

SUMMER BIRD HABITATS IN THE CORVALLIS  
AREA, WILLAMETTE VALLEY, OREGON

by

RICHARD HEWES EDDY JR

A THESIS

submitted to

OREGON STATE COLLEGE

in partial fulfillment of  
the requirements for the  
degree of

MASTER OF SCIENCE

June 1953

APPROVED:

Redacted for Privacy

---

Professor of Zoology in Charge of Major

Redacted for Privacy

---

Head of Department of Zoology

---

Chairman of School Graduate Committee

---

Dean of Graduate School

Date thesis is presented May 12, 1953

Typed by Jean Jonas

## Table of Contents

	page
Introduction .....	1
Methods .....	2
Discussion of results .....	6
Table 1- number of species seen in the areas .....	7
Table 2- species list of the Coniferous Forest ...	9
Table 3- species list of the Oak Forest .....	10
Table 4- species list of the Brushy Area .....	11
Table 5- species list of the River Area .....	12
Table 6- species list of the Marsh Area .....	13
Table 7- species list of the Mixed Deciduous .....	15
Table 8- species population densities .....	16
Annotated list of species seen .....	18
Bibliography .....	56

SUMMER BIRD HABITATS IN THE CORVALLIS AREA,  
WILLAMETTE VALLEY, OREGON

Introduction

Observations of the summering birds of the Corvallis area of the Willamette Valley, Oregon were made from June 14 to and including August 24, 1952. During that time fifty-three days were devoted in part to field work. One hundred and eighty hours were spent in the six specified study areas in addition to many hours spent travelling around the general area.

The purpose of these observations was to satisfy the need of more detailed information on the summer avifauna in the immediate area around Oregon State College, Corvallis, Oregon. The object was to attempt to classify the birds seen as to relative abundance and as to habitat preference.

The best reference for this area is Gabrielson and Jewett's book "Birds Of Oregon" (7) published in 1940.

Robert Buchanon did a master's thesis (2) on the area in 1942, which however covered only the avifauna of the winter months.

Various articles have appeared in journals from time to time that related to the area studied (5,6,8).

### Methods

Before outlining the methods used in observing and tabulating the birds, a brief description of each of the six areas will be given. The areas were designated as area one- the Coniferous forest area; area two- the Oak Woodland area; area three- the Brushy area; area four- the Willamette River area; area five- the Marsh area; and area six- the Mixed Deciduous area.

The Coniferous forest area is on top of a forested ridge, about three miles west of Lewisburg and ten miles northwest of Corvallis. The area is known as the McDonald Forest ridge. The dominant tree is douglas fir (Pseudotsuga taxifolia). The main deciduous tree is big-leaf maple (Acer macrophyllum). Other plants of the underbrush are willow (Salix), vine maple (Acer circinatum), and thimbleberry (Rubus parviflorus). The southern end of the area is burned over and has a low growth of such shrubs as young douglas fir, vine maple, trailing blackberry (Rubus vitifolius) and elder (Sambucus). The area covers about thirty-five acres.

The Oak Woodland area is located about one mile west of Corvallis on a hillside behind and to one side of a turkey farm along Harrison Street. This area covers about thirty-five acres and is dominated by garry oak (Quercus Garryana). There are many thickets of poison oak (Rhus

diversiloba) and wild rose (Rosa). At one end of the area are piles of fire wood covered with poison oak, roses, and grasses.

The brushy area, located about six miles south-east of Corvallis on the Peoria road, covers some thirty acres. The main plants of this area are willow (Salix), red alder (Alnus rubra), garry oak (Quercus Garryana), wild rose (Rosa), poison oak (Rhus diversiloba), hawthorn (Crataegus Douglasii), red-flowering current (Ribes sanguineum), indian peach (Osmaronia serasiformes), service berry (Amelanchier florida), elder (Sambucus), oregon grape (Berberis aquifolium), and scattered douglas fir (Pseudotsuga taxifolia). Along the south end of the area is a small swampy creek that is well filled with water lilies (Nymphaea).

The Willamette River area, two miles south of Corvallis at an area called Murphy's beach, covers about twenty-five acres along the river. The area is dominated by douglas fir (Pseudotsuga taxifolia) and big-leaf maple (Acer macrophyllum). Plants of the undergrowth are red alder (Alnus rubra), elder (Sambucus), wild rose (Rosa), evergreen blackberry (Rubus laciniatus), and thistles (Cirsium). During the summer there is a ten to fifteen foot gravel shore between the bank and the water. Most of the area was covered by tall grass during the study period.

The marsh area is located at McFadden's Marsh, twelve miles south of Corvallis. The area where the observations were made covers about fifty acres, of which five were open water, the rest supporting marsh vegetation and clumps and stands of shrubs and trees. A small creek runs along the western edge of the area. The dominant tree along the creek is garry oak (Quercus Garryana). Other trees are the big-leaf maple (Acer macrophyllum) and the Oregon ash (Fraxinus oregona). Undergrowth shrubs are hardhack (Spiraea douglasii) and willows (Salix). The marsh vegetation consists mainly of cattails (Typha latifolia), smart weed (Polygonum hydropiperoides), arrowhead (Sagittaria latifolia), California bullrush (Scirpus californicus), and Oregon sedge (Carus oregonensis). This marsh is maintained by a hunting club for duck hunting in the fall, but during the summer of 1952 about thirty-five head of cattle and ten head of horses used the area for grazing.

The Mixed Deciduous area is an open area of about twenty acres just below and to the west of the Oak area. The area is dominated by scattered big-leaf maple (Acer macrophyllum) and garry oak (Quercus Garryana). Other trees are willows (Salix), alder (Alnus), wild cherry (Prunus emarginata), and hawthorn (Crataegus Douglasii). Undergrowth plants are mainly poison oak (Rhus diversiloba) and wild rose (Rosa). A small stream runs through the

center of the area and kept the whole area moist throughout the summer. The area is surrounded on three sides by pasture land and on the other side by a typical oak woodland.

In checking the birds in the areas, two-hour checking periods were used and the entire area covered by foot. Eight x twenty-five power binoculars were used to do the actual observing. Ten two-hour observation periods were spent in each area. The observations were always made in the morning hours between five and ten o'clock so the results could be better compared from one area to another. Dice's method (4) of relative abundance, a method which involves numbers of birds per a unit of time (in this work an hour) was used in making the chart on population densities.



### Discussion of results

Table one shows the number of species seen in each study area during each observation period and also gives average number and total number of species for each area. The average number of species was found to be nearly the same for every area. Lack of water during the summer was probably the limiting factor for many birds in the Oak Woodland area.

Some birds were seen to be limited to one specific habitat, such as the pileated woodpecker, while other birds were found in many diverse habitats.

The most common birds throughout the whole selected area were the black-capped chickadee, spotted towhee, song sparrow, violet-green swallow, and the vulture.

In the Marsh area the dominating factor was the great flocks of red-winged blackbirds. These birds were from a numerical viewpoint the most abundant bird in this area of the Willamette Valley, but were limited almost exclusively to the one habitat area.

Tables two through seven show the numbers of each species recorded in each observation period throughout the summer.

In the section where each species is discussed separately an attempt was made where possible to limit the bird to its specific habitat requirements.

Table 1 No. of Species Seen in the Area

Observation Dates	Coniferous Area	Oak Area	Brushy Area	River Area	Marsh Area	Decidious Area
June 14		16				
15						23
16				16	16	
17		15	17			
18				17		
19	20					
20						20
22	16					
23					17	
24			17	15		
25		12				
26			18			
27					11	
30	22					
July 1				17		
3						20
8			19			
9		22				
10					17	
11	18					
14						22
15				20		
16			19			
17	19					
18		16			23	
21						19
22			25			
23					21	
24		18		19		
25	20					
29						18
August 1			21			
2				17		
3	22					
4						18
5		18			14	
6			16			
7						18
8	24					
9				23		
10		14				
11					20	
12	20					
13						20
14			22			

Table 1 Cont.

