

Supplemental Material



Supplemental Figure 1. Images of morphometric measurements for *Macrocyctis* and *Nereocystis*. a) Diver removing whole *Macrocyctis* sporophyte in situ at the holdfast (Hopkins Marine Life Refuge). b) *Macrocyctis* sporophyte transport from water to a clean and dry location on land. c) Entire *Macrocyctis* sporophyte spread across tarp before dividing into 2 m sections. d) Field technicians measuring morphology of each 2 m section of a *Macrocyctis* sporophyte. E) *Nereocystis* canopy spread out on clean dock ready to be measured. F) Josie Iselin taking counting *Nereocystis* blades for morphometric measurement. Photo credit: a) Sara Hamilton (OSU), b-f): Meredith McPherson.

Supplemental Table 1. Spectral characteristics (center wavelengths and full-width at half-max (FWHM) values in nanometer) for each relevant satellite band (blue, green, red, red-edge, and NIR). Within each cell the top value is the band's center wavelength and the bottom value is the band's FWHM. n/a denotes where band information doesn't exist or isn't available.

Band	MicaSense RedEdge-M	PlanetScope	Planet RapidEye	ESA Sentinel-2	USGS Landsat OLI
Blue	475	485	475	492	480
	32	n/a	n/a	66	60
Green	560	545	555	560	561
	27	n/a	n/a	36	57
Red	668	630	660	665	655
	14	n/a	n/a	31	38
Red-Edge	717		710		
	12	n/a	n/a	n/a	n/a
NIR	842	820	805	833	865
	57	n/a	n/a	106	28