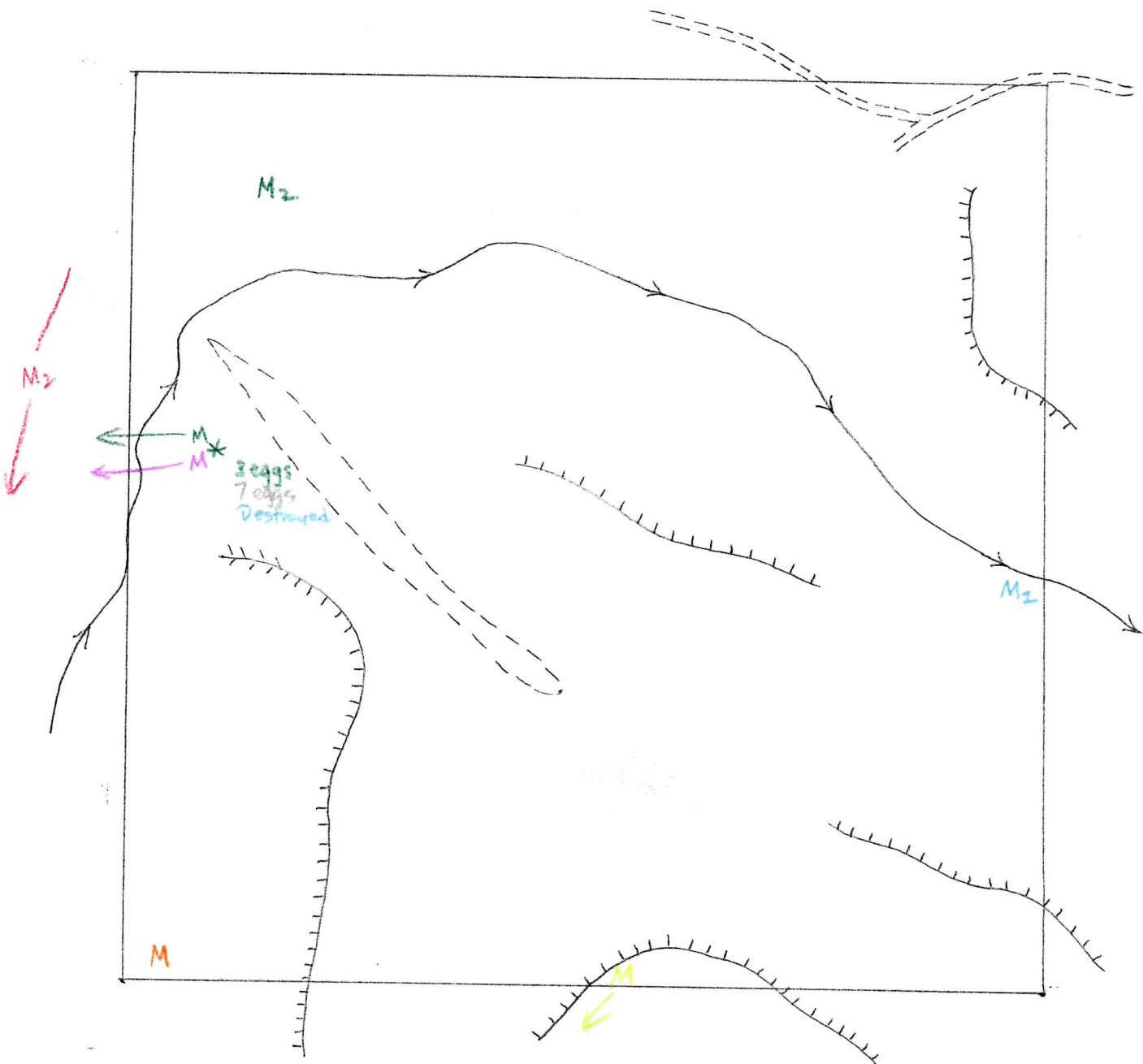


Chukar = 2

Lark Sparrow (L)