Observation Dates	Coniferous Area	Oak Area	Brushy Area	River Area	Marsh Area	Decidious Area
August 15				21		
17		21				
18				17		17
19					21	
20			17			
21	22					
22					22	
24		16				
Average (number of species)	19.3	16.8	19.1	18.2	18.2	19.5
Total (number of species)	38	27	32	34	43	38

Table II Species List of the Coniferous Forest Area

	June			July			August			
	19	22	30	11	17	25	3	8	12	21
1. Turkey Vulture	3	2	2	3	5	1	2	1	4	3
2. Cooper's Hawk							1			1
3. Red-tailed hawk					1				1	
4. Duck Hawk										1
5. Ruffed Grouse	5	1	6			6	5	2	2	
6. Band-tailed Pigeon	3	1	2	3	6			1		4
7. Horned Owl	1						1			1
8. Red-shafted Flicker					2	6	4	2		2
9. Pileated Woodpecker	1		2	1		2	1		1	
10. Hairy Woodpecker	4	2					1			1
11. Red-breasted Sapsucker	3	4	2	3	2	2	5	6	1	1
12. "Empidonax" Flycatcher					1			1		
13. Olive-sided Flycatcher	1		2	4	3	3	3	4	2	3
14. Western Wood Pewee			4	3	3	3	1	2	1	2
15. Oregon Jay			2	2					2	
16. Steller's Jay	8	7	7	12	8	11	10	7	6	4
17. Black-capped Chickadee	8	9	11	7	5	2	6	5	7	11
18. Chestnut-backed Chickadee	3	2		1	1	1	3	7		2
19. White-breasted Nuthatch			1	3	3			1	2	
20. Red-breasted Nuthatch	3				1	1				
21. Creeper			1		1	2	1	3		
22. Winter Wren										2
23. Russet-backed Thrush			7	2		2	1		1	3
24. Western Bluebird	6	4			2	8	1	7	3	
25. Golden-crowned Kinglet	8	5	6		2		1	3	12	3
26. Hutton's Vireo										5
27. Warbling Vireo			3					1		2
28. Orange-crowned Warbler	7	3	8		3	6	4	2	1	
29. Calaveras Warbler			4				1			
30. Townsend's Warbler	4	2								
31. Macgillivray's Warbler			6	3		5	4	1	3	3
32. Western Tanager	6	5	7	12	6	6	4	3	5	6
33. Purple Finch						5	3	2		
34. Pine Siskin	3	2	3	4				1		
35. Red Crossbill	2	3		2				2	1	
36. Spotted Towhee			3	3		1		3	1	
37. Oregon Junco										4
38. White-crowned Sparrow	3	1	3	5	3	3		3	6	4

Total number seen - 659

No. seen per hour in the field- 32.95

Table III Species List of the Oak Forest Area

	June			July			August			
	14	17	25	9	18	24	5	10	17	24
1. Turkey Vulture	1	3	3	1	2	1	1	1	5	2
2. Red-tailed Hawk						1		1		1
3. Band-tailed Pigeon	4	6	5	2		3		1	5	
4. Lewis's Woodpecker						1			1	
5. Downy Woodpecker	3	4	5	3	2	5	3	1	3	2
6. Western Wood Pewee			9	1			13		1	
7. Crow	2	8			6	6	7	1	3	2
8. Black-capped Chickadee	2	3	12	4	20	11	50	9	16	18
9. White-breasted Nuthatch	3	4	1	3	1	2	13	3	5	1
10. Creeper				1			2		1	
11. House Wren					5		10	5	4	7
12. Bewick's Wren	15	12	20	15	8	12	12	9	17	10
13. Robin	1	2		14	3	1	2		3	5
14. Russet-backed Thrush	2			3						1
15. Warbling Vireo				1	2	1	1			
16. Orange-crowned Warbler		6		2		5			7	
17. Calaveras Warbler	6	12	8	2	10	3	6	9	11	7
18. Yellow Warbler				6			1			
19. Black-throated Grey Warbler	1	3			5	5	5		5	2
20. Macgillivray's Warbler				1	2		1		1	3
21. Yellow-throat				2			2			
22. Western Tanager	1	12	1	2	6	4	9	1	8	5
23. Lazuli Bunting	3	8	2	3	1	3		5	3	
24. Spotted Towhee	10	8	3	15	25	29	25	9	10	8
25. Oregon Junco	1		3	1						1
26. Chipping Sparrow	4	2		12	3	16		9	7	
27. White-crowned Sparrow				4					3	

Total number seen - 954

No. seen per hour in the field- 35.65

Table IV Species List of the Brushy Area

	June			July			August			
	17	24	26	8	16	22	1	6	14	20
1. Great Blue Heron				1		1			1	
2. Anthony's Green Heron				1						
3. Turkey Vulture	2	1	1	1	3	2	1	1	2	4
4. Sparrow Hawk				1		1			1	
5. Black Tern						2				
6. Mourning Dove			2		3	1	2	1	3	
7. Rufous Hummingbird			2	1		1			1	
8. Belted Kingfisher			1	1		1				1
9. Red-shafted Flicker	6	4	6	8	5	10	9	4	10	1
10. Downy Woodpecker				4	3	3	2	2	3	1
11. "Empidonax" Flycatcher					1			1		1
12. Olive-sided Flycatcher			4	1	1	3	4	6		5
13. California Jay	3	4	5		3		7	2	3	1
14. Crow	1	2	6		1	1	5		3	
15. Black-capped Chickadee	3	8	5	1	15	2	4	3	14	1
16. Bush-tit	6	12		12					10	12
17. White-breasted Nuthatch	1	1	2	3	3	5	3	3	2	3
18. Red-breasted Nuthatch						1	1			
19. Creeper	1	3		1			1		1	
20. Bewick's Wren	3	1	8	6	6	5	7	6	2	4
21. Robin	2	6	1	4	8	6	5			
22. Russet-backed Thrush	10	11	8	15	15	12	14	13	3	9
23. Hutton's Vireo	1	1					1			
24. Solitary Vireo			2			1	1	1		1
25. Orange-crowned Warbler	2	3	5		4	2	1	1	4	1
26. Yellow Warbler	1	1		3		2			3	
27. Macgillivray's Warbler	5	3	5	2	3	1	2	6	2	7
28. Brewer's Blackbird					7	5			4	
29. Spotted Towhee	4	5	7	5	1	6	6	8	9	3
30. Oregon Junco	1	3					2		1	
31. Vesper Sparrow					4	3		2		1
32. Song Sparrow			3		2	2	1		4	

Total number birds seen - 713

Number birds seen per hour in field- 35.65

Table V Species List of the Willamette River Area

	June			July			August			
	16	18	24	1	15	24	2	9	15	18
1. Great Blue Heron	1	3	1	1	2	1	1	1		
2. Anthony's Green Heron								1		
3. American Merganser			1					1		
4. Turkey Vulture	1	4	1	2	8	1		3		
5. Red-tailed Hawk				1			1			
6. Sparrow Hawk	1	2						1	1	
7. Pigeon Hawk								1		
8. California Quail	10	16		8	3	1	5	6	1	
9. Mourning Dove	4	4	3	4	3	5	2	5	1	1
10. Rufous Hummingbird					1	2			1	
11. Red-shafted Flicker	1	4		3	2	1		1	2	
12. Downy Woodpecker	1	1			1		1	1		2
13. "Empidonax" Flycatcher		1		1			1			3
14. Olive-sided Flycatcher										1
15. Western Wood Pewee					3	4		1	1	
16. Violet-green Swallow	10	12	7		15	6	12	12	7	42
17. California Jay			1	1	3		1	1	1	
18. Black-capped Chickadee			1	2		1		3	3	
19. White-breasted Nuthatch	1	3		2					2	1
20. Robin	3	12	3	10	5	7	3	3	6	1
21. Russet-backed Thrush						2		1		
22. Cedar Waxwing	2	3	12	4	8	6		5	1	25
23. Solitary Vireo						1			1	
24. Audubon's Warbler					8					
25. English Sparrow	5	23	5		5		6	7	3	5
26. Western Tanager			3	7		6		5	4	1
27. Purple Finch							2	3	1	4
28. Pine Siskin					3		1			1
29. Common Goldfinch	3	3	2	3	6	7	6		3	24
30. Green Backed Goldfinch					3	5	3	7	8	11
31. Spotted Towhee	5	6	2	4	1	7	10	6	7	
32. Oregon Junco	6	6	4	12	10	11	3		7	35
33. White-crowned Sparrow										1
34. Song Sparrow	6	10	5	5	5	3	2	2	1	15

