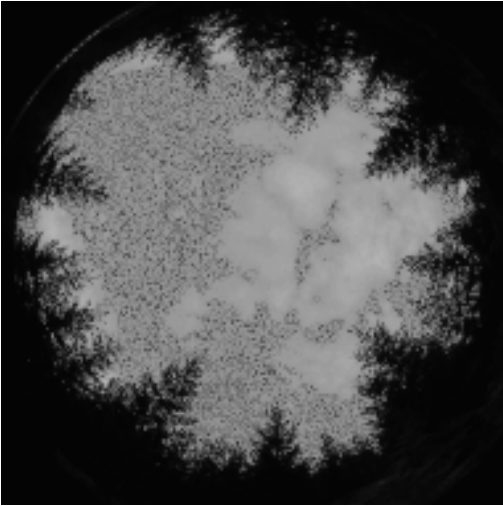


Hemispherical photography is becoming the “standard” method to characterize light environments beneath forest canopies. It is especially useful in evaluating the rate of change in canopy cover (Valverde and Silvertown 1996). We used a Nikon (Coolpix 4500) digital camera with a Nikon fisheye converter (FC-E8) to take photos of 10 plots (including equal numbers of control and thin plots) in Philomath, 12 plots in Astoria, and 12 plots in Forest Grove (Figure). The camera was placed above the PVC pipe marking the plot center, 1 m above ground level. All photos were taken in black and white and analyzed for % canopy openness (Table) using the software program Gap Light Analyzer (GLA v.2).

A.



B.

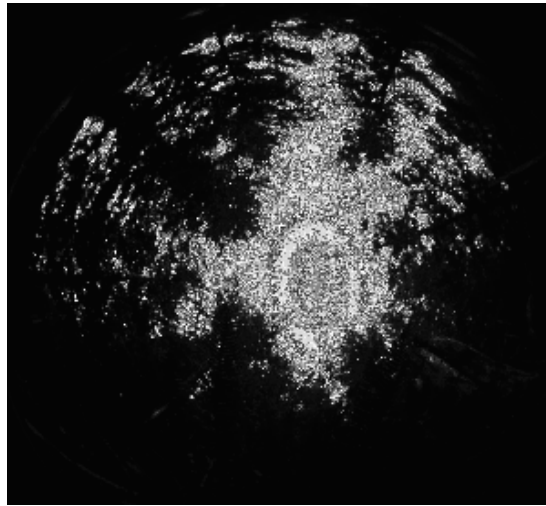


Figure. Hemispherical photos taken in Forest Grove, A) treated, thin plot and B) untreated, control plot.

Table. Percent canopy openness for each plot.

District	Plot #	Treatment	% canopy openness	
Astoria	2	Control	2.74	
	5	Control	11.5	
	6	Thin	27.93	
	8	Control	8.73	
	10	Thin	33.65	
	11	Thin	14.14	
	12	Control	12.63	
	14	Thin	29.27	
	15	Control	13.9	
	16	Thin	36.07	
	18	Thin	26.34	
	22	Control	15.58	
	Forest Grove	2	Thin	40.07
		4	Control	21.95
5		Control	21.82	
7		Thin	43.67	
8		Control	23.6	
10		Thin	27.59	
11		Control	23.29	
12		Thin	36.5	
15		Control	31.4	
16		Thin	35.18	
17		Thin	45.28	
21		Thin	24.97	
Philomath	22	Control	10.46	
	21	Thin	16.51	
	11	Control	14.97	
	22	Control	17.49	
	2	Thin	10.4	
	3	Control	8.48	
	6	Control	9.83	
	7	Thin	16.3	
	13	Control	12	
	19	Thin	18.1	
9	Thin	17.03		

Literature cited

Valverde, T. and J. Silvertown. 1996. Canopy closure rate and forest structure. *Ecology* 78(5): 1555-1562