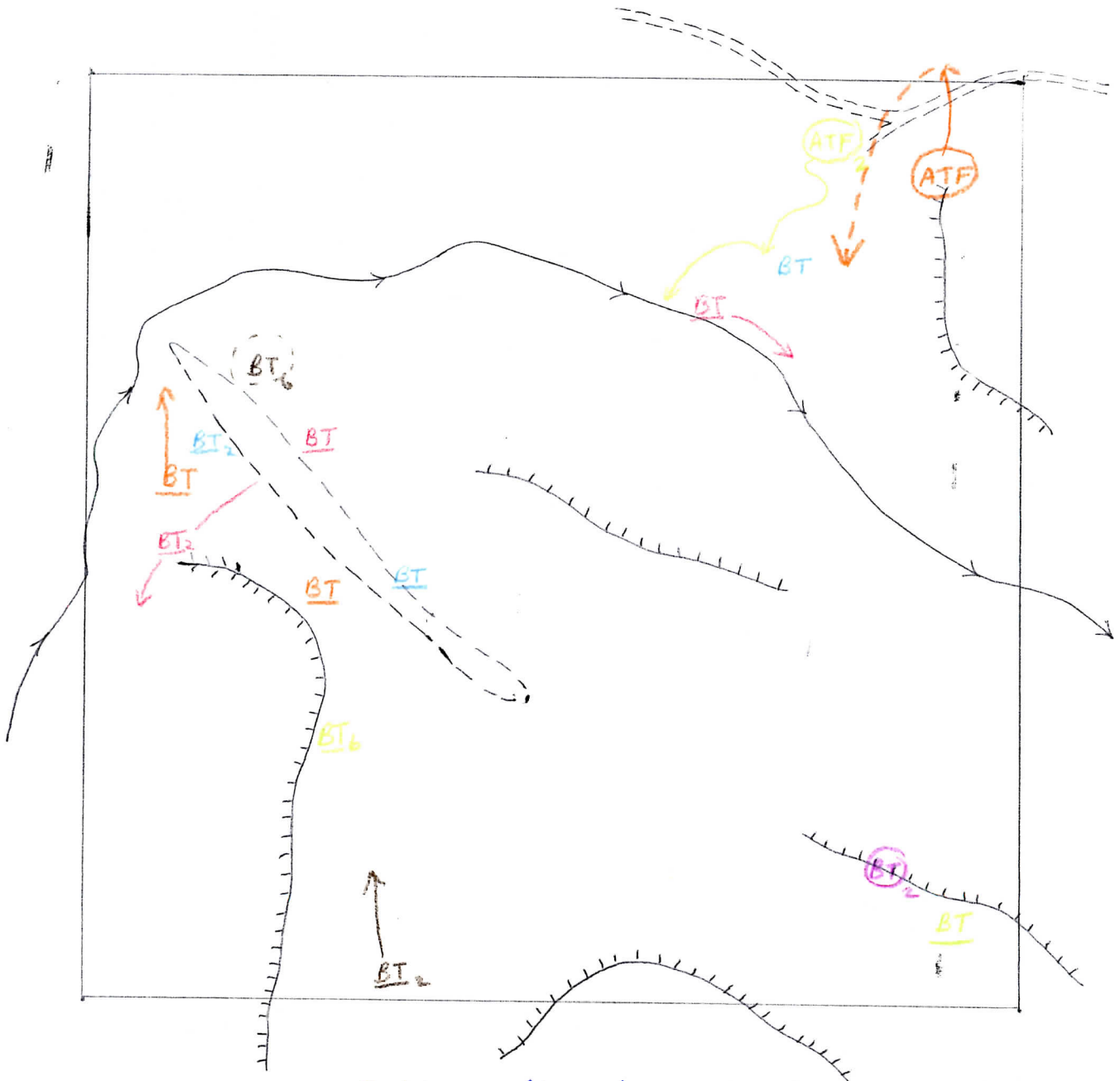


Black-billed Magpie



B.B. Magpie = 1 (First nest found; ended in failure)

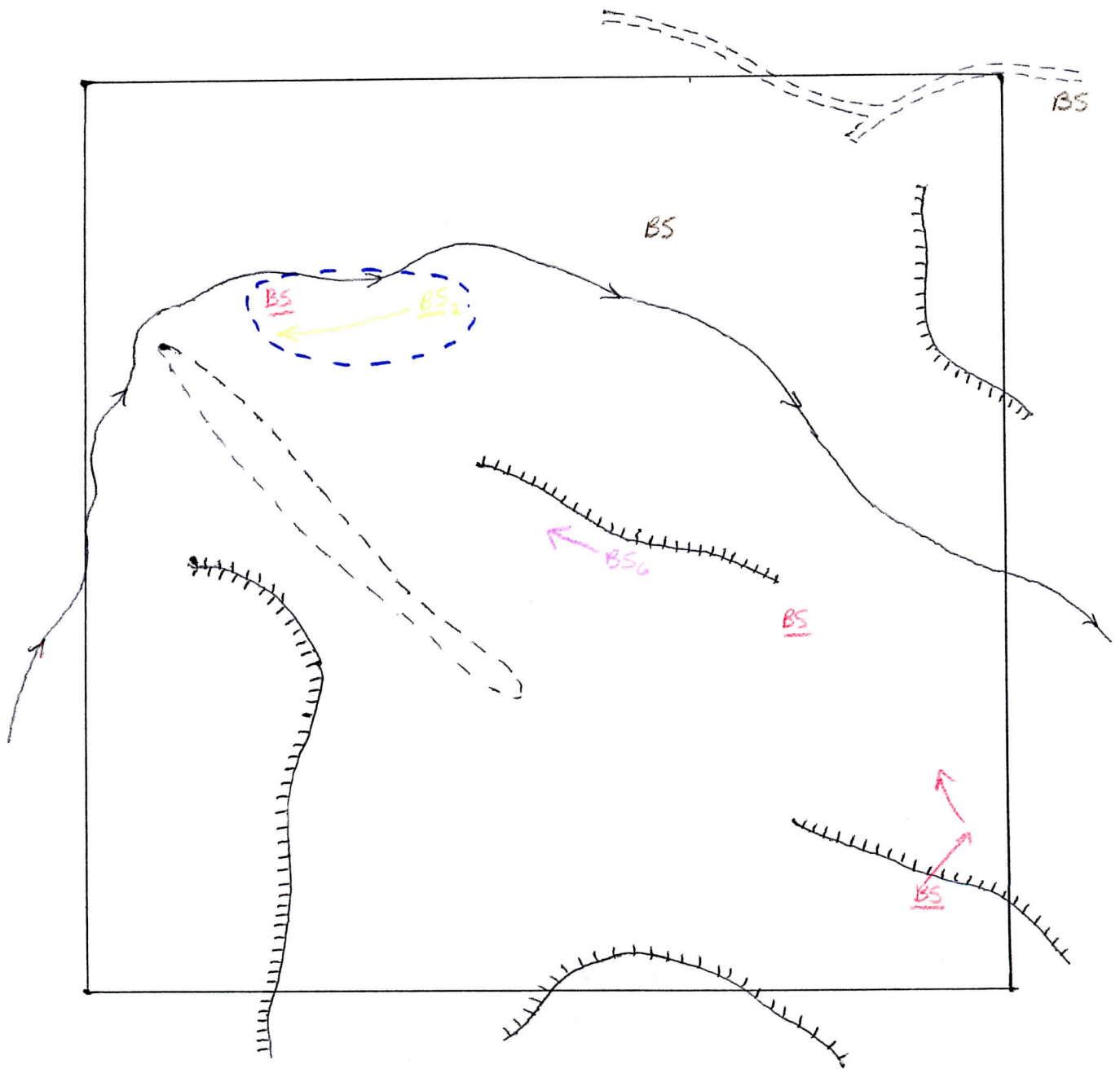
Common Bushtit (BT)
Ash-throated Flycatcher (ATF)