Total number birds seen - 838

Number seen per hour field work - 41.9

Table VI Species List of the Marsh Area

	June			July		Aug.	
	16	23	27	10	18	23	5
1. Great-Blue Heron			2	3	3	3	1
2. American bittern		1					
3. Mallard Duck			14	12	8	10	24
4. Wood Duck			1		2	1	
5. Turkey Vulture	2	3		8	2	12	
6. Marsh Hawk							
7. Sparrow Hawk				1			
8. Ring-necked Pheasant				3	2	6	
9. Coot							
10. Sora Rail					1		
11. Killdeer				5	2	2	
12. Wilson's Snipe					2		
13. Band-tailed Pigeon	1	2					
14. Mourning Dove	3	2		7	5	8	
15. Horned Owl						1	
16. Nighthawk			4				1
17. Belted Kingfisher					2		
18. Western Wood Pewee							
19. Violet-green Swallow	17	13	127	36	14	39	100
20. Tree Swallow			26				15
21. Rough-winged Swallow			21		6		50
22. Barn Swallow	39	10	84	51	8	21	100
23. Cliff Swallow	84	6	210	62	3	53	250
24. Crow						1	
25. Black-capped Chickadee						11	1
26. Bush-tit				6	1	13	
27. White-breasted Nuthatch							1
28. Bewick's Wren							
29. Marsh Wren	5	6	8	8	1	7	3
30. Robin	1	2					
31. Russet-backed Thrush					3		
32. Cedar Waxwing	1	2					
33. Orange-crowned warbler	1	1					2
34. Calaveras Warbler							
35. Yellow Warbler	3	7				6	
36. Macgillivray's Warbler				3			
37. Long-tailed Chat				3	1	1	
38. Meadowlark	1	2					
39. Red-winged Blackbird	167	150	300	250	200	280	195
40. Brewer's Blackbird	1	10			1		
41. Common Goldfinch				4	6	2	
42. Spotted towhee	1	2					
43. Song Sparrow	5	8		8	10	1	6



Table VI cont.

August			
	<u>11</u>	<u>19</u>	<u>22</u>
1.	2	1	3
2.			1
3.	15	14	9
4.	2		
5.	5	2	9
6.		1	3
7.			1
8.		6	
9.		1	4
10.	1		
11.		2	7
12.		2	
13.			1
14.	4		12
15.	1		
16.			
17.			1
18.		2	1
19.	50	7	17
20.	7		
21.	13		
22.	50	7	14
23.	34	15	29
24.			3
25.		9	
26.	12		
27.		1	
28.		2	
29.	1	2	5
30.	1		
31.			
32.			1
33.			3
34.		7	
35.		3	
36.			
37.		1	
38.	1		
39.	67	150	93
40.			
41.			3
42.	2		
43.	6	6	3

Total number seen - 3,972

Number seen per hour in the field - 198.6

Table VII Species List of the Mixed Deciduous Area

	June			July			August			
	15	20	3	14	21	29	4	7	13	18
1. Turkey Vulture	8	4	7	1	5	3		2	1	3
2. Red-tailed Hawk		2	2	1					1	
3. Bobwhite Quail	1	1	3				1		1	
4. California Quail							6			7
5. Ring-necked Pheasant	1				1				1	
6. Downy Woodpecker	3	3	3	4	1	2	2	1	2	2
7. "Empidonax" Flycatcher					3	3				1
8. Olive-sided Flycatcher							1		1	
9. Western Wood Pewee			3	2					1	
10. Violet-green Swallow	2							3		
11. Crow	1	2	8	4	5	10	1	1	6	5
12. Black-capped Chickadee	4	6	1	21	17	6		5		1
13. Bush-tit	6	12							11	
14. White-breasted Nuthatch	1	2		3	3	2	1	1		3
15. Red-breasted Nuthatch			1	1						
16. Bewick's Wren			4	6	3	5		1	4	2
17. Robin	8	12	5	3	12	12	19	10	15	11
18. Russet-backed Thrush	1							1		
19. Cedar Waxwing	4	4	3	1	5	5	4	3	6	4
20. Solitary Vireo	2	2	1	9						
21. Warbling Vireo				3						
22. Orange-crowned Warbler	4	5	2	4	2	5		4	2	7
23. Calaveras Warbler						2		1		
24. Yellow Warbler	8	11	8	3	8	6	4	4	5	7
25. Audubon's Warbler	1	3								
26. Macgillivray's Warbler							1			2
27. Yellow-Throat	1	3	1		3	2	3	2	3	1
28. Meadowlark	1							1		
29. Western Tanager	2	3	2	8	5	5	4	3	5	9
30. Black-headed Grosbeak							3			
31. Lazuli Bunting		3	3	2	2	3	2		2	3
32. Purple Finch				9	2	2	1		2	
33. Common Goldfinch				1	1		1			
34. Spotted Towhee	4	4	8	5	6			3	4	
35. Oregon Junco	1	1					3			
36. Chipping Sparrow	27	18	7	14	25	27	17	8	19	17
37. Fox Sparrow	1									
38. Song Sparrow			1	2		1				

Total number seen - 888

Number seen per hour in the field - 44.4

Table VIII Species Population Densities

Species	Observation Areas					
	1	2	3	4	5	6
1. Great Blue Heron			0.15	0.55	0.90	
2. Anthony's Green Heron			0.05	0.05		
3. American Bittern					0.10	
4. Common Mallard					5.30	
5. Wood Duck					0.30	
6. American Merganser				0.10		
7. Turkey Vulture	1.30	1.00	0.90	1.00	2.15	1.70
8. Cooper's Hawk	0.10					
9. Red-tailed Hawk	0.10	0.15		0.10		0.30
10. Marsh Hawk					0.20	
11. Sparrow Hawk			0.15	0.25	0.15	
12. Duck Hawk	0.05					
13. Pigeon Hawk				0.05		
14. Ruffed Grouse	1.35					
15. Bobwhite Quail						0.35
16. California Quail				2.50		0.65
17. Ring-necked Pheasant					0.85	0.15
18. Sora Rail					0.10	
19. American Coot					0.25	
20. Killdeer					0.90	
21. Wilson's Snipe					0.20	
22. Black Tern			0.10			
23. Band-tailed Pigeon	1.00	1.30			0.20	
24. Mourning Dove			0.60	1.60	2.05	
25. Horned Owl	0.15				0.10	
26. Night Hawk					0.25	
27. Rufous Hummingbird			0.25	0.20		
28. Belted Kingfisher			0.20		0.15	
29. Red-shafted Flicker	0.80		3.15	0.70		
30. Pileated Woodpecker	0.40					
31. Lewis's Woodpecker		0.10				
32. Hairy Woodpecker	0.40					
33. Downy Woodpecker		1.55	0.90	0.35		1.15
34. Red-breasted sapsucker	1.45					
35. "Empidonax" Flycatcher	0.10		0.15	0.30		0.35
36. Olive-sided Flycatcher	1.25		1.20	0.05		0.10
37. Western Wood Pewee	0.95	1.20		0.45		0.30
38. Violet-green Swallow				6.15	21.00	0.25
39. Tree Swallow					2.40	
40. Rough-winged Swallow					4.50	
41. Barn Swallow					19.20	
42. Cliff Swallow					37.30	
43. Oregon Jay	0.30					
44. Steller's Jay	4.00					

Table VIII Cont.

