

Supplementary Data for “Coral Reef Benthos Classification Using Data From a Short-range Multispectral Sensor” by Garza-Pérez JR & F Barrón-Coronel

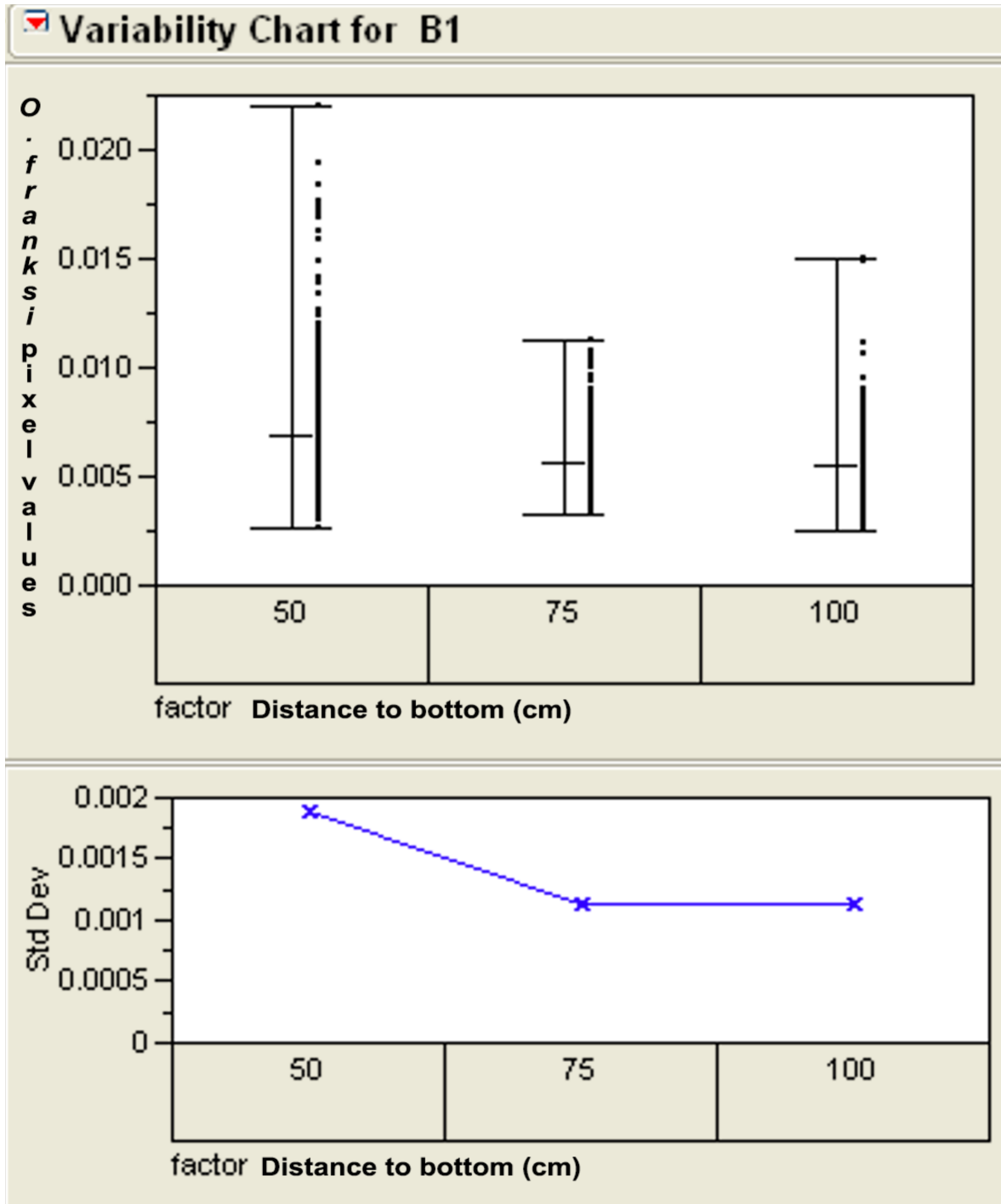


Figure S1. Comparison of Blue band pixel values of an *Orbicella franksi* coral colony, acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen).

▢ Variability Chart for B2

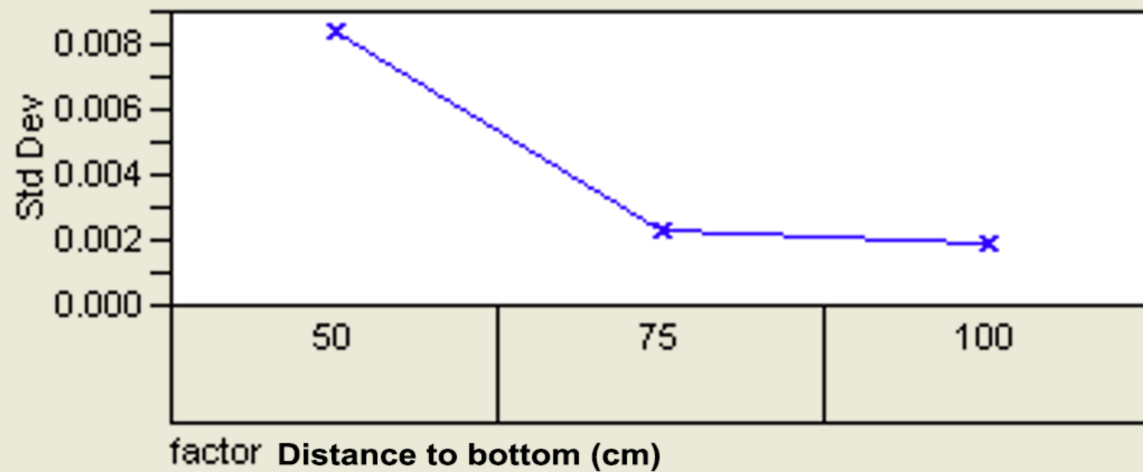
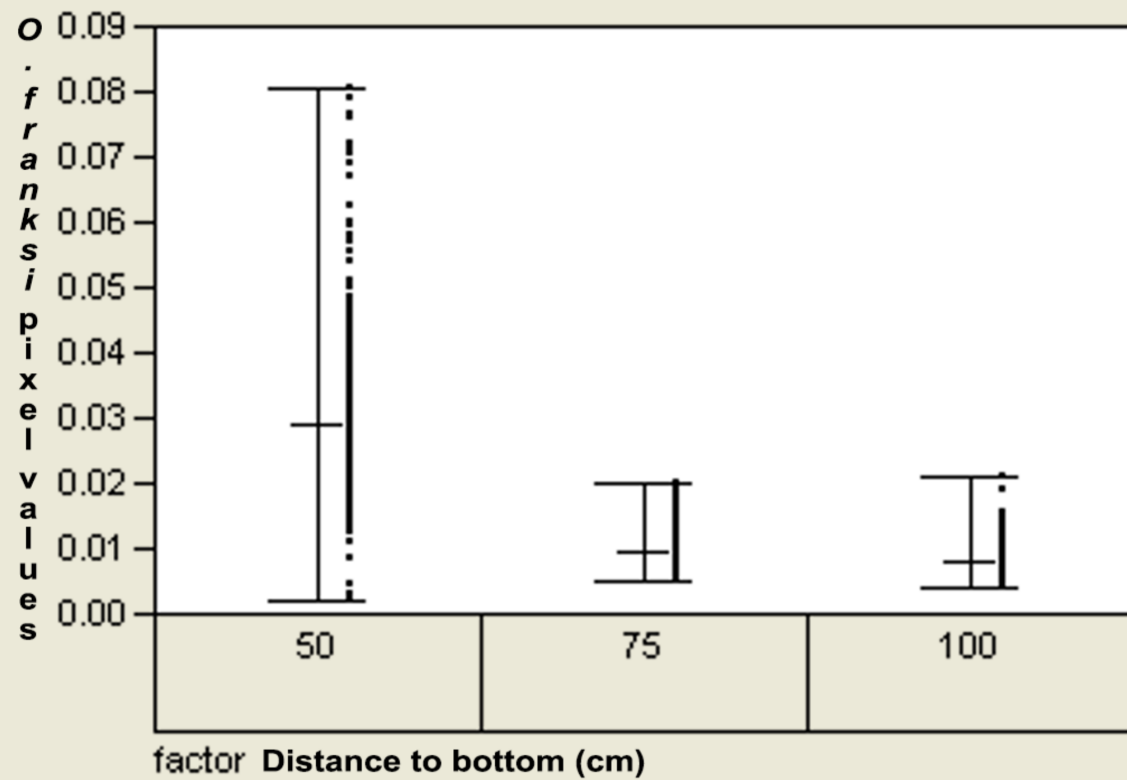


Figure S2. Comparison of Green band pixel values of an *Orbicella franksi* coral colony, acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen).

Variability Chart for B3

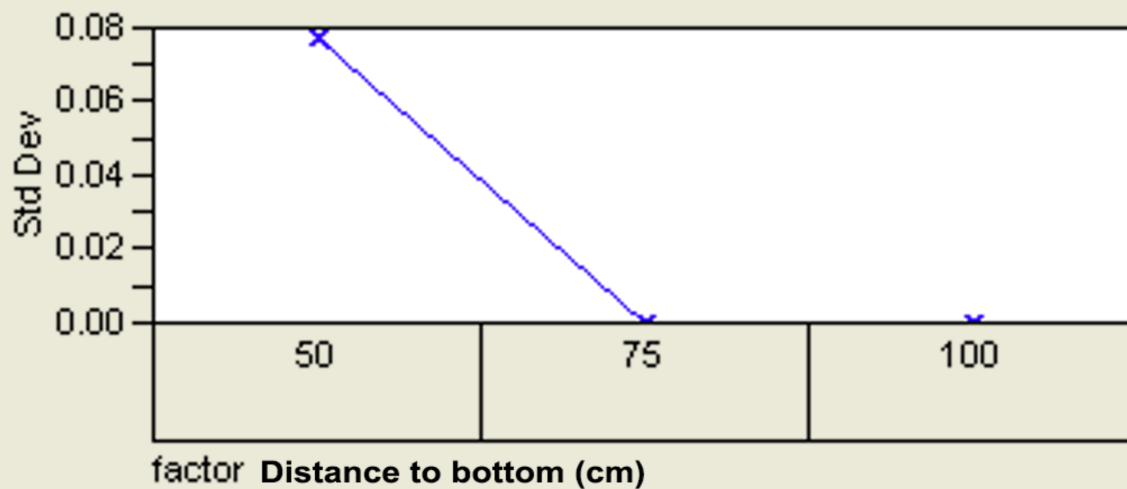
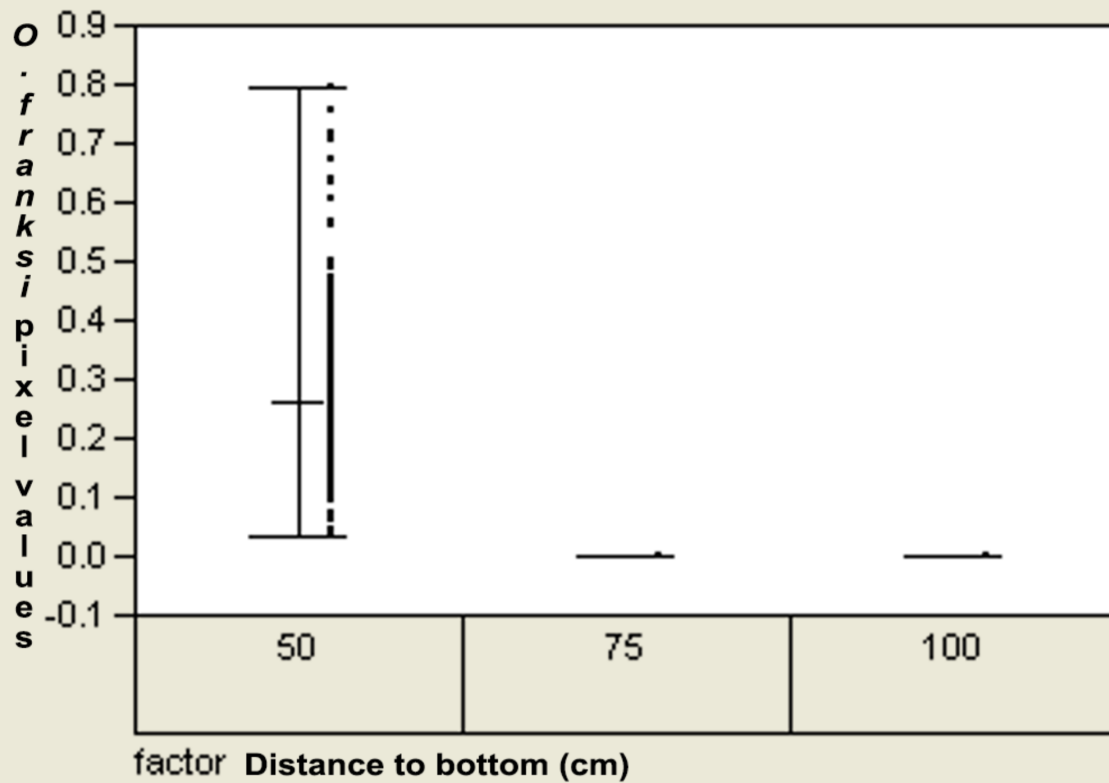


Figure S3. Comparison of Red band pixel values of an *Orbicella franksi* coral colony, acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen).

