The following supplement accompanies the article

Predictive distribution modelling of cold-water corals in the Newfoundland and Labrador region

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Supplement 1. Species distribution modelling

Table S1. Species names and number of presence-only observations used to generate SDMs for cold-water corals at the species level. Data are part of the multi-species trawl surveys performed by DFO between 2004 and 2011.

Functional Group	Species Name	Presence Count
Large Gorgonians	*Acanthogorgia armata*	114
	Paramuricea spp.	58
	Paragorgia arborea	27
	Keratoisis grayi	27
Small Gorgonians	*Acanella arbuscula*	245
Sea Pens	*Anthoptilum grandiflorum*	250
	Funiculina quandrangularis	104
	Halipteris finmarchica	98
	Pennatula sp.	80
	Pennatula aculeata	78
	Pennatula grandis	73
Cup Corals	*Flabellum alabastrum*	214
Antipatharians	*Stauropathes arctica*	26
Soft Corals	*Duva florida*	1,252
	Gersemia spp.	655
	Anthomastus spp.	125
	Drifa spp.	95
	Drifa glomerata	79
	Anthomastus agaricus	53

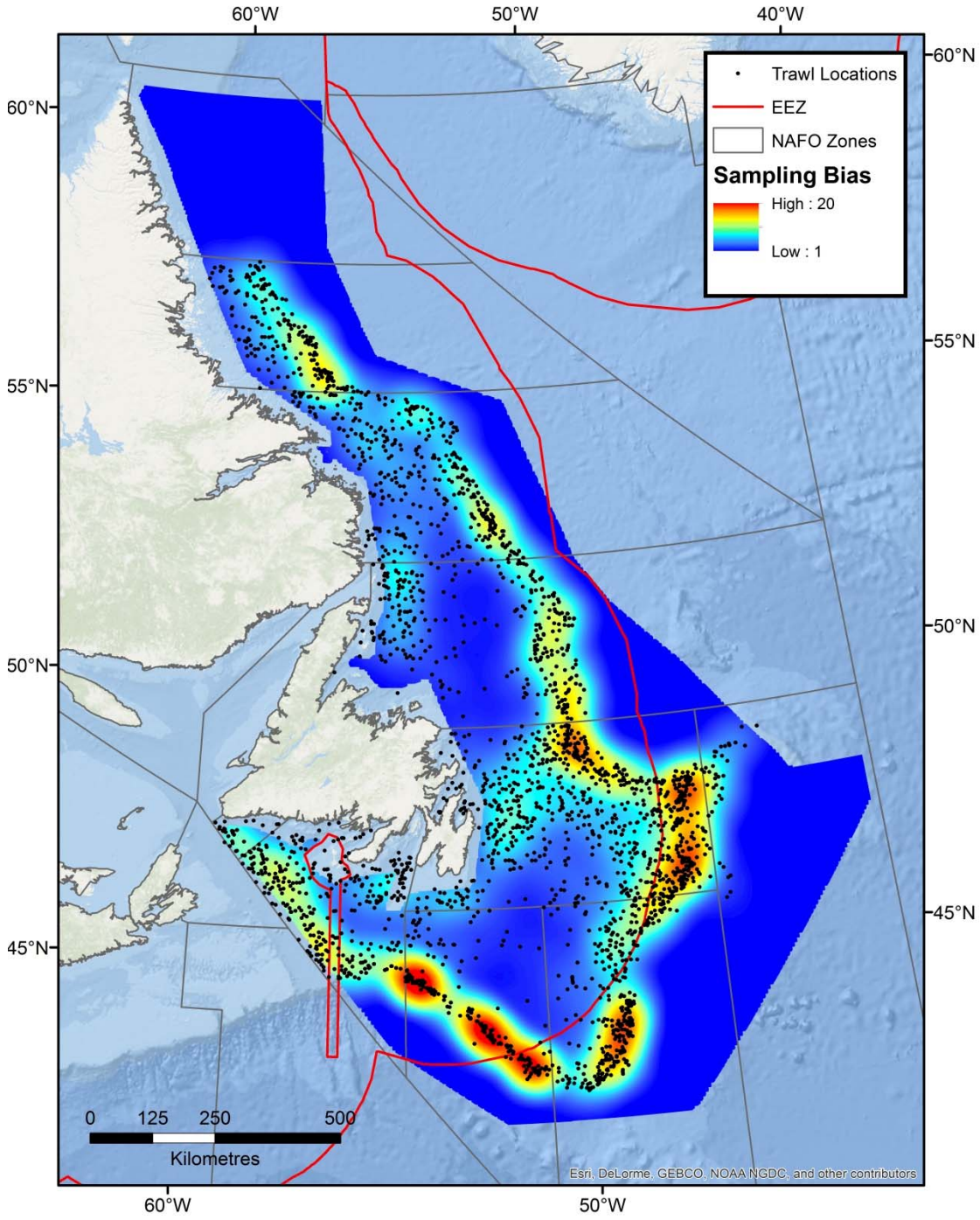

Figure S1: Location of multi-species surveys performed from 2004 – 2011 overlaid on bias surface generated for use in Maxent.

1. SPECIES DISTRIBUTION MODELS

1.1 Small Gorgonians

Acanella arbuscula

Of the three cold-water coral species within the functional group small gorgonians, *A. arbuscula* was the only one with a sufficient number of observations to generate a SDM (n = 245). The model (Figure S2) identified two segments along the edge of the continental shelf as highly suitable habitat. The most suitable area ran from Orphan Spur north to Cape Chidley. The southwest edge of the Grand Banks and the upper portion of the continental slope in the area also presented as highly suitable habitat in the model, while the edge of the Flemish Cap presented as relatively suitable habitat.

Table S2. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *A. arbuscula*.

Variable	***A. arbuscula***
Test AUC	0.916 (0.017)
Test Gain	1.613
10th percentile training presence	0.300
Omission rate	17.4%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.772
Top 4 Jackknife Variables	**Gain**
Depth	1.239
Bottom Temperature	1.067
Slope	0.824
Bottom Salinity	0.619

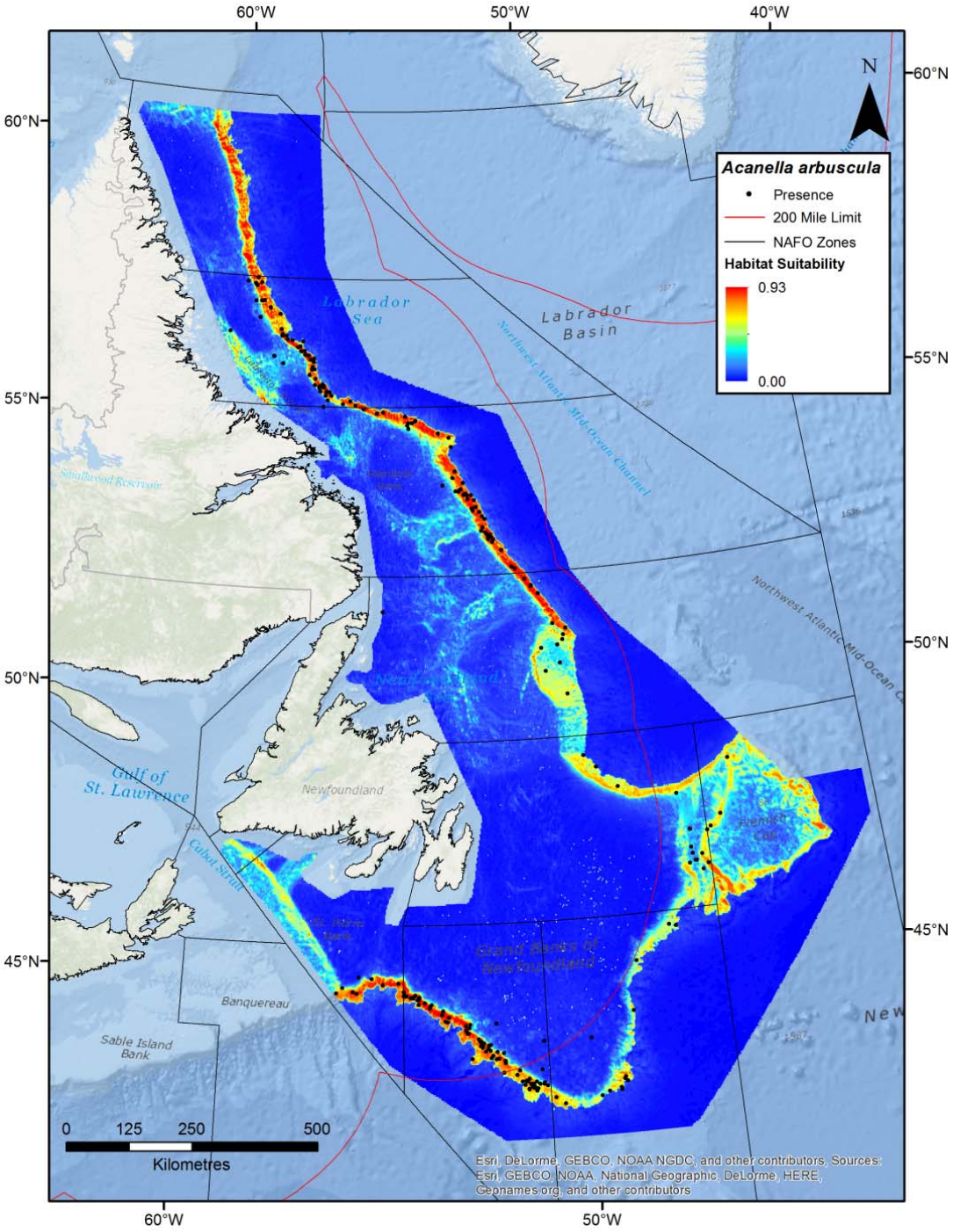

Figure S2: Habitat suitability model for *A. arbuscula* (n = 245) in the NL region

1.2 Sea Pens

Anthoptilum grandiforum

The model generated for *A. grandiflorum* (n = 267) indicated suitable habitat along the southwest edge of the St. Pierre and Grand Banks, within the Flemish Pass, along the edges of the Flemish Cap, and along the edge of the continental shelf north of the Flemish Cap to Cape Chidley (Figure S3).

Table S3. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of A. *grandiflorum*.