C. Bushtit = 1 (Suspect more, but data inconclusive other than one definite cluster).

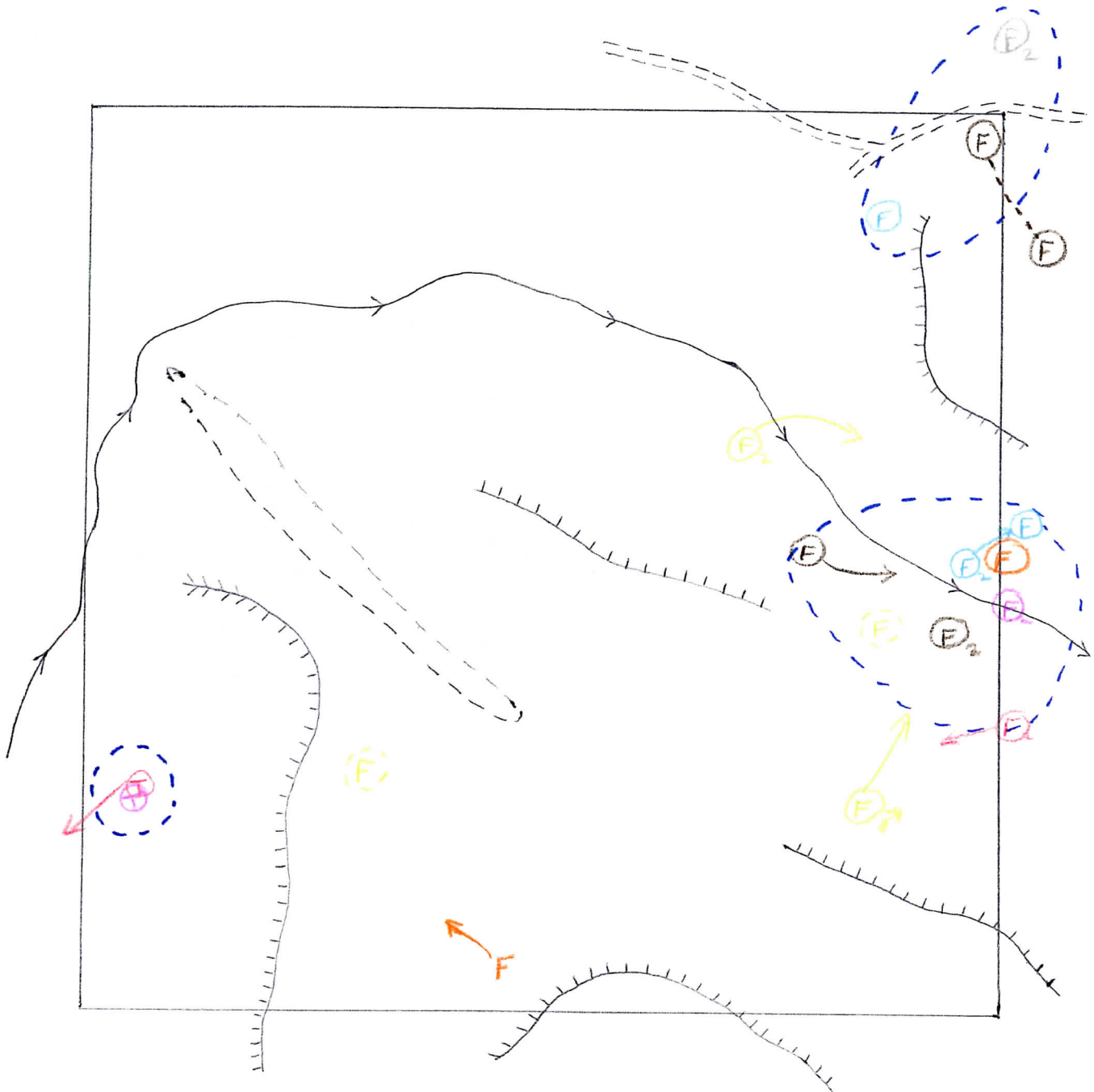
A.T. Flycatcher = 1 (Very territorial behavior).

Brewer's Sparrow (BS)



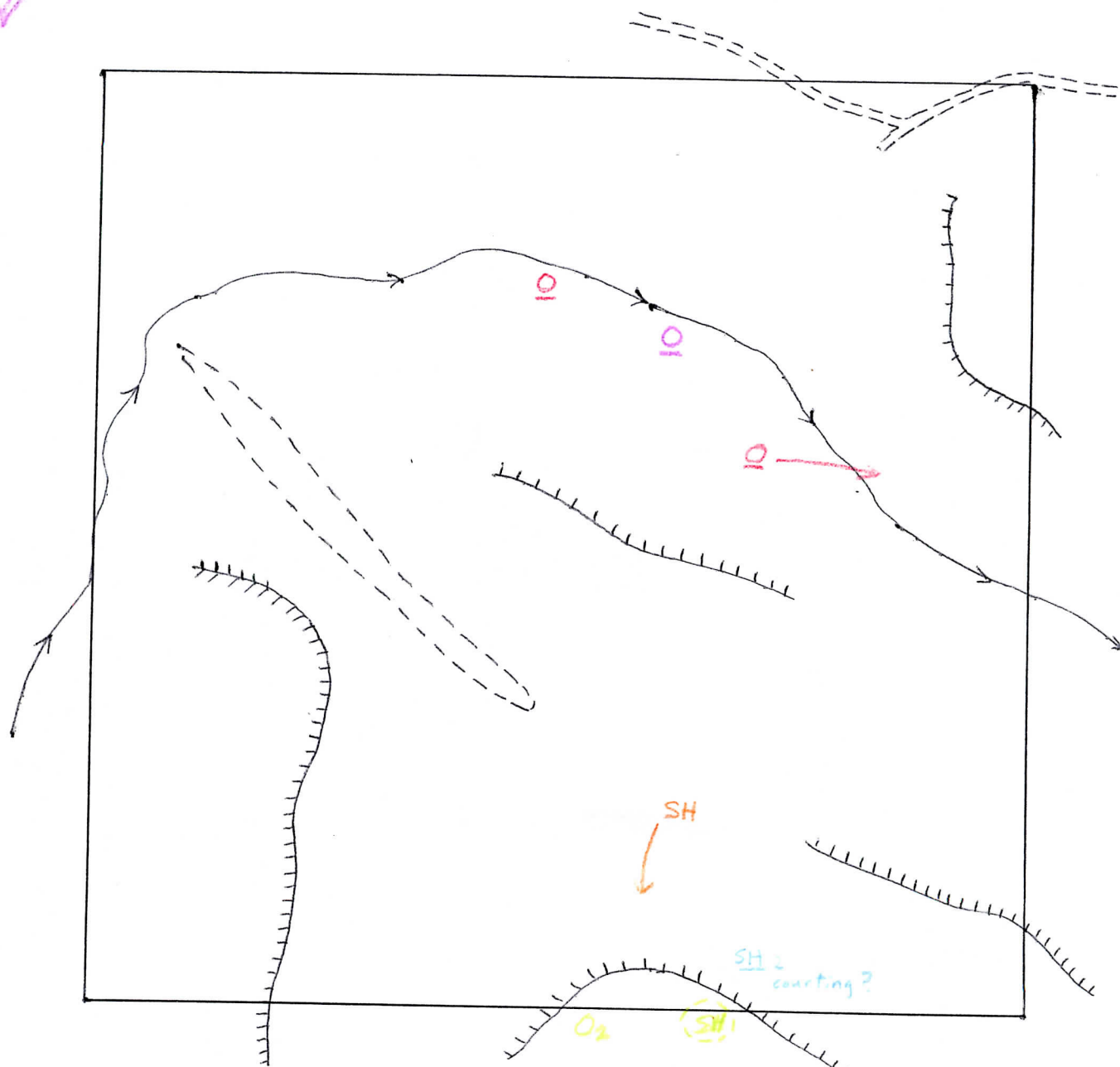
Br. Sparrow = 1 (Could have been more)

