DATA REPORT

Bird Banding Project at the

Salmon River South Conservation Area

2016

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VANCOUVER ISLAND UNIVERSITY

The Nature Trust of British Columbia

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1. Introduction

In 2015, The Nature Trust of BC announced the acquisition of 67 hectares in the Salmon River estuary (hereby referred as the "Salmon River South Conservation Area") (Figures 1 and 2). This new acquisition, along with the adjacent 104 hectares already secured by The Nature Trust and its partners in 1978, encompasses a mixture of ecosystem types, including coastal wetland, marsh and shallow water, riparian areas, upland forest and old-field habitats. This strategic location along the rugged northeast Vancouver Island coastline provides important habitat to numerous species of fish and wildlife, including birds. However, inventory data on breeding birds is generally lacking in this area.

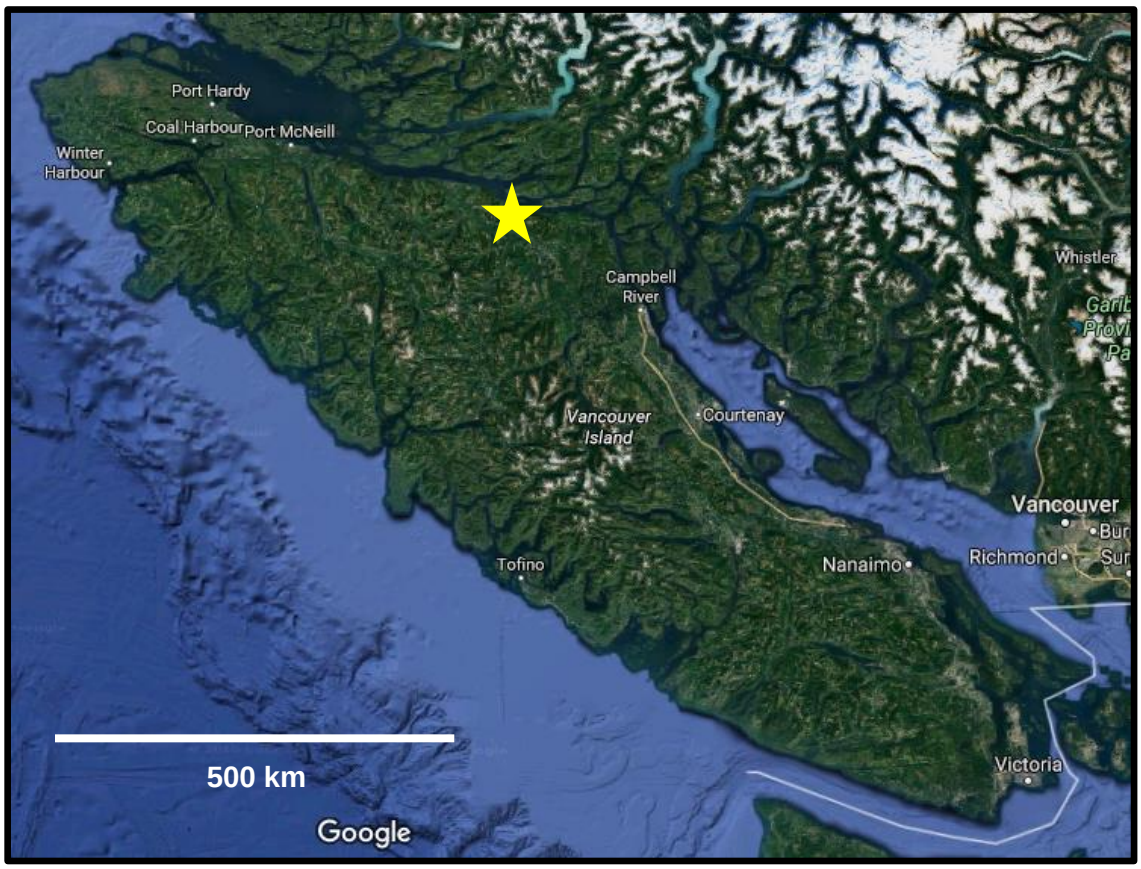

Figure 1. Aerial photograph of Vancouver Island showing the location of the Salmon River South Conservation Area (yellow star). Image courtesy of Google Earth © 2016.

In May-June 2016, Vancouver Island University conducted a bird banding project at the Salmon River South Conservation Area, with specific objectives to monitor migrating and breeding birds to assess their use of the habitat as a migratory stopover and breeding site.