	Observation Areas					
	1	2	3	4	5	6
45. California Jay			1.40	0.40		
46. Crow		1.75	0.95		0.20	2.15
47. Black-capped Chickadee	3.55	7.25	2.80	0.50	1.05	3.05
48. Chestnut-backed Chickadee	1.00					
49. Bush-tit			2.60		1.60	1.45
50. White-breasted Nuthatch	0.50	1.80	1.30	0.45	0.10	0.80
51. Red-breasted Nuthatch	0.25		0.10			0.10
52. Creeper	0.40	0.20	0.35			
53. House Wren		1.55				
54. Winter Wren	0.10					
55. Bewick's Wren		6.50	2.40		0.10	1.25
56. Marsh Wren					2.30	
57. Robin		1.55	1.60	2.65	0.20	5.25
58. Russet-backed Thrush	0.80	0.30	5.50	0.15	0.15	0.10
59. Western Bluebird	1.55					
60. Golden-crowned Kinglet	2.00					
61. Cedar Waxwing				3.30	0.30	1.95
62. Hutton's Vireo	0.10		0.15			
63. Solitary Vireo			0.30	0.10		0.70
64. Warbling Vireo	0.30	0.25				0.15
65. Orange-crowned Warbler	1.70	1.00	1.15		0.35	1.75
66. Calaveras Warbler	0.25	3.70			0.35	0.15
67. Yellow Warbler		0.35	0.50		0.95	3.30
68. Audubon's Warbler				0.40		0.20
69. Black-throated Grey Warbler		1.30				
70. Townsend's Warbler	0.30					
71. Macgillivray's Warbler	1.25	0.40	1.80		0.15	0.15
72. Yellow Throat		0.20				0.95
73. Long-tailed Chat					0.30	
74. English Sparrow				2.95		
75. Meadowlark					0.20	0.10
76. Red-winged Blackbird					87.60	
77. Brewer's Blackbirds			0.80		0.60	
78. Western Tanager	3.10	2.45		1.30		2.30
79. Black-headed Grosbeak						0.15
80. Lazuli Bunting		1.40				1.00
81. Purple Finch	0.50			0.50		0.80
82. Pine Siskin	0.65			0.25		
83. Common Goldfinch				2.85	0.75	0.15
84. Green-backed Goldfinch				1.85		
85. Red-crossbill	0.50					
86. Spotted Towhee	0.55	7.10	2.70	2.40	0.25	1.70
87. Oregon Junco	0.20	0.35	0.35	4.70		0.25
88. Vesper Sparrow			0.50			
89. Chipping Sparrow		2.65				8.95
90. White-crowned Sparrow	1.55	0.35		0.05		
91. Fox Sparrow						0.05
92. Song Sparrow			0.60	2.70	2.75	0.20

Annotated List of Species SeenArdea herodias Linnaeus

Great blue herons were found to be one of the most typical water birds of the study area. Wherever there was water this long-legged, blue-grey fisherman was likely to be found. They were observed in three of the six study areas, and were fairly common in two of the three areas. At McFadden's Marsh the birds could nearly always be found wading through the shallow southern end of the marsh fishing for fish and frogs. Several times the birds were observed in the process of feeding on frogs. A large sand bar in the Willamette River across from the study area was another favorite spot of the birds. The birds were also found in area three where they frequented the small swampy creek passing through one side of the area. These birds can be classed as common summering birds of the Willamette Valley with a restricted habitat.

Butorides virescens anthonyi (Mearns)

Green herons can be classed as uncommon summer residents of the study area. They were seen only twice during the summer, once on the small swampy stream in the brushy area and once on a sand bar in the Willamette River. The habitat requirements of these birds are similar to those of the great blue heron except that it is a

much more secretive bird and therefore is very seldom seen. Both times it was observed it seemed to be resting rather than fishing.

*Botaurus lentiginosus* (Montagu)

The American bittern is a typical marsh bird. They have very secretive habits and are hard to flush and therefore might be a much more common bird than only two observations during the summer would seem to make them. The bird was observed at McFadden's Marsh on June 23 and again on August 22. The bird was probably present between these two dates but just not seen by the observer because of its secretive habits.

*Anas platyrhynchos platyrhynchos* Linnaeus

Mallards were found to be the only common duck in the study area during the summer. They were common breeding birds of McFadden's Marsh and were usually found there in small groups of three to five feeding on the marsh vegetation or resting. In the evening the birds could be seen coming in to the marsh for the night in greater concentrations which indicates that many of the birds range out over the surrounding territory for feeding during the day. The voice of the female mallard could always be heard at the marsh even when the birds themselves could not be seen.

Aix sponsa (Linnaeus)

Female wood ducks were seen rather infrequently at McFadden's Marsh. These birds, while being fairly common breeding birds in the Willamette Valley during the summer, did not find any of the picked study areas suited to their wants. The wood duck likes the smaller flowing streams that have plenty of nesting trees nearby. Around Corvallis the Mary's River and the Calapooya River best fit these habitat requirements and the birds could usually be found on or near these streams, especially in the early morning hours.

Mergus merganser americanus Cassin

American mergansers were observed twice on the Willamette River during the summer. One was observed flying upstream and the other was seen swimming in a comparatively quiet stretch of water that was sheltered from the current by a pile of logs. This species, known commonly as the fish duck, would be much more common in the Willamette River if it were not for early persecution by fishermen who blamed it, however unjustly, for reducing the fish population. This merganser is among the most beautiful of Oregon water birds and certainly one of the most interesting to watch as it is a very graceful diver and swimmer.

Cathartes aura Friedmann

Turkey vultures were the most common member of the order Falconiformes to be seen during the summer in the Willamette Valley. They were a familiar sight in all the study areas as they sailed and glided through the air, taking advantage of every variation of wind and air currents to sustain them in the air. This bird lives on carrion that it finds by searching the landscape from its vantage point high in the air. For this reason the birds are usually found in the more open areas. On June 21 two birds were seen resting in a large Douglas fir tree near Peoria, this being the only time the birds were seen other than in the air or on the ground in open fields.

Accipiter cooperii (Bonaparte)

Cooper's hawks were seen twice during the summer in the Coniferous Forest area. They are essentially secretive birds of wooded areas and are not very commonly seen. One was observed in pursuit of a song bird. As this hawk is one of the species that is almost completely destructive, living to a large extent on poultry, game and insectivorous birds, it is a good thing that it is not one of the common species.



Buteo jamaicensis Cassin

Red-tailed hawks were seen, sailing on set wings in ever widening circles, throughout the summer in the Willamette valley. Although the only Buteo usually seen in western Oregon it is here a comparatively uncommon bird. They were seen in every study area except over the Marsh area and the Brushy area. The red-tailed hawk has about the same habitat requirements as the turkey vulture except that the hawk flies at a lower altitude and usually feeds on living animals (mostly mammals) instead of carrion. It nests high up in a large tree while the turkey vulture nests on the ground in a cave, stump, or hollow tree. These two large birds do not apparently compete to any great extent with each other and are usually found in the same areas.

Circus cyaneus hudsonicus (Linnaeus)

Marsh hawks were seen at McFadden's Marsh four times and a few others were seen over open fields along country roads. This hawk was first seen on August 19 quartering back and forth over the marsh. Three more birds were seen quartering over the marsh on August 22. These hawks usually fly close to the ground, back and forth across the fields and marsh with a short steady gliding flight looking for small rodents that make up a large percentage of their food. This is an uncommon summer bird in western Oregon.

Falco sparverius Linnaeus

Sparrow hawks were the most common hawk in the studied area of the Willamette valley. They were seen in only three of the study areas, Brushy, Willamette River and the Marsh, and then only a few times, but they could usually be seen perching on telephone or fence poles in open country. The birds would now and then dart to the ground to get a mouse or insect detected by their keen eyesight. Sparrow hawks could also be seen hovering over fields looking for prey. Like the red-tailed hawk, this hawk is a beneficial species.

Falco peregrinus Bonaparte

Only one duck hawk was seen during the summer and then in the Coniferous Forest Area. When seen the bird alighted in the top of a tall douglas fir, stayed there about fifteen minutes and then flew on. The bird was apparently just passing through this section of the country.