House Finch (F)
Green-Tailed Towhee (T)



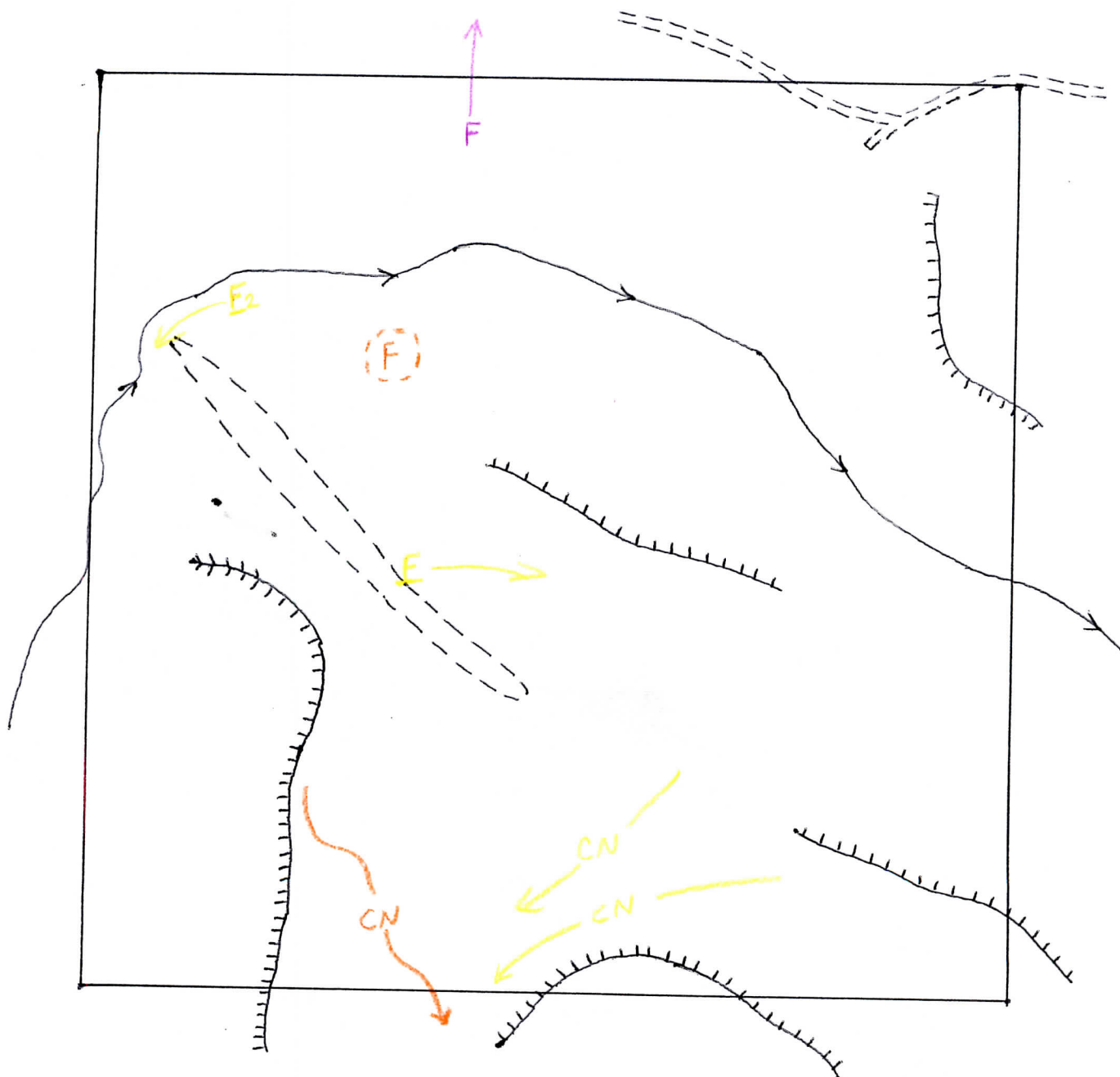
H. Finch = 1.5
G.T. Towhee = 1

Great Horned Owl (O)
Sparrow Hawk (SH)



G.H.Owl = 0.5 } Early nesters, both species were present
Sparrow Hawk = 0.5 } on the plot regularly on early exploratory
and mapping trips (not shown above).

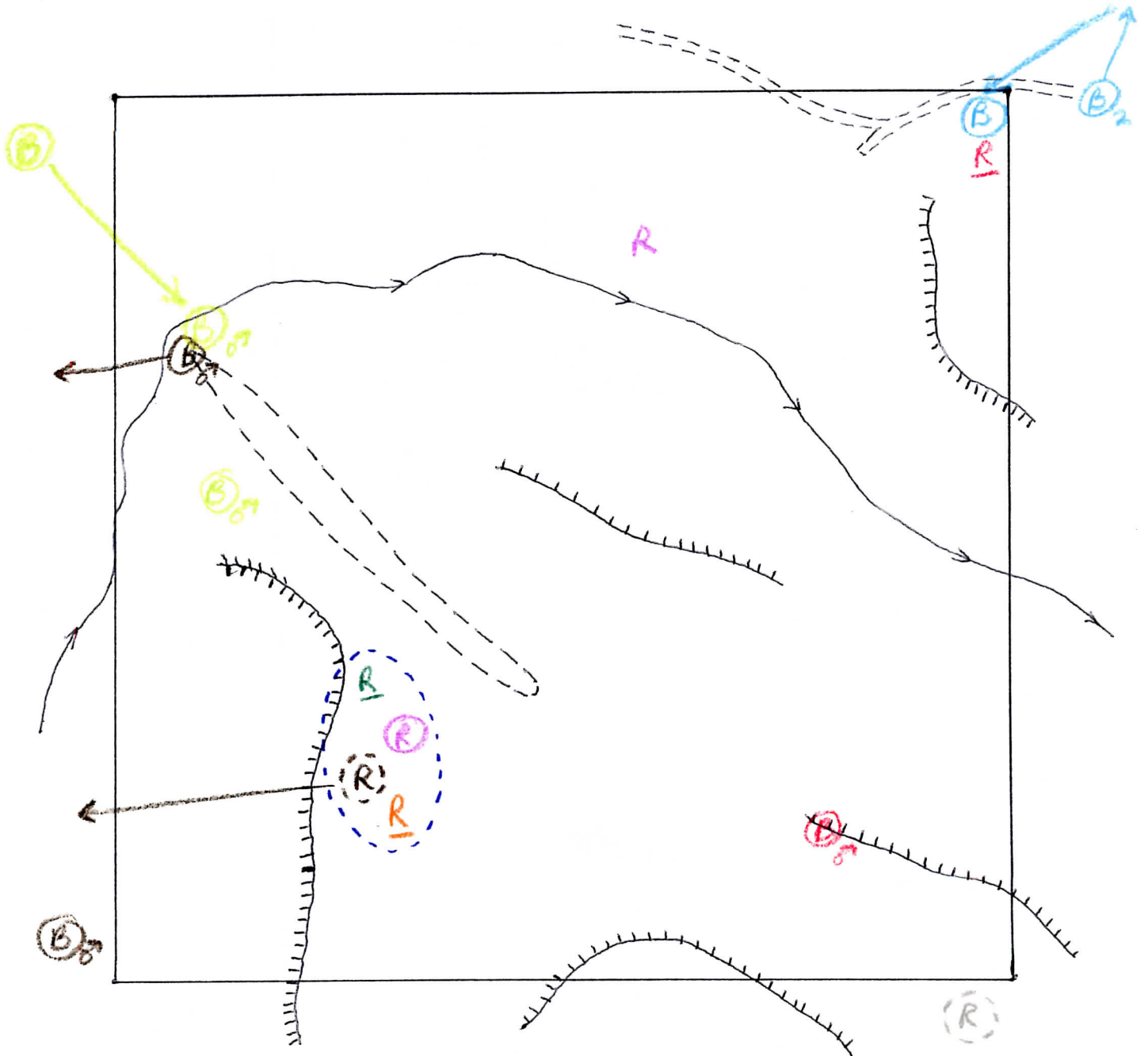
Red-shafted Flicker (F)
Common Nighthawk (CN)