Variable	***A. grandiflorum***
Test AUC	0.919 (*0.015*)
Test Gain	1.584
10th percentile training presence	0.491
Omission rate	17.8%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.726
Top 4 Jackknife Variables	**Gain**
Depth	0.773
Bottom Temperature	0.635
Bottom Salinity	0.493
Slope	0.146

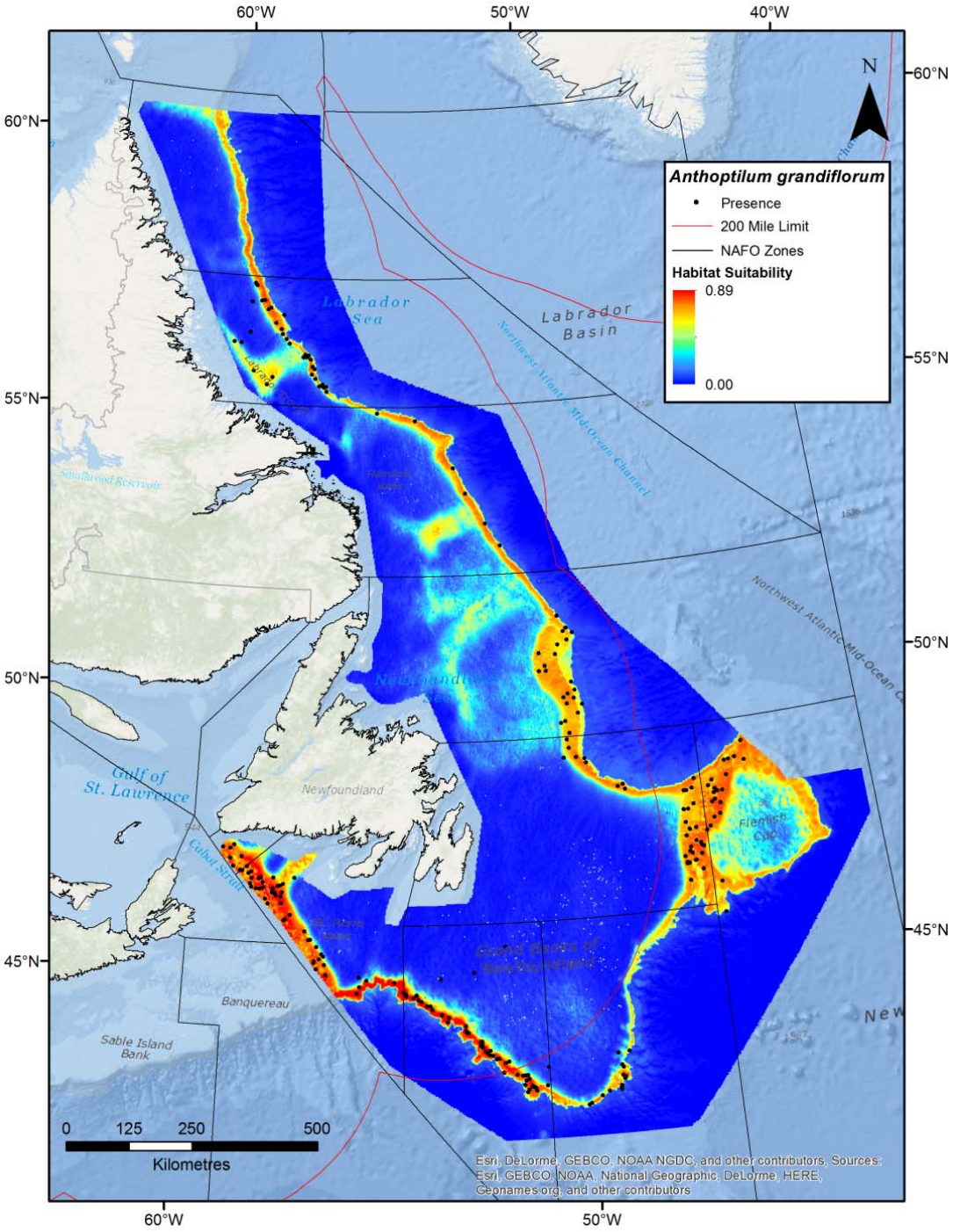

Figure S3: Habitat suitability model for A. *grandiflorum* (n = 267) in the NL region

Funiculina quadrangularis

The SDM for *F. quadrangularis* (n = 103) indicated suitable habitat was largely concentrated along the southwest edge of the St. Pierre and Grand Banks, with portions also identified along the western edge of the Flemish Cap. (Figure S4).

Table S4. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *F. quadrangularis*.

Variable	***F. quadrangularis***
Test AUC	0.970 (0.006)
Test Gain	2.386
10th percentile training presence	0.352
Omission rate	10.0%
Wilcoxon rank-sum	-
TSS	0.813
Top 4 Jackknife Variables	**Gain**
Bottom Temperature	0.941
Depth	0.673
Bottom Salinity	0.405
Chlorophyll A	0.084

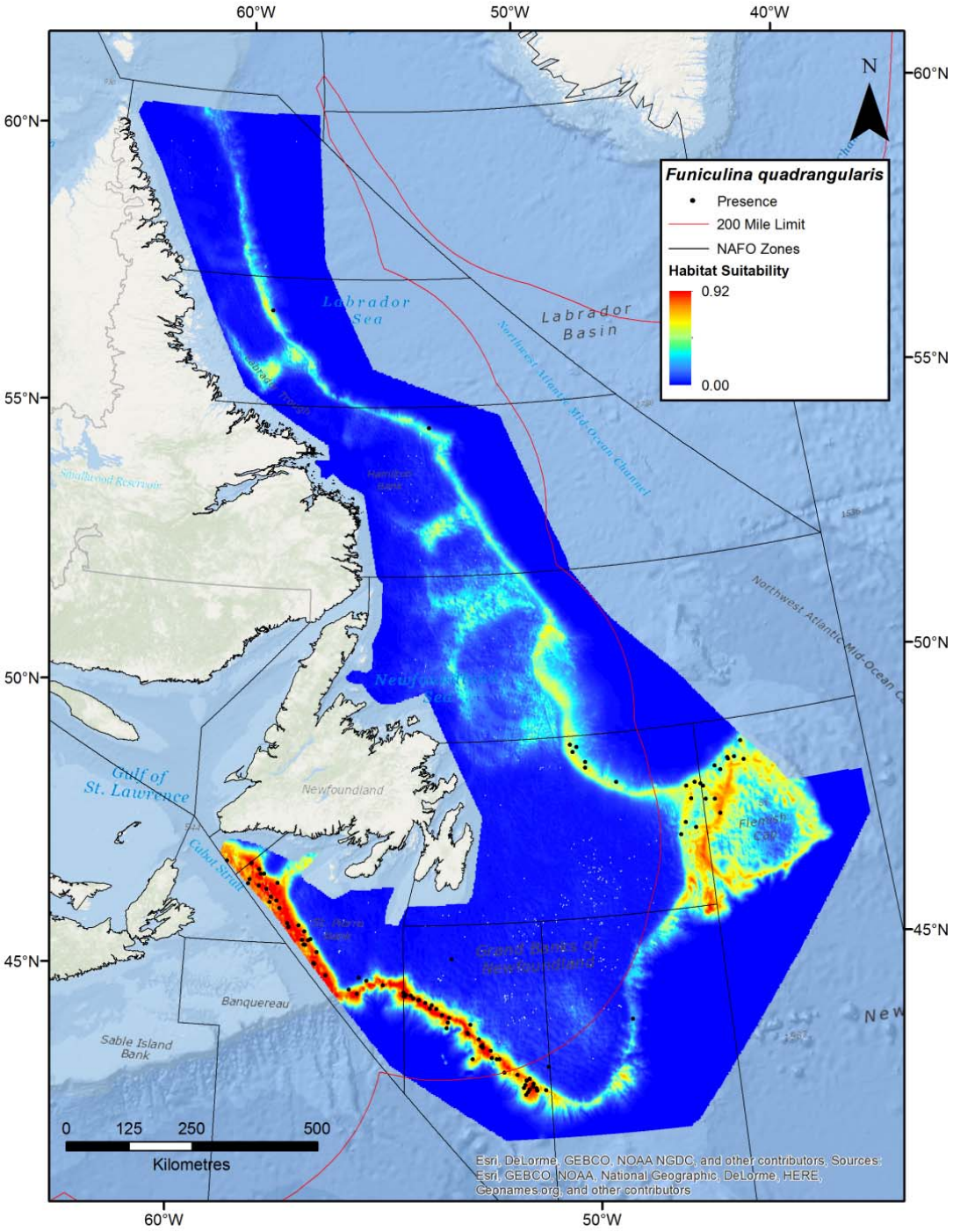

Figure S4: Habitat suitability model for *F. quadrangularis* (n = 103) in the NL region

Halipteris finmarchica

Suitable habitat for *H. finmarchica* (n = 97) was concentrated on the southwest edge of the Grand Banks and the Laurentian Channel, bordering the tail of the Grand Banks, as well as within the Flemish Pass and on the Flemish Cap. Highly suitable habitat was also detected along the edge of the continental slope surrounding Orphan Basin to Orphan Spur, and on portions of the Northeast Newfoundland Shelf (Figure S5).

Table S5. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *H. finmarchica*.