Falco columbarius benderei Swann

A Western pigeon hawk was seen on August 9 at the Willamette River study area. This little falcon, like the duck hawk, was seen only once during the summer. The bird was seen sitting in a big-leaf maple tree and was observed for twenty minutes before it flew away.

Bonasa umbellus (Linnaeus)

Ruffed grouse were common residents and breeding birds of the Coniferous Forest study area. They were seen during seven out of the ten study trips to the area and on June 30 five young were seen accompanied by an adult bird.

Colinus v. virginianus (Linnaeus)

Bobwhite quail were seen in only one of the study areas, the Mixed Deciduous Area, but were seen throughout the summer in and around the brushy fence rows of the valley. An introduced bird in Oregon, it has done very well and it now is found throughout in suitable habitats. Around Corvallis these quail can be found wherever there is sufficient cover, usually in the form of fence rows grown over with shrubs and tall grass.

Lophortyx californica (Shaw)

California quail, like the bob-white an introduced bird to most of Oregon, were found in two of the six study areas, the Willamette River area where they were fairly common and in the Mixed Deciduous area where they were less commonly seen. These birds are common inhabitants of the brushy fence rows found so commonly throughout this part of the state but are much more common than the bob-white as they are also found in the wooded areas. If the present tendency, noted among some of the farmers

of western Oregon, to clear away the brush around the fence rows is continued this bird and even more so the bob-white quail will become much less abundant and would even stand in danger of extinction in many parts of their present range. The california quail can be considered as a fairly common resident of the Willamette valley around Corvallis.

Phasianus colchicus Gmelin

Ring-neck or "china" pheasants were seen in two of the study areas: McFadden's Marsh where the birds were observed in an open field adjacent to the Marsh and in Area six. These birds, also introduced species--being introduced to the Willamette valley from China in 1881, are birds of the open fields and brushy fence rows. They could be seen almost anywhere in the Willamette valley during the summer wherever the combination of open field and suitable cover could be found. They can be classed as common residents of the study area.

Porzana carolina (Linnaeus)

Sora rails were seen twice during the summer at McFadden's Marsh. This small brown rail is a very secretive bird of the marshes and would probably have been observed more if an intensive search of the marsh had been undertaken.

Fulica americana Gmelin

American coots or "mud-hens" are undoubtedly one of the most common water birds of western Oregon. They were seen at McFadden's Marsh five times and also everywhere else in the valley where large enough water areas were present for them. These birds like permanent bodies of water, large enough to furnish suitable feeding and nesting grounds. A pair of the birds could usually be found on any of the mill ponds around Corvallis.

Oxyechus y. vociferus (Linnaeus)

Killdeer were observed to be a common resident of the wetter open fields around the Willamette valley. Only one of the six study areas, McFadden's Marsh, contained these habitat requirements and here the birds were found to be fairly common residents throughout the summer. These birds were usually observed on the ground running about rapidly in a somewhat nervous manner frequently uttering their cry from which they get their name. When disturbed they would fly for only a short distance and then settle down again. These birds nest on the ground on gravel bars and in open fields throughout the area studied.

Capella gallinago delicato (Ord)

Wilson's or jack snipes were seen rather infrequently at McFadden's Marsh. These birds were always seen after being flushed out of the tall grass in the shallow water at the marsh's edge. According to Gabrielson and Jewett in their book, "Birds of Oregon," this snipe is more common during the winter than in the summer in western Oregon. However, in the summer it can be expected to be present in small numbers at almost any of the marshes around the valley.

Chilidonias niger surinamensis (Gmelin)

Two black terns were observed in the air over the Brushy area on July 22. They were seen to fly up from the small creek, chasing each other, and then fly away to the northeast with one in rapid pursuit of the other, all the while uttering their characteristic scream. The birds were both in black breeding plumage.

Columbia f. fasciata Say

Band-tailed pigeons were seen in three of the six study areas. They were fairly common in areas one and two and were comparatively rare in area five. In area one they were usually seen flying, not apparently feeding. In area two they were observed on the ground and in the oak trees feeding on seeds, and in area five the birds were seen on the road going through the marsh. These

pigeons were not common birds in the Corvallis area of the Willamette valley but usually two or three of the birds could be seen in a day's time. They like to feed on acorns and could usually be found wherever there were oaks.

Zenaidura macroura marginella (Woodhouse)

Mourning doves were one of the common birds occurring in the Corvallis vicinity of the Willamette valley. They were found commonly in two of the study areas and infrequently in a third. In the Marsh area these birds could nearly always be found resting on the limbs of dead deciduous trees over the water, and in the Willamette River area the birds' favorite resting spots were the logging cables that were stretched back and forth, left over from old logging operations. These birds were also seen flying over area three. These doves could usually be seen in numbers in the open areas throughout this section of the Willamette valley and favorite resting spots were the telephone wires along the roads of the area. On August 23 a flock of approximately 350 doves was seen feeding in a field one mile south of Corvallis along highway 99W. These birds are hunted quite extensively around the Corvallis area and apparently their numbers are down from former years.

Columba livia livia Gmelin

The rock dove, or common domestic pigeon, has become naturalized and established about many towns in Oregon. It is a common sight about the Oregon State College campus and in the town of Corvallis.

Bubo virginianus (Gmelin)

Horned owls were seen in only two of the study areas; three times in area one and twice in area five. This large predatory owl hunts at night and sleeps in the daytime and this is probably the reason it was not seen more. The only time they were seen was when the observer had apparently awakened them and scared them from their perch. In the Coniferous Forest area they were seen to be resting in the depths of large coniferous trees and at the marsh in a dense oak tree. This bird is probably the most destructive avian predator and as such should be shot whenever seen. It is very fond of young turkeys and chickens and is a great trouble to the farmers of the area when it becomes abundant.

Asio f. flammeus (Pontoppidan)

Short-eared owls were seen twice during the summer, in the early mornings of June 21 and July 12, flapping slowly over some wet meadows east of Corvallis. This owl is diurnal in habits, usually coming out on cloudy days.



Speotyto cunicularia hypugaea (Bonaparte)

The western burrowing owl, a curious long-legged little owl was seen once, on July 28. It was observed in a hay field three miles southeast of Corvallis on the Peoria road, standing near a ground squirrel burrow, which it soon disappeared into.

Chordeiles minor Forster

Nighthawks were one of the commonest birds heard or seen in the evenings around Corvallis. They usually appeared about dusk and their distinctive cry could be heard late into the night as the birds went about their business of catching insects. As the study observations were made in the morning these birds were not seen in any of the study areas except over the marsh area where four birds were seen on June 27 and one more on August 5. The heavy concentrations of insects over the marsh apparently kept the nighthawks out longer than usual; by eight in the morning they were gone. These birds nest and spend the day on the ground and quite frequently on flat, tarred and gravelly roofs when they are available.

Selasphorus rufus (Gmelin)

Rufous hummingbirds are the only hummingbirds that are likely to be seen in western Oregon. This common little bird is comparatively common around human habitation where it can find flowers to get nectar and insects,

and could usually be seen around Corvallis wherever there were flower gardens. They were seen rather infrequently in two of the study areas. A pair were observed to be nesting in a large big-leaf maple tree in the Brushy area June 26, and in area four, hummingbirds were seen four times in and around patches of Canadian thistles and evergreen blackberries.

Megaceryle alcyon caurina (Grinnell)

Kingfishers were seen infrequently in two of the study areas: area three and area five. In the Brushy area kingfishers were seen four times sitting on a log over the small creek. Every once in a while they would dive into the water and emerge with a small fish. The birds were also seen flying over the marsh area. The specific habitat requirements for this bird are a stream that has banks for nesting holes and plenty of trees or dead snags for perching spots where the birds can watch the stream for fish. The upper Mary's River (above Philomath) fits this classification well and kingfishers can nearly always be seen there.

