

## Appendix 4.5

### Cornwell Meadow Report

The Cornwell Meadow, is a 30+ acre site located near river mile 17, (T1S, R4E, Section 24) that has been the focus of a Scots broom removal project since 1996. ODFW, Metro, and TNC have acquired parts of the site over the last 20 years, and it represents the largest natural meadow in the lower SRW. In 1996 most of the meadow was choked with so called “old-growth” Scots broom, with many plants exceeding 3 meters in height. All mature Scots broom plants were removed from the site by 1998. As thousands of new seedlings emerge each year, work continues in the meadow removing all flowering plants and as many immature plants as time permits.

Photo monitoring has been conducted to document our progress at the Cornwell Meadow, and to represent overall work on Scots broom in the Sandy River Watershed.

### Photo-Monitoring

Many photos were taken prior to and during Scots broom removal at Cornwell in the mid-1990s, however only six pre-treatment photos were taken at established photopoints. In 2003, a volunteer took photos at the same six points in the meadows, replicating the 1997 photos (see Scots Broom Control 1997-2003, photo points 1-6). These pictures clearly show the progress of the removal work that has taken place at the Cornwell meadow. Areas once covered with thick Scots broom are now filled with Oregon grape (*Mahonia nervosa*), Salal (*Gaultheria shallon*), Kinnikinnik (*Arctostaphylos uva-ursi*), and many different kinds of mosses and lichens.

Sixteen permanent photo markers were established in 1998 to continue to document the progress of Scots broom removal. Appendix 4.91 is an aerial photo of the Cornwell Meadow, showing the locations of these photo points. Photos were taken in two directions at each marker each year, with the exception of 2003. Photos will be taken in alternate years for the foreseeable future.

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 1



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken 25 meters East of Photo Point D looking away from river

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 2



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken from Photo Point F looking East

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 3



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken from Photo Point F looking toward river

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 4



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken from Photo Point F looking South

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 5



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken from Photo Point F looking toward trailhead

# Cornwell Tract Meadow

Scot's Broom Control 1997-2003 -- Photopoint 6



Photo 1: Summer 1997. Scot's Broom was cleared in late summer and fall.



Photo 2: April 7, 2003, after 5 years of manual control.

Photo taken from Photo Point A looking NW

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot A-East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot A-East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot A -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot A -West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot B-East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot B-East- page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot B-West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot B-West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot C -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot C -East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot C -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.

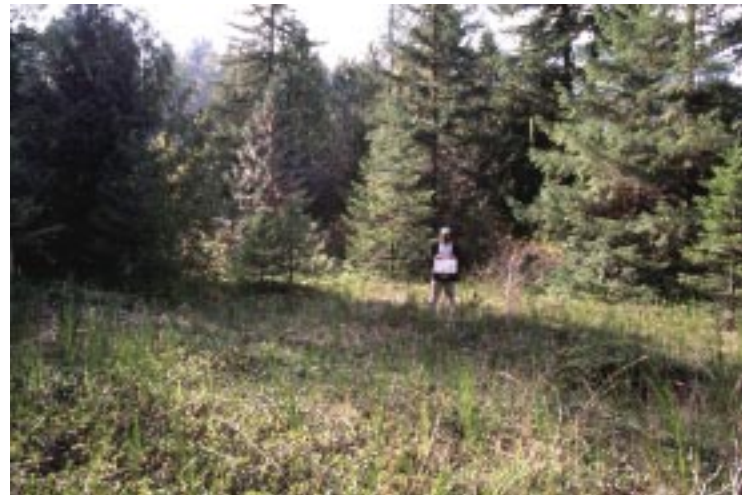


Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot C -West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot D - East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot D-East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot D -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot D -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot E-East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot E-East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot E- West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot E -West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot F-East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot F-East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot F-West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot F-West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot G -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot G -East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot G -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot G -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot H -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot H -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot H -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot H-West - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot I -East - page 1 of 2**



Photo 2, July 1998.

Photo 1, July 1997. Year after initial clearing.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot I -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot I -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot I -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot J - East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot J -East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot J -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot J- West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot K -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot K -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot K -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot K -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot L -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot L -East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot L -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot L -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot M -East- page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot M -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot M -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, April 2000.



Photo 3, October 2001.



Photo 4, August 2002.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot M -West - page 2 of 2**

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot N -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot N -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot N -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot N -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot O -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.



## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot O -East - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot O -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot O -West - page 2 of 2



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot P -East - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**

**Plot P -East - page 2 of 2**



Photo 5, August 2002.

**Cornwell Tract Meadow Scots broom Photomonitoring Series**  
**Plot P -West - page 1 of 2**



Photo 1, July 1997. Year after initial clearing.



Photo 2, July 1998.



Photo 3, April 2000.



Photo 4, October 2001.

Summary: Dense mature plants up to 4m tall were cleared in late summer and fall of 1996. East= magnetic 90 degrees, West= magnetic 270 degrees.

## Cornwell Tract Meadow Scots broom Photomonitoring Series

Plot P - West - page 2 of 2



Photo 5, August 2002.