R.S. Flicker = 0 (Insufficient number of observations to indicate actual breeding)

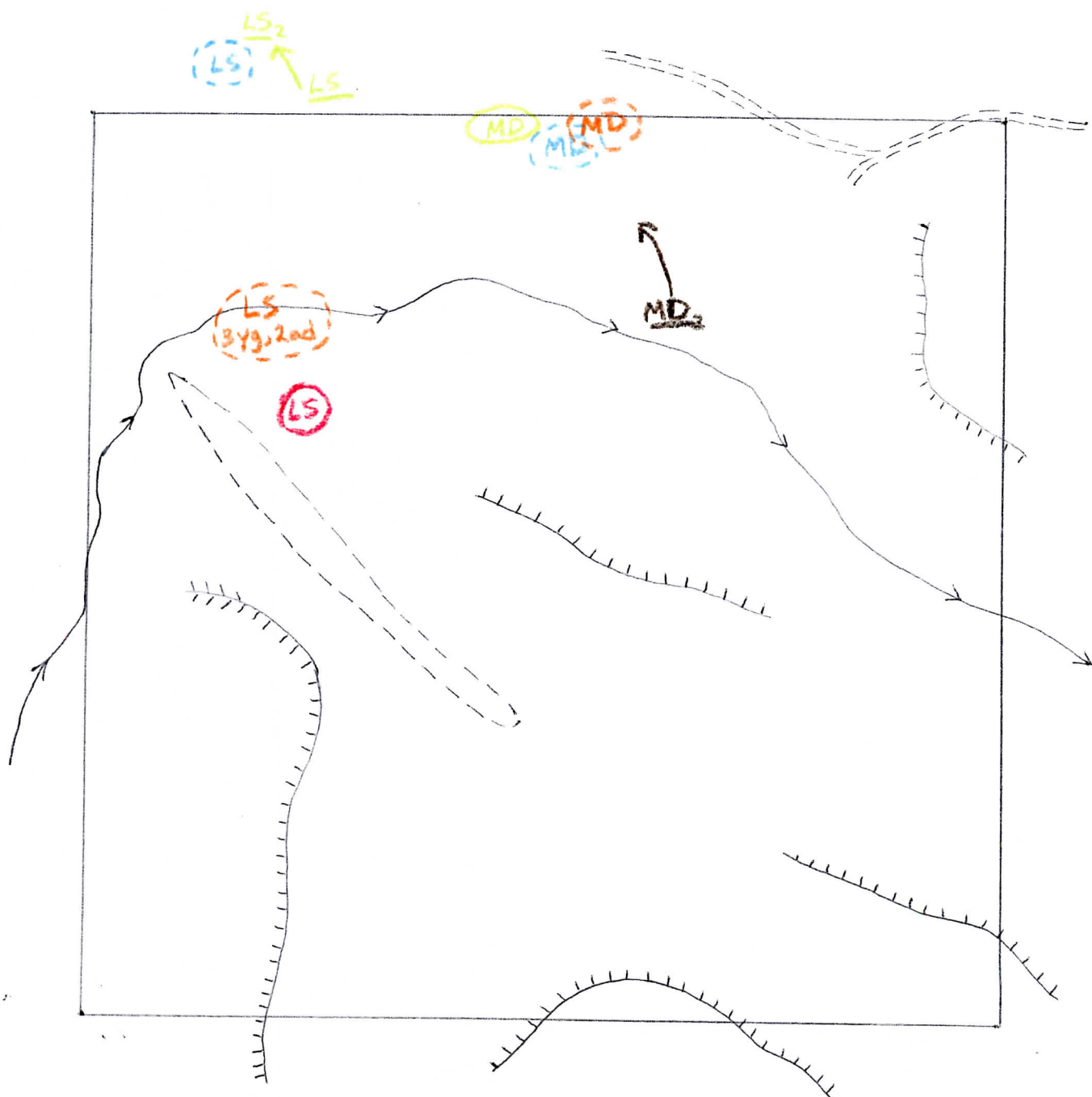
C. Nighthawk = 0.5 (Only 1 evening trip, but behavior suggested nesting near southern boundary of plot).

Robin (R)
Lazuli Bunting (B)