Variable	***H. finmarchica***
Test AUC	0.941 (0.020)
Test Gain	2.106
10th percentile training presence	0.243
Omission rate	7.4%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.810
Top 4 Jackknife Variables	**Gain**
Bottom Temperature	1.763
Depth	1.401
Slope	0.708
Bottom Salinity	0.666

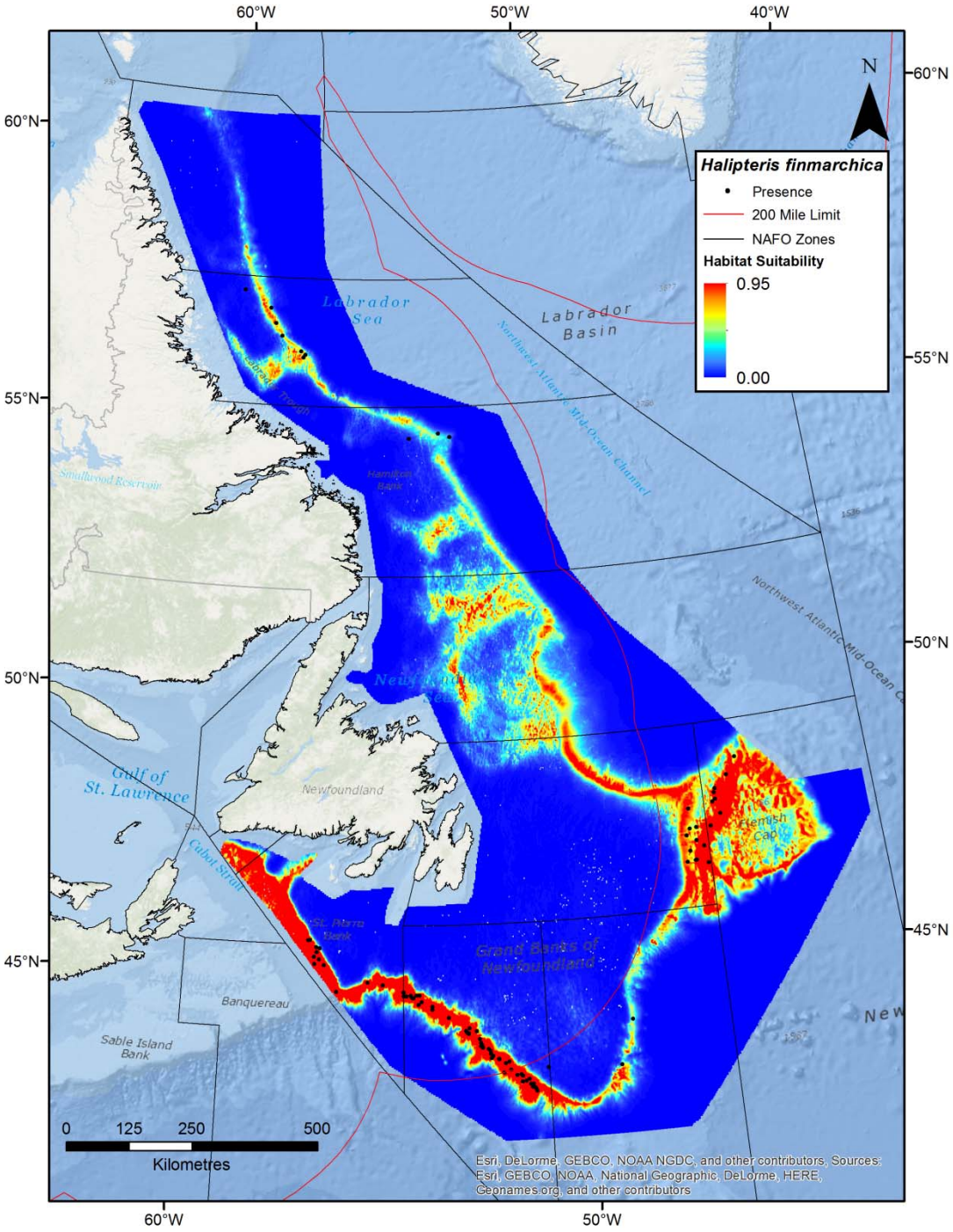

Figure S5: Habitat suitability model for *H. finmarchica* (n = 97) in the NL region

***Pennatula* sp.**

Highly suitable habitat for *Pennatula* sp. (n = 79) exists along the Laurentian Channel and southwestern edge of the St. Pierre and Grand Banks, within the Flemish Pass, along the northern, eastern, and western edges of the Flemish Cap, and along the continental edge and upper slope bordering the Orphan Basin. In addition, portions of suitable habitat also existed along sections of the Labrador Shelf edge (Figure S6).

Table S6. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *Pennatula* sp.

Variable	***Pennatula* sp.**
Test AUC	0.953 (0.012)
Test Gain	1.849
10th percentile training presence	0.498
Omission rate	12.5%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.792
Top 4 Jackknife Variables	**Gain**
Bottom Temperature	1.120
Depth	0.980
Slope	0.328
Bottom Salinity	0.324

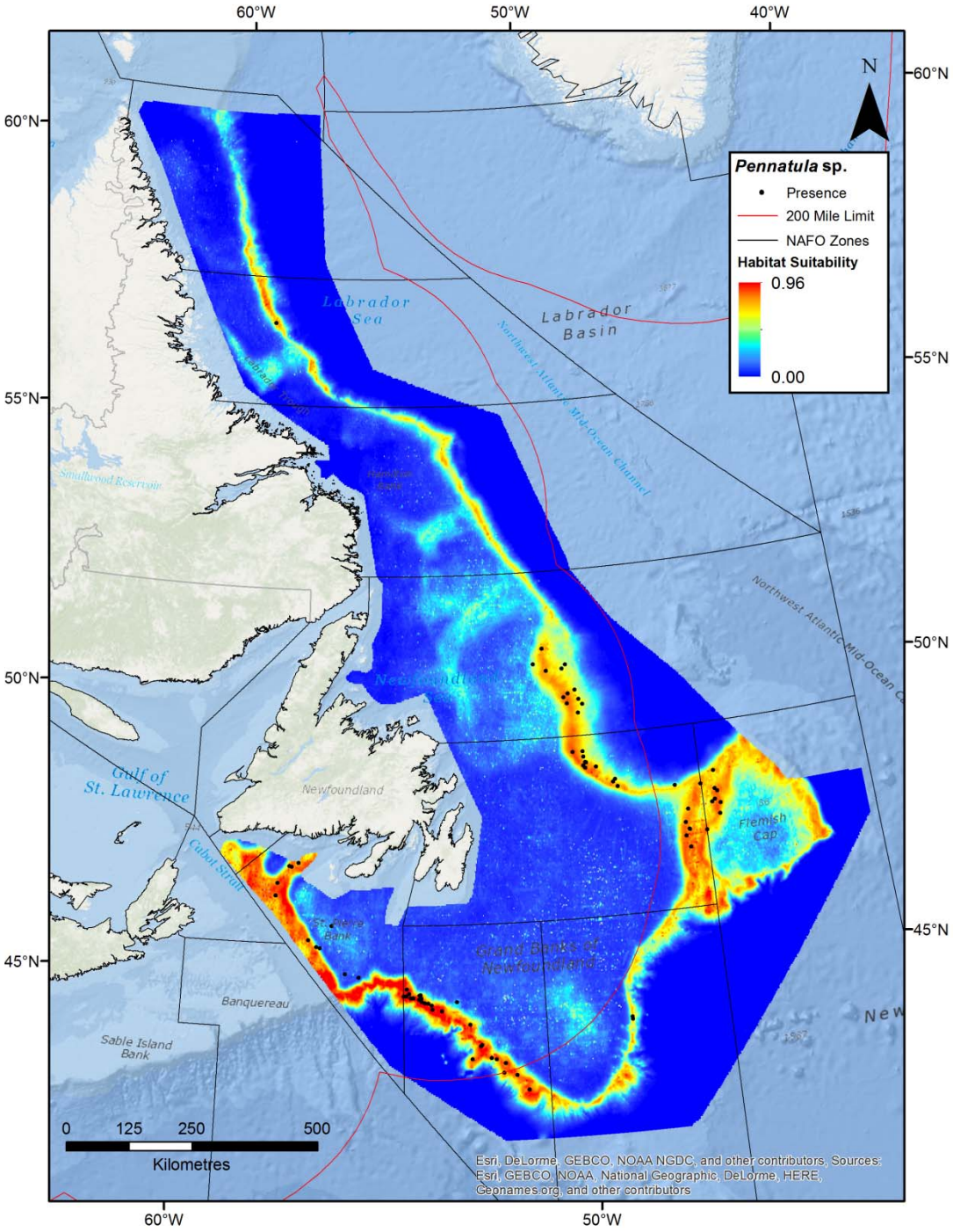

Figure S6: Habitat suitability model for *Pennatula* sp. (n = 79) in the NL region

Pennatula aculeata

The SDM of *P. aculeata* (n = 77) identified the southwest edge of the St. Pierre and Grand Banks to be the most suitable habitat within the study area; however, additional areas of suitable habitat were also seen on the tail of the Grand Banks as well as the western edge of the Flemish Pass, across the Flemish Cap, and along the western boundary of Orphan Basin. (Figure S7).

Table S7. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *P. aculeata*.

Variable	***P. aculeata***
Test AUC	0.964 (0.012)
Test Gain	2.033
10th percentile training presence	0.334
Omission rate	4.5%
Wilcoxon rank-sum	-
TSS	0.767
Top 4 Jackknife Variables	**Gain**
Bottom Temperature	0.653
Depth	0.168
Chlorophyll A	0.129
Bottom Salinity	0.103