▢ Variability Chart for B4

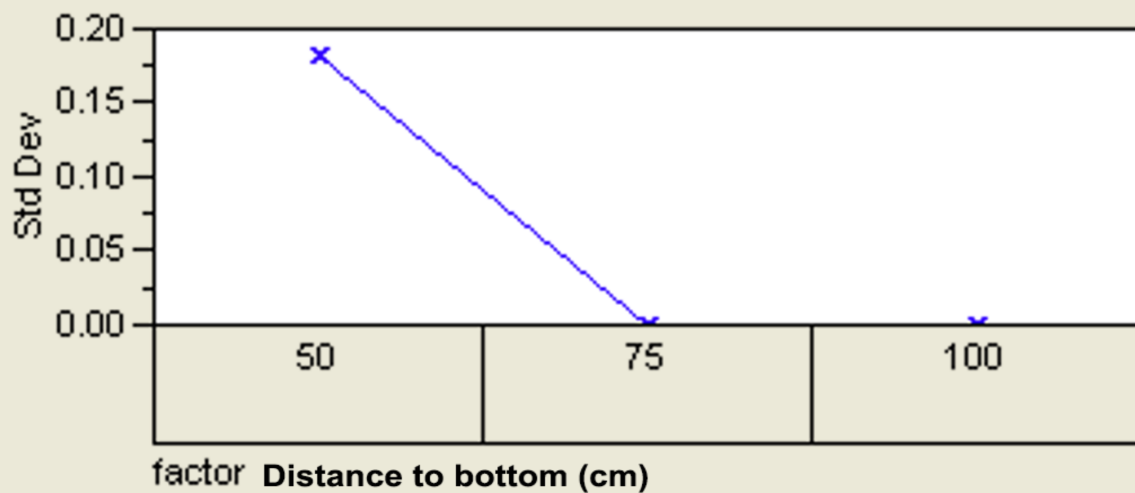


Figure S4. Comparison of Red Edge band pixel values of an *Orbicella franksi* coral colony, acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen).

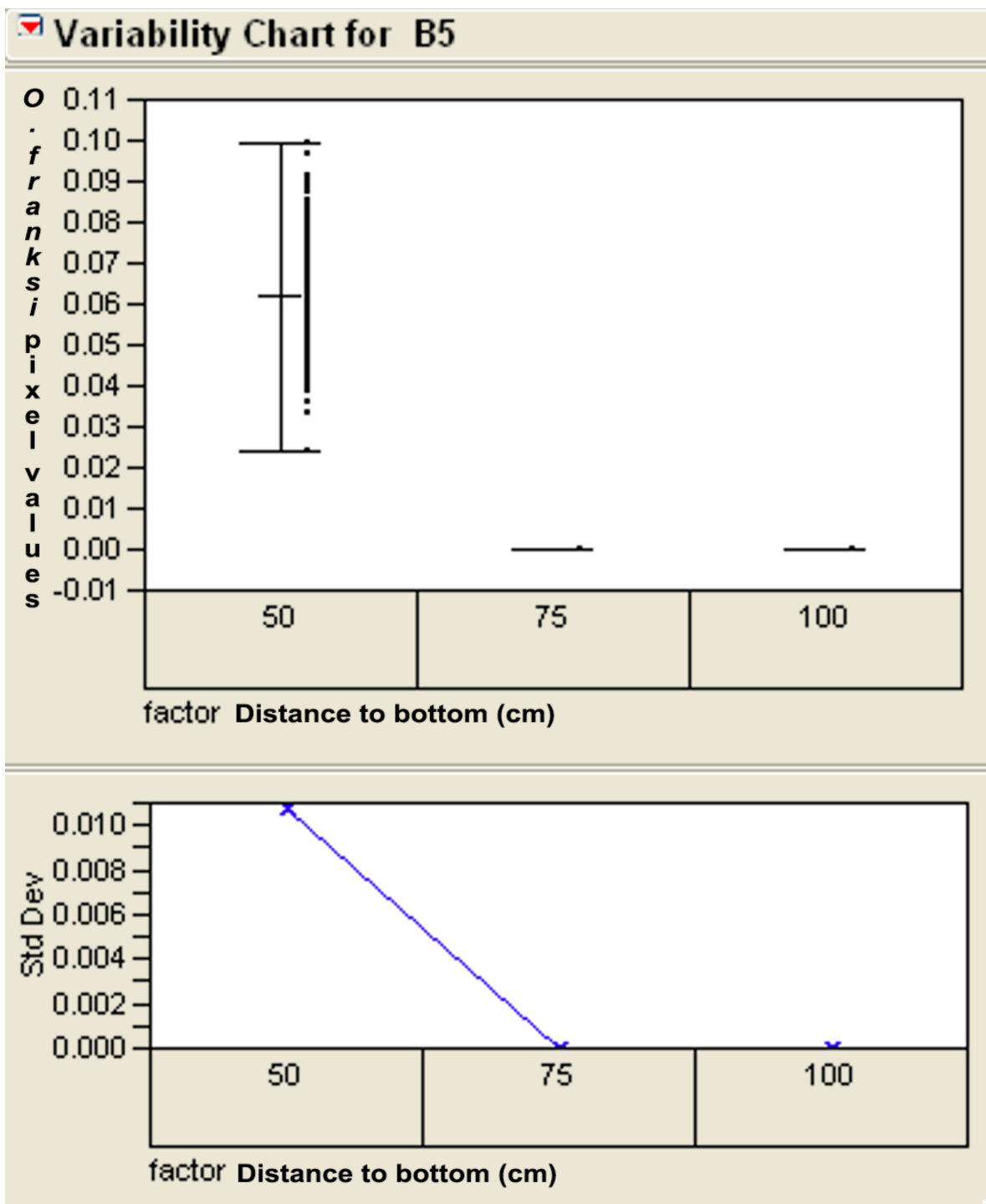


Figure S5. Comparison of Near Infrared band pixel values of an *Orbicella franksi* coral colony, acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen).

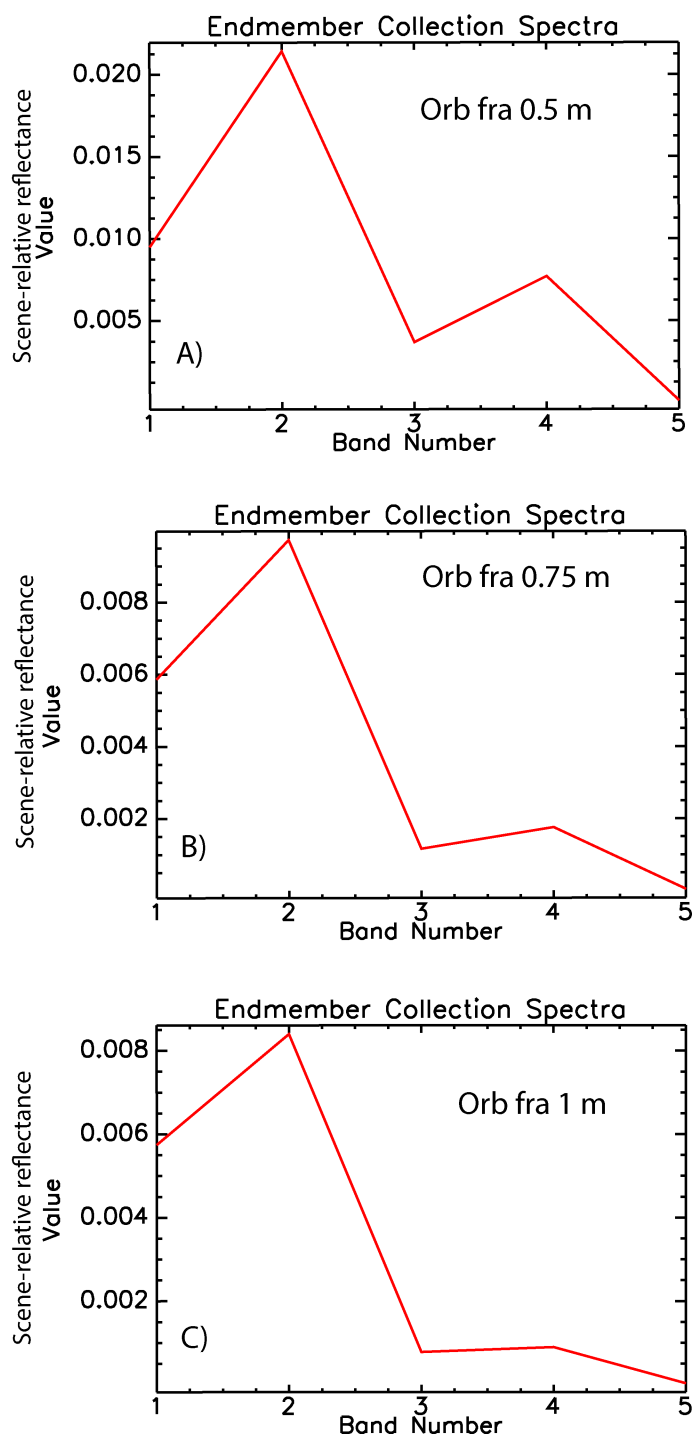


Figure S6. Spectral signatures of a coral colony of *Orbicella franksi* acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen). Bands number: 1, Blue 465-685 nm; 2, Green 550-570 nm; 3, Red 663-673 nm; 4, Red Edge 712-722 nm; 5, Near Infrared 820-560 nm.

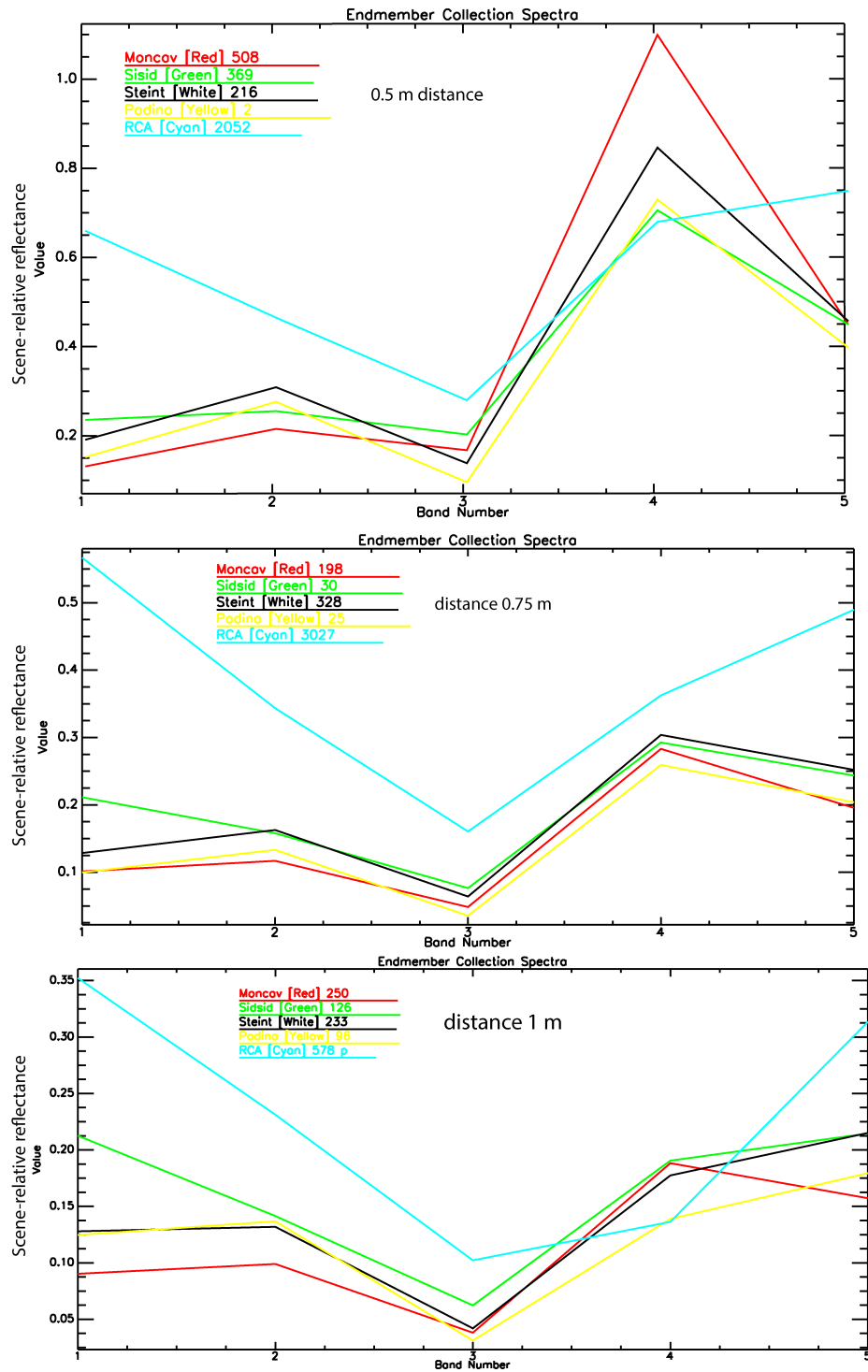


Figure S7. Spectral signatures of reef benthic components *Montastraea cavernosa* (red), *Siderastraea siderea* (green), *Stephanocoenia intersepta* (white), brown algae Genus *Padina* (yellow), red encrusting algae (cyan), acquired at different distances with the MicaSense RedEdge-M multispectral camera, and with 2 Keldan 8X video lights at full power (13,000 lumen). Bands number: 1, Blue 465-685 nm; 2, Green 550-570 nm; 3, Red 663-673 nm; 4, Red Edge 712-722 nm; 5, Near Infrared 820-560 nm.