Robin = 1
L. Bunting = 0.5

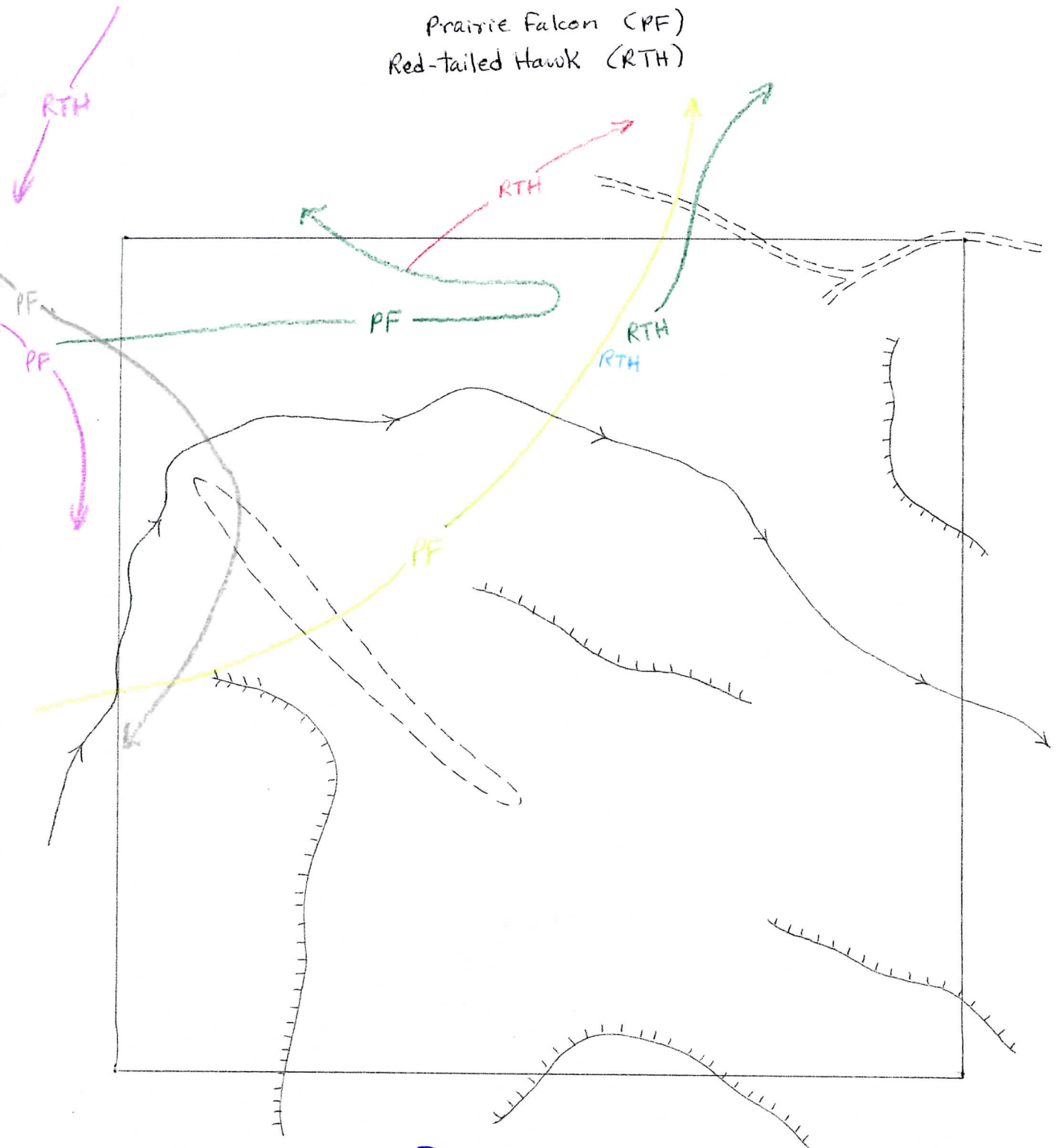
Loggerhead Shrike (LS)
Mourning Dove (MD)



L. Shrike = 0.5 (Nesting was apparently within the plot,
as 3 young observed on June 30 were
yet incapable of sustained flight).

M. Dove = 1

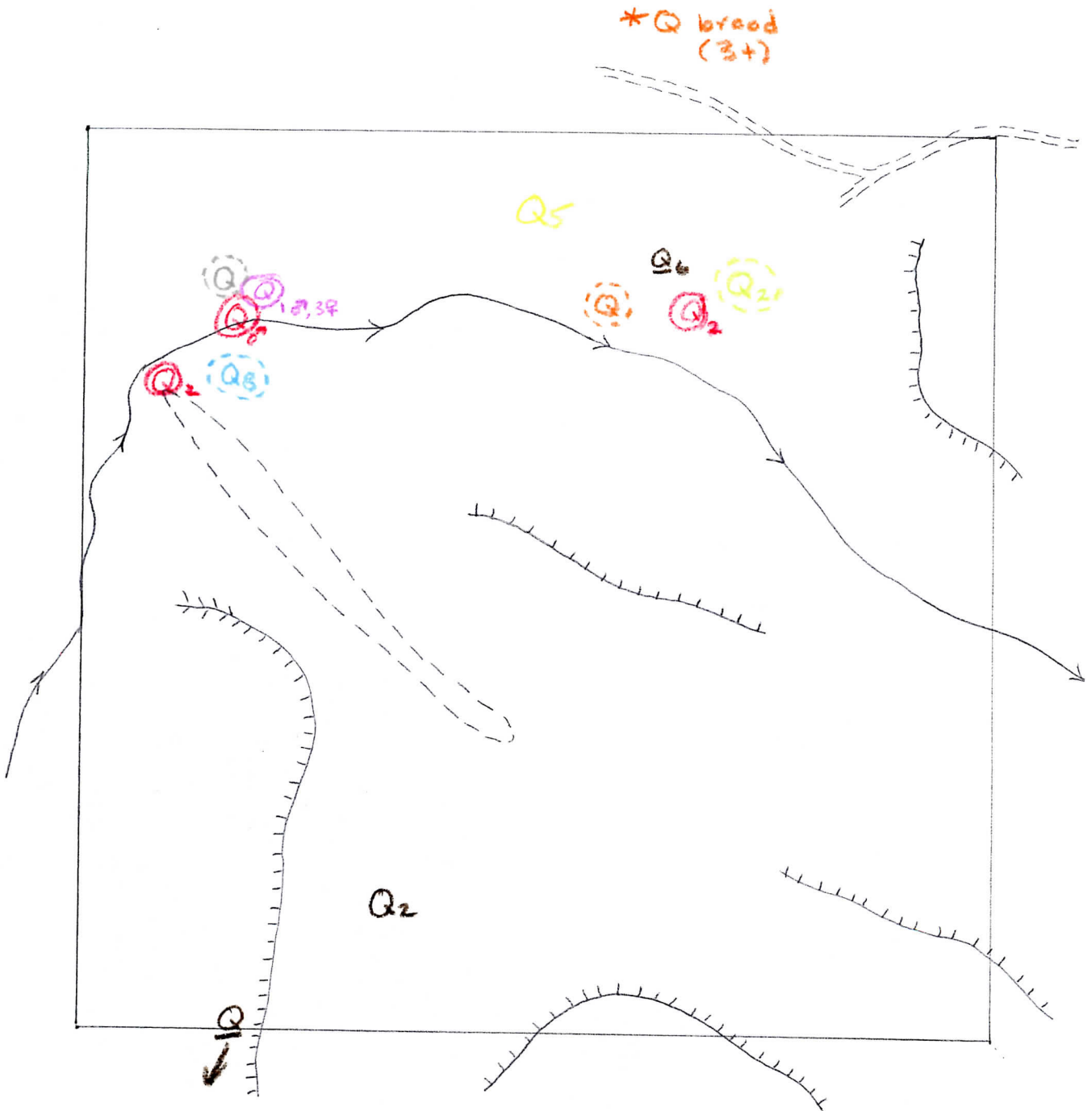
Prairie Falcon (PF)
Red-tailed Hawk (RTH)