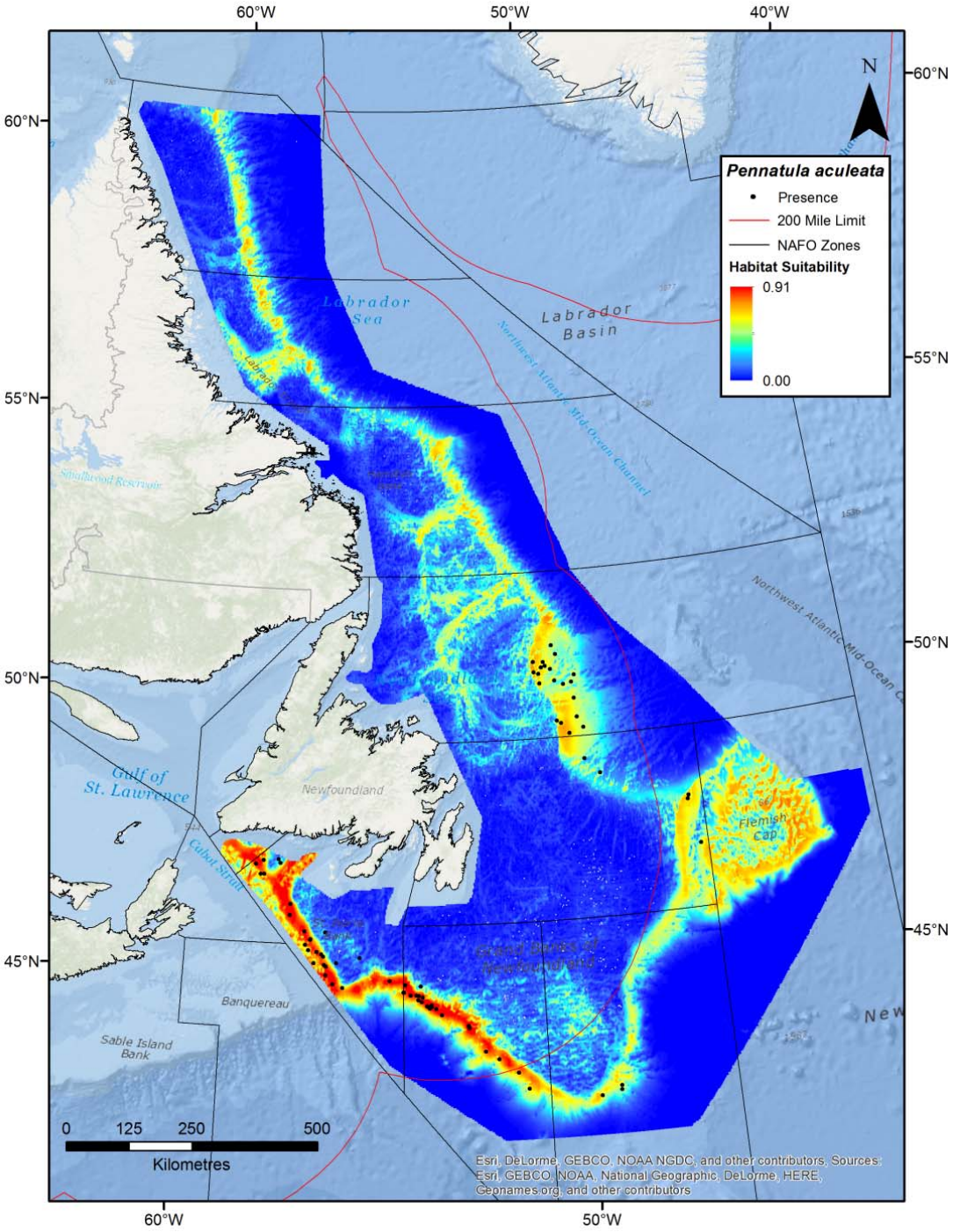

Figure S7: Habitat suitability model for *P. aculeata* (n = 77) in the NL region

Pennatula grandis

The SDM of *P. grandis* (n = 72) indicated areas of highest habitat suitability exist along the edge of the Grand Banks, north through the Flemish Pass, along the edges of the Flemish Cap, and along the edge of the continental shelf and slope to the Orphan Spur (Figure S8). In contrast to the other species within this functional group, habitat suitability appears to be lower along the edge of the St. Pierre Bank, bordering the Laurentian Channel.

Table S8. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *P. grandis*.

Variable	***P. grandis***
Test AUC	0.952 (0.009)
Test Gain	1.875
10th percentile training presence	0.462
Omission rate	19.0%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.815
Top 4 Jackknife Variables	**Gain**
Depth	1.521
Bottom Temperature	1.000
Bottom Salinity	0.808
Slope	0.276

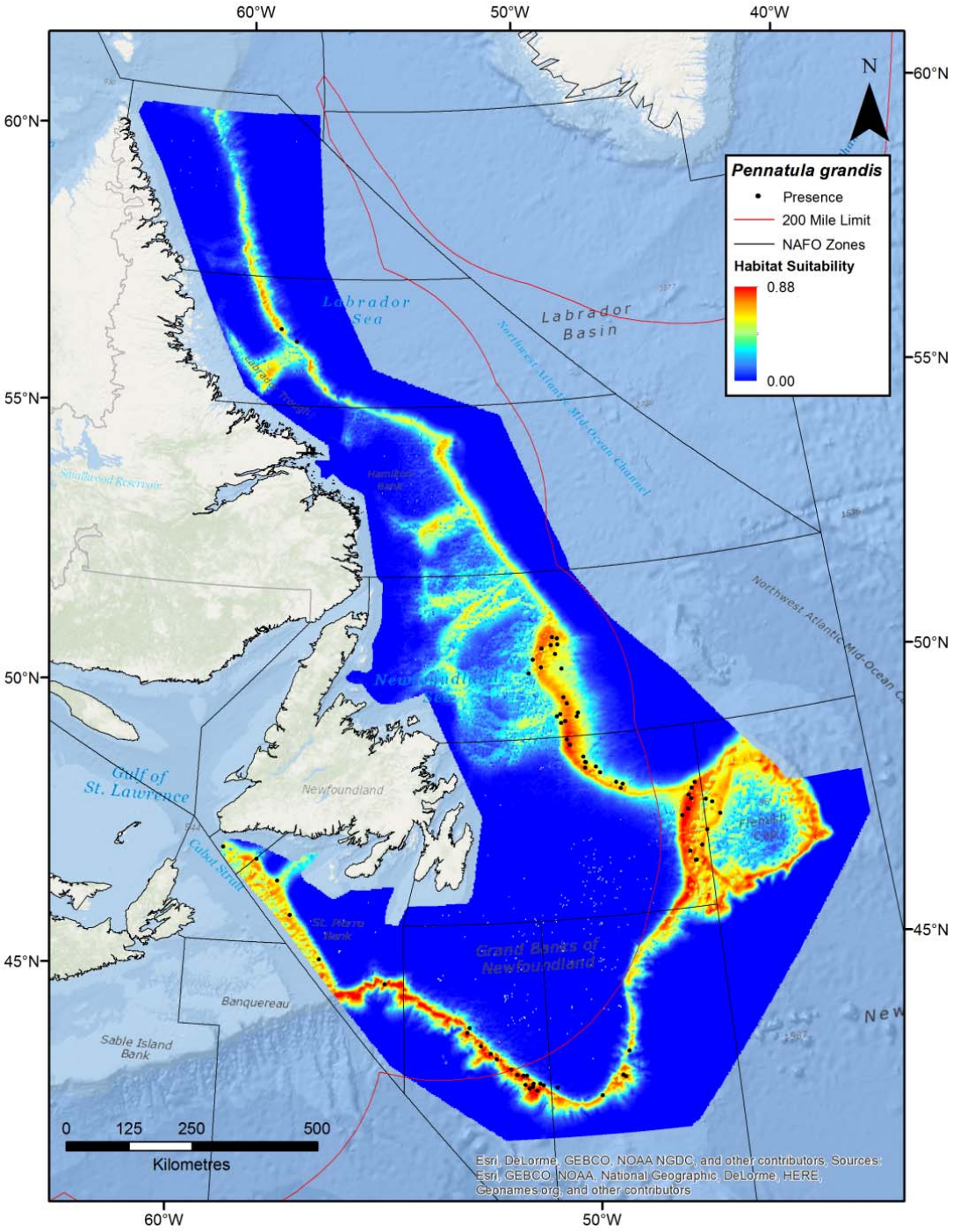

Figure S8: Habitat suitability model for *P. grandis* (n = 72) in the NL region

1.3 Cup Corals

Flabellum alabastrum

The model generated for *F. alabastrum* (n = 214) identified highly suitable habitats along the southwest edge of the Grand Banks, extending along the boundary of the St. Pierre Bank bordering the Laurentian Channel (Figure S9). Habitat suitability was reduced in other parts of the region.

Table S9. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *F. alabastrum*.

Variable	***F. alabastrum***
Test AUC	0.969 (0.009)
Test Gain	2.329
10th percentile training presence	0.339
Omission rate	5.1%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.842
Top 4 Jackknife Variables	**Gain**
Bottom Temperature	1.836
Depth	1.305
Bottom Salinity	0.786
Slope	0.627

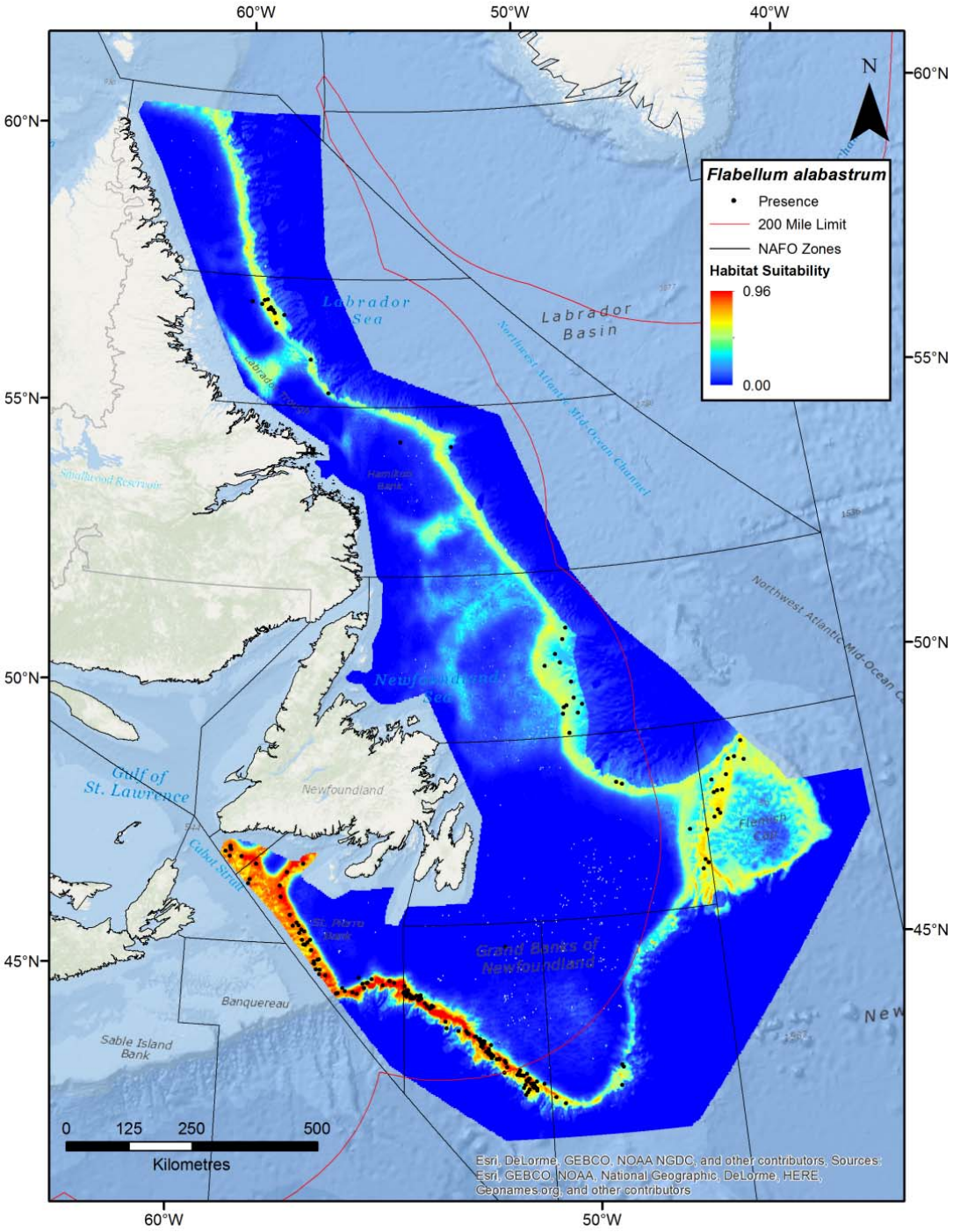

Figure S9: Habitat suitability model for *F. alabastrum* (n = 214) in the NL region

1.4 Antipatharians

Stuaropathes arctica

As illustrated in Figure S10 the SDM of *S. arctica* (n = 26) identified highly suitable habitats within the Flemish Pass, along all but the southern edge of the Flemish Cap, much of the edge and upper slope of the shelf surrounding Orphan Knoll, and along the shelf edge extending from Orphan Spur to Hamilton Bank. Habitat suitability tapered off beyond Hamilton Bank, but returned along Makkovik Bank and persisted along the edge of the shelf and upper slope as far north as Cape Chidley. Some portions along the edge of the Nose and Tail of the Bank, as well as the southwest edge of the Grand Banks also qualify as suitable habitat; however, there was much variation throughout the area.