This report summarizes the activities and results for the bird banding project conducted Salmon River South Conservation Area in 2016.

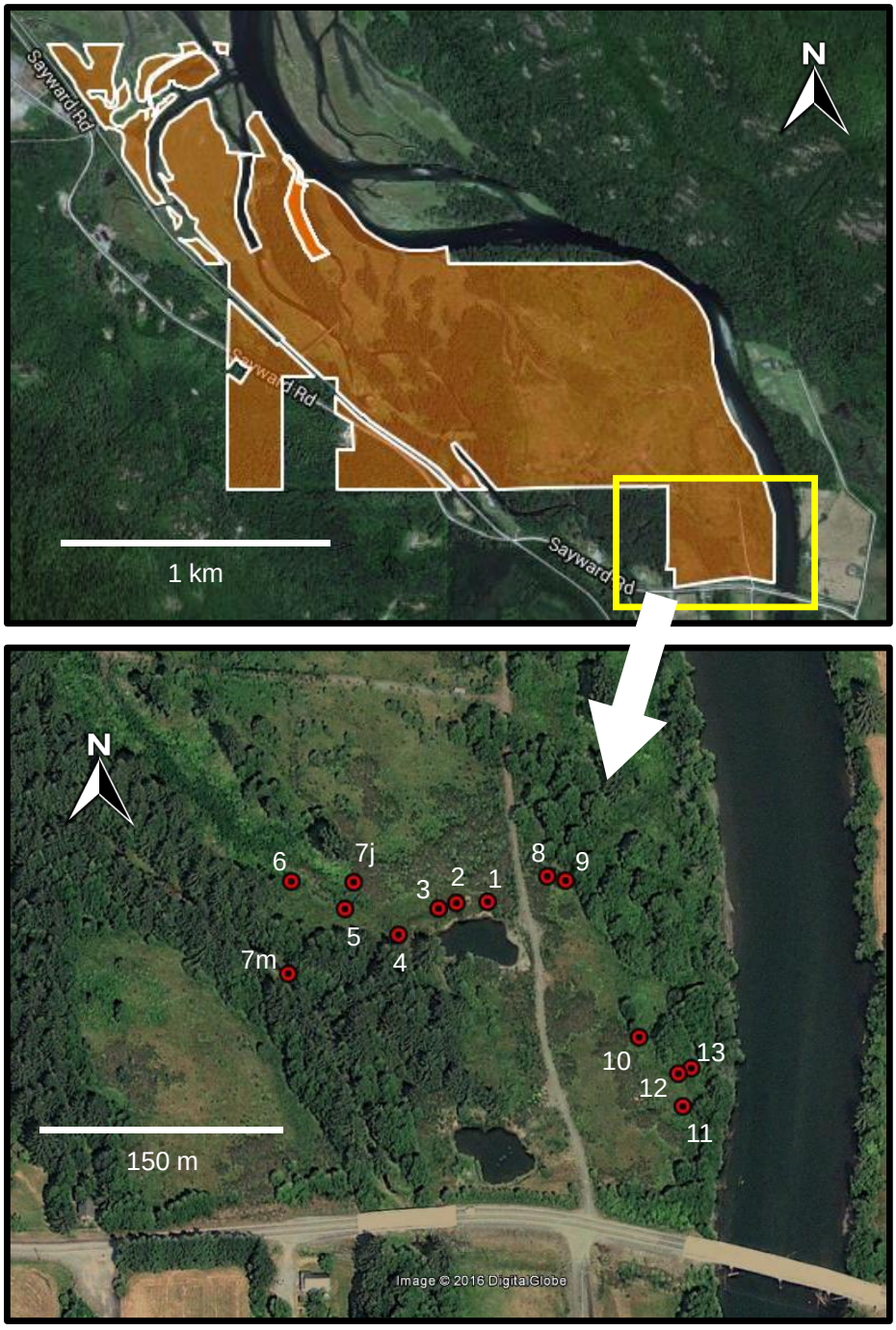

Figure 2. Top: Salmon River estuary conservation lands (orange shading), with yellow box showing the location of the bird banding activities in the South Conservation Area. Bottom: Locations of mist nets at the South Conservation Area. The same mist net locations were used in May and June, except 7m used in May was replaced with 7j in June. Table A.1 in Appendix provides details of the specific location of each net.