Table S1. Subplot BI, 12 classes ROI separation values (Jeffries-Matusita, Transformed Divergence)

agaaga:
 orbfra: (1.74991331 1.99669979)
 milalc: (1.99976098 1.99999987)
 cliona: (1.99292999 2.00000000)
 moncav: (1.97267309 1.99492652)
 calvag: (1.99999987 2.00000000)
 leadl: (1.99999995 2.00000000)
 dycti: (1.99747322 1.99999033)
 padina: (1.99877052 1.99993408)
 CCA: (1.89033708 1.92275556)
 filalg: (1.97915322 2.00000000)
 octoc: (1.99997391 1.99999892)

orbfra:
 agaaga: (1.74991331 1.99669979)
 milalc: (2.00000000 2.00000000)
 cliona: (1.85617810 1.94640330)
 moncav: (1.98428570 1.99920520)
 calvag: (1.99991907 2.00000000)
 leadl: (1.99993164 2.00000000)
 dycti: (1.89903675 1.94211727)
 padina: (1.95287655 1.99210411)
 CCA: (1.99212485 1.99999998)
 filalg: (1.94099737 1.98973716)
 octoc: (1.99486922 1.99999534)

milalc:
 agaaga: (1.99976098 1.99999987)
 orbfra: (2.00000000 2.00000000)
 cliona: (2.00000000 2.00000000)
 moncav: (1.99999815 2.00000000)
 calvag: (2.00000000 2.00000000)
 leadl: (2.00000000 2.00000000)
 dycti: (2.00000000 2.00000000)
 padina: (2.00000000 2.00000000)
 CCA: (1.99042478 1.99987248)
 filalg: (2.00000000 2.00000000)
 octoc: (2.00000000 2.00000000)

cliona:
 agaaga: (1.99292999 2.00000000)
 orbfra: (1.85617810 1.94640330)
 milalc: (2.00000000 2.00000000)
 moncav: (1.96025132 1.99997934)
 calvag: (1.99784468 2.00000000)
 leadl: (1.99892889 2.00000000)
 dycti: (1.45236840 1.60116811)

padina: (1.89466481 1.99412885)
CCA: (1.98345416 2.00000000)
filalg: (1.59108380 1.89536613)
octoc: (1.97277777 1.99798359)

moncav:

agaaga: (1.97267309 1.99492652)
orbfra: (1.98428570 1.99920520)
milalc: (1.99999815 2.00000000)
cliona: (1.96025132 1.99997934)
calvag: (1.98964677 1.99999749)
leadl: (1.97832852 1.99987257)
dycti: (1.75739262 1.99976552)
padina: (1.57586059 1.89295191)
CCA: (1.85520959 1.99910205)
filalg: (1.95723209 1.99999998)
octoc: (1.65601102 1.99260549)

calvag:

agaaga: (1.99999987 2.00000000)
orbfra: (1.99991907 2.00000000)
milalc: (2.00000000 2.00000000)
cliona: (1.99784468 2.00000000)
moncav: (1.98964677 1.99999749)
leadl: (1.80715369 1.93611540)
dycti: (1.97452627 1.99985870)
padina: (1.99933004 1.99999246)
CCA: (1.91682495 1.99999138)
filalg: (1.96595364 1.99979981)
octoc: (1.95032615 1.98925993)

leadl:

agaaga: (1.99999995 2.00000000)
orbfra: (1.99993164 2.00000000)
milalc: (2.00000000 2.00000000)
cliona: (1.99892889 2.00000000)
moncav: (1.97832852 1.99987257)
calvag: (1.80715369 1.93611540)
dycti: (1.96402906 1.99998756)
padina: (1.99731720 1.99994939)
CCA: (1.78948722 1.99091169)
filalg: (1.99264861 2.00000000)
octoc: (1.92583612 1.99995087)

dycti:

agaaga: (1.99747322 1.99999033)
orbfra: (1.89903675 1.94211727)
milalc: (2.00000000 2.00000000)
cliona: (1.45236840 1.60116811)
moncav: (1.75739262 1.99976552)

calvag: (1.97452627 1.99985870)
leadl: (1.96402906 1.99998756)
padina: (1.72009627 1.95241410)
CCA: (1.91585096 1.99999180)
filalg: (1.75730366 1.94382424)
octoc: (1.15826383 1.34373427)

padina:

agaaga: (1.99877052 1.99993408)
orbfra: (1.95287655 1.99210411)
milalc: (2.00000000 2.00000000)
cliona: (1.89466481 1.99412885)
moncav: (1.57586059 1.89295191)
calvag: (1.99933004 1.99999246)
leadl: (1.99731720 1.99994939)
dycti: (1.72009627 1.95241410)
CCA: (1.95547245 1.99999389)
filalg: (1.97277401 1.99977228)
octoc: (1.86050193 1.94495859)

CCA:

agaaga: (1.89033708 1.92275556)
orbfra: (1.99212485 1.99999998)
milalc: (1.99042478 1.99987248)
cliona: (1.98345416 2.00000000)
moncav: (1.85520959 1.99910205)
calvag: (1.91682495 1.99999138)
leadl: (1.78948722 1.99091169)
dycti: (1.91585096 1.99999180)
padina: (1.95547245 1.99999389)
filalg: (1.95636462 2.00000000)
octoc: (1.88734542 1.99999889)

filalg:

agaaga: (1.97915322 2.00000000)
orbfra: (1.94099737 1.98973716)
milalc: (2.00000000 2.00000000)
cliona: (1.59108380 1.89536613)
moncav: (1.95723209 1.99999998)
calvag: (1.96595364 1.99979981)
leadl: (1.99264861 2.00000000)
dycti: (1.75730366 1.94382424)
padina: (1.97277401 1.99977228)
CCA: (1.95636462 2.00000000)
octoc: (1.97653027 1.99914922)

octoc:

agaaga: (1.99997391 1.99999892)
orbfra: (1.99486922 1.99999534)
milalc: (2.00000000 2.00000000)

cliona: (1.97277777 1.99798359)
moncav: (1.65601102 1.99260549)
calvag: (1.95032615 1.98925993)
leadl: (1.92583612 1.99995087)
dycti: (1.15826383 1.34373427)
padina: (1.86050193 1.94495859)
CCA: (1.88734542 1.99999889)
filalg: (1.97653027 1.99914922)

Pair Separation (least to most);

dycti and octoc - 1.15826383
cliona and dycti - 1.45236840
moncav and padina - 1.57586059
cliona and filalg - 1.59108380
moncav and octoc - 1.65601102
dycti and padina - 1.72009627
agaaga and orbfra - 1.74991331
dycti and filalg - 1.75730366
moncav and dycti - 1.75739262
leadl and CCA - 1.78948722
calvag and leadl - 1.80715369
moncav and CCA - 1.85520959
orbfra and cliona - 1.85617810
padina and octoc - 1.86050193
CCA and octoc - 1.88734542
agaaga and CCA - 1.89033708
cliona and padina - 1.89466481
orbfra and dycti - 1.89903675
dycti and CCA - 1.91585096
calvag and CCA - 1.91682495
leadl and octoc - 1.92583612
orbfra and filalg - 1.94099737
calvag and octoc - 1.95032615
orbfra and padina - 1.95287655
padina and CCA - 1.95547245
CCA and filalg - 1.95636462
moncav and filalg - 1.95723209
cliona and moncav - 1.96025132
leadl and dycti - 1.96402906
calvag and filalg - 1.96595364
agaaga and moncav - 1.97267309
padina and filalg - 1.97277401
cliona and octoc - 1.97277777
calvag and dycti - 1.97452627
filalg and octoc - 1.97653027
moncav and leadl - 1.97832852
agaaga and filalg - 1.97915322
cliona and CCA - 1.98345416
orbfra and moncav - 1.98428570

moncav and calvag - 1.98964677
milalc and CCA - 1.99042478
orbfra and CCA - 1.99212485
leadl and filalg - 1.99264861
agaaga and cliona - 1.99292999
orbfra and octoc - 1.99486922
leadl and padina - 1.99731720
agaaga and dycti - 1.99747322
cliona and calvag - 1.99784468
agaaga and padina - 1.99877052
cliona and leadl - 1.99892889
calvag and padina - 1.99933004
agaaga and milalc - 1.99976098
orbfra and calvag - 1.99991907
orbfra and leadl - 1.99993164
agaaga and octoc - 1.99997391
milalc and moncav - 1.99999815
agaaga and calvag - 1.99999987
agaaga and leadl - 1.99999995
milalc and leadl - 2.00000000
milalc and padina - 2.00000000
milalc and octoc - 2.00000000
milalc and filalg - 2.00000000
milalc and calvag - 2.00000000
milalc and dycti - 2.00000000
milalc and cliona - 2.00000000
orbfra and milalc - 2.00000000

Table S2. Confusion Matrix subplot BI, 12 class, SVM

Overall Accuracy = (8075/10221) 79.0040%

Kappa Coefficient = 0.7658

		Ground Truth (Pixels)			
Class		Agaaga_AA	Cliona	Calvag_AA	Lead_AA
Dyctiota_AA	Unclassified	0	0	0	0
0					
	agaaga	458	0	0	0
0					
	cliona	1	1354	0	0
422					
	calvag	0	0	451	74
0					
	leadl	0	0	49	652
0					
	dycti	6	19	6	10
603					
	milalc	7	0	0	0
0					
	moncav	22	1	0	8
24					
	CCA	118	4	0	7
0					
	filalg	2	57	6	1
43					
	octoc	0	0	0	4
34					
	orbfav	52	34	0	0
43					
	padina	13	5	0	3
110					
	Total	679	1474	512	759
1279					

		Ground Truth (Pixels)			
Class		Milalc_AA	Moncav_AA	CCA_AA	FilAlg_AA
Octoc_AA	Unclassified	0	0	0	0
0					
	agaaga	10	0	33	0
0					
	cliona	0	1	0	96
0					
	calvag	2	0	0	82
2					
	leadl	1	1	2	1

13					
	dycti	0	19	0	26
95					
	milalc	705	0	0	0
0					
	moncav	15	294	6	0
3					
	CCA	38	5	607	0
8					
	filalg	0	0	0	631
5					
	octoc	0	23	0	0
194					
	orbfav	2	2	0	11
0					
	padina	10	25	0	0
5					
	Total	783	370	648	847
325					

Class	Ground Truth (Pixels)		Total
	Orbfra_AA	Padina_AA	
Unclassified	0	0	0
agaaga	34	0	535
cliona	250	3	2127
calvag	0	0	611
leadl	0	0	719
dycti	15	30	829
milalc	0	0	712
moncav	2	48	423
CCA	0	8	795
filalg	18	0	763
octoc	0	1	256
orbfav	1410	2	1556
padina	8	716	895
Total	1737	808	10221

Class	Ground Truth (Percent)		Calvag_AA	Lead_AA
	Agaaga_AA	Cliona		
Dyctiota_AA				
Unclassified	0.00	0.00	0.00	0.00
0.00				
agaaga	67.45	0.00	0.00	0.00

0.00					
	cliona	0.15	91.86	0.00	0.00
32.99					
	calvag	0.00	0.00	88.09	9.75
0.00					
	leadl	0.00	0.00	9.57	85.90
0.00					
	dycti	0.88	1.29	1.17	1.32
47.15					
	milalc	1.03	0.00	0.00	0.00
0.00					
	moncav	3.24	0.07	0.00	1.05
1.88					
	CCA	17.38	0.27	0.00	0.92
0.00					
	filalg	0.29	3.87	1.17	0.13
3.36					
	octoc	0.00	0.00	0.00	0.53
2.66					
	orbfav	7.66	2.31	0.00	0.00
3.36					
	padina	1.91	0.34	0.00	0.40
8.60					
	Total	100.00	100.00	100.00	100.00
100.00					

		Ground Truth (Percent)		CCA_AA	FilAlg_AA
Class		Milalc_AA	Moncav_AA		
Octoc_AA					
	Unclassified	0.00	0.00	0.00	0.00
0.00					
	agaaga	1.28	0.00	5.09	0.00
0.00					
	cliona	0.00	0.27	0.00	11.33
0.00					
	calvag	0.26	0.00	0.00	9.68
0.62					
	leadl	0.13	0.27	0.31	0.12
4.00					
	dycti	0.00	5.14	0.00	3.07
29.23					
	milalc	90.04	0.00	0.00	0.00
0.00					
	moncav	1.92	79.46	0.93	0.00
0.92					
	CCA	4.85	1.35	93.67	0.00
2.46					
	filalg	0.00	0.00	0.00	74.50
1.54					