Table S10. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *S. arctica*.

Variable	***S. arctica***
Test AUC	0.944 (0.012)
Test Gain	1.658
10th percentile training presence	0.479
Omission rate	14.3%
Wilcoxon rank-sum	-
TSS	0.783
Top 4 Jackknife Variables	**Gain**
Depth	1.635
Bottom Salinity	0.591
Bottom Temperature	0.582
Slope	0.202

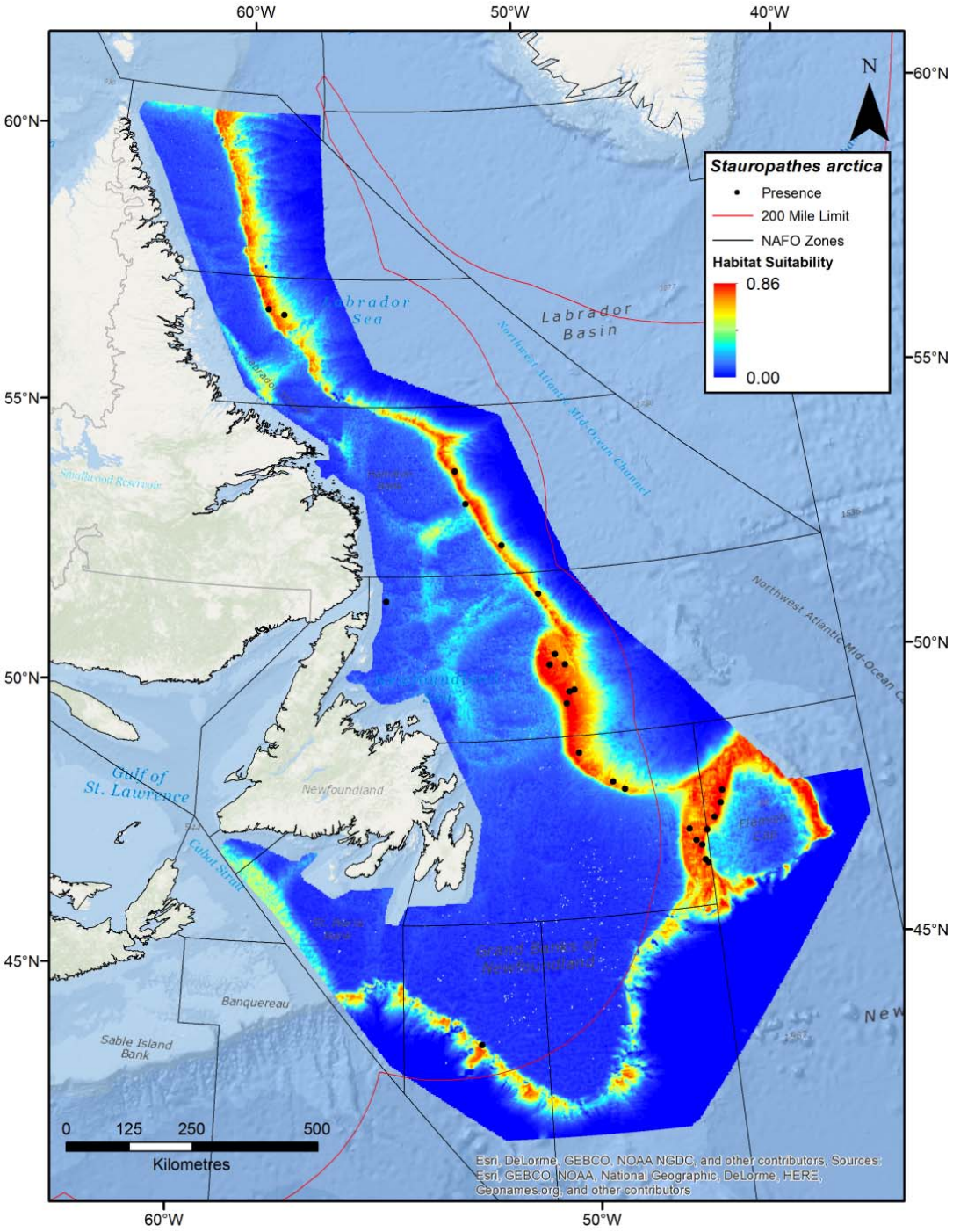

Figure S10: Habitat suitability model for *S. arctica* (n = 26) in the NL region

1.5 Soft Corals

Duva florida

Habitat suitability for *D. florida* (n = 1,252) (Figure S11) illustrated a tendency for the species to concentrate along the edge and upper slope of the continental shelf, with highly suitable habitat running from the Tail of the Bank as far north as Saglek Bank and along the edges of the Flemish Cap. However, significant portions of the bank top were also found to provide suitable habitat for the species.

Table S11. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *D. florida*.

Variable	***D. florida***
Test AUC	0.799 (0.009)
Test Gain	0.654
10th percentile training presence	0.391
Omission rate	13.7%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.483
Top 4 Jackknife Variables	**Gain**
Depth	0.505
Bottom Salinity	0.300
Chlorophyll A	0.277
Slope	0.057

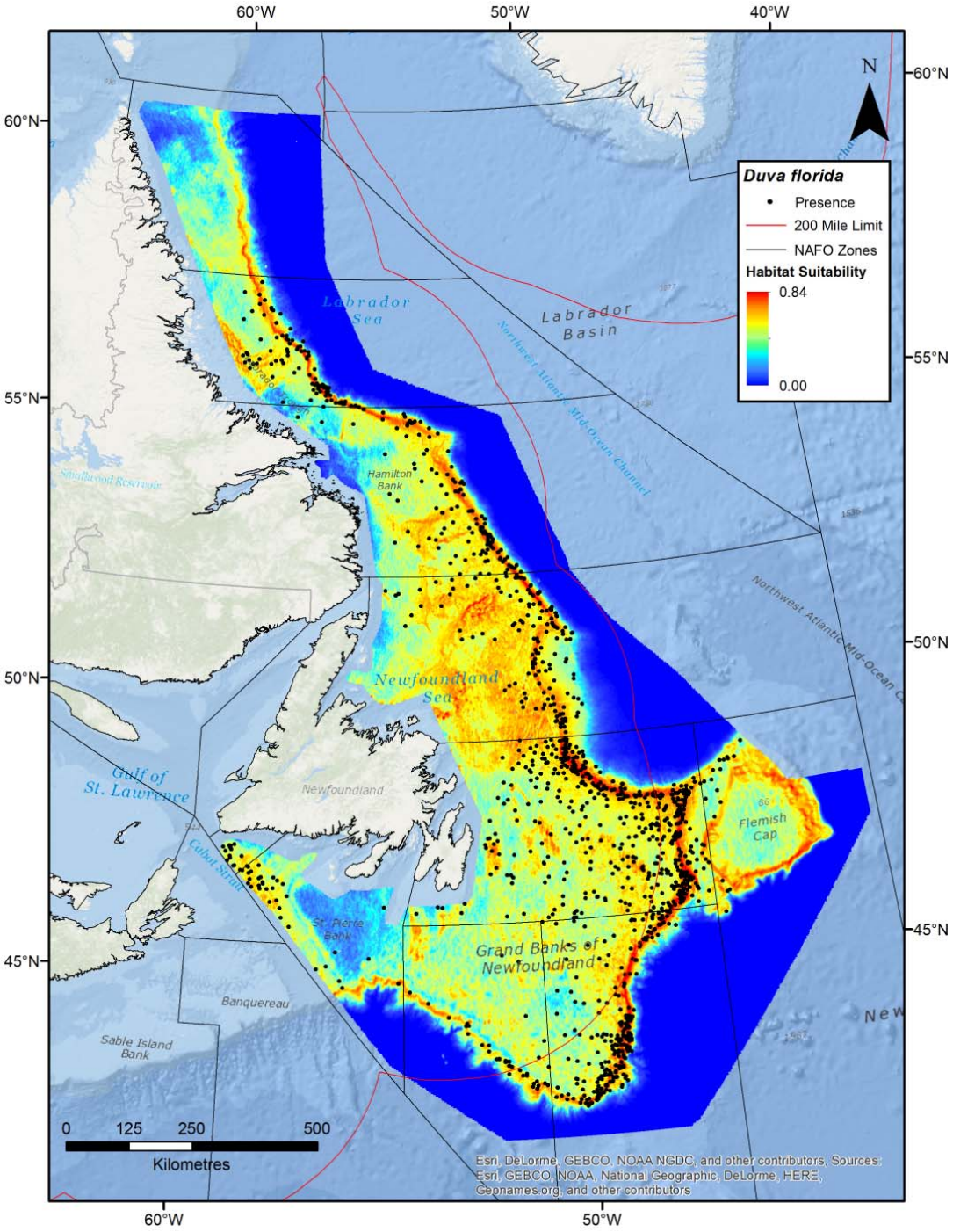

Figure S11: Habitat suitability model for *D. florida* (n = 1,252) in the NL region

***Gersemia* spp.**

The SDM for *Gersemia* spp. (n = 655) (Figure S12) identified a significant portion of the Grand Banks, as highly suitable habitat for the species. With the exception of areas where depth increased dramatically, such as Hopedale and Cartwright Saddles, the majority of the Labrador shelf was also highlighted as suitable habitat.