2. Methods

Songbird banding activities were conducted in accordance with Vancouver Island University Animal Use Protocol No. 2012-10-R (3), Canadian Wildlife Service Bird Banding Office Scientific Permit No. 10885 and No. 10788H, and following procedures and guidance established in the VIU Bird Monitoring and Banding Manual (Demers, 2015), the North American Banding Council (NABC, 2001a,b), and the Institute for Bird Populations (IBP, 2012).

On May 20 and June 16, 2016, thirteen mist net locations were established at the Salmon River South Conservation Area (Figure 2; Table A.1 in Appendix). Net locations were chosen to ensure a broad coverage of available habitats (old-field, edge, riparian and forested habitats). The same mist net locations were used in May and June, except 7m used in May was replaced with 7j in June. Each mist net consisted of a 12 m long by 2.6 m high panel, made of polyester yarn, with 30-mm mesh size.

During each banding day, nets were operated from 30 minutes before sunrise and for a period of up to 6 hours (i.e., until 5.5 hours after sunrise). Nets were checked every 20-30 minutes. While not in use, all nets were closed and furled tightly to prevent inadvertent capture, and they were removed at the end of each banding day.

Each captured bird was extracted from the net and transferred into a cloth bag until further processing at a central banding table. The banding process for most birds typically involved the following steps: species identification, band application (if unbanded), age and sex determination, fat score, biometrics (wing chord, tail length, weight), and photography (if applicable). Most birds were processed within about 1-2 minutes, and then released. Total handling time from net extraction to release was usually under 30 minutes.

Hummingbirds were not banded due to permit specifications. Instead, to help identify recaptures, a small green or red ink mark was applied on their undertail coverts. Data on age and sex was collected on each hummingbird and all were released near the net shortly after capture.

3. Results

Songbird banding activities were conducted on May 20 and June 16, 2016, with a mist netting effort of 78 net hours each day (Table 1; raw data in Table A.2 of Appendix). A total of 103 birds of 19 species were captured in mist nets. More birds and species were captured in June (64 birds of 17 species) compared to May (38 birds of 11 species). Thirteen of the 38 birds banded in May were recaptured in June (28.9%). The overall average capture rate was 66.0 birds / 100 net-hours for all birds captured, and 58.3 birds / 100 net-hours for all birds processed (excluding unbanded birds).

One unbanded bird captured in May was a recently-fledged American Robin (*Turdus migratorius*) deemed too young for banding. All unbanded birds captured in June were Rufous Hummingbird (*Selasphorus rufus*).

Table 1. Mist net capture statistics at the Salmon River South Conservation Area during May and June 2016.

Parameter	Value		
	May	**June**	**Total**
Capture effort (net-hours)	78	78	**156**
Number of birds banded	38	42	**80**
Number of recaptures	0	11	**11**
Number unbanded	1	11	**12**
Total processed	39	64	**103**
Number of species	11	17	**19**
Capture rate (birds per 100 net-hours)	50.0	82.1	**66.0**

The capture rate for individual mist nets varied across the project site (Table 2). The top three nets with the highest capture rates were nets 6, 10 and 11. Birds were captured at all net locations, except net 7m.

Table 2. Capture statistics by mist net at the Salmon River South Conservation Area during May and June 2016.

Net Number	Number Banded	Number Recaptured	Number Unbanded	Total Number Captured
1	4	2	0	6
2	5	1	1	7
3	4	0	1	5
4	5	1	0	6
5	5	1	0	6
6	14	1	2	17
7m	0	0	0	0
7j	4	2	0	6
8	5	1	0	6
9	7	0	0	7
10	7	1	2	10
11	10	1	1	12
12	3	0	4	7
13	7	0	1	8
TOTAL	80	11	12	103

Overall, the six most commonly captured species were Swainson's Thrush (*Catharus ustulatus*), American Robin, MacGillivray's Warbler (*Geothlypis tolmiei*), Song Sparrow (*Melospiza melodia*), Orange-crowned Warbler (*Vermivora celata*), and Yellow Warbler (*Setophaga petechia*) (Table 3). Together, these six species represented 76% of all birds caught, and each species was caught during May and June. Other species captured during both sampling days included Chestnut-backed Chickadee (*Poecile rufescens*), Audubon's Warbler (*S. coronate auduboni*), and Spotted Towhee (*Pipilo maculatus*).

Table 3. List of species captured in mist nets and processed at the Salmon River South Conservation Area during May and June 2016.