Colaptes cafer vigors

Flickers are one of the most common birds in western Oregon. The three study areas where they were seen commonly were the Coniferous Forest area, the Willamette River area, and the Brushy area. It is impossible to

assign these birds to any definite habitat as they are likely to be seen anywhere in the area around Corvallis. They feed in the orthodox woodpecker manner and were also seen commonly on the ground tearing up ant hills and eating the ants of which they appeared especially fond. Flickers were seen nesting in holes in old dead snags throughout the Brushy area in the month of June.

Hyatomus pileatus (Bangs)

Pileated woodpeckers are birds that are strictly confined to one habitat, the coniferous forest. The borings of this large woodpecker were more commonly seen than the bird itself as it is very adept at keeping the trunk of a tree between itself and the observer. For habitat requirements these birds require a coniferous forest that has lots of dead stumps and snags wherein it can find its food. They were observed to be a regular if not common resident of the Coniferous Forest area.

Asyndesmus lewisi Gray

Lewis's woodpeckers were observed twice during the summer in area two. One bird was seen on the ground apparently eating insects and the other was seen in an oak tree.

Dryobates villosus (Linnaeus)

Hairy woodpeckers are also birds that seem to be restricted to one habitat, the coniferous forest, as they were seen only in area one and even there rather infrequently. These birds were usually seen on the trunk or limb of a large coniferous tree where they would be busy drilling away looking for insects. They were uncommon residents of the Coniferous Forest area during the study period.

Dendrocopos pubescens (Linnaeus)

Downy woodpeckers were the most common member of the woodpecker family in the study areas. These little woodpeckers were seen in every study area except the marsh, where suitable trees for them were not present, and the Coniferous Forest area where their place was taken by the hairy woodpecker. They were observed nesting in cavities in oak trees in areas two and six and in a cavity in a big-leaf maple in area four. These birds are very common inhabitants of this area of the Willamette valley wherever there are enough deciduous trees present so they can make nest cavities and find their food, which were wood boring insects and worms for the most part.

Sphyrapicus varius Linnaeus

Red-breasted sapsuckers were seen in only one study area, the Coniferous Forest area, and there were strictly confined to a deciduous tree, the big-leaf maple. These large handsome woodpeckers were also seen in orchards throughout this section of the Willamette valley. According to the farmers they do considerable damage to the trees.

Empidonax sp. (Cabanis)

Empidonax is the generic name of a group of small grey flycatchers that are difficult if not impossible to tell apart in the field. These small flycatchers were seen infrequently in all the study areas except area two and area five. When at rest this bird perches silently on some dead twig and from this vantage point it captures insects by short, quick dashes and then returns to the same perch or a similiar one nearby. These little birds could be seen in almost any wooded habitat throughout the study area but did not seem to be common anywhere.

Nuttallornis borealis (Swainson)

Olive-sided flycatchers were seen very commonly in two of the study areas, the Brushy and the Coniferous Forest areas, where they were usually seen sitting in the very top of large trees, now and then making dashes out to catch an insect and then returning back to the same

perch. These large woodpeckers were also seen in the Willamette River area and the Mixed Deciduous area. These birds are common birds in the Willamette valley with an apparent preference for coniferous wooded areas.

Contopus richardsoni (Swainson)

Western wood pewees were found commonly in all the study areas except in the Marsh and the Brushy areas. They were found most commonly in the Coniferous Forest and Oak Woodland areas. This small flycatcher has about the same habits and is usually found in the same habitats as its cousins, the empidonax flycatchers. One exceptional occurrence was noted in the Oak Woodland on August 5 when thirteen of these small birds were noticed together, hunting insects from the same oak tree; at all other times they were noticed as individual birds. These birds can be classed as common components of the Willamette valley avifauna in wooded areas around Corvallis.

Eremophila alpestris Linnaeus

Two horned larks were seen on August 19 in a plowed field seven miles south of Corvallis on highway 99W. The larks were apparently catching insects in the field. They were observed in the field for a half hour and were still there when the observer left.

Tachycineta thalassina (Mearns)

Violet-green swallows were found very commonly at McFadden's Marsh and the Willamette River area and five birds were seen at the Mixed Deciduous area. These swallows were the commonest of the swallows in the Willamette valley during the summer and they could be found anywhere, lining the telephone wires. At McFadden's Marsh they were second in abundance to the cliff swallow. During the early hours of the morning and evening at the marsh the air was filled with swallows darting over the water catching insects. Sometimes the swallows would dip so low in quest of some particular insect that they would actually appear to dive into the water and then rise up all wet and go to sit on a telephone wire until they were dried off. At the Willamette River, these swallows were present flying over the river in their quest for insects. At the river, in marked contrast to the marsh, violet-green swallows were the only species of swallow present.

Iridoprocne bicolor (Vieillot)

Tree swallows were present at the marsh, catching insects along with the other species of swallow, but they were the least common of the five species of swallows at the marsh.

Stelgidopteryx ruficollis (Audubon)

Rough-winged swallows were also components of the large swallow swarms at McFadden's Marsh. These small dull-colored swallows were an inconspicuous part of the swarms but were easily identifiable as they darted after insects or sat on the telephone wires.

Hirundo rustica Linnaeus

Barn swallows were the third commonest swallow at McFadden's Marsh and the second commonest one in the whole study area after the violet-green swallow. These swallows could be seen around every barnyard in the Corvallis vicinity and were very common around the barns of Oregon State College. They were noticed as the only swallow nesting under the bridge at McFadden's Marsh. From their practice of nesting under bridges they acquire the common name in many localities of bridge swallow.

Petrochelidon pyrrhonota (Vieillot)

Cliff swallows were the commonest swallows in the large swarms at McFadden's Marsh but were not seen to any great extent anywhere else. These birds were common around the Oregon State College barns where their cone shaped mud nests could be seen on the rafters of the buildings.



Perisoreus canadensis (Linnaeus)

Oregon jays were seen on three different occasions in the Coniferous Forest area and each time were seen in pairs. These grey jays known as "Camp Robbers" because of their lack of fear of humans were very interesting to watch and they appeared to get as much enjoyment out of watching the observer. These birds are inhabitants of coniferous forests and are seldom noticed outside the confines of these forests.

Cyanocitta stelleri (Gmelin)

Steller's jays were another species that were found to be confined strictly to one habitat, the coniferous forest. These large blue-black birds with their loud screams echoing through the trees when an intruder was spotted were a constant and interesting part of the avifauna of the Coniferous Forest area, and were one of the commonest birds in the study area. They were usually seen slipping around among the trees voicing their protest to the observer.

Aphelocoma californica (Vigors)

California jays were found in two of the study areas. They were commonly seen in area three and less commonly in area four. These birds are birds of deciduous woodlands and thickets and were inhabitants of such habitats in the study area during the summer. The continual

squawking of these birds as they flew from tree to tree drew the observer's attention to them. They can be classed as not too common inhabitants of the Willamette valley around Corvallis.

Corvus corax (Wagler)

One raven was seen on August 22 sitting on a fence pole about six miles south of Corvallis. This large bird was common on Mary's Peak in the Coast Range but did not often come down to the Willamette valley.

Corvus brachyrhynchos Brehm

Crows were common birds of the area studied. They were seen flying over every area except the Marsh and Coniferous Forest. Crows were found to be birds of the open fields and pastures and could be seen there during the day in almost every part of the study area. In the evening these birds retire to wooded areas to roost in large colonies. These birds were one of the commonest birds of the study area.

Parus atricapillus Linnaeus

Black-capped chickadees were one of the birds that had a very wide distribution. They were found commonly in all six study areas. Nests were found in the Mixed Deciduous, Willamette River and the Coniferous Forest areas in cavities in stumps. Specific habitat

requirements could not be assigned to this species as they were likely to be found anywhere through the study area wherever trees were present.

Parus rufescens Townsend

Chestnut-backed chickadees, unlike the black-capped chickadee, were found to be confined to one habitat, the coniferous forest and even here they were not as common as the other chickadee was. Chestnut-backed chickadees were fairly common inhabitants of the coniferous forest area where they could be seen hunting food through the boughs of the large conifers in company with the other birds of this habitat.

