

PALE EVENING PRIMROSE (*Oenothera pallida*) INVENTORY IN
THE SOUTH OKANAGAN, 1993



By

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Internal Working Report

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EXECUTIVE SUMMARY

In 1993, Sara Short conducted an inventory of pale evening primrose (*Oenothera pallida*) in the South Okanagan Wildlife Management Area and Haynes Lease Ecological Reserve, just north of Osoyoos Lake in southcentral British Columbia. The survey used wandering transects between June 4 and July 4 to identify blooming plants. Clusters of plants were visually counted or estimated and their locations were recorded. The population was estimated at approximately 4500 blooming individuals.

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INTRODUCTION

Pale evening primrose (*Oenothera pallida*) is listed as S1 (Red-listed) in British Columbia (CDC 2010). It is a priority 2 under goal 3 (Maintain the diversity of native species and ecosystems) of the BC Conservation Framework (2010). The Framework recommends inventory to confirm status rank.

The global distribution includes western North America from Arizona and New Mexico north to British Columbia (B.C.), but excluding California (Natureserve 2009). In Canada it occurs only in B.C. (Natureserve 2009). In British Columbia, it has been reported mainly in the South Okanagan Valley near Osoyoos (Brenda Costanzo pers. comm. 2010). There also is a disjunct record from Pemberton (Brenda Costanzo pers. comm. 2010) and a photograph from Penticton (Klinkenberg 2010). The Pemberton record appears to be far outside of the expected range, since the Burke Museum in Washington State reports no coastal records, only interior records (Burke Museum of Natural History and Culture (2006). Distribution records have not been completely searched and are not complete.

This report summarizes data collected by Sara Short in 1993 in the South Okanagan Wildlife Management Area and Haynes Lease Ecological Reserve.

STUDY AREA

The study area included the South Okanagan Wildlife Management Area (SOWMA) and Haynes Lease Ecological Reserve northeast of Osoyoos Lake in southcentral B.C. (Figure 1). The site is characterized by sandy soils and antelope-brush – needle-and-thread-grass plant community.

METHODS

Wandering transects were used to identify flowering pale evening primrose plants in the study area. Plants were counted if less than 50. If there were more than 50, plants were either counted or estimated, sometimes including a range of numbers. The lowest estimate was used to represent the total number at each site.

Surveys were conducted between June 4 and July 4 in 1993 during the blooming season. The following information was recorded at each site: species, date, location (UTM NAD 27 using a 1:20,000 topographic map), slope, and elevation (from topographic map).

UTM locations were recorded on paper then transferred to a Wildlife Species Inventory reconnaissance template (Ministry of Environment 2010) in Microsoft Excel 2003 spreadsheet. Data were uploaded into ESRI ArcMap 9.2, saved as a shapefile and displayed in jpg format. One record occurred outside of the study area on private land now owned by Ducks Unlimited Canada and one record occurred on different private land site adjacent to the study area. These records were retained in the data.

All results, including spreadsheets and reports, were uploaded onto the Ministry of Environment's Wildlife Species Inventory database.