Common Name	May	June		Total Number Captured
	Number Banded	Number Banded	Number Recaptured	
Swainson's Thrush	8	6	2	16
American Robin	2	11	1	14
MagGillivray's Warbler	5	3	4	12
Song Sparrow	5	5	2	12
Orange-crowned Warbler	4	3	1	8
Yellow Warbler	5	1	1	7
Warbling Vireo		4		4
Audubon's Warbler	2	1		3
Spotted Towhee	2	1		3
Hammond's Flycatcher	2			2
Chestnut-backed Chickadee	1	1		2
Common Yellowthroat	2			2
Cassin's Vireo		1		1
Pacific Wren		1		1
Golden-crowned Kinglet		1		1
Cedar Waxwing		1		1
Black-headed Grosbeak		1		1
Brown-headed Cowbird		1		1
TOTAL	38	42	11	91

Some species were only captured during one sampling day. Species caught in May but not in June included: Hammond's Flycatcher (*Empidonax hammondii*) and Common Yellowthroat (*Geothlypis trichas*). Species caught in June but not caught in May included: Cassin's Vireo (*Vireo cassinii*), Warbling Vireo (*V. gilvus*), Pacific Wren (*Troglodytes pacificus*), Golden-crowned

Kinglet (*Regulus satrapa*), Cedar Waxwing (*Bombycilla cedrorum*), Black-headed Grosbeak (*Pheucticus melanocephalus*), and Brown-headed Cowbird (*Molothrus ater*). Photographs of all species captured are shown in Appendix B.

The age composition of birds captured varied between banding days and reflected the recruitment of young birds (hatch-year birds) to the population in June (Table 4). In May, the majority of birds caught (97%; 38 of 39 birds) were adult birds born during 2015 (second-year birds) or earlier (after-second-year birds). In June, similar numbers of second-year and after-second-year birds were captured (21 and 20 birds, respectively), although the proportion of hatch-year birds was greater in June (23%; 15 of 64 birds).

Table 4. Age structure of birds banded at the Salmon River South Conservation Area during May and June 2016. Age codes: HY = born in 2016; SY = born in 2015; AHY = born in 2015 or earlier; ASY = born in 2014 or earlier.

Month	Hatch Year (HY)	Second Year (SY)	After Hatch Year (AHY)	After Second Year (ASY)	Total
May	1	23	0	15	39
June	15	21	8	20	64
TOTAL	16	44	8	35	103

Most of the species captured (15 of 19 species) appeared to be breeding at or near the Salmon River South Conservation Area, as indicated by the presence of breeding characteristics on adult birds and/or the capture of fledged young (Table 5). Breeding adults of both sexes and fledged young were captured for Orange-crowned Warbler, Song Sparrow, and Spotted Towhee.

Birds store fat as a readily accessible source of energy during migration. A high fat score typically indicates that a bird is migrating through an area. Overall, the vast majority of birds processed at the Salmon River South Conservation Area (92% of birds) did not have any visible fat (fat score = 0), while a small proportion showed small amounts of fat (7% of birds with fat score = 1-2) (Table 6). These results suggest that most birds captured were either year-round residents or birds that had already undergone spring migration to the area. One exception was a Yellow Warbler captured in May that had a large amount of fat (fat score = 5), suggesting that this bird was most likely using the Salmon River area as a migratory stopover.

Table 5. Breeding indicators for bird species captured at the Salmon River South Conservation Area during May and June 2016. Females and males were determined to be in breeding condition based on the presence of a brood patch or cloacal protuberance, respectively. Fledged young were identified based on juvenile plumage characteristics. Rufous Hummingbirds were not examined for brood patch or cloacal protuberance. Brown-headed Cowbirds are brood parasites and females do not develop a brood patch.

Common Name	Breeding Female	Breeding Male	Fledged Young
Rufous Hummingbird	---	---	X
Hammond's Flycatcher	X		
Cassin's Vireo	X		
Warbling Vireo			
Chestnut-backed Chickadee			X
Pacific Wren			X
Golden-crowned Kinglet			
Swainson's Thrush	X	X	
American Robin	X	X	
Cedar Waxwing			
Orange-crowned Warbler	X	X	X
MagGillivray's Warbler	X	X	
Common Yellowthroat		X	
Yellow Warbler		X	
Audubon's Warbler	X	X	
Song Sparrow	X	X	X
Spotted Towhee	X	X	X
Black-headed Grosbeak	X		
Brown-headed Cowbird	---		

Table 6. Breakdown of fat scores measured on birds processed at the Salmon River South Conservation Area during May and June 2016. Fat scores are determined by examining the furcular hollow on the upper breast. Fat scores: 0 = 0%, no fat; 1 = 1-5% fat as scattered patches; 2 = 5-33% fat as a thin layer; 3 = 33-66% fat half-fulling the furcular hollow; 4 = 66-100% fat fulling the furcular hollow; 5 = >100% fat bulging from the furcular hollow.