Psaltiparus minimus (Townsend)

Bush-tits were seen commonly in three of the study areas, the Mixed Deciduous, McFadden's Marsh, and the Brushy areas. These birds were always seen in small flocks of six or more except once at the marsh when only one bird was seen. These tiny birds were common inhabitants of roadsides throughout the study area where the small flocks could be seen hunting industriously through the roadside thickets.

Sitta carolinensis Latham

White-breasted nuthatches were common inhabitants of all five of the six study areas and were seen twice in the sixth area, McFadden's Marsh. These birds were seen

on both coniferous and deciduous trees but showed a preference for the deciduous type. They have a habit of going down the trunks of the trees head-first in their hunt for insects and worms. They were common and colorful inhabitants of the whole study area.

Sitta canadensis Linnaeus

Red-breasted nuthatches were seen infrequently in three of the study areas, area one, area three and area six. These birds could be seen on both coniferous and deciduous trees but showed a preference for the coniferous type. They were much more uncommon than the white-breasted nuthatch.

Certhia familiaris Linnaeus

Creepers were seen infrequently in three of the six areas, area one, area two, and area three, frequenting both deciduous and coniferous trees. These little birds have the habit of flying to the base of a tree and spiraling upward about the trunk searching the crevices for food. Creepers could be found throughout the study area along with the nuthatches, but were comparatively rarer birds.

Troglodytes aedon Vieillot

House wrens were seen in the Oak Forest area, but they were not common all over the area, appearing limited

to one small area where a lot of cut timber had been piled up and was grown over with grass and poison oak. In the last half of the summer these birds were seen quite commonly every time the area was observed.

Troglodytes troglodytes (Baird)

Winter wrens are shy inhabitants of the densest thickets in the denser parts of the coniferous forest and consequently were not very often observed. Only two of these wrens were seen during the summer in the Coniferous Forest area, both on the last observation period of August 21.

Thryomanes bewickii (Audubon)

Bewick's wrens were the most common wrens in the area studied. They were common inhabitants of the Mixed Deciduous, Brushy, and the Oak Woodland areas and two individuals were seen at McFadden's Marsh. Throughout the area they were found in the thick patches of poison oak especially but anywhere that thick brush patches occurred these little birds could be found.

Telmatalodytes palustris Wilson

Marsh or tule wrens were restricted to one of the study areas, the Marsh area, where they took the place of bewick's wren of the other areas. This little wren was very common and could be seen anywhere throughout the marsh.

Turdus migratorius Linnaeus

Robins were seen everywhere except in the Coniferous Forest area. These birds were by far the most common and widely distributed birds in the study area. They need open lawns or fields in which to hunt worms but as this requirement is met almost everywhere throughout the area around Corvallis, robins are almost universal birds of the area. Their nests were common objects and hardly any tree was without one throughout the summer. Several albino robins were commonly seen in the Mixed Deciduous area and one was noticed on the Oregon State College campus throughout the summer.

Hylocichla ustulata (Nuttall)

Russet-backed thrushes were seen very commonly in area three and infrequently in all the other five areas. One of the characteristic sounds of the Brushy area in the early mornings or evenings was the beautiful, eerie song of these thrushes. These birds are shy birds of thickets and are more often heard than seen. When the observer stands still, glimpses of these brown birds can be gotten as they fly from bush to bush. These thrushes can be classed as common summer residents of the thick brushy habitats of the study area.

Sialia mexicana Townsend

Western bluebirds were seen commonly in one section of the Coniferous Forest area, the burned over section. In this section bluebirds could be seen flying from stump to stump catching insects. One nest was found June 19 in a cavity in an old stump, with young that were just about ready to leave the nest. This bird was a common bird in this one habitat.

Regulus satrapa Baird

Golden-crowned kinglets were found to be common summer inhabitants of area one. These tiny mites were observed flitting through the upper branches of the large coniferous trees in company with other species of birds in search of food.

Bombycilla cedrorum Vieillot

Cedar waxwings were common inhabitants of the Mixed Deciduous area and the Willamette River area, and six birds were seen at McFadden's Marsh. At the Willamette River area waxwings were competing with the flycatchers and swallows for insects. They would continually fly out from a perch, usually on the limb of a maple tree, get an insect and then return to the same or similiar perch. In the Mixed Deciduous area the birds were seen in a pair of wild cherry trees eating the fruit. Usually, anywhere in the study area where there were cherry trees these

beautiful birds could be found. These waxwings can be considered common but not widely distributed birds throughout the study area.

Vireo huttoni Cassin

Hutton's vireos were found to be an uncommon member of the avifauna of the Coniferous Forest area, where two birds were seen, and of the Brushy area, where three birds were seen. The birds were seen hopping about in deciduous trees.

Vireo solitarius Xantus

Solitary, or cassin's, vireos were seen infrequently in three of the study areas, Mixed Deciduous, Willamette River, and the Brushy area. They were found in the smaller second growth and brushy areas. A pair of these vireos were seen nesting in area six June 15.

Vireo gilvus Baird

Warbling vireos are vireos of the tree tops, preferring to work through the very tops of deciduous trees such as the oaks and maples. These vireos were observed infrequently in the Coniferous Forest, Mixed Deciduous, and Oak Woodland areas. Warbling vireos, as their name would suggest, are very consistent singers and the birds could usually be located by their voice.



Vermivora celata (Say)

Orange-crowned or lutescent warblers were the commonest warblers in the study area. These little warblers were observed commonly in every area except the Willamette River area. They were warblers of the brushlands, usually being found wherever there were thickets, and were also common members of the bird aggregations that were seen moving through the tops of the deciduous trees.

Vermivora ruficapilla Van Rossem

Calaveras warblers were mainly warblers of the brushy oak woodland type of habitat. They were very common in area two and were also seen infrequently in areas one, five and six. The second named area was the only place the birds were seen away from the brushy-oak type of habitat. A nest on the ground, hidden under a patch of poison oak, with four young in it was observed June 16, and by June 25 the young had left the nest.

Dendroica aestiva Grinnell

Yellow warblers were very common warblers of brush thickets and deciduous patches along streams. In area six these little warblers were very common in the deciduous trees along the stream and two nests were observed in forks of trees. One nest was vacated June 17 and the other June 27. The nests had two and five young respectively. The birds were also seen frequently at

area five in deciduous trees along the water's edge and infrequently in area three (along the small stream) and area two.

Dendroica auduboni (Townsend)

Audubon's warblers were seen infrequently in deciduous trees in company with other warblers in the Mixed Deciduous and Willamette River areas. Only twelve of these birds were seen throughout the summer and therefore they would have to be classed as one of the uncommon species of the bird population in the area studied.

Dendroica nigrescens (Townsend)

Black-throated gray warblers were common residents of the Oak Woodland area where they could be seen working through the oak trees throughout the summer.

Dendroica townsendi (Townsend)

Townsend's warblers would be considered as uncommon inhabitants of area one. Six birds were seen during the summer high up in the tops of the conifers, four on the first observation trip, June 16, and two on the next trip, June 23. None were seen during the rest of the summer so these birds might have been late migrants.

Oporornis tolmiei (Townsend)

Macgillivray's warblers were one of the commoner warblers in the study area, being observed in every area except the Willamette River area. These warblers were typical inhabitants of brushy areas and nearly anywhere that there were thick extensive brushy patches this bird could be found.

Geothlypis trichas Brewster

Yellow-throats were commonly seen in the deciduous trees along the stream in area six and four were seen in area two. These little birds have the same habitat requirements as the yellow warbler but are not anywhere near as common.

Icteria virens (Lichtenstein)

Long-tailed chats were seen six times at McFadden's Marsh. These birds are inhabitants of dense thickets near water, especially along stream courses. As this kind of habitat does not occur to any great extent around Corvallis these birds are not very common in this part of the Willamette Valley.

Passer domesticus (Linnaeus)

English sparrows were seen in only one study area, the Willamette River area, at a garbage dump. These birds were one of the commonest birds wherever there was human

habitation. Every farm yard had its quota of them, and they were very common around Corvallis and the Oregon State College campus.