Table S12. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *Gersemia* spp.

Variable	***Gersemia* spp.**
Test AUC	0.833 (0.010)
Test Gain	0.834
10th percentile training presence	0.360
Omission rate	13.5%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.567
Top 4 Jackknife Variables	**Gain**
Bottom Salinity	0.775
Depth	0.702
Bottom Temperature	0.580
Chlorophyll A	0.172

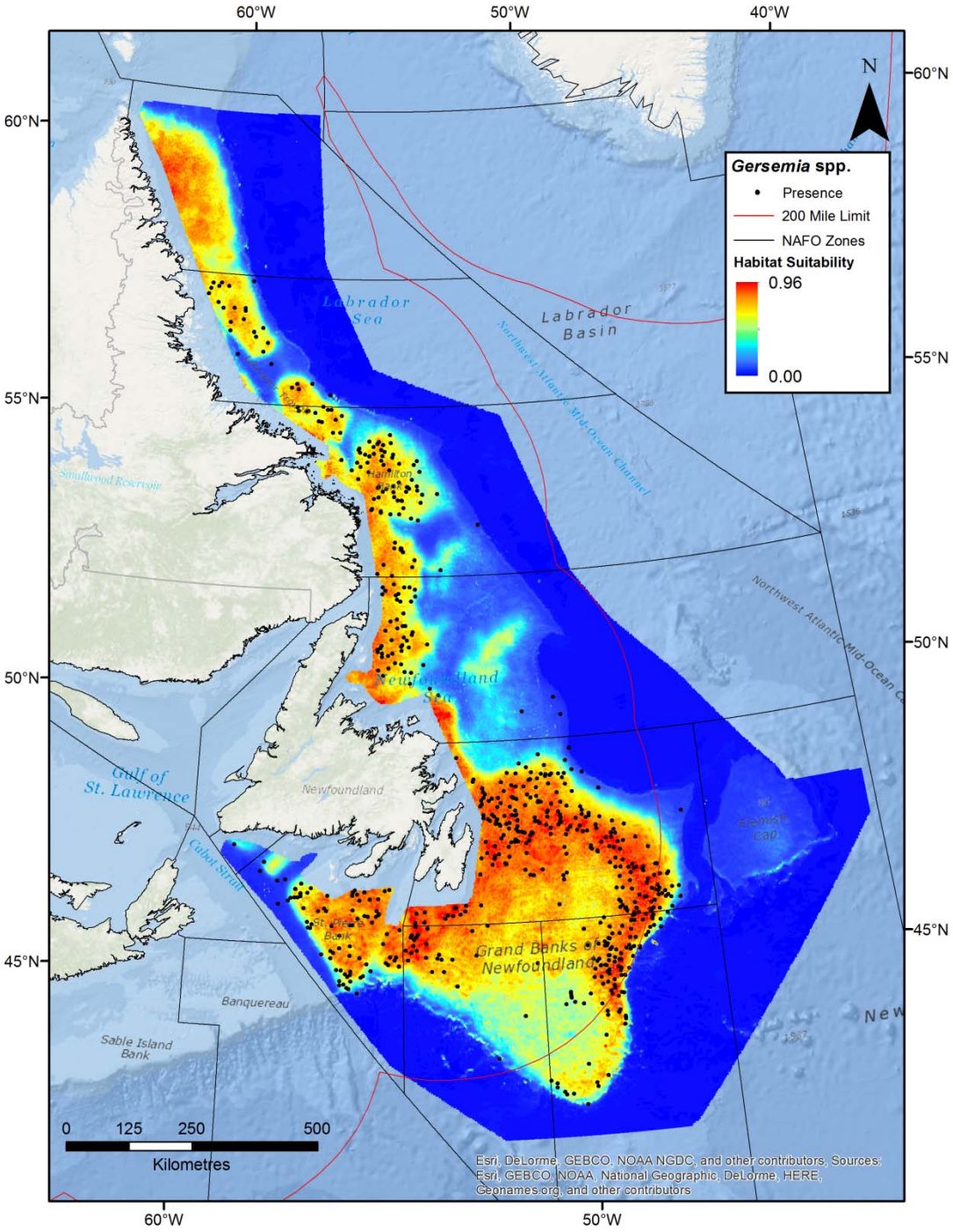

Figure S12: Habitat suitability model for *Gersemia* spp. (n = 655) in the NL region

***Anthomastus* spp.**

For *Anthomastus* spp. (n = 125) highly suitable habitat was identified along the outer edges of the Flemish Cap, and along the edge and upper slope of the Labrador shelf between the Orphan Spur north to Nain Bank (Figure S13).

Table S13. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *Anthomastus* spp.

Variable	***Anthomastus* spp.**
Test AUC	0.936 (0.012)
Test Gain	1.738
10th percentile training presence	0.338
Omission rate	13.9%
Wilcoxon rank-sum	$p < 0.001$
TSS	0.757
Top 4 Jackknife Variables	**Gain**
Depth	1.779
Bottom Temperature	1.151
Bottom Salinity	0.922
Slope	0.601

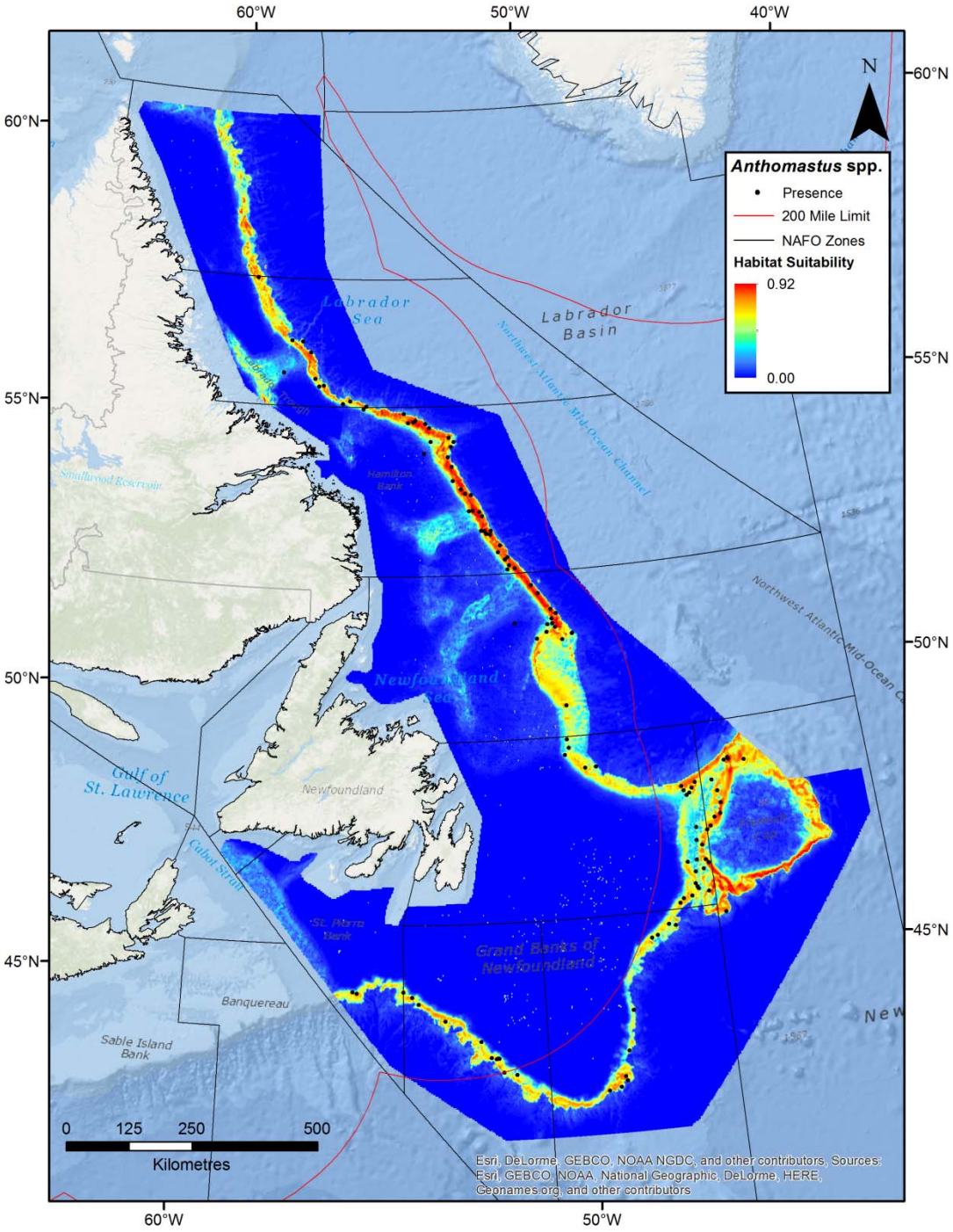

Figure S13: Habitat suitability model for *Anthomastus* spp. (n = 125) in the NL region

***Drifa* spp.**

Suitable habitat for *Drifa* spp. (n = 95) was concentrated on the continental shelf from Cape Chidley to Hamilton Bank, the western portion of the bank top from Belle Island Bank to the northern portion of the Grand Banks, and along the edge of the continental shelf from Flemish Pass the Tail of the Bank (Figure S14).

Table S14. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *Drifa* spp.