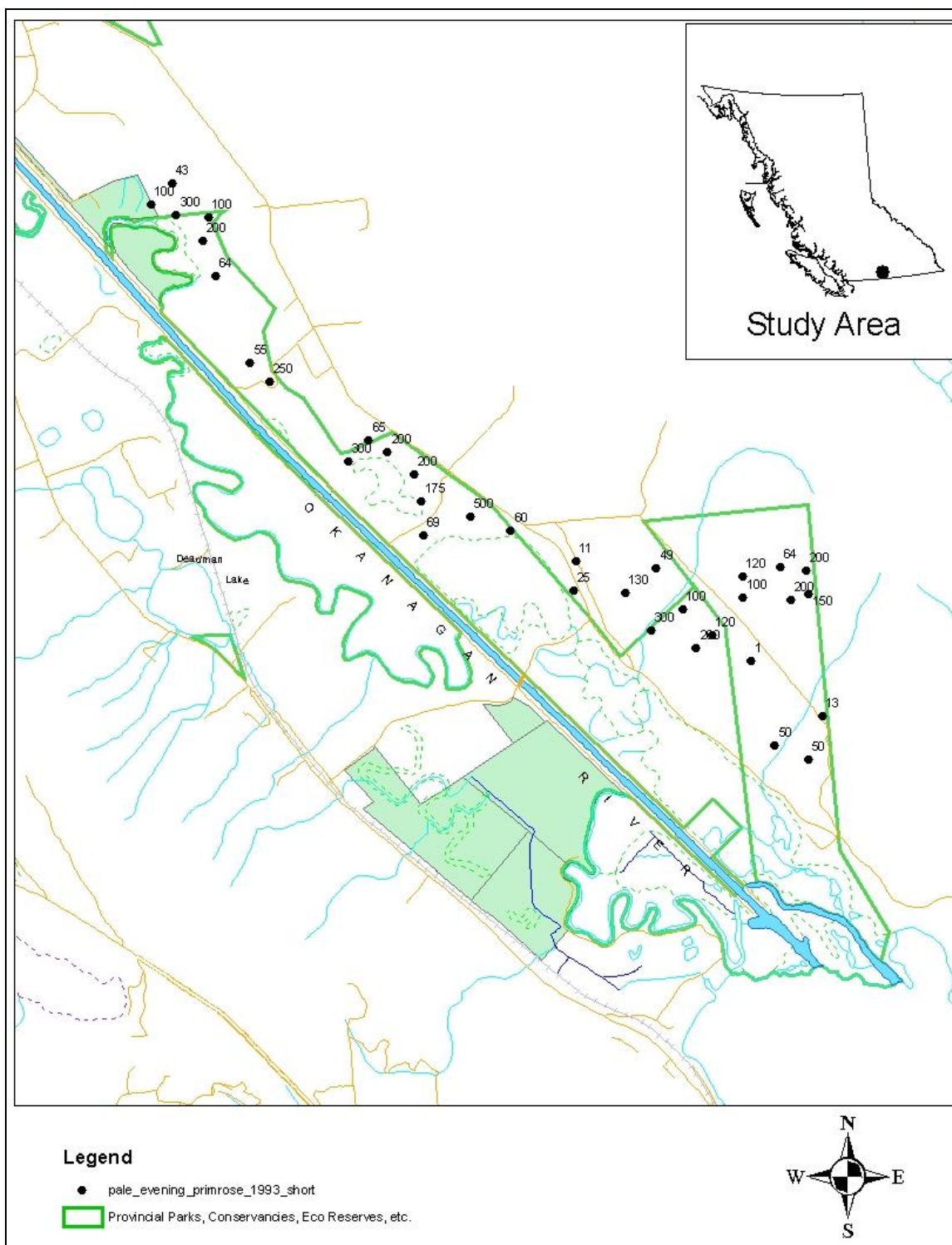


Figure 1. Study Area: Numbers beside points represent the number of flowering individuals observed

RESULTS

4564 individuals were reported at 34 sites between June 4 and July 4 1993 (Appendix 1). Elevation ranged from 280m to 400m above sea level (Appendix 2). Slope was mostly flat (0%) but ranged up to 20% (Appendix 2).

DISCUSSION

No discussion is provided.

RECOMMENDATIONS

No recommendations are provided.

REFERENCES

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Appendix 1

Study Area	Date	Count	Zone	Easting	Northing	Comments
Haynes Lease	june 4 1993	100	11	316080	5440520	NAD 27
Haynes Lease	june 4 1993	1	11	316080	5440220	NAD 27
Haynes Lease	june 4 1993	13	11	316380	5439920	NAD 27
Haynes Lease	june 4 1993	50	11	316140	5439810	NAD 27
Haynes Lease	june 4 1993	50	11	316290	5439720	NAD 27
Haynes Lease	june 13 1993	49	11	315690	5440710	NAD 27
Haynes Lease	june 13 1993	100	11	315790	5440500	NAD 27
Haynes Lease	june 13 1993	120	11	315910	5440360	NAD 27
Haynes Lease	june 13 1993	200	11	315830	5440310	NAD 27
Haynes Lease	june 13 1993	130	11	315530	5440610	NAD 27
Haynes Lease	june 13 1993	300	11	315630	5440420	NAD 27
Haynes Lease	june 13 1993	11	11	315320	5440790	NAD 27
opposite Haynes	june 24 1993	25	11	315290	5440650	NAD 27
SOWMA	june 24 1993	60	11	315030	5440970	NAD 27
SOWMA	june 24 1993	500	11	314850	5441060	NAD 27
SOWMA	june 24 1993	69	11	314620	5441000	NAD 27
SOWMA	june 24 1993	200	11	314610	5441290	NAD 27
SOWMA	june 24 1993	200	11	314500	5441410	NAD 27
SOWMA	july 19 1993	175	11	314630	5441160	NAD 27
SOWMA	june 25 1993	65	11	314420	5441480	NAD 27
SOWMA	june 25 1993	300	11	314310	5441390	NAD 27
SOWMA	july 1 1993	250	11	313990	5441810	NAD 27
SOWMA	july 1 1993	55	11	313910	5441910	NAD 27
SOWMA	july 1 1993	64	11	313800	5442340	NAD 27
SOWMA	july 1 1993	200	11	313760	5442510	NAD 27
SOWMA	july 1 1993	100	11	313800	5442620	NAD 27
SOWMA	july 1 1993	43	11	313650	5442800	NAD 27
SOWMA	july 1 1993	100	11	313540	5442710	NAD 27
SOWMA	july 1 1993	300	11	313650	5442650	NAD 27
Haynes Lease	july 4 1993	120	11	316090	5440620	NAD 27
Haynes Lease	july 4 1993	64	11	316270	5440640	NAD 27
Haynes Lease	july 4 1993	200	11	316390	5440610	NAD 27
Haynes Lease	july 4 1993	150	11	316390	5440500	NAD 27
Haynes Lease	july 4 1993	200	11	316300	5440480	NAD 27