Month	0	1-2	3-5	Total
May	33	4	1	38
June	50	2	0	52
TOTAL	83	6	1	90

4. Acknowledgements

This project was made possible with the support of The Nature Trust of BC, the Vancouver Island Conservation Land Management Program, and Vancouver Island University.

Bird banders for the May banding session were Blair Dudeck and Dr. Eric Demers (Bander-in-Charge). Bird banders for the June banding session were Sarah Chalmers and Dr. Eric Demers (Bander-in-Charge).

Bird banding activities were conducted in accordance with Vancouver Island University Animal Use Protocol No. 2012-10-R (3) and in accordance with Canadian Wildlife Service Bird Banding Office Scientific Permit No. 10885 (Eric Demers) and 10788H (Sarah Chalmers) to capture and band migratory birds, including authorization to use mist nets for the capture of passerines and other landbirds.

5. References

Demers, E. 2015. Bird Monitoring and Banding Manual, version 2. Vancouver Island University, Nanaimo, BC. 51 p.

Institute for Bird Population (IBP). 2012. Monitoring Avian Productivity and Survivorship (MAPS) Manual. Institute for Bird Population, Point Reyes Station, California. 79 p.

North American Banding Council (NABC). 2001a. The North American Banders' Study Guide. North American Banding Council, Point Reyes Station, California. 66 p.

North American Banding Council (NABC). 2001b. The North American Banders' Manual for Banding Passerines and Near Passerines (Excluding Hummingbirds And Owls). North American Banding Council, Point Reyes Station, California. 15 p.

6. Appendix

Table A.1. Geographic coordinates (UTM) of the mist-netting locations at the Salmon River South Conservation Area during May and June 2016. Net 7m was only used during May and net 7j was only used in June. All easting and northing coordinates are based on zone 10U.

Net Location	UTM Coordinates	
	Easting	Northing
1	292277	5583099
2	292258	5583099
3	292247	5583096
4	292231	5583073
5	292190	5583098
6	292158	5583116
7m	292154	5583060
7j	292196	5583114
8	292314	5583113
9	292325	5583110
10	292366	5583013
11	292391	5582970
12	292389	5582990
13	292397	5582993

Table A.2. Banding data for all birds captured in mist nets at the Salmon River South Conservation Area during May and June 2016.