Variable	***Drifa* spp.**
Test AUC	0.774 (0.033)
Test Gain	0.532
10th percentile training presence	0.327
Omission rate	14.3%
Wilcoxon rank-sum	-
TSS	0.414
Top 4 Jackknife Variables	**Gain**
Depth	0.606
Bottom Salinity	0.332
Slope	0.055
Chlorophyll A	0.043

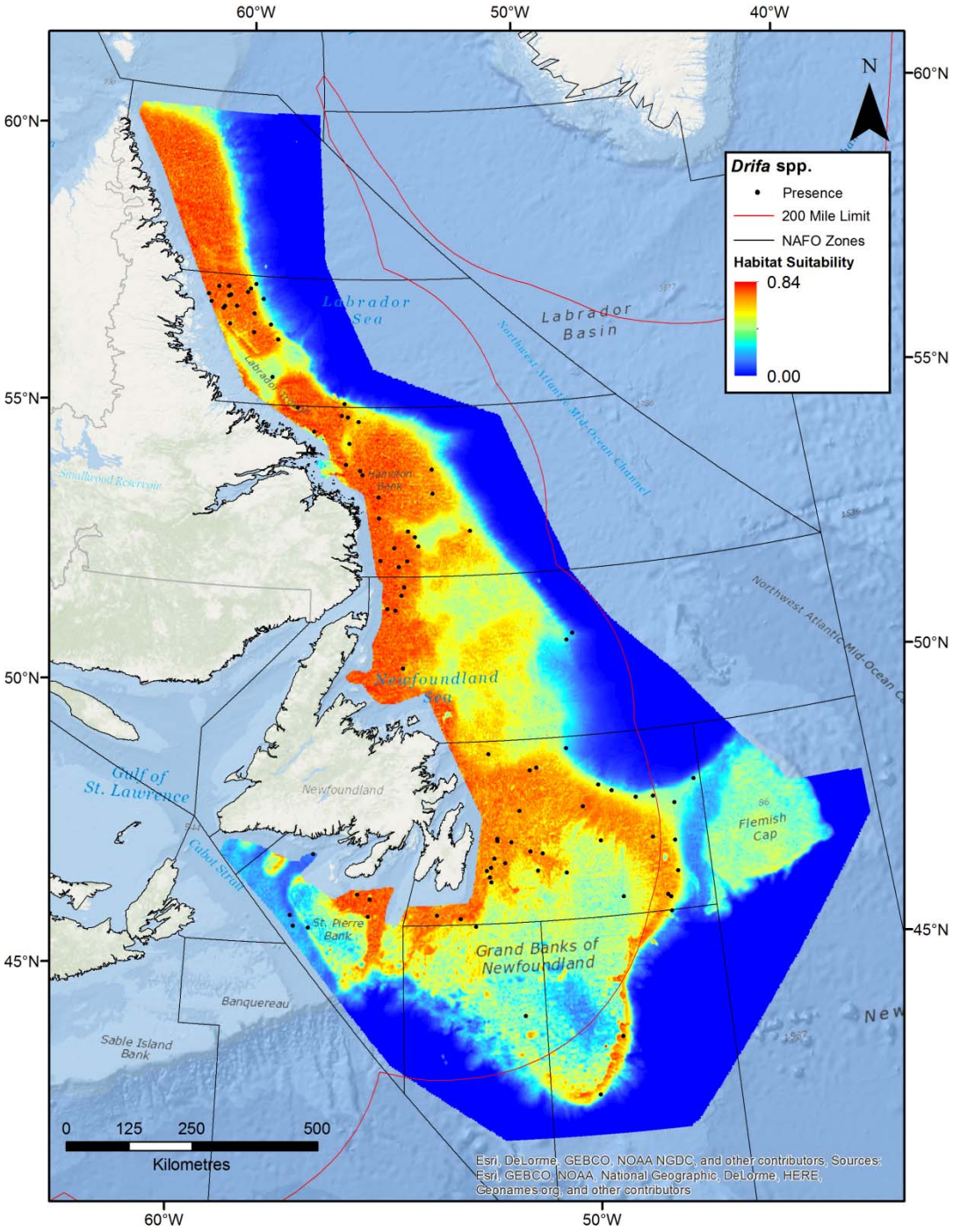

Figure S14: Habitat suitability model for *Drifa* spp. (n = 95) in the NL region

Drifa glomerata

The SDM of *D. glomerata* (n = 79) (Figure S15) identified large areas of highly suitable habitat on the Labrador shelf, exclusive of Hopedale and Hawke Saddles. Additional areas of suitable habitat were confined to the western portion of the continental shelf extending from the Northern Peninsula of the Island to St. Pierre Bank, to the northern Grand Banks, as well as along shelf edge of the Tail and Nose of the Bank.

Table S15. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *D. glomerata*.

Variable	***D. glomerata***
Test AUC	0.800 (0.027)
Test Gain	0.651
10th percentile training presence	0.277
Omission rate	8.7%
Wilcoxon rank-sum	-
TSS	0.472
Top 4 Jackknife Variables	**Gain**
Depth	0.631
Bottom Salinity	0.450
Bottom Temperature	0.323
Slope	0.018

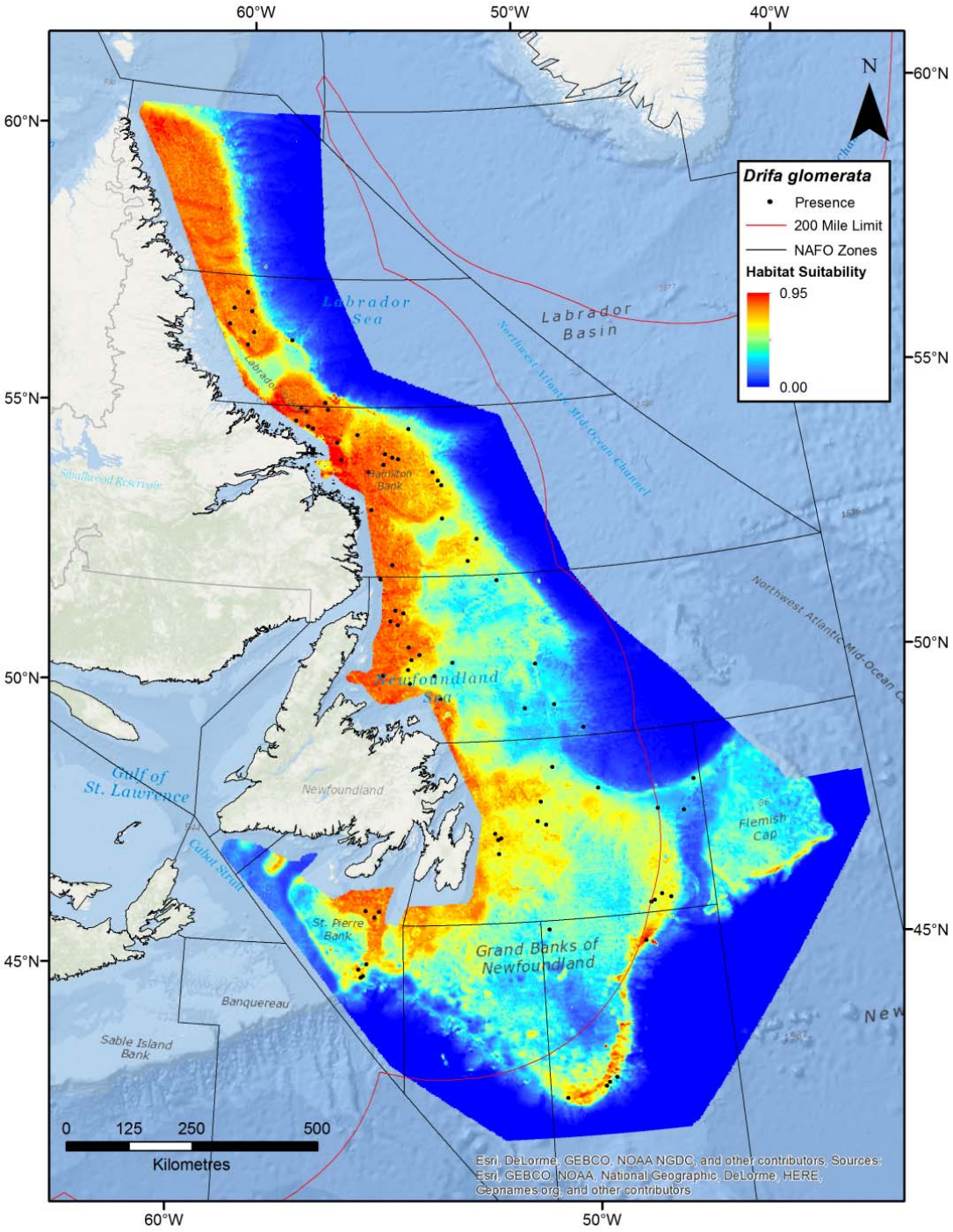

Figure S15: Habitat suitability model for *D. glomerata* (n = 79) in the NL region

Anthomastus agaricus

The model of *A. agaricus* (n = 53) (Figure S16) identified much of the edge and upper slope of the Labrador shelf from the Orphan Spur north to Cape Chidley as high suitability habitat. However, variations in suitability between Hamilton Bank and Cape Chidley suggest the entire edge of the shelf in this area is not suitable for the species. There were also indications that a small portion along the eastern edge and the southwestern tip of the Flemish Cap, as well as the western edge of the Hopedale Saddle, may also represent suitable habitat for the species.

Table S16. Validation statistics, presence threshold, and jackknife analysis of environmental variables for SDM of *A. agaricus*.

Variable	***A. agaricus***
Test AUC	0.947 (0.015)
Test Gain	1.812
10th percentile training presence	0.167
Omission rate	6.7%
Wilcoxon rank-sum	-
TSS	0.788
Top 4 Jackknife Variables	**Gain**
Depth	1.313
Bottom Temperature	0.991
Bottom Salinity	0.701
Slope	0.641