59.69	octoc	0.00	6.22	0.00	0.00
0.00	orbfav	0.26	0.54	0.00	1.30
1.54	padina	1.28	6.76	0.00	0.00
100.00	Total	100.00	100.00	100.00	100.00

Class	Ground Truth (Percent)		Total
	Orbfra_AA	Padina_AA	
Unclassified	0.00	0.00	0.00
agaaga	1.96	0.00	5.23
cliona	14.39	0.37	20.81
calvag	0.00	0.00	5.98
leadl	0.00	0.00	7.03
dycti	0.86	3.71	8.11
milalc	0.00	0.00	6.97
moncav	0.12	5.94	4.14
CCA	0.00	0.99	7.78
filalg	1.04	0.00	7.47
octoc	0.00	0.12	2.50
orbfav	81.17	0.25	15.22
padina	0.46	88.61	8.76
Total	100.00	100.00	100.00

Class	Commission	Omission	Commission
(Pixels)	(Percent)	(Percent)	(Pixels)
agaaga	14.39	32.55	77/535
cliona	36.34	8.14	773/2127
calvag	26.19	11.91	160/611
leadl	9.32	14.10	67/719

dycti	27.26	52.85	226/829
676/1279			
milalc	0.98	9.96	7/712
78/783			
moncav	30.50	20.54	129/423
76/370			
CCA	23.65	6.33	188/795
41/648			
filalg	17.30	25.50	132/763
216/847			
octoc	24.22	40.31	62/256
131/325			
orbfav	9.38	18.83	146/1556
327/1737			
padina	20.00	11.39	179/895
92/808			

Class	Prod. Acc.	User Acc.	Prod. Acc.
User Acc.	(Percent)	(Percent)	(Pixels)
(Pixels)			
agaaga	67.45	85.61	458/679
458/535			
cliona	91.86	63.66	1354/1474
1354/2127			
calvag	88.09	73.81	451/512
451/611			
leadl	85.90	90.68	652/759
652/719			
dycti	47.15	72.74	603/1279
603/829			
milalc	90.04	99.02	705/783
705/712			
moncav	79.46	69.50	294/370
294/423			
CCA	93.67	76.35	607/648
607/795			
filalg	74.50	82.70	631/847
631/763			
octoc	59.69	75.78	194/325
194/256			
orbfav	81.17	90.62	1410/1737
1410/1556			
padina	88.61	80.00	716/808
716/895			

Table S3. Confusion Matrix subplot BI, 12 class, SVM, Local Sigma Filter

Overall Accuracy = (8344/10221) 81.6358%

Kappa Coefficient = 0.7953

		Ground Truth (Pixels)		CCA_AA	Padina_AA
Class		Octoc_AA	FilAlg_AA		
Dyctiota_AA	Unclassified	0	0	0	0
0	octoc	216	0	0	2
22	filalg	5	680	0	0
26	CCA	11	0	610	4
0	padina	5	0	0	730
91	dycti	78	26	0	21
667	calvag	1	77	0	0
0	moncav	2	0	7	48
26	leadl	7	0	1	0
0	milalc	0	0	0	0
0	cliona	0	58	0	2
417	agaaga	0	0	30	0
0	orbfav	0	6	0	1
30	Total	325	847	648	808
1279					

		Ground Truth (Pixels)		Lead_AA	Milalc_AA
Class		Calvag_AA	Moncav_AA		
Cliona	Unclassified	0	0	0	0
0	octoc	0	21	0	0
0	filalg	4	0	0	0
54	CCA	0	3	7	32
4					

4	padina	0	24	2	12
23	dycti	6	11	12	0
0	calvag	467	0	71	0
0	moncav	0	310	7	12
0	leadl	35	0	660	1
0	milalc	0	0	0	714
0	cliona	0	0	0	0
1368	agaaga	0	0	0	10
0	orbfav	0	1	0	2
21	Total	512	370	759	783
1474					

Class	Ground Truth (Pixels)		Total
	Agaaga_AA	Orbfra_AA	
Unclassified	0	0	0
octoc	0	0	261
filalg	1	13	783
CCA	98	0	769
padina	11	6	885
dycti	4	12	860
calvag	0	0	616
moncav	30	2	444
leadl	0	0	704
milalc	2	0	716
cliona	1	242	2088
agaaga	492	32	564
orbfav	40	1430	1531
Total	679	1737	10221

Class	Ground Truth (Percent)		CCA_AA	Padina_AA
	Octoc_AA	FilAlg_AA		
Dyctiota_AA				
Unclassified	0.00	0.00	0.00	0.00
0.00				

1.72	octoc	66.46	0.00	0.00	0.25
2.03	filalg	1.54	80.28	0.00	0.00
0.00	CCA	3.38	0.00	94.14	0.50
7.11	padina	1.54	0.00	0.00	90.35
52.15	dycti	24.00	3.07	0.00	2.60
0.00	calvag	0.31	9.09	0.00	0.00
2.03	moncav	0.62	0.00	1.08	5.94
0.00	leadl	2.15	0.00	0.15	0.00
0.00	milalc	0.00	0.00	0.00	0.00
32.60	cliona	0.00	6.85	0.00	0.25
0.00	agaaga	0.00	0.00	4.63	0.00
2.35	orbfav	0.00	0.71	0.00	0.12
100.00	Total	100.00	100.00	100.00	100.00

		Ground Truth (Percent)		Lead_AA	Milalc_AA
Class		Calvag_AA	Moncav_AA		
0.00	Cliona				
0.00	Unclassified	0.00	0.00	0.00	0.00
0.00	octoc	0.00	5.68	0.00	0.00
3.66	filalg	0.78	0.00	0.00	0.00
0.27	CCA	0.00	0.81	0.92	4.09
0.27	padina	0.00	6.49	0.26	1.53
1.56	dycti	1.17	2.97	1.58	0.00
0.00	calvag	91.21	0.00	9.35	0.00
0.00	moncav	0.00	83.78	0.92	1.53
0.00	leadl	6.84	0.00	86.96	0.13
	milalc	0.00	0.00	0.00	91.19

0.00					
	cliona	0.00	0.00	0.00	0.00
92.81					
	agaaga	0.00	0.00	0.00	1.28
0.00					
	orbfav	0.00	0.27	0.00	0.26
1.42					
	Total	100.00	100.00	100.00	100.00
100.00					

Class	Ground Truth (Percent)		Total
	Agaaga_AA	Orbfra_AA	
Unclassified	0.00	0.00	0.00
octoc	0.00	0.00	2.55
filalg	0.15	0.75	7.66
CCA	14.43	0.00	7.52
padina	1.62	0.35	8.66
dycti	0.59	0.69	8.41
calvag	0.00	0.00	6.03
moncav	4.42	0.12	4.34
leadl	0.00	0.00	6.89
milalc	0.29	0.00	7.01
cliona	0.15	13.93	20.43
agaaga	72.46	1.84	5.52
orbfav	5.89	82.33	14.98
Total	100.00	100.00	100.00

Class	Commission	Omission	Commission
Omission	(Percent)	(Percent)	(Pixels)
(Pixels)			
octoc	17.24	33.54	45/261
109/325			
filalg	13.15	19.72	103/783
167/847			
CCA	20.68	5.86	159/769
38/648			
padina	17.51	9.65	155/885

78/808			
dycti	22.44	47.85	193/860
612/1279			
calvag	24.19	8.79	149/616
45/512			
moncav	30.18	16.22	134/444
60/370			
leadl	6.25	13.04	44/704
99/759			
milalc	0.28	8.81	2/716
69/783			
cliona	34.48	7.19	720/2088
106/1474			
agaaga	12.77	27.54	72/564
187/679			
orbfav	6.60	17.67	101/1531
307/1737			

Class	Prod. Acc.	User Acc.	Prod. Acc.
User Acc.	(Percent)	(Percent)	(Pixels)
(Pixels)			
octoc	66.46	82.76	216/325
216/261			
filalg	80.28	86.85	680/847
680/783			
CCA	94.14	79.32	610/648
610/769			
padina	90.35	82.49	730/808
730/885			
dycti	52.15	77.56	667/1279
667/860			
calvag	91.21	75.81	467/512
467/616			
moncav	83.78	69.82	310/370
310/444			
leadl	86.96	93.75	660/759
660/704			
milalc	91.19	99.72	714/783
714/716			
cliona	92.81	65.52	1368/1474
1368/2088			
agaaga	72.46	87.23	492/679
492/564			
orbfav	82.33	93.40	1430/1737
1430/1531			

Table S4. Confusion Matrix subplot BI, 12 class, SVM, RGB subset, Local Sigma Filter

Overall Accuracy = (6867/10221) 67.1852%

Kappa Coefficient = 0.6301

		Ground Truth (Pixels)			
Class		Agaaga_AA	Cliona	Calvag_AA	Lead_AA
Dyctiota_AA	Unclassified	0	0	0	0
0	agaaga	302	1	0	10
0	cliona	1	1381	2	2
537	calvag	3	0	417	70
2	leadl	30	6	23	556
2	dycti	1	14	4	30
95	moncav	55	0	0	15
0	milalc	4	0	0	0
0	orbfav	73	32	27	54
602	padina	12	2	0	3
21	CCA	198	0	0	18
0	filalg	0	38	39	1
20	octoc	0	0	0	0
0	Total	679	1474	512	759
1279					

		Ground Truth (Pixels)			
Class		Moncav_AA	Milalc_AA	Orbfra_AA	Padina_AA
CCA_AA	Unclassified	0	0	0	0
0	agaaga	27	7	20	16
56	cliona	0	0	216	3
0	calvag	0	0	14	0
0					

19	leadl	0	6	18	6
0	dycti	2	0	79	8
4	moncav	238	11	9	25
0	milalc	0	711	0	0
0	orbfav	96	1	1304	86
0	padina	7	22	61	664
569	CCA	0	25	1	0
0	filalg	0	0	15	0
0	octoc	0	0	0	0
648	Total	370	783	1737	808

Class	Ground Truth (Pixels)		Total
	FilAlg_AA	Octoc_AA	
Unclassified	0	0	0
agaaga	0	0	439
cliona	189	61	2392
calvag	15	0	521
leadl	2	1	669
dycti	0	22	255
moncav	0	0	357
milalc	0	0	715
orbfav	11	237	2523
padina	0	1	793
CCA	0	0	811
filalg	630	3	746
octoc	0	0	0
Total	847	325	10221

Class	Ground Truth (Percent)		Calvag_AA	Lead_AA
	Agaaga_AA	Cliona		
Dyctiota_AA				
Unclassified	0.00	0.00	0.00	0.00
0.00				

0.00	agaaga	44.48	0.07	0.00	1.32
41.99	cliona	0.15	93.69	0.39	0.26
0.16	calvag	0.44	0.00	81.45	9.22
0.16	leadl	4.42	0.41	4.49	73.25
7.43	dycti	0.15	0.95	0.78	3.95
0.00	moncav	8.10	0.00	0.00	1.98
0.00	milalc	0.59	0.00	0.00	0.00
47.07	orbfav	10.75	2.17	5.27	7.11
1.64	padina	1.77	0.14	0.00	0.40
0.00	CCA	29.16	0.00	0.00	2.37
1.56	filalg	0.00	2.58	7.62	0.13
0.00	octoc	0.00	0.00	0.00	0.00
100.00	Total	100.00	100.00	100.00	100.00

		Ground Truth (Percent)		Orbfra_AA	Padina_AA
Class		Moncav_AA	Milalc_AA		
CCA_AA	Unclassified	0.00	0.00	0.00	0.00
0.00	agaaga	7.30	0.89	1.15	1.98
8.64	cliona	0.00	0.00	12.44	0.37
0.00	calvag	0.00	0.00	0.81	0.00
0.00	leadl	0.00	0.77	1.04	0.74
2.93	dycti	0.54	0.00	4.55	0.99
0.00	moncav	64.32	1.40	0.52	3.09
0.62	milalc	0.00	90.80	0.00	0.00
0.00	orbfav	25.95	0.13	75.07	10.64
0.00	padina	1.89	2.81	3.51	82.18

0.00					
	CCA	0.00	3.19	0.06	0.00
87.81					
	filalg	0.00	0.00	0.86	0.00
0.00					
	octoc	0.00	0.00	0.00	0.00
0.00					
	Total	100.00	100.00	100.00	100.00
100.00					

Class	Ground Truth (Percent)		Total
	FilAlg_AA	Octoc_AA	
Unclassified	0.00	0.00	0.00
agaaga	0.00	0.00	4.30
cliona	22.31	18.77	23.40
calvag	1.77	0.00	5.10
leadl	0.24	0.31	6.55
dycti	0.00	6.77	2.49
moncav	0.00	0.00	3.49
milalc	0.00	0.00	7.00
orbfav	1.30	72.92	24.68
padina	0.00	0.31	7.76
CCA	0.00	0.00	7.93
filalg	74.38	0.92	7.30
octoc	0.00	0.00	0.00
Total	100.00	100.00	100.00