Sturnella neglecta Audubon

Meadowlarks could be seen and heard throughout the open areas of the valley around Corvallis, sitting on fences or telephone poles. One nest was located on June 15 with four eggs in it, in the middle of a field that was covered with knee deep grass. The study areas were not suited to this bird, but two were seen in the Mixed Deciduous area and four in the Marsh area. This bird would be classed as a common resident of fields and open areas of this area of the Willamette Valley.

Agelaius phoeniceus Linnaeus

Red-winged blackbirds were the commonest birds of McFadden's Marsh. The birds were not seen commonly anywhere else in the valley except at this marsh, where they were nesting and spending the summer by the hundreds. Great flocks of these blackbirds could be seen feeding on the ground and when they were disturbed they would turn the air black for a few minutes before they settled down again. The few brewer's blackbirds that attempted to come into the marsh were promptly chased out by the red-wings.

Euphagus cyanocephalus (Wagler)

Brewer's blackbirds were the common blackbirds of fields and pasture in the Willamette Valley. They could always be seen along any of the roads around the town of Corvallis. In the study areas, they were occasionally seen flying over area three and were seen sparingly in area five. These birds can be classed as one of the commonest birds of the open valley around Corvallis.

Piranga ludoviciana (Wilson)

Western tanagers were common birds in all the study areas except the Marsh and Brushy areas. These birds could be seen working through the tops of either coniferous or deciduous trees. Tanagers were commonest in the Coniferous Forest area where the birds could be seen flying from limb to limb in the very tops of the largest douglas fir trees. Western tanagers would be classed as common residents of the wooded portions of this section of the Willamette Valley.

Hedymeles melanocephalus (Audubon)

Three black-headed grosbeaks were seen on August 4 in the Mixed Deciduous area in a big-leaf maple tree. However, these birds showed a preference for cottonwood growth and wherever these trees grew these beautiful birds could be commonly found.

Passerina amoena (Say)

Lazuli bunting were seen commonly in two areas, area two and six. These highly colored little birds were usually associated with rose bushes and oak trees. Buntings are busy little birds and always seemed to be active as they constantly flew back and forth picking up seeds and insects.

Carpodacus purpureus (Gmelin)

Purple finches were seen infrequently in the Coniferous Forest, Mixed Deciduous, and Willamette River areas. This bird was usually observed singly or in pairs on the highest limb or tip of a tree (either deciduous or coniferous).

Carpodacus mexicanus (Say)

Common house finches were observed casually around the town of Corvallis and the Oregon State College campus. These birds were usually seen in small flocks of four to six birds. House finches are still apparently extending their range northward and have not become commonly established in this part of the Willamette Valley.

Spinus pinus (Wilson)

Pine siskins were found in two of the six study areas: Coniferous Forest and the Willamette Valley areas. In the coniferous forest these birds were seen in the company of

other birds moving through the foliage of the conifers, and in the Willamette River area were observed to be eating seeds in the company with the goldfinches. Siskins were also seen on the Oregon State College campus during the summer. Siskins were essentially birds of wooded areas and were comparatively rare in the area studied.

Spinus tristis (Linnaeus)

Common goldfinches were found in three of the study areas, the Mixed Deciduous, the Marsh, and the Willamette River areas. They were very abundant in the Willamette River area apparently due the presence of large patches of thistles. Goldfinches are birds of the open, feeding in patches of thistles, on dandelion heads, or on other composites by choice, but taking a great variety of other seeds. These birds are very common components of the Corvallis area avifauna.

Spinus psaltria (Oberholser)

Green-backed goldfinches were seen only in the Willamette River area and there were usually seen feeding on the seeds of canadian thistles in the company of the common goldfinch. This species was much less common than the common goldfinch.

Loxia curvirostra Gloger

Red crossbills were seen ten times in the Coniferous Forest area. These birds were always observed flying from the top of one large conifer to another. Crossbills are fairly common inhabitants of the coniferous forest.

Pipilo maculatus Bell

Spotted towhees were one of the most common birds in the area observed. Anywhere there were brushy thickets these birds would be present. They were seen commonly in every area except the marsh, where only five birds were observed and the coniferous forest, where only eleven birds were seen. Young birds were seen in June and July in area two, area three, and area six.

Junco oreganus (Townsend)

Oregon juncos were found commonly in one study area, the Willamette River area where they frequented the patches of evergreen blackberries along the river bank, and the grassy fields. Juncos were also found infrequently in all the other areas except the Marsh area and were noticed as nesting in the Mixed Deciduous and Brushy areas. These juncos can be considered as a widespread but not very common resident of the study area in all habitats.



Passerculus sandwichensis Ponaparte

Savannah sparrows were found to be a bird of the open grasslands. They were seen while the observer was driving or walking along roads around Corvallis. They could be found anywhere there was tall grass or uncut hay or grain fields and were common inhabitants of the brushy fence rows.

Poocetes gramineus (Miller)

Vesper sparrows were common inhabitants of open meadow and farm lands of the Corvallis vicinity where they inhabited the thickets and brushy fence rows. These sparrows were seen in only one study area, the Brushy area, where they were found on one side of the area near an open field.

Spizella passerina arizonae Coues

Chipping sparrows were seen very commonly in area six and a little less commonly in area two. These little sparrows were by far the most common bird in area six and were a very common nester in the area. Twelve nests of this bird were located in the area during the month of June with the last nest being vacated June 20. These sparrows were seen apparently feeding in and under the oak trees in the Oak Woodland area and were also a common lawn bird in the town of Corvallis and around Oregon State College.

Zonotrichia leucophrys (Forster)

White-crowned sparrows were seen commonly in the coniferous forest area and infrequently in the Willamette River and Oak Woodland areas. In the Coniferous Forest area they were seen feeding in the road that went through the area. These sparrows were nearly always seen feeding on the ground close to a convenient thicket that they could fly to in case of danger.

Passerella iliaca Merrem

One fox sparrow was seen on June 15 in the Mixed Deciduous area. It was seen in a pile of brush in the creek bottom.

Melospiza melodia (Wilson)

Song sparrows were found to be the commonest sparrow in the study areas. They were found in every area except the Coniferous Forest and the Oak Woodland area. Almost every brush patch in the open part of the valley harbored a pair of these little songsters. The song of the song sparrow was the most common bird song heard throughout the summer. This bird can be classed as a common member of the Willamette Valley avifauna.

## BIBLIOGRAPHY

1. American ornithologists union. Checklist of North American birds. 4th ed. Lancaster, Penn., American ornithologists union, 1931. 526p.
2. Buchanan, Robert. Population and occurrence of birds in varying cover types of the Willamette Valley. 1942. 57p. (Unpublished Master's Thesis, Oregon State College).
3. Dice, Lee R. Methods of indicating relative abundance of birds. Auk 47: 22-24. 1930.
4. Eliot, Willard Ayres. Birds of the Pacific coast. New York, G.P. Putnam, 1923. 211p.
5. Evenden, Fred G. Data on nesting Red-winged Blackbirds in western Oregon. The Condor 52:42-43. 1950.
6. Evenden, Fred G., David B. Marshall, and Thomas H. McAllister jr. Waterfowl population of a swamp in western Oregon. The Condor 52: 159-163. 1950.
7. Gabrielson, Ira N. and Stanley G. Jewett. Birds of Oregon. Corvallis, Oregon state college, 1940. 650p. (Oregon State Monographs. Studies in Zoology no. 2).
8. Gullion, Gordon. Birds of the southern Willamette valley, Oregon. The Condor 53:129-149.
9. Hickey, Joseph J. A guide to bird watching. London, Oxford University press. 1943. 262p.
10. Hoffmann, Ralph. Birds of the Pacific states. Boston, Houghton. 1927. 353p.
11. Peck, Morton Eaton. A manual of the higher plants of Oregon. Portland, Binfords and Mort. 1941. 866p.
12. Peterson, Roger Tory. A field guide to the western birds. Boston, Houghton. 1941. 240p.