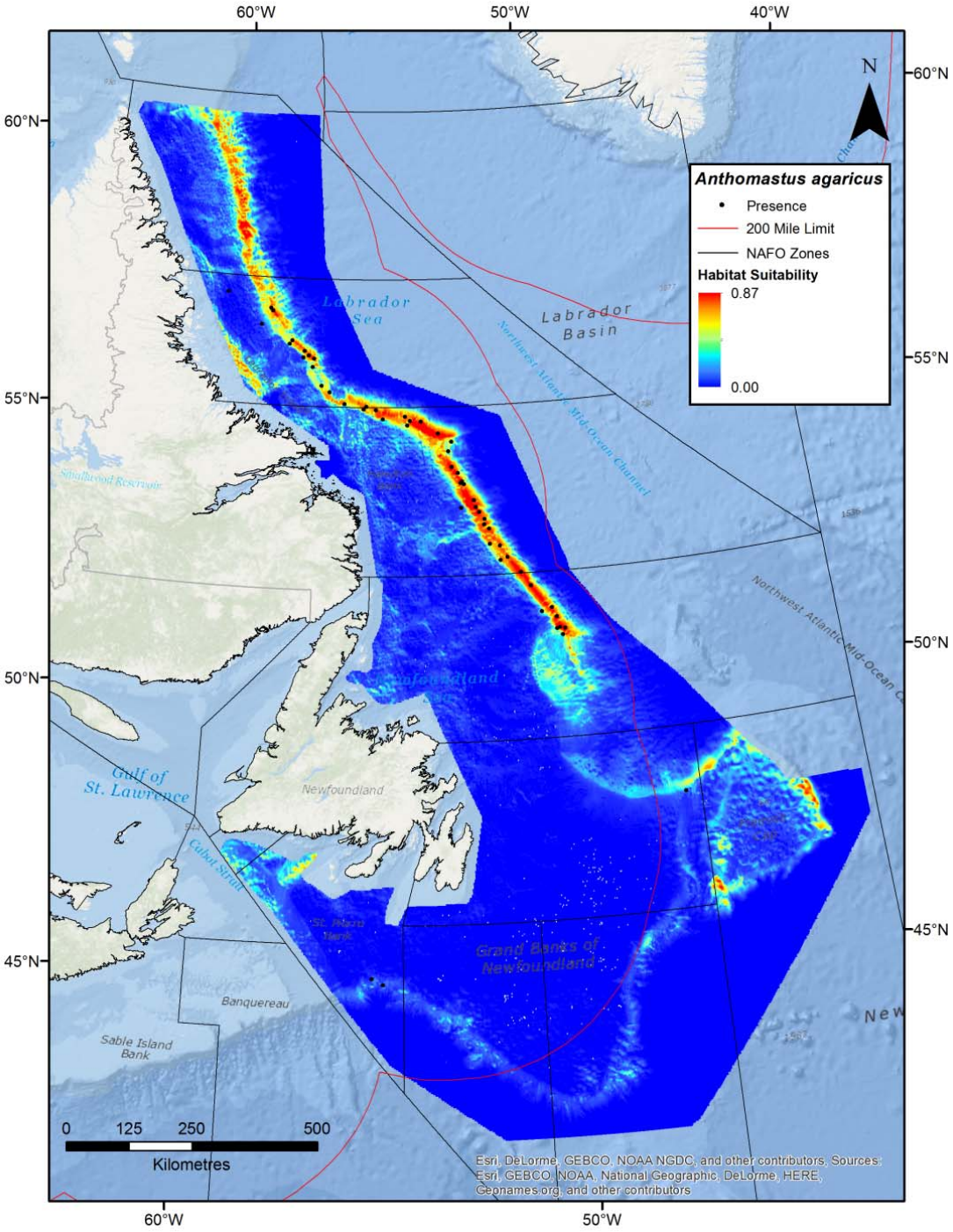

Figure S16: Habitat suitability model for *A. agaricus* (n = 53) in the NL region

Supplement 2.

2. SPECIES VARIABILITY

Based on the data used to generate SDMs, habitat suitability comparisons for species within the same functional groups were possible for large gorgonian, sea pen, and soft coral species. The findings of these comparisons are illustrated below.

2.1 Sea Pens

Depth ranges between 500 – 1,200 m found to be most suitable (≥ 0.8) for *A. grandiflorum*, 400 – 1,000 m for *F. quadrangularris*, 300 – 1,000 m for *H. finmarchica*, and 800 – 1,100 m for *P. grandis* (Figure S17A – S17C, & S17E), while suitable habitats for *P. aculeata* were found in waters closer to shore, between 200 and 700 m (Figure S17E). *Pennatula* sp. (Figure S17F) had the widest range of suitable habitats, covering depths of 200 – 1,300 m, likely due to the fact that the specimens in this group were only defined to the family level.

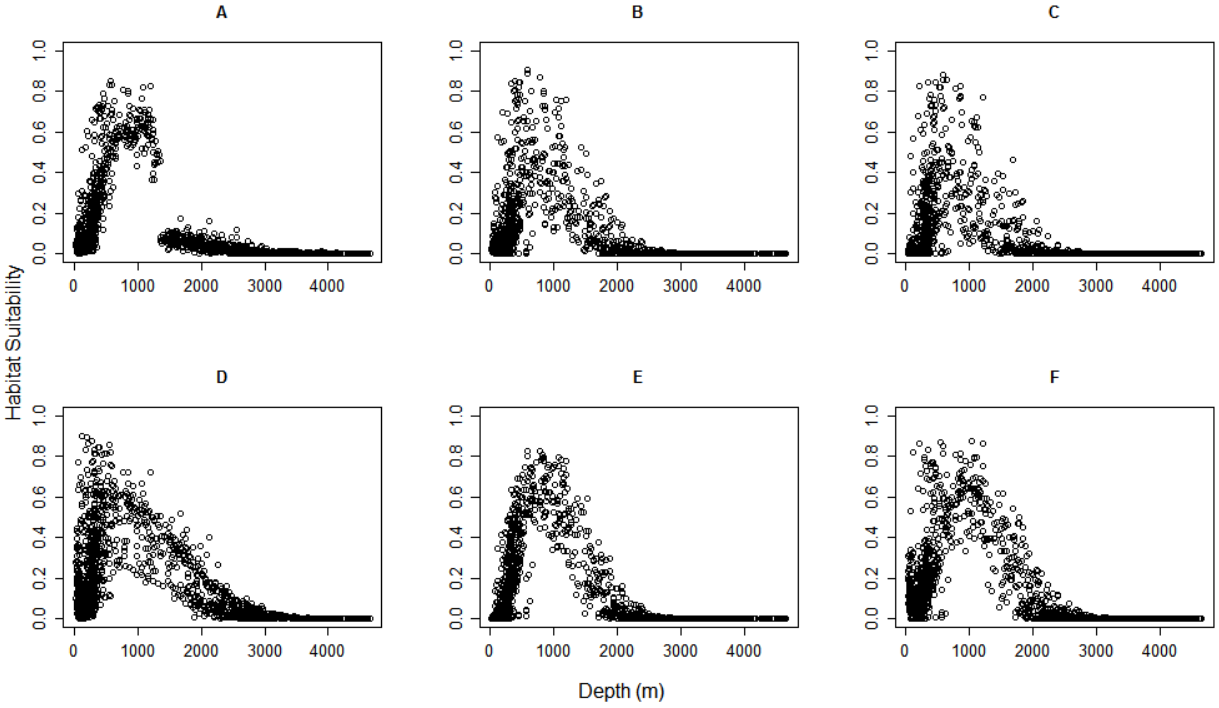

Figure S17: Comparisons of habitat suitability scores for species of Sea Pen corals with respect to depth (m) (A = *Anthoptilum grandiflorum*, B = *Funiculina quadrangularis*, C = *Halipteris finmarchica*, D = *Pennatula aculeata*, E = *Pennatula grandis*, F = *Pennatula* sp.)

Bottom temperatures delineating suitable habitats (≥0.8) for *A. grandiflorum* and *F. quadrangularis* fell between 4.5 – 5.5°C (Figures S18A & S18B), while *P. grandis* covered a slightly large range of 3.5 – 5.5°C (Figure S18E). *H. finmarchica* was concentrated in waters above 3.5°C (Figure S18C), *P. aculeata* in waters above 4.5°C (Figure S18D), and *Pennatula* sp. above 2.5°C (Figure S18F).

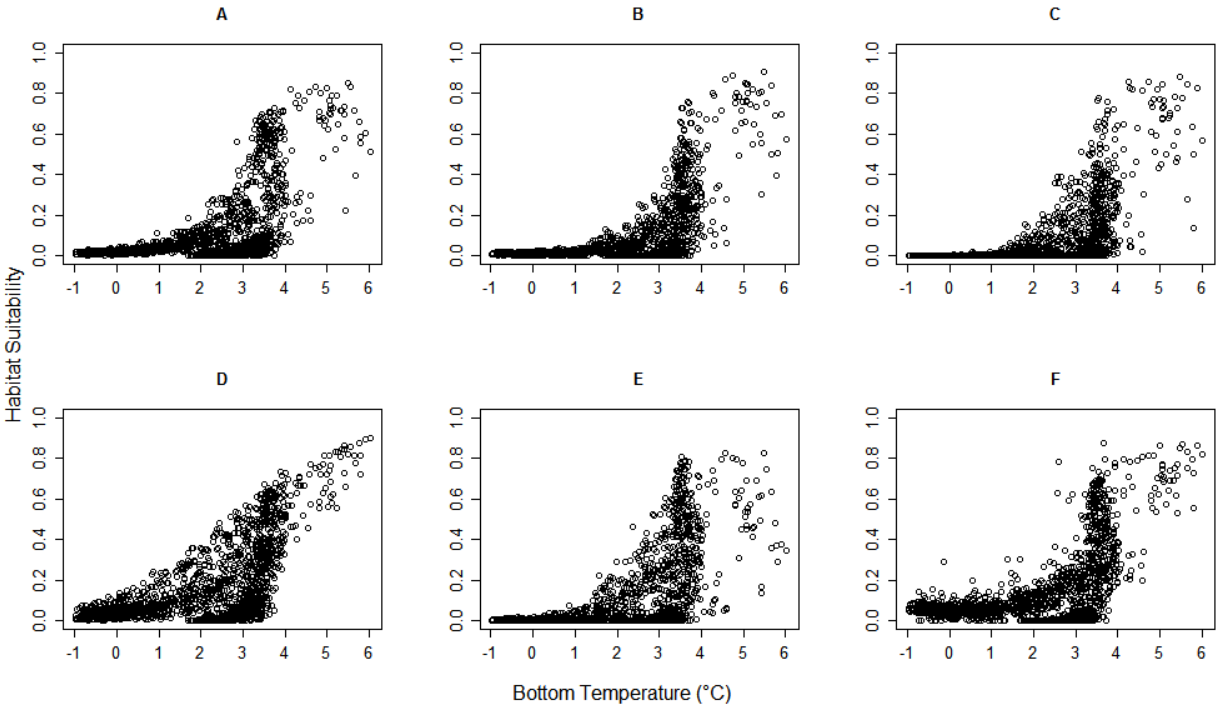

Figure S18: Comparisons of habitat suitability scores for species of Sea Pen corals with respect to bottom temperature (°C) (A = *Anthoptilum grandiflorum*, B = *Funiculina quadrangularis*, C = *Halipteris finmarchica*, D = *Pennatula aculeata*, E = *Pennatula grandis*, F = *Pennatula* sp.)

Based on salinity, suitable habitats for *A. grandiflorum*, *F. quadrangularis*, and *P. grandis* were restricted to bottom salinity ranges of 34.7 – 34.9 PSU (Figures S19A, S19B & S19E). *H. finmarchica* occupied salinities between 34.5 and 34.9 PSU (Figure S19C), *P. aculeata* between 34 and 34.9 PSU (Figure S19D), and *Pennatula* sp. between 34.3 and 35 PSU (Figure S19F)