P. Falcon = +
R.T. Hawk = +

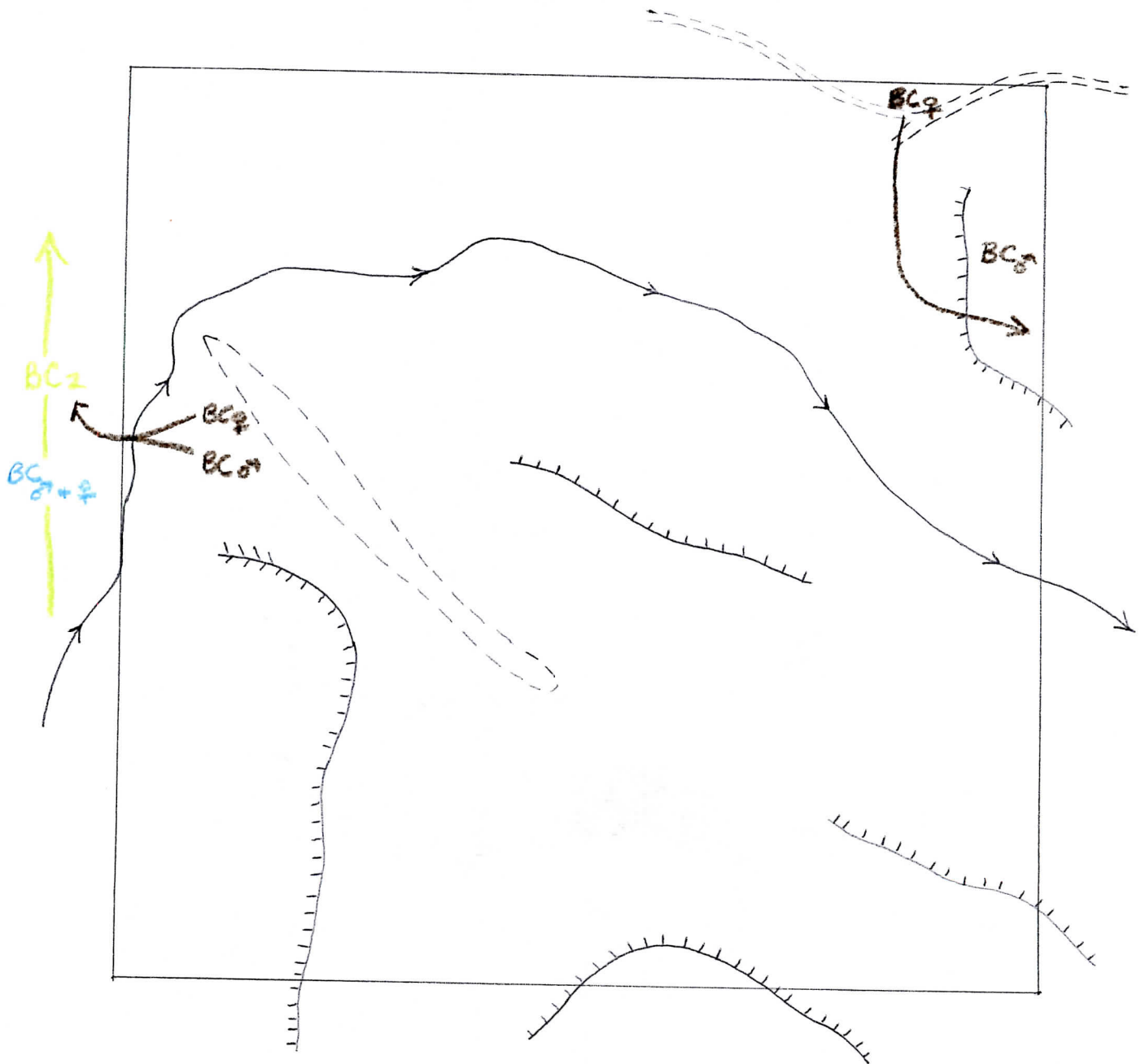
} Both nested nearby and used the study area frequently, even defending the study area by screams of protest. Because of the large territorial sizes for these birds, they rated a "+" for the 40-acre study plot.

California Quail (Q)