Appendix 2

SITEFORM.DBF																						
1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	
2	SPECIES	M	F	I	U	LOCATION	UTM GRID	PRECIS	DAY	MO	YR	TIME	BGCZ	HABCLASS	POLYGON	MU	HABITAT DESCRIPTION	ELEV	M	SLOPE	ASPECT	COMMENTS
3	Antelope Bush					Eco Reserve 100	340530	S	14	06	93			SS	225 003-259	2-1	Antelope Bush, shrub 1-10% cover	340	0	0	W	approx. 100 plants
4							340530	S	04	06	93			SS			Antelope Bush 1-3% cover	340	0	0		1 plant
5							340530	S	04	06	93			SS			Antelope Bush 1-3% cover	340	0	0		13 plants - more on other side of fence
6							340530	S	04	06	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 50 plants
7							340530	S	04	06	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 50 plants - along road
8						Haynes Lane	340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		49 plants
9							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		100-105 plants
10							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		100-135 plants - approx. 100
11							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		200-250 plants
12							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		130-150 plants
13							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		300-400 plants
14							340530	S	13	06	93			SS			Antelope Bush 1-3% cover	340	0	0		11 plants
15						Haynes Lane	340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		25 plants
16						Purple Site	340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		60 plants
17							340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		500+ plants - on hill
18							340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		69 plants
19							340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 200 plants
20							340530	S	24	06	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 300 plants - on hill
21							340530	S	19	07	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 175 plants
22							340530	S	25	06	93			SS			Antelope Bush 1-3% cover	340	0	0		65 plants
23							340530	S	25	06	93			SS			Antelope Bush 1-3% cover	340	0	0		500+ plants - on hill
24						Purple Site	340530	S	01	07	93			SS			Antelope Bush 1-3% cover	340	0	0		approx. 250 plants
25																						
26																						
OBSERVER'S NAME																		David. Strout				
Page 1																						

SITEFORM.DBF

1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
2	NUMBER								DATE												
3	SPECIES	M	F	I	U	LOCATION	UTM GRID	PRECIS	DAY	MO	YR	TIME	BGCZ	HABCLASS	POLYGON	MU	HABITAT DESCRIPTION	ELEV_M	SLOPE	ASPECT	COMMENTS
3	<i>Demissa and polytrichum</i>					NW of pump site	31390 5441910	S	01	07	93		87xh1	SS	22E 013- 212	8-1		300	10°	W	55 plants.
4							313800 5442340	S						CF	22E 013- 219			280	0°		64 plants
5							313760 5442510	S						CF	22E 013- 219			280	0°		approx. 200 plants - cross site
6							313800 5442620	S						CF	22E 013- 226			280	0°		approx. 100 plants - private land
7							313650 5442800	S						CF	22E 013- 226			280	0°		43 plants.
8							313540 5442710	S						CF	22E 013- 226			280	0°		100-200 plants.
9							313650 5442650	S						CF	22E 013- 226			280	10°		300+ plants.
10						Eco. Reserve 100	316090 5440650	S	04	07	93			SS	22E 003- 932			380	0°		120-125 plants - along path
11							316270 5440640	S						SS	22E 003- 904			400	0°		64 plants
12							316390 5440610	S						SS	22E 003- 904			380	0°		approx. 200 plants
13							316390 5440500	S						SS	22E 003- 932			360	0°		150-200 plants - along line to Indian reserve
14							316300 5440480	S						SS	22E 003- 922			360	0°		200+ - N. SE corner of Eco. Reserve
15																					
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