Class	Commission	Omission	Commission
Omission	(Percent)	(Percent)	(Pixels)
(Pixels)			
agaaga	31.21	55.52	137/439
377/679			
cliona	42.27	6.31	1011/2392
93/1474			
calvag	19.96	18.55	104/521
95/512			

203/759	leadl	16.89	26.75	113/669
1184/1279	dycti	62.75	92.57	160/255
132/370	moncav	33.33	35.68	119/357
72/783	milalc	0.56	9.20	4/715
433/1737	orbfav	48.32	24.93	1219/2523
144/808	padina	16.27	17.82	129/793
79/648	CCA	29.84	12.19	242/811
217/847	filalg	15.55	25.62	116/746
325/325	octoc	0.00	100.00	0/0

User Acc.	Class	Prod. Acc. (Percent)	User Acc. (Percent)	Prod. Acc. (Pixels)
302/439	agaaga	44.48	68.79	302/679
1381/2392	cliona	93.69	57.73	1381/1474
417/521	calvag	81.45	80.04	417/512
556/669	leadl	73.25	83.11	556/759
95/255	dycti	7.43	37.25	95/1279
238/357	moncav	64.32	66.67	238/370
711/715	milalc	90.80	99.44	711/783
1304/2523	orbfav	75.07	51.68	1304/1737
664/793	padina	82.18	83.73	664/808
569/811	CCA	87.81	70.16	569/648
630/746	filalg	74.38	84.45	630/847
0/0	octoc	0.00	0.00	0/325

Table S5. Confusion Matrix subplot BI, 12 class, MaxLike, Local Sigma Filter, Majority Analysis

Overall Accuracy = (8624/10221) 84.3753%

Kappa Coefficient = 0.8263

		Ground Truth (Pixels)			
Class		Padina_AA	Orbfra_AA	Octoc_AA	Moncav_AA
Milalc_AA	Unclassified	0	0	0	0
0	padina	677	7	0	2
5	orbfav	0	1459	0	0
0	octoc	6	0	278	27
0	moncav	97	3	0	333
9	milalc	0	0	0	0
725	leadl	0	0	0	0
0	filalg	0	22	3	0
0	dycti	15	21	39	4
0	cliona	0	178	0	0
0	CCA	13	1	5	4
39	calvag	0	0	0	0
0	agaaga	0	46	0	0
5	Total	808	1737	325	370
783					

		Ground Truth (Pixels)			
Class		Lead_AA	FilAlg_AA	Dyctiota_AA	Cliona
CCA_AA	Unclassified	0	0	0	0
0	padina	0	0	60	2
0	orbfav	0	2	30	25
0	octoc	0	0	19	0
0					

7	moncav	1	0	63	5
0	milalc	0	0	0	0
0	leadl	673	0	0	0
0	filalg	0	772	53	71
0	dycti	0	53	859	101
0	cliona	0	6	188	1265
614	CCA	31	8	7	5
0	calvag	54	6	0	0
27	agaaga	0	0	0	0
648	Total	759	847	1279	1474

Class	Ground Truth (Pixels)		Total
	Calvag_AA	Agaaga_AA	
Unclassified	0	0	0
padina	0	4	757
orbfav	0	20	1536
octoc	2	0	332
moncav	1	31	550
milalc	0	3	728
leadl	22	0	695
filalg	7	0	928
dycti	0	6	1098
cliona	0	0	1637
CCA	0	126	853
calvag	480	0	540
agaaga	0	489	567
Total	512	679	10221

Class	Ground Truth (Percent)		Octoc_AA	Moncav_AA
	Padina_AA	Orbfra_AA		
Milalc_AA				
0.00	0.00	0.00	0.00	0.00
padina	83.79	0.40	0.00	0.54

0.64					
	orbfav	0.00	84.00	0.00	0.00
0.00					
	octoc	0.74	0.00	85.54	7.30
0.00					
	moncav	12.00	0.17	0.00	90.00
1.15					
	milalc	0.00	0.00	0.00	0.00
92.59					
	leadl	0.00	0.00	0.00	0.00
0.00					
	filalg	0.00	1.27	0.92	0.00
0.00					
	dycti	1.86	1.21	12.00	1.08
0.00					
	cliona	0.00	10.25	0.00	0.00
0.00					
	CCA	1.61	0.06	1.54	1.08
4.98					
	calvag	0.00	0.00	0.00	0.00
0.00					
	agaaga	0.00	2.65	0.00	0.00
0.64					
	Total	100.00	100.00	100.00	100.00
100.00					

		Ground Truth (Percent)			
Class		Lead_AA	FilAlg_AA	Dyctiota_AA	Cliona
CCA_AA					
Unclassified		0.00	0.00	0.00	0.00
0.00					
	padina	0.00	0.00	4.69	0.14
0.00					
	orbfav	0.00	0.24	2.35	1.70
0.00					
	octoc	0.00	0.00	1.49	0.00
0.00					
	moncav	0.13	0.00	4.93	0.34
1.08					
	milalc	0.00	0.00	0.00	0.00
0.00					
	leadl	88.67	0.00	0.00	0.00
0.00					
	filalg	0.00	91.15	4.14	4.82
0.00					
	dycti	0.00	6.26	67.16	6.85
0.00					
	cliona	0.00	0.71	14.70	85.82
0.00					

94.75	CCA	4.08	0.94	0.55	0.34
0.00	calvag	7.11	0.71	0.00	0.00
4.17	agaaga	0.00	0.00	0.00	0.00
100.00	Total	100.00	100.00	100.00	100.00

Class	Ground Truth (Percent)		Total
	Calvag_AA	Agaaga_AA	
Unclassified	0.00	0.00	0.00
padina	0.00	0.59	7.41
orbfav	0.00	2.95	15.03
octoc	0.39	0.00	3.25
moncav	0.20	4.57	5.38
milalc	0.00	0.44	7.12
leadl	4.30	0.00	6.80
filalg	1.37	0.00	9.08
dycti	0.00	0.88	10.74
cliona	0.00	0.00	16.02
CCA	0.00	18.56	8.35
calvag	93.75	0.00	5.28
agaaga	0.00	72.02	5.55
Total	100.00	100.00	100.00

Class	Commission	Omission	Commission
(Pixels)	(Percent)	(Percent)	(Pixels)
padina	10.57	16.21	80/757
131/808			
orbfav	5.01	16.00	77/1536
278/1737			
octoc	16.27	14.46	54/332
47/325			
moncav	39.45	10.00	217/550
37/370			

58/783	milalc	0.41	7.41	3/728
86/759	leadl	3.17	11.33	22/695
75/847	filalg	16.81	8.85	156/928
420/1279	dycti	21.77	32.84	239/1098
209/1474	cliona	22.72	14.18	372/1637
34/648	CCA	28.02	5.25	239/853
32/512	calvag	11.11	6.25	60/540
190/679	agaaga	13.76	27.98	78/567

User Acc.	Class	Prod. Acc. (Percent)	User Acc. (Percent)	Prod. Acc. (Pixels)
677/757	padina	83.79	89.43	677/808
1459/1536	orbfav	84.00	94.99	1459/1737
278/332	octoc	85.54	83.73	278/325
333/550	moncav	90.00	60.55	333/370
725/728	milalc	92.59	99.59	725/783
673/695	leadl	88.67	96.83	673/759
772/928	filalg	91.15	83.19	772/847
859/1098	dycti	67.16	78.23	859/1279
1265/1637	cliona	85.82	77.28	1265/1474
614/853	CCA	94.75	71.98	614/648
480/540	calvag	93.75	88.89	480/512
489/567	agaaga	72.02	86.24	489/679

Table S6. Subplot BII, 9 classes ROI separation values (Jeffries-Matusita, Transformed Divergence)

agaaga2:

Filamv3: (1.99650535 1.99991131)
 CCAv3: (1.99967819 2.00000000)
 Clionav3: (1.99998816 1.99999999)
 Dyctv3: (1.83474091 1.92191484)
 Padina: (1.92396563 1.96845026)
 Spng1: (1.99999778 2.00000000)
 Spng2v3: (1.99949993 2.00000000)
 Zoanth: (1.99643320 1.99999934)

Filamv3:

agaaga2: (1.99650535 1.99991131)
 CCAv3: (1.99999167 2.00000000)
 Clionav3: (1.79050050 1.98518317)
 Dyctv3: (1.96568376 1.98562234)
 Padina: (1.99969278 2.00000000)
 Spng1: (1.99998944 1.99999956)
 Spng2v3: (1.19460563 1.42873367)
 Zoanth: (1.99997480 2.00000000)

CCA3v:

agaaga2: (1.99967819 2.00000000)
 Filamv3: (1.99999167 2.00000000)
 Clionav3: (1.99999161 2.00000000)
 Dyctv3: (1.99998543 2.00000000)
 Padina: (1.99964878 1.99999980)
 Spng1: (1.99877963 2.00000000)
 Spng2v3: (1.99999692 2.00000000)
 Zoanth: (1.45388625 1.70966172)

Clionav3:

agaaga2: (1.99998816 1.99999999)
 Filamv3: (1.79050050 1.98518317)
 CCAv3: (1.99999161 2.00000000)
 Dyctv3: (1.88519548 1.96624525)
 Padina: (1.99796355 2.00000000)
 Spng1: (1.99999985 2.00000000)
 Spng2v3: (1.95644123 1.99999999)
 Zoanth: (1.99999989 2.00000000)

Dyctv3:

agaaga2: (1.83474091 1.92191484)
 Filamv3: (1.96568376 1.98562234)
 CCAv3: (1.99998543 2.00000000)
 Clionav3: (1.88519548 1.96624525)
 Padina: (1.95773435 1.99833464)
 Spng1: (2.00000000 2.00000000)

Spng2v3: (1.99567695 1.99999252)
Zoanth: (1.99993849 2.00000000)

Padina:

agaaga2: (1.92396563 1.96845026)
Filamv3: (1.99969278 2.00000000)
CCAv3: (1.99964878 1.99999980)
Clionav3: (1.99796355 2.00000000)
Dyctv3: (1.95773435 1.99833464)
Spng1: (1.99999920 2.00000000)
Spng2v3: (1.99992437 2.00000000)
Zoanth: (1.98934963 1.99978519)

Spng1:

agaaga2: (1.99999778 2.00000000)
Filamv3: (1.99998944 1.99999956)
CCAv3: (1.99877963 2.00000000)
Clionav3: (1.99999985 2.00000000)
Dyctv3: (2.00000000 2.00000000)
Padina: (1.99999920 2.00000000)
Spng2v3: (1.99999986 2.00000000)
Zoanth: (1.99997980 2.00000000)

Spng2v3:

agaaga2: (1.99949993 2.00000000)
Filamv3: (1.19460563 1.42873367)
CCAv3: (1.99999692 2.00000000)
Clionav3: (1.95644123 1.99999999)
Dyctv3: (1.99567695 1.99999252)
Padina: (1.99992437 2.00000000)
Spng1: (1.99999986 2.00000000)
Zoanth: (1.99999362 2.00000000)

Zoanth:

agaaga2: (1.99643320 1.99999934)
Filamv3: (1.99997480 2.00000000)
CCAv3: (1.45388625 1.70966172)
Clionav3: (1.99999989 2.00000000)
Dyctv3: (1.99993849 2.00000000)
Padina: (1.98934963 1.99978519)
Spng1: (1.99997980 2.00000000)
Spng2v3: (1.99999362 2.00000000)

Pair Separation (least to most);

Filamv3 and Spng2v3 – 1.19460563
CCAv3 and Zoanth – 1.45388625
Filamv3 and Clionav3 – 1.79050050
agaaga2 and Dyctv3 – 1.83474091

Clionav3 and Dyctv3 – 1.88519548
agaaga2 and Padina – 1.92396563
Clionav3 and Spng2v3 – 1.95644123
Dyctv3 and Padina – 1.95773435
Filamv3 and Dyctv3 – 1.96568376
Padina and Zoanth – 1.98934963
Dyctv3 and Spng2v3 – 1.99567695
agaaga2 and Zoanth – 1.99643320
agaaga2 and Filamv3 – 1.99650535
Clionav3 and Padina – 1.99796355
CCAv3 and Spng1 – 1.99877963
agaaga2 and Spng2v3 – 1.99949993
CCAv3 and Padina – 1.99964878
agaaga2 and CCAv3 – 1.99967819
Filamv3 and Padina – 1.99969278
Padina and Spng2v3 – 1.99992437
Dyctv3 and Zoanth – 1.99993849
Filamv3 and Zoanth – 1.99997480
Spng1 and Zoanth – 1.99997980
CCAv3 and Dyctv3 – 1.99998543
agaaga2 and Clionav3 – 1.99998816
Filamv3 and Spng1 – 1.99998944
CCAv3 and Clionav3 – 1.99999161
Filamv3 and CCAv3 – 1.99999167
Spng2v3 and Zoanth – 1.99999362
CCAv3 and Spng2v3 – 1.99999692
agaaga2 and Spng1 – 1.99999778
Padina and Spng1 – 1.99999920
Clionav3 and Spng1 – 1.99999985
Spng1 and Spng2v3 – 1.99999986
Clionav3 and Zoanth – 1.99999989
Dyctv3 and Spng1 – 2.00000000