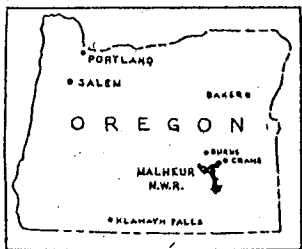


C. Quail = 2.0 (A minimum figure, based on number of males observed)

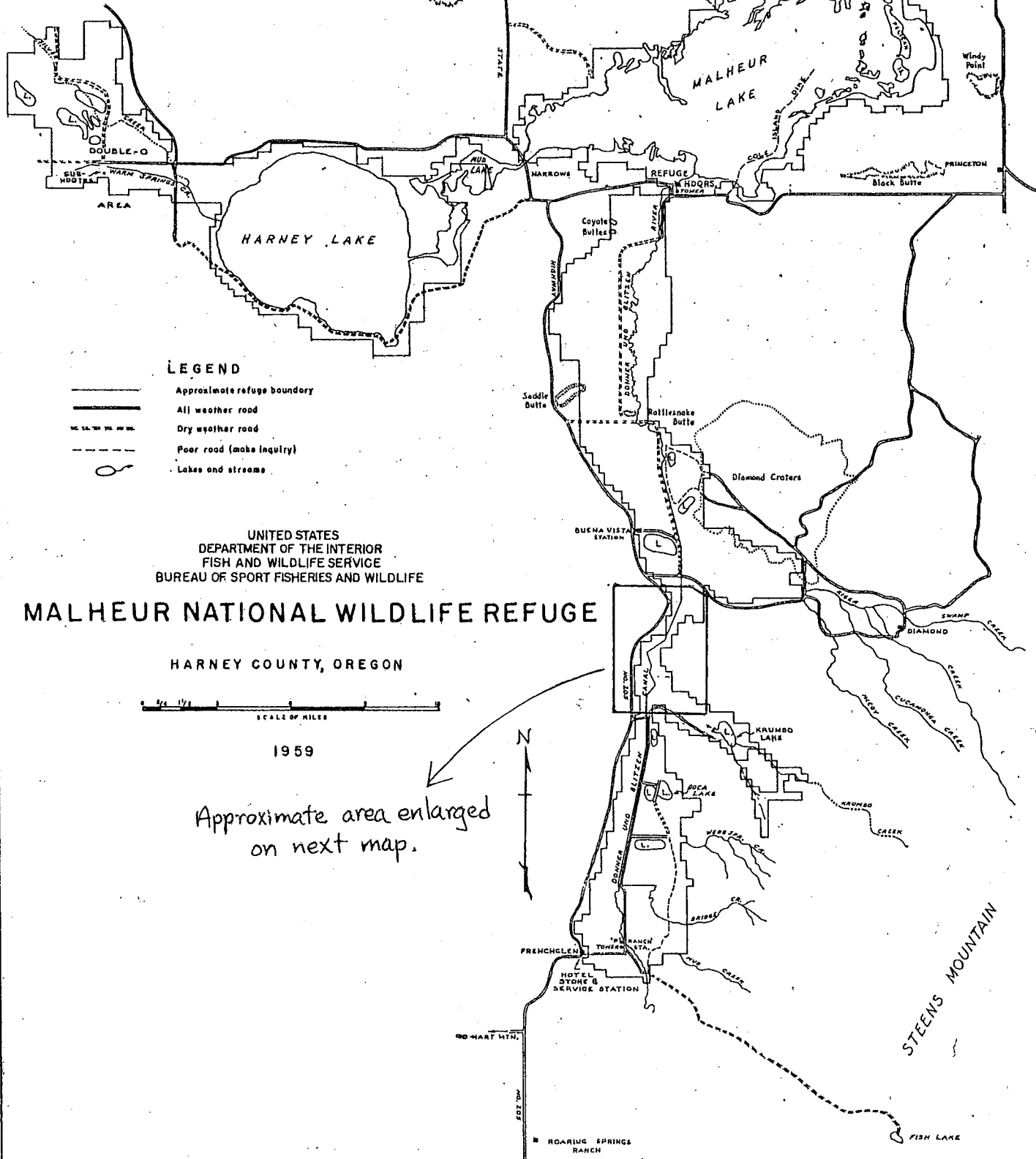
Brown-headed Cowbird (BC)



B.h. Cowbird = 2 pairs



LOCATION MAP



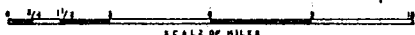
LEGEND

- Approximate refuge boundary
- All weather road
- - - Dry weather road
- - - Poor road (make inquiry)
- Lakes and streams

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

MALHEUR NATIONAL WILDLIFE REFUGE

HARNEY COUNTY, OREGON

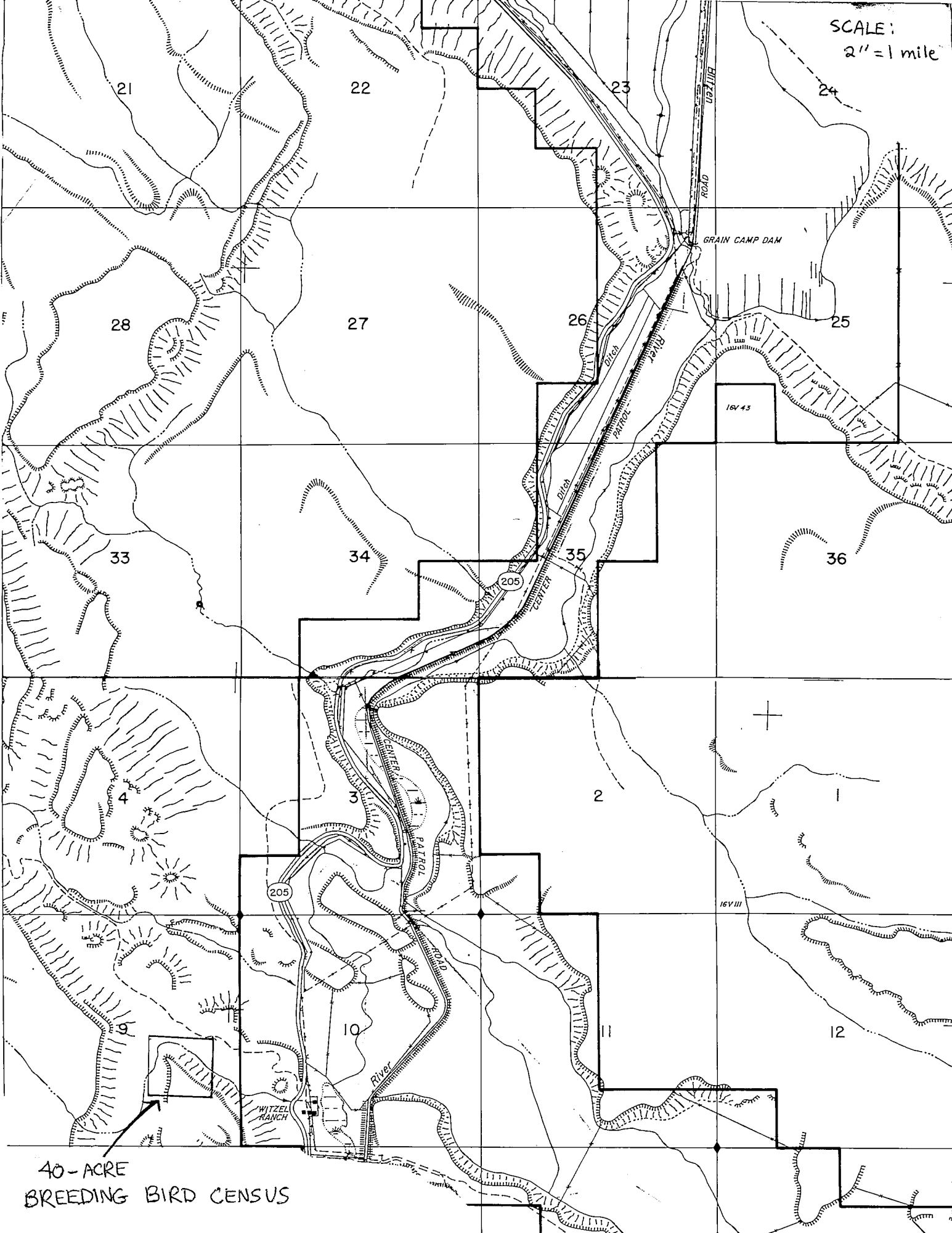


1959

Approximate area enlarged
on next map.

STENS MOUNTAIN

SCALE:
2" = 1 mile



40-ACRE
BREEDING BIRD CENSUS