Band Number	Status	Species	Age	Sex	Wing Chord (mm)	Tail Length (mm)	Fat Score	Bird Weight (g)	Brood Patch	Cloacal Protuberance	Banding Date	Capture Time	Net Number	Bander ID
1352-50299	New	AMRO	SY	M	126	99	0	83.6		3	05-20-2016	05:20	10	BLDU
1352-50300	New	AMRO	ASY	M	130	101	0	95.5		3	05-20-2016	05:20	10	BLDU
1352-50300	Recap	AMRO	ASY	M	138	99	0	86.4		3	06-16-2016	05:10	1	SACH
1372-10318	New	AMRO	ASY	M	135	102	0	86.2		3	06-16-2016	05:30	2	SACH
1372-10319	New	AMRO	AHY	M						3	06-16-2016	06:10	2	SACH
1372-10320	New	AMRO	SY	M	129	94	0	83.8		3	06-16-2016	06:10	2	SACH
1372-10321	New	AMRO	SY	M	132	100	0	93.5		3	06-16-2016	06:40	2	ERDE
1372-10322	New	AMRO	ASY	M	128	100	0	84.4		3	06-16-2016	06:40	6	ERDE
1372-10323	New	AMRO	SY	M	128	100	0	78.5		3	06-16-2016	07:30	3	SACH
1372-10324	New	AMRO	ASY	F	126	98	0	91.8	3		06-16-2016	07:30	11	SACH
1372-10325	New	AMRO	ASY	M	132	102	0	84.7		3	06-16-2016	07:30	10	SACH
1372-10326	New	AMRO	SY	F	124	95	0	90.4	3		06-16-2016	08:20	1	SACH
1372-10327	New	AMRO	ASY	M	132	98	0	92.0		3	06-16-2016	09:40	6	SACH
1372-10328	New	AMRO	ASY	F	131	99	0	114.7	3		06-16-2016	10:20	9	ERDE
N/A	NB	AMRO	HY	U							05-20-2016	07:00	13	ERDE
2730-48979	New	AUWA	SY	F	70	54	0	13.1	3		05-20-2016	09:50	10	BLDU
2730-48980	New	AUWA	ASY	M	76	57	0	12.1		3	05-20-2016	09:50	10	BLDU
2780-62277	New	AUWA	ASY	M	76	60	0	12.3			06-16-2016	08:20	7	SACH
2691-51480	New	BHCO	ASY	F	96	66	0	39.3			06-16-2016	10:20	6	SACH
2561-31842	New	BHGR	SY	F	93	72	0	42.8	3		06-16-2016	09:40	6	SACH
2621-82585	New	CAVI	SY	F	70	51	1	14.3	1		06-16-2016	09:00	5	ERDE
2730-48970	New	CBCH	SY	U	61	49	0	9.7			05-20-2016	07:20	4	BLDU
2780-62281	New	CBCH	HY	U	60	48	0	9.8			06-16-2016	09:00	5	SACH
2691-51475	New	CEDW	SY	F	90	57	0	27.6			06-16-2016	08:20	2	SACH
2730-48974	New	COYE	SY	F	51	51	0	9.7			05-20-2016	07:50	11	BLDU
2730-48975	New	COYE	SY	M	53	53	0	9.3		2	05-20-2016	07:50	11	BLDU
2770-54042	New	GCKI	AHY	M	56	44	0	6.1			06-16-2016	08:20	10	SACH
2730-48972	New	HAFL	SY	F	70	57	0	12.0	1		05-20-2016	07:20	6	BLDU
2730-48973	New	HAFL	SY	U	74	54	0	9.8			05-20-2016	07:20	6	BLDU
2621-82554	New	MGWA	SY	F	56	49	1	11.2			05-20-2016	05:20	6	BLDU
2621-82554	Recap	MGWA	SY	F	57	49	0	10.4	3		06-16-2016	07:30	7	SACH
2621-82555	New	MGWA	SY	M	58	53	0	11.1		3	05-20-2016	05:50	6	BLDU
2621-82555	Recap	MGWA	SY	M	58	53	0	11.0		3	06-16-2016	10:20	7	SACH
2621-82556	New	MGWA	ASY	M	56	52	0	11.0		3	05-20-2016	05:50	6	BLDU
2621-82556	Recap	MGWA	ASY	M	56	52	0	10.9		3	06-16-2016	06:10	5	SACH
2621-82557	New	MGWA	ASY	M	60	55	0	11.3		3	05-20-2016	06:40	6	BLDU
2621-82557	Recap	MGWA	ASY	M	59	56	0	11.2		3	06-16-2016	09:00	6	SACH

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Table A.2. (Continued)