Table S7. Confusion Matrix subplot BII, 9 class, MaxLike, Local Sigma Filter

Overall Accuracy = (4533/6270) 72.2967%

Kappa Coefficient = 0.6750

		Ground Truth (Pixels)			
Class		Dyctiota_AA	Spng2v3_AA	Spng1_AA	Padina_AA
FilamA_AA					
Unclassified		0	0	0	0
0					
	Dyctv3	312	0	0	1
70					
	Spng2v3	0	130	0	0
11					
	Spng1	0	0	132	0
3					
	Padina	66	0	0	907
32					
	Filamv3	14	30	11	0
358					
	CCAv3	0	0	1	0
43					
	Clionav3	1	0	0	0
258					
	Zoanth	0	0	0	0
0					
	agaaga2	44	0	0	7
18					
	Total	437	160	144	915
793					

		Ground Truth (Pixels)			
Class		CCA_AA	Cliona_AA	Zoanth_AA	Agaaga_AA
Total					
Unclassified		0	0	0	0
0					
	Dyctv3	11	14	2	4
414					
	Spng2v3	1	2	0	0
144					
	Spng1	1	0	0	0
136					
	Padina	179	8	11	23
1226					
	Filamv3	95	10	8	0
526					
	CCAv3	261	1	94	1
401					

1530	Clionav3	3	1268	0	0
1296	Zoanth	295	0	970	31
597	agaaga2	318	0	15	195
6270	Total	1164	1303	1100	254

		Ground Truth (Percent)		Spng1_AA	Padina_AA
Class		Dyctiota_AA	Spng2v3_AA		
0.00	FilamA_AA Unclassified	0.00	0.00	0.00	0.00
8.83	Dyctv3	71.40	0.00	0.00	0.11
1.39	Spng2v3	0.00	81.25	0.00	0.00
0.38	Spng1	0.00	0.00	91.67	0.00
4.04	Padina	15.10	0.00	0.00	99.13
45.15	Filamv3	3.20	18.75	7.64	0.00
5.42	CCAv3	0.00	0.00	0.69	0.00
32.53	Clionav3	0.23	0.00	0.00	0.00
0.00	Zoanth	0.00	0.00	0.00	0.00
2.27	agaaga2	10.07	0.00	0.00	0.77
100.00	Total	100.00	100.00	100.00	100.00

		Ground Truth (Percent)		Zoanth_AA	Agaaga_AA
Class		CCA_AA	Cliona_AA		
0.00	Total Unclassified	0.00	0.00	0.00	0.00
6.60	Dyctv3	0.95	1.07	0.18	1.57
2.30	Spng2v3	0.09	0.15	0.00	0.00
2.17	Spng1	0.09	0.00	0.00	0.00
19.55	Padina	15.38	0.61	1.00	9.06

8.39	Filamv3	8.16	0.77	0.73	0.00
6.40	CCAv3	22.42	0.08	8.55	0.39
24.40	Clionav3	0.26	97.31	0.00	0.00
20.67	Zoanth	25.34	0.00	88.18	12.20
9.52	agaaga2	27.32	0.00	1.36	76.77
100.00	Total	100.00	100.00	100.00	100.00

Class	Commission	Omission	Commission
Omission	(Percent)	(Percent)	(Pixels)
(Pixels)			
Dyctv3	24.64	28.60	102/414
125/437			
Spng2v3	9.72	18.75	14/144
30/160			
Spng1	2.94	8.33	4/136
12/144			
Padina	26.02	0.87	319/1226
8/915			
Filamv3	31.94	54.85	168/526
435/793			
CCAv3	34.91	77.58	140/401
903/1164			
Clionav3	17.12	2.69	262/1530
35/1303			
Zoanth	25.15	11.82	326/1296
130/1100			
agaaga2	67.34	23.23	402/597
59/254			

Class	Prod. Acc.	User Acc.	Prod. Acc.
User Acc.	(Percent)	(Percent)	(Pixels)
(Pixels)			
Dyctv3	71.40	75.36	312/437
312/414			
Spng2v3	81.25	90.28	130/160
130/144			
Spng1	91.67	97.06	132/144
132/136			
Padina	99.13	73.98	907/915

907/1226			
Filamv3	45.15	68.06	358/793
358/526			
CCAv3	22.42	65.09	261/1164
261/401			
Clionav3	97.31	82.88	1268/1303
1268/1530			
Zoanth	88.18	74.85	970/1100
970/1296			
agaaga2	76.77	32.66	195/254
195/597			

Table S8. Confusion Matrix subplot BII, 9 class, MaxLike, Local Sigma Filter, Majority Analysis

Overall Accuracy = (4630/6270) 73.8437%

Kappa Coefficient = 0.6930

		Ground Truth (Pixels)			
Class		Agaaga_AA	Zoanth_AA	Cliona_AA	CCA_AA
0	FilamA_AA				
	Unclassified	0	0	0	0
20	agaaga2	199	12	0	321
	Zoanth	35	999	0	280
262	Clionav3	0	0	1289	1
	CCAv3	0	70	1	273
362	Filamv3	0	9	3	95
	Padina	17	9	7	182
2	Spng1	0	0	0	0
	Spng2v3	0	0	0	1
66	Dyctv3	3	1	3	11
	Total	254	1100	1303	1164

		Ground Truth (Pixels)			
Class		Padina_AA	Spng1_AA	Spng2v3_AA	Dyctiota_AA
0	Total				
	Unclassified	0	0	0	0
596	agaaga2	0	0	0	44
	Zoanth	0	0	0	0
1553	Clionav3	0	0	0	1
	CCAv3	0	0	0	0
523	Filamv3	0	11	32	11
	Padina	915	0	0	49

135	Spng1	0	133	0	0
137	Spng2v3	0	0	128	0
416	Dyctv3	0	0	0	332
6270	Total	915	144	160	437

		Ground Truth (Percent)			
Class		Agaaga_AA	Zoanth_AA	Cliona_AA	CCA_AA
0.00	FilamA_AA				
0.00	Unclassified	0.00	0.00	0.00	0.00
2.52	agaaga2	78.35	1.09	0.00	27.58
0.00	Zoanth	13.78	90.82	0.00	24.05
33.04	Clionav3	0.00	0.00	98.93	0.09
5.55	CCAv3	0.00	6.36	0.08	23.45
45.65	Filamv3	0.00	0.82	0.23	8.16
3.66	Padina	6.69	0.82	0.54	15.64
0.25	Spng1	0.00	0.00	0.00	0.00
1.01	Spng2v3	0.00	0.00	0.00	0.09
8.32	Dyctv3	1.18	0.09	0.23	0.95
100.00	Total	100.00	100.00	100.00	100.00

		Ground Truth (Percent)			
Class		Padina_AA	Spng1_AA	Spng2v3_AA	Dyctiota_AA
0.00	Total				
0.00	Unclassified	0.00	0.00	0.00	0.00
9.51	agaaga2	0.00	0.00	0.00	10.07
20.96	Zoanth	0.00	0.00	0.00	0.00
24.77	Clionav3	0.00	0.00	0.00	0.23
6.19	CCAv3	0.00	0.00	0.00	0.00

8.34	Filamv3	0.00	7.64	20.00	2.52
19.27	Padina	100.00	0.00	0.00	11.21
2.15	Spng1	0.00	92.36	0.00	0.00
2.19	Spng2v3	0.00	0.00	80.00	0.00
6.63	Dyctv3	0.00	0.00	0.00	75.97
100.00	Total	100.00	100.00	100.00	100.00

Class	Commission	Omission	Commission
Omission	(Percent)	(Percent)	(Pixels)
(Pixels)			
agaaga2	66.61	21.65	397/596
55/254			
Zoanth	23.97	9.18	315/1314
101/1100			
Clionav3	17.00	1.07	264/1553
14/1303			
CCAv3	29.64	76.55	115/388
891/1164			
Filamv3	30.78	54.35	161/523
431/793			
Padina	24.25	0.00	293/1208
0/915			
Spng1	1.48	7.64	2/135
11/144			
Spng2v3	6.57	20.00	9/137
32/160			
Dyctv3	20.19	24.03	84/416
105/437			

Class	Prod. Acc.	User Acc.	Prod. Acc.
User Acc.	(Percent)	(Percent)	(Pixels)
(Pixels)			
agaaga2	78.35	33.39	199/254
199/596			
Zoanth	90.82	76.03	999/1100
999/1314			
Clionav3	98.93	83.00	1289/1303
1289/1553			
CCAv3	23.45	70.36	273/1164

273/388			
Filamv3	45.65	69.22	362/793
362/523			
Padina	100.00	75.75	915/915
915/1208			
Spng1	92.36	98.52	133/144
133/135			
Spng2v3	80.00	93.43	128/160
128/137			
Dyctv3	75.97	79.81	332/437
332/416			

Table S9. Subplot B Full, 14 classes ROI separation values (Jeffries-Matusita, Transformed Divergence)

Lead [Red] 650 points:

Orbfra [Blue] 1100 points: (1.99999889 2.00000000)
 Zoanth [Cyan] 650 points: (1.95484797 1.99734110)
 Cliona [Maroon] 1101 points: (1.99999548 2.00000000)
 Milalc_AA [Coral] 451 points: (1.97717070 2.00000000)
 Myali [Aquamarine] 309 points: (1.99999955 2.00000000)
 Sidsid [Sienna] 325 points: (1.97973368 1.99990356)
 Pordiv [Thistle] 395 points: (1.99865262 2.00000000)
 Moncav [Red2] 314 points: (1.99679017 1.99999891)
 Padina [Green1] 1000 points: (1.99847798 1.99998926)
 Dyctiota [Green3] 1000 points: (1.99909193 1.99999999)
 AlFilam [Blue2] 603 points: (1.99860531 1.99999749)
 CCA [Yellow1] 822 points: (1.95424889 1.99999686)
 Steint [Yellow3] 253 points: (1.99657462 1.99991640)

Orbfra [Blue] 1100 points:

Lead [Red] 650 points: (1.99999889 2.00000000)
 Zoanth [Cyan] 650 points: (1.99975775 2.00000000)
 Cliona [Maroon] 1101 points: (1.98113921 1.99999722)
 Milalc_AA [Coral] 451 points: (1.99953831 2.00000000)
 Myali [Aquamarine] 309 points: (1.94434563 1.99730445)
 Sidsid [Sienna] 325 points: (1.99999962 2.00000000)
 Pordiv [Thistle] 395 points: (1.91968119 1.98201111)
 Moncav [Red2] 314 points: (1.99509642 1.99999997)
 Padina [Green1] 1000 points: (1.99510335 1.99981068)
 Dyctiota [Green3] 1000 points: (1.89269265 1.94038679)
 AlFilam [Blue2] 603 points: (1.97326699 1.99909584)
 CCA [Yellow1] 822 points: (1.99959382 2.00000000)
 Steint [Yellow3] 253 points: (1.99955367 2.00000000)

Zoanth [Cyan] 650 points:

Lead [Red] 650 points: (1.95484797 1.99734110)
 Orbfra [Blue] 1100 points: (1.99975775 2.00000000)
 Cliona [Maroon] 1101 points: (1.99633866 2.00000000)
 Milalc_AA [Coral] 451 points: (1.80576735 1.99938901)
 Myali [Aquamarine] 309 points: (1.99418043 1.99956544)
 Sidsid [Sienna] 325 points: (0.98233410 1.11762266)
 Pordiv [Thistle] 395 points: (1.83163038 1.95052898)
 Moncav [Red2] 314 points: (1.91622578 1.99983876)
 Padina [Green1] 1000 points: (1.84555313 1.99883684)
 Dyctiota [Green3] 1000 points: (1.97361589 1.99995263)
 AlFilam [Blue2] 603 points: (1.98929131 1.99999581)
 CCA [Yellow1] 822 points: (1.51907933 1.82457268)
 Steint [Yellow3] 253 points: (1.75436209 1.99383273)

Cliona [Maroon] 1101 points:

Lead [Red] 650 points: (1.99999548 2.00000000)

Orbfra [Blue] 1100 points: (1.98113921 1.99999722)
Zoanth [Cyan] 650 points: (1.99633866 2.00000000)
Milalc_AA [Coral] 451 points: (1.99572956 2.00000000)
Myali [Aquamarine] 309 points: (1.99722132 1.99986978)
Sidsid [Sienna] 325 points: (1.99999965 2.00000000)
Pordiv [Thistle] 395 points: (1.91233009 1.99993315)
Moncav [Red2] 314 points: (1.72171064 1.90187763)
Padina [Green1] 1000 points: (1.95551053 1.99747456)
Dyctiota [Green3] 1000 points: (1.16940873 1.44977836)
AlFilam [Blue2] 603 points: (1.82619579 1.91580212)
CCA [Yellow1] 822 points: (1.99160367 2.00000000)
Steint [Yellow3] 253 points: (1.99266340 1.99984009)

Milalc_AA [Coral] 451 points:
Lead [Red] 650 points: (1.97717070 2.00000000)
Orbfra [Blue] 1100 points: (1.99953831 2.00000000)
Zoanth [Cyan] 650 points: (1.80576735 1.99938901)
Cliona [Maroon] 1101 points: (1.99572956 2.00000000)
Myali [Aquamarine] 309 points: (1.99221832 2.00000000)
Sidsid [Sienna] 325 points: (1.90045849 2.00000000)
Pordiv [Thistle] 395 points: (1.97003579 2.00000000)
Moncav [Red2] 314 points: (1.98645284 2.00000000)
Padina [Green1] 1000 points: (1.94657236 2.00000000)
Dyctiota [Green3] 1000 points: (1.98885914 2.00000000)
AlFilam [Blue2] 603 points: (1.99417739 2.00000000)
CCA [Yellow1] 822 points: (1.40518497 1.98028034)
Steint [Yellow3] 253 points: (1.97462016 2.00000000)

Myali [Aquamarine] 309 points:
Lead [Red] 650 points: (1.99999955 2.00000000)
Orbfra [Blue] 1100 points: (1.94434563 1.99730445)
Zoanth [Cyan] 650 points: (1.99418043 1.99956544)
Cliona [Maroon] 1101 points: (1.99722132 1.99986978)
Milalc_AA [Coral] 451 points: (1.99221832 2.00000000)
Sidsid [Sienna] 325 points: (1.98791479 1.99656092)
Pordiv [Thistle] 395 points: (0.73931617 0.80812589)
Moncav [Red2] 314 points: (1.99319637 1.99930123)
Padina [Green1] 1000 points: (1.97326130 1.98766378)
Dyctiota [Green3] 1000 points: (1.89568978 1.97384358)
AlFilam [Blue2] 603 points: (1.97729205 1.99597848)
CCA [Yellow1] 822 points: (1.98787986 1.99999894)
Steint [Yellow3] 253 points: (1.99804024 1.99998133)

Sidsid [Sienna] 325 points:
Lead [Red] 650 points: (1.97973368 1.99990356)
Orbfra [Blue] 1100 points: (1.99999962 2.00000000)

Zoanth [Cyan] 650 points: (0.98233410 1.11762266)
Cliona [Maroon] 1101 points: (1.99999965 2.00000000)
Milalc_AA [Coral] 451 points: (1.90045849 2.00000000)
Myali [Aquamarine] 309 points: (1.98791479 1.99656092)
Pordiv [Thistle] 395 points: (1.90255603 1.94532513)
Moncav [Red2] 314 points: (1.99831592 1.99999725)
Padina [Green1] 1000 points: (1.97915763 1.99945777)
Dyctiota [Green3] 1000 points: (1.99991869 1.99999757)
AlFilam [Blue2] 603 points: (1.99998872 1.99999864)
CCA [Yellow1] 822 points: (1.56985636 1.99660795)
Steint [Yellow3] 253 points: (1.91952915 1.99739366)

Pordiv [Thistle] 395 points:

Lead [Red] 650 points: (1.99865262 2.00000000)
Orbfra [Blue] 1100 points: (1.91968119 1.98201111)
Zoanth [Cyan] 650 points: (1.83163038 1.95052898)
Cliona [Maroon] 1101 points: (1.91233009 1.99993315)
Milalc_AA [Coral] 451 points: (1.97003579 2.00000000)
Myali [Aquamarine] 309 points: (0.73931617 0.80812589)
Sidsid [Sienna] 325 points: (1.90255603 1.94532513)
Moncav [Red2] 314 points: (1.73458853 1.97764832)
Padina [Green1] 1000 points: (1.72141481 1.82649184)
Dyctiota [Green3] 1000 points: (1.61213874 1.80614887)
AlFilam [Blue2] 603 points: (1.90522849 1.98138991)
CCA [Yellow1] 822 points: (1.92480459 1.99963998)
Steint [Yellow3] 253 points: (1.79154349 1.99442396)

Moncav [Red2] 314 points:

Lead [Red] 650 points: (1.99679017 1.99999891)
Orbfra [Blue] 1100 points: (1.99509642 1.99999997)
Zoanth [Cyan] 650 points: (1.91622578 1.99983876)
Cliona [Maroon] 1101 points: (1.72171064 1.90187763)
Milalc_AA [Coral] 451 points: (1.98645284 2.00000000)
Myali [Aquamarine] 309 points: (1.99319637 1.99930123)
Sidsid [Sienna] 325 points: (1.99831592 1.99999725)
Pordiv [Thistle] 395 points: (1.73458853 1.97764832)
Padina [Green1] 1000 points: (1.45016462 1.70653912)
Dyctiota [Green3] 1000 points: (1.09545837 1.32024294)
AlFilam [Blue2] 603 points: (1.88794847 1.95787574)
CCA [Yellow1] 822 points: (1.96647511 2.00000000)
Steint [Yellow3] 253 points: (1.23688344 1.35950341)

Padina [Green1] 1000 points:

Lead [Red] 650 points: (1.99847798 1.99998926)
Orbfra [Blue] 1100 points: (1.99510335 1.99981068)
Zoanth [Cyan] 650 points: (1.84555313 1.99883684)
Cliona [Maroon] 1101 points: (1.95551053 1.99747456)
Milalc_AA [Coral] 451 points: (1.94657236 2.00000000)
Myali [Aquamarine] 309 points: (1.97326130 1.98766378)
Sidsid [Sienna] 325 points: (1.97915763 1.99945777)

Pordiv [Thistle] 395 points: (1.72141481 1.82649184)
Moncav [Red2] 314 points: (1.45016462 1.70653912)
Dyctiota [Green3] 1000 points: (1.72410577 1.83075562)
AlFilam [Blue2] 603 points: (1.97898484 1.99976261)
CCA [Yellow1] 822 points: (1.94929069 1.99999999)
Steint [Yellow3] 253 points: (1.17818701 1.40704608)

Dyctiota [Green3] 1000 points:

Lead [Red] 650 points: (1.99909193 1.99999999)
Orbfra [Blue] 1100 points: (1.89269265 1.94038679)
Zoanth [Cyan] 650 points: (1.97361589 1.99995263)
Cliona [Maroon] 1101 points: (1.16940873 1.44977836)
Milalc_AA [Coral] 451 points: (1.98885914 2.00000000)
Myali [Aquamarine] 309 points: (1.89568978 1.97384358)
Sidsid [Sienna] 325 points: (1.99991869 1.99999757)
Pordiv [Thistle] 395 points: (1.61213874 1.80614887)
Moncav [Red2] 314 points: (1.09545837 1.32024294)
Padina [Green1] 1000 points: (1.72410577 1.83075562)
AlFilam [Blue2] 603 points: (1.61469525 1.75945208)
CCA [Yellow1] 822 points: (1.97749344 2.00000000)
Steint [Yellow3] 253 points: (1.83353848 1.96177709)

AlFilam [Blue2] 603 points:

Lead [Red] 650 points: (1.99860531 1.99999749)
Orbfra [Blue] 1100 points: (1.97326699 1.99909584)
Zoanth [Cyan] 650 points: (1.98929131 1.99999581)
Cliona [Maroon] 1101 points: (1.82619579 1.91580212)
Milalc_AA [Coral] 451 points: (1.99417739 2.00000000)
Myali [Aquamarine] 309 points: (1.97729205 1.99597848)
Sidsid [Sienna] 325 points: (1.99998872 1.99999864)
Pordiv [Thistle] 395 points: (1.90522849 1.98138991)
Moncav [Red2] 314 points: (1.88794847 1.95787574)
Padina [Green1] 1000 points: (1.97898484 1.99976261)
Dyctiota [Green3] 1000 points: (1.61469525 1.75945208)
CCA [Yellow1] 822 points: (1.98286951 2.00000000)
Steint [Yellow3] 253 points: (1.99460154 1.99955617)

CCA [Yellow1] 822 points:

Lead [Red] 650 points: (1.95424889 1.99999686)
Orbfra [Blue] 1100 points: (1.99959382 2.00000000)
Zoanth [Cyan] 650 points: (1.51907933 1.82457268)
Cliona [Maroon] 1101 points: (1.99160367 2.00000000)
Milalc_AA [Coral] 451 points: (1.40518497 1.98028034)
Myali [Aquamarine] 309 points: (1.98787986 1.99999894)
Sidsid [Sienna] 325 points: (1.56985636 1.99660795)
Pordiv [Thistle] 395 points: (1.92480459 1.99963998)
Moncav [Red2] 314 points: (1.96647511 2.00000000)
Padina [Green1] 1000 points: (1.94929069 1.99999999)
Dyctiota [Green3] 1000 points: (1.97749344 2.00000000)
AlFilam [Blue2] 603 points: (1.98286951 2.00000000)

Steint [Yellow3] 253 points: (1.94325820 1.99999614)

Steint [Yellow3] 253 points:

Lead [Red] 650 points: (1.99657462 1.99991640)
Orbfra [Blue] 1100 points: (1.99955367 2.00000000)
Zoanth [Cyan] 650 points: (1.75436209 1.99383273)
Cliona [Maroon] 1101 points: (1.99266340 1.99984009)
Milalc_AA [Coral] 451 points: (1.97462016 2.00000000)
Myali [Aquamarine] 309 points: (1.99804024 1.99998133)
Sidsid [Sienna] 325 points: (1.91952915 1.99739366)
Pordiv [Thistle] 395 points: (1.79154349 1.99442396)
Moncav [Red2] 314 points: (1.23688344 1.35950341)
Padina [Green1] 1000 points: (1.17818701 1.40704608)
Dyctiota [Green3] 1000 points: (1.83353848 1.96177709)
AlFilam [Blue2] 603 points: (1.99460154 1.99955617)
CCA [Yellow1] 822 points: (1.94325820 1.99999614)

Pair Separation (least to most);

Myali [Aquamarine] 309 points and Pordiv [Thistle] 395 points -
0.73931617
Zoanth [Cyan] 650 points and Sidsid [Sienna] 325 points - 0.98233410
Moncav [Red2] 314 points and Dyctiota [Green3] 1000 points -
1.09545837
Cliona [Maroon] 1101 points and Dyctiota [Green3] 1000 points -
1.16940873
Padina [Green1] 1000 points and Steint [Yellow3] 253 points -
1.17818701
Moncav [Red2] 314 points and Steint [Yellow3] 253 points - 1.23688344
Milalc_AA [Coral] 451 points and CCA [Yellow1] 822 points - 1.40518497
Moncav [Red2] 314 points and Padina [Green1] 1000 points - 1.45016462
Zoanth [Cyan] 650 points and CCA [Yellow1] 822 points - 1.51907933
Sidsid [Sienna] 325 points and CCA [Yellow1] 822 points - 1.56985636
Pordiv [Thistle] 395 points and Dyctiota [Green3] 1000 points -
1.61213874
Dyctiota [Green3] 1000 points and AlFilam [Blue2] 603 points -
1.61469525
Pordiv [Thistle] 395 points and Padina [Green1] 1000 points -
1.72141481
Cliona [Maroon] 1101 points and Moncav [Red2] 314 points - 1.72171064
Padina [Green1] 1000 points and Dyctiota [Green3] 1000 points -
1.72410577
Pordiv [Thistle] 395 points and Moncav [Red2] 314 points - 1.73458853
Zoanth [Cyan] 650 points and Steint [Yellow3] 253 points - 1.75436209
Pordiv [Thistle] 395 points and Steint [Yellow3] 253 points -
1.79154349
Zoanth [Cyan] 650 points and Milalc_AA [Coral] 451 points - 1.80576735
Cliona [Maroon] 1101 points and AlFilam [Blue2] 603 points -
1.82619579
Zoanth [Cyan] 650 points and Pordiv [Thistle] 395 points - 1.83163038