Band Number	Status	Species	Age	Sex	Wing Chord (mm)	Tail Length (mm)	Fat Score	Bird Weight (g)	Brood Patch	Cloacal Protuberance	Banding Date	Capture Time	Net Number	Bander ID
2621-82558	New	MGWA	SY	M	58	53	0	10.7			05-20-2016	06:40	9	BLDU
2621-82583	New	MGWA	SY	M	58	51	0	11.4		3	06-16-2016	06:10	5	SACH
2621-82584	New	MGWA	ASY	F	54	50	0	9.7	3		06-16-2016	07:30	9	SACH
2621-82586	New	MGWA	SY	M	57	49	0	10.4		3	06-16-2016	09:40	7	SACH
2730-48965	New	OCWA	SY	M	57	44	0			3	05-20-2016	05:50	6	BLDU
2730-48969	New	OCWA	SY	F	55	43	2	9.5			05-20-2016	06:40	11	BLDU
2730-48976	New	OCWA	SY	F	56	48	0	9.5	3		05-20-2016	08:40	13	BLDU
2730-48976	Recap	OCWA	SY	F	56	46	0	9.5	3		06-16-2016	06:40	10	SACH
2730-48977	New	OCWA	SY	M	56	45	0	8.6		3	05-20-2016	08:40	8	BLDU
2780-62274	New	OCWA	HY	U	58	44	0	8.1			06-16-2016	06:10	9	SACH
2780-62275	New	OCWA	ASY	M	59	45	0	9.5		3	06-16-2016	06:40	10	SACH
2780-62280	New	OCWA	SY	M	58	46	0	8.5			06-16-2016	09:00	1	SACH
2770-54043	New	PAWR	HY	U	46	31	0	7.7			06-16-2016	08:20	8	SACH
N/A	NB	RUHU	AHY	M							06-16-2016	06:10	6	ERDE
N/A	NB	RUHU	AHY	F							06-16-2016	06:40	10	SACH
N/A	NB	RUHU	HY	M							06-16-2016	07:30	3	SACH
N/A	NB	RUHU	HY	F							06-16-2016	07:30	12	ERDE
N/A	NB	RUHU	HY	F							06-16-2016	07:30	12	ERDE
N/A	NB	RUHU	HY	M							06-16-2016	08:20	11	SACH
N/A	NB	RUHU	HY	F							06-16-2016	08:20	2	ERDE
N/A	NB	RUHU	AHY	M							06-16-2016	08:20	6	ERDE
N/A	NB	RUHU	HY	M							06-16-2016	09:00	10	ERDE
N/A	NB	RUHU	AHY	M							06-16-2016	09:00	12	ERDE
N/A	NB	RUHU	HY	M							06-16-2016	09:50	12	SACH
2691-51427	New	SOSP	SY	M	66	62	0	24.0		3	05-20-2016	05:50	1	BLDU
2691-51427	Recap	SOSP	AHY	M	65	62	0	23.3		3	06-16-2016	10:20	8	SACH
2691-51429	New	SOSP	SY	M	70	68	0	23.8		3	05-20-2016	05:50	11	BLDU
2691-51433	New	SOSP	SY	F	64	62	0	22.3	3		05-20-2016	06:40	12	BLDU
2691-51436	New	SOSP	ASY	M	64	63	0	23.0		3	05-20-2016	07:50	11	BLDU
2691-51437	New	SOSP	SY	F	61	62	0	23.3	3		05-20-2016	11:10	4	BLDU
2691-51437	Recap	SOSP	AHY	F	62	62	0	20.5	3		06-16-2016	05:10	1	SACH
2691-51468	New	SOSP	HY	U	61	58	0	19.2			06-16-2016	06:10	4	SACH
2691-51469	New	SOSP	SY	M	64	62	0	25.0		3	06-16-2016	06:20	8	SACH
2691-51472	New	SOSP	HY	U	65	64	0	21.4			06-16-2016	07:30	1	SACH
2691-51478	New	SOSP	HY	U	65	65	0	21.9			06-16-2016	10:20	8	SACH
2691-51479	New	SOSP	HY	U	65	66	0				06-16-2016	10:20	9	SACH
2561-31829	New	SPTO	ASY	M	87	100	0	39.9		3	05-20-2016	07:50	6	BLDU
2561-31830	New	SPTO	SY	F	78	87	0	46.7	3		05-20-2016	09:50	6	BLDU
2561-31841	New	SPTO	HY	U	81	96	0	36.2			06-16-2016	06:40	8	SACH

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Table A.2. (Continued)

Band Number	Status	Species	Age	Sex	Wing Chord (mm)	Tail Length (mm)	Fat Score	Bird Weight (g)	Brood Patch	Cloacal Protuberance	Banding Date	Capture Time	Net Number	Bander ID
2691-51425	New	SWTH	ASY	U	99	75	0	30.0			05-20-2016	05:20	9	BLDU
2691-51426	New	SWTH	ASY	6	99	76	2	30.0			05-20-2016	05:20	9	BLDU
2691-51426	Recap	SWTH	ASY	M	99	76	0	29.9		3	06-16-2016	08:20	4	SACH
2691-51428	New	SWTH	ASY	M	99	74	0	30.9		2	05-20-2016	05:50	13	BLDU
2691-51430	New	SWTH	ASY	M	98	73	0	30.3		2	05-20-2016	06:40	3	BLDU
2691-51430	Recap	SWTH	ASY	M	99	73	0	31.6		3	06-16-2016	08:20	2	SACH
2691-51431	New	SWTH	SY	U	96	74	2	31.2			05-20-2016	06:40	3	BLDU
2691-51432	New	SWTH	ASY	U	98	72	0	30.7			05-20-2016	06:40	12	BLDU
2691-51434	New	SWTH	ASY	U	99	75	0	28.5			05-20-2016	06:40	13	BLDU
2691-51435	New	SWTH	ASY	U	98	72	0	32.2			05-20-2016	07:20	5	BLDU
2691-51470	New	SWTH	ASY	F	92	68	0	32.3	3		06-16-2016	06:40	13	SACH
2691-51471	New	SWTH	ASY	F	93	68	0	31.2	3		06-16-2016	06:40	4	SACH
2691-51473	New	SWTH	ASY	M	99	72	0	31.1		3	06-16-2016	08:20	5	SACH
2691-51474	New	SWTH	ASY	M	96	72	0	30.5		2	06-16-2016	08:20	3	SACH
2691-51476	New	SWTH	SY	U	95	67	0	27.1			06-16-2016	09:40	7	SACH
2691-51477	New	SWTH	SY	M	96	73	0	30.6		2	06-16-2016	09:40	7	SACH
2780-62276	New	WAVI	SY	F	65	48	0	12.3			06-16-2016	07:30	12	SACH
2780-62278	New	WAVI	SY	F	64	44	1	12.9			06-16-2016	08:20	4	ERDE
2780-62279	New	WAVI	SY	U	67	50	0	12.1			06-16-2016	08:20	13	SACH
2780-62282	New	WAVI	SY	F	62	46	0	13.0			06-16-2016	09:40	13	SACH
2730-48966	New	YEWA	SY	F	59	44	0	9.8			05-20-2016	05:50	11	BLDU
2730-48967	New	YEWA	SY	M	60	42	0				05-20-2016	06:40	11	BLDU
2730-48968	New	YEWA	SY	M	59	42	0	9.0		2	05-20-2016	06:40	11	BLDU
2730-48968	Recap	YEWA	SY	M	60	42	0	9.5		3	06-16-2016	05:30	11	SACH
2730-48971	New	YEWA	ASY	M	62	45	0	9.1		3	05-20-2016	07:20	13	BLDU
2730-48978	New	YEWA	ASY	F	59	41	5	10.5			05-20-2016	09:10	6	BLDU
2780-62283	New	YEWA	ASY	M	64	45	0	9.4			06-16-2016	09:40	11	SACH