Dyctiota [Green3] 1000 points and Steint [Yellow3] 253 points -
1.83353848
Zoanth [Cyan] 650 points and Padina [Green1] 1000 points - 1.84555313
Moncav [Red2] 314 points and AlFilam [Blue2] 603 points - 1.88794847
Orbfra [Blue] 1100 points and Dyctiota [Green3] 1000 points -
1.89269265
Myali [Aquamarine] 309 points and Dyctiota [Green3] 1000 points -
1.89568978
Milalc_AA [Coral] 451 points and Sidsid [Sienna] 325 points -
1.90045849
Sidsid [Sienna] 325 points and Pordiv [Thistle] 395 points -
1.90255603
Pordiv [Thistle] 395 points and AlFilam [Blue2] 603 points -
1.90522849
Cliona [Maroon] 1101 points and Pordiv [Thistle] 395 points -
1.91233009
Zoanth [Cyan] 650 points and Moncav [Red2] 314 points - 1.91622578
Sidsid [Sienna] 325 points and Steint [Yellow3] 253 points -
1.91952915
Orbfra [Blue] 1100 points and Pordiv [Thistle] 395 points - 1.91968119
Pordiv [Thistle] 395 points and CCA [Yellow1] 822 points - 1.92480459
CCA [Yellow1] 822 points and Steint [Yellow3] 253 points - 1.94325820
Orbfra [Blue] 1100 points and Myali [Aquamarine] 309 points -
1.94434563
Milalc_AA [Coral] 451 points and Padina [Green1] 1000 points -
1.94657236
Padina [Green1] 1000 points and CCA [Yellow1] 822 points - 1.94929069
Lead [Red] 650 points and CCA [Yellow1] 822 points - 1.95424889
Lead [Red] 650 points and Zoanth [Cyan] 650 points - 1.95484797
Cliona [Maroon] 1101 points and Padina [Green1] 1000 points -
1.95551053
Moncav [Red2] 314 points and CCA [Yellow1] 822 points - 1.96647511
Milalc_AA [Coral] 451 points and Pordiv [Thistle] 395 points -
1.97003579
Myali [Aquamarine] 309 points and Padina [Green1] 1000 points -
1.97326130
Orbfra [Blue] 1100 points and AlFilam [Blue2] 603 points - 1.97326699
Zoanth [Cyan] 650 points and Dyctiota [Green3] 1000 points -
1.97361589
Milalc_AA [Coral] 451 points and Steint [Yellow3] 253 points -
1.97462016
Lead [Red] 650 points and Milalc_AA [Coral] 451 points - 1.97717070
Myali [Aquamarine] 309 points and AlFilam [Blue2] 603 points -
1.97729205
Dyctiota [Green3] 1000 points and CCA [Yellow1] 822 points -
1.97749344
Padina [Green1] 1000 points and AlFilam [Blue2] 603 points -
1.97898484
Sidsid [Sienna] 325 points and Padina [Green1] 1000 points -
1.97915763

Lead [Red] 650 points and Sidsid [Sienna] 325 points – 1.97973368
 Orbfra [Blue] 1100 points and Cliona [Maroon] 1101 points – 1.98113921
 AlFilam [Blue2] 603 points and CCA [Yellow1] 822 points – 1.98286951
 Milalc_AA [Coral] 451 points and Moncav [Red2] 314 points – 1.98645284
 Myali [Aquamarine] 309 points and CCA [Yellow1] 822 points –
 1.98787986
 Myali [Aquamarine] 309 points and Sidsid [Sienna] 325 points –
 1.98791479
 Milalc_AA [Coral] 451 points and Dyctiota [Green3] 1000 points –
 1.98885914
 Zoanth [Cyan] 650 points and AlFilam [Blue2] 603 points – 1.98929131
 Cliona [Maroon] 1101 points and CCA [Yellow1] 822 points – 1.99160367
 Milalc_AA [Coral] 451 points and Myali [Aquamarine] 309 points –
 1.99221832
 Cliona [Maroon] 1101 points and Steint [Yellow3] 253 points –
 1.99266340
 Myali [Aquamarine] 309 points and Moncav [Red2] 314 points –
 1.99319637
 Milalc_AA [Coral] 451 points and AlFilam [Blue2] 603 points –
 1.99417739
 Zoanth [Cyan] 650 points and Myali [Aquamarine] 309 points –
 1.99418043
 AlFilam [Blue2] 603 points and Steint [Yellow3] 253 points –
 1.99460154
 Orbfra [Blue] 1100 points and Moncav [Red2] 314 points – 1.99509642
 Orbfra [Blue] 1100 points and Padina [Green1] 1000 points – 1.99510335
 Cliona [Maroon] 1101 points and Milalc_AA [Coral] 451 points –
 1.99572956
 Zoanth [Cyan] 650 points and Cliona [Maroon] 1101 points – 1.99633866
 Lead [Red] 650 points and Steint [Yellow3] 253 points – 1.99657462
 Lead [Red] 650 points and Moncav [Red2] 314 points – 1.99679017
 Cliona [Maroon] 1101 points and Myali [Aquamarine] 309 points –
 1.99722132
 Myali [Aquamarine] 309 points and Steint [Yellow3] 253 points –
 1.99804024
 Sidsid [Sienna] 325 points and Moncav [Red2] 314 points – 1.99831592
 Lead [Red] 650 points and Padina [Green1] 1000 points – 1.99847798
 Lead [Red] 650 points and AlFilam [Blue2] 603 points – 1.99860531
 Lead [Red] 650 points and Pordiv [Thistle] 395 points – 1.99865262
 Lead [Red] 650 points and Dyctiota [Green3] 1000 points – 1.99909193
 Orbfra [Blue] 1100 points and Milalc_AA [Coral] 451 points –
 1.99953831
 Orbfra [Blue] 1100 points and Steint [Yellow3] 253 points – 1.99955367
 Orbfra [Blue] 1100 points and CCA [Yellow1] 822 points – 1.99959382
 Orbfra [Blue] 1100 points and Zoanth [Cyan] 650 points – 1.99975775
 Sidsid [Sienna] 325 points and Dyctiota [Green3] 1000 points –
 1.99991869
 Sidsid [Sienna] 325 points and AlFilam [Blue2] 603 points – 1.99998872
 Lead [Red] 650 points and Cliona [Maroon] 1101 points – 1.99999548
 Lead [Red] 650 points and Orbfra [Blue] 1100 points – 1.99999889

Lead [Red] 650 points and Myali [Aquamarine] 309 points - 1.99999955
Orbfra [Blue] 1100 points and Sidsid [Sienna] 325 points - 1.99999962
Cliona [Maroon] 1101 points and Sidsid [Sienna] 325 points -
1.99999965

Table S10. Confusion Matrix subplot B Full, 14 class, SVM, Local Sigma Filter, Majority Analysis

Overall Accuracy = (7760/9375) 82.7733%

Kappa Coefficient = 0.8117

		Ground Truth (Pixels)			
Class		Lead_AA	Orbfra_AA	Zoanth_AA	Cliona_AA
Milalc_AA					
0	Unclassified	0	0	0	0
1	Lead	650	0	1	0
0	Orbfra	0	1065	0	0
33	Zoanth	0	0	609	0
0	Cliona	0	1	0	1015
291	Milalc	0	0	0	0
0	Myali	0	5	0	0
0	Sidsid	0	0	26	0
2	Pordiv	0	1	2	0
0	Moncav	0	0	5	1
9	Padina	0	1	1	4
0	Dyctiota	0	27	0	79
0	AlFilam	0	0	0	3
115	CCA	0	0	6	0
0	Steint	0	0	1	0
451	Total	650	1100	651	1102

		Ground Truth (Pixels)			
Class		Mycali_AA	Sidsid_AA	Pordiv_AA	Moncav_AA
Padina_AA					
0	Unclassified	0	0	0	0
0	Lead	0	0	0	0

0	Orbfra	0	0	0	0
1	Zoanth	0	62	5	0
1	Cliona	0	0	2	2
0	Milalc	0	0	0	0
0	Myali	363	0	74	0
0	Sidsid	0	284	15	0
0	Pordiv	88	0	282	4
15	Moncav	0	0	6	172
916	Padina	0	0	7	21
44	Dyctiota	1	0	4	147
0	AlFilam	0	0	2	0
0	CCA	0	11	0	0
25	Steint	0	0	10	23
1002	Total	452	357	407	369

		Ground Truth (Pixels)		CCA_AA	Steint_AA
Class		Dyctiota_AA	AlFilam_AA		
Total					
0	Unclassified	0	0	0	0
657	Lead	0	2	3	0
1155	Orbfra	0	90	0	0
733	Zoanth	0	0	11	12
1132	Cliona	93	18	0	0
327	Milalc	0	0	36	0
450	Myali	0	3	5	0
367	Sidsid	0	0	42	0
	Pordiv	2	23	13	0

417					
	Moncav	162	0	0	30
391					
	Padina	38	0	0	103
1100					
	Dyctiota	698	7	0	0
1007					
	AlFilam	19	478	0	0
502					
	CCA	0	0	733	0
865					
	Steint	9	0	0	204
272					
	Total	1021	621	843	349
9375					

		Ground Truth (Percent)		Zoanth_AA	Cliona_AA
Class		Lead_AA	Orbfra_AA		
Milalc_AA					
Unclassified		0.00	0.00	0.00	0.00
0.00					
	Lead	100.00	0.00	0.15	0.00
0.22					
	Orbfra	0.00	96.82	0.00	0.00
0.00					
	Zoanth	0.00	0.00	93.55	0.00
7.32					
	Cliona	0.00	0.09	0.00	92.11
0.00					
	Milalc	0.00	0.00	0.00	0.00
64.52					
	Myali	0.00	0.45	0.00	0.00
0.00					
	Sidsid	0.00	0.00	3.99	0.00
0.00					
	Pordiv	0.00	0.09	0.31	0.00
0.44					
	Moncav	0.00	0.00	0.77	0.09
0.00					
	Padina	0.00	0.09	0.15	0.36
2.00					
	Dyctiota	0.00	2.45	0.00	7.17
0.00					
	AlFilam	0.00	0.00	0.00	0.27
0.00					
	CCA	0.00	0.00	0.92	0.00
25.50					
	Steint	0.00	0.00	0.15	0.00
0.00					

Total	100.00	100.00	100.00	100.00
100.00				

Class	Ground Truth (Percent)		Pordiv_AA	Moncav_AA
	Mycali_AA	Sidsid_AA		
Padina_AA				
Unclassified	0.00	0.00	0.00	0.00
0.00				
Lead	0.00	0.00	0.00	0.00
0.00				
Orbfra	0.00	0.00	0.00	0.00
0.00				
Zoanth	0.00	17.37	1.23	0.00
0.10				
Cliona	0.00	0.00	0.49	0.54
0.10				
Milalc	0.00	0.00	0.00	0.00
0.00				
Myali	80.31	0.00	18.18	0.00
0.00				
Sidsid	0.00	79.55	3.69	0.00
0.00				
Pordiv	19.47	0.00	69.29	1.08
0.00				
Moncav	0.00	0.00	1.47	46.61
1.50				
Padina	0.00	0.00	1.72	5.69
91.42				
Dyctiota	0.22	0.00	0.98	39.84
4.39				
AlFilam	0.00	0.00	0.49	0.00
0.00				
CCA	0.00	3.08	0.00	0.00
0.00				
Steint	0.00	0.00	2.46	6.23
2.50				
Total	100.00	100.00	100.00	100.00
100.00				

Class	Ground Truth (Percent)		CCA_AA	Steint_AA
	Dyctiota_AA	AlFilam_AA		
Total				
Unclassified	0.00	0.00	0.00	0.00
0.00				
Lead	0.00	0.32	0.36	0.00
7.01				
Orbfra	0.00	14.49	0.00	0.00
12.32				

7.82	Zoanth	0.00	0.00	1.30	3.44
12.07	Cliona	9.11	2.90	0.00	0.00
3.49	Milalc	0.00	0.00	4.27	0.00
4.80	Myali	0.00	0.48	0.59	0.00
3.91	Sidsid	0.00	0.00	4.98	0.00
4.45	Pordiv	0.20	3.70	1.54	0.00
4.17	Moncav	15.87	0.00	0.00	8.60
11.73	Padina	3.72	0.00	0.00	29.51
10.74	Dyctiota	68.36	1.13	0.00	0.00
5.35	AlFilam	1.86	76.97	0.00	0.00
9.23	CCA	0.00	0.00	86.95	0.00
2.90	Steint	0.88	0.00	0.00	58.45
100.00	Total	100.00	100.00	100.00	100.00

Class	Commission	Omission	Commission
Omission	(Percent)	(Percent)	(Pixels)
(Pixels)			
Lead	1.07	0.00	7/657
0/650			
Orbfra	7.79	3.18	90/1155
35/1100			
Zoanth	16.92	6.45	124/733
42/651			
Cliona	10.34	7.89	117/1132
87/1102			
Milalc	11.01	35.48	36/327
160/451			
Myali	19.33	19.69	87/450
89/452			
Sidsid	22.62	20.45	83/367
73/357			
Pordiv	32.37	30.71	135/417
125/407			

Moncav 197/369	56.01	53.39	219/391
Padina 86/1002	16.73	8.58	184/1100
Dyctiota 323/1021	30.69	31.64	309/1007
AlFilam 143/621	4.78	23.03	24/502
CCA 110/843	15.26	13.05	132/865
Steint 145/349	25.00	41.55	68/272

Class User Acc. (Pixels)	Prod. Acc. (Percent)	User Acc. (Percent)	Prod. Acc. (Pixels)
Lead 650/657	100.00	98.93	650/650
Orbfra 1065/1155	96.82	92.21	1065/1100
Zoanth 609/733	93.55	83.08	609/651
Cliona 1015/1132	92.11	89.66	1015/1102
Milalc 291/327	64.52	88.99	291/451
Myali 363/450	80.31	80.67	363/452
Sidsid 284/367	79.55	77.38	284/357
Pordiv 282/417	69.29	67.63	282/407
Moncav 172/391	46.61	43.99	172/369
Padina 916/1100	91.42	83.27	916/1002
Dyctiota 698/1007	68.36	69.31	698/1021
AlFilam 478/502	76.97	95.22	478/621
CCA 733/865	86.95	84.74	733/843
Steint 204/272	58.45	75.00	204/349