Legend:

Status: New = New banded bird; Recap = Recapture; NB = Not banded.
Species: American Robin (AMRO); Audubon's Warbler (AUWA); Brown-headed Cowbird (BHCO); Black-headed Grosbeak (BHGR); Cassin's Vireo (CAVI); Chestnut-backed Chickadee (CBCH); Cedar Waxwing (CEDW); Common Yellowthroat (COYE); Golden-crowned Kinglet (GCKI); Hammond's Flycatcher (HAFL); MagGillivray's Warbler (MGWA); Orange-crowned Warbler (OCWA); Pacific Wren (PAWR); Rufous Hummingbird (RUHU); Song Sparrow (SOSP); Spotted Towhee (SPTO); Swainson's Thrush (SWTH); Warbling Vireo (WAVI); Yellow Warbler (YEWA).
Age: HY = Hatch Year; AHY = After Hatch Year; SY = Second Year; ASY = After Second Year.
Sex: F = Female; M = Male; U = Unknown.
Fat score: 0 = 0%, no fat; 1 = 1-5% fat as scattered patches; 2 = 5-33% fat as a thin layer; 3 = 33-66% fat half-fulling the furcular hollow; 4 = 66-100% fat fulling the furcular hollow; 5 = >100% fat bulging from the furcular hollow.
Brood Patch: 1 = Smooth skin, loss of breast feathers; 3 = Heavy vascularization, skin thickly wrinkled.
Cloacal Protuberance: 2 = Medium (cylindrical), enlarged throughout; 3 = Large (bulbous), more enlarged at tip.
Bander ID: BLDU = Blair Dudeck; ERDE = Eric Demers; SACH = Sarah Chalmers.

Photos B.1. Sample photographs for the Salmon River South Conservation Area banding project during May and June 2016. Photos courtesy of E. Demers.

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Photos B.1. (Continued)

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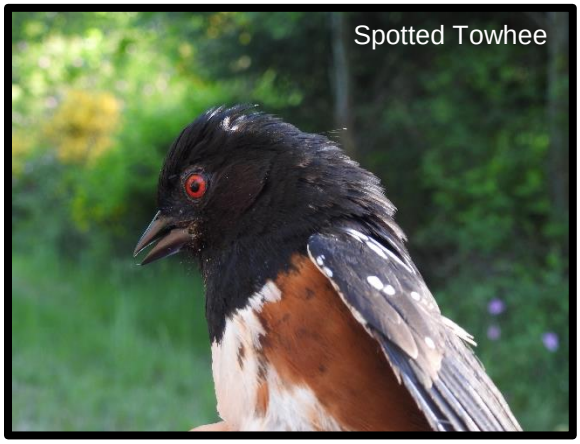
Photos B.1. (Continued)



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Photos B.1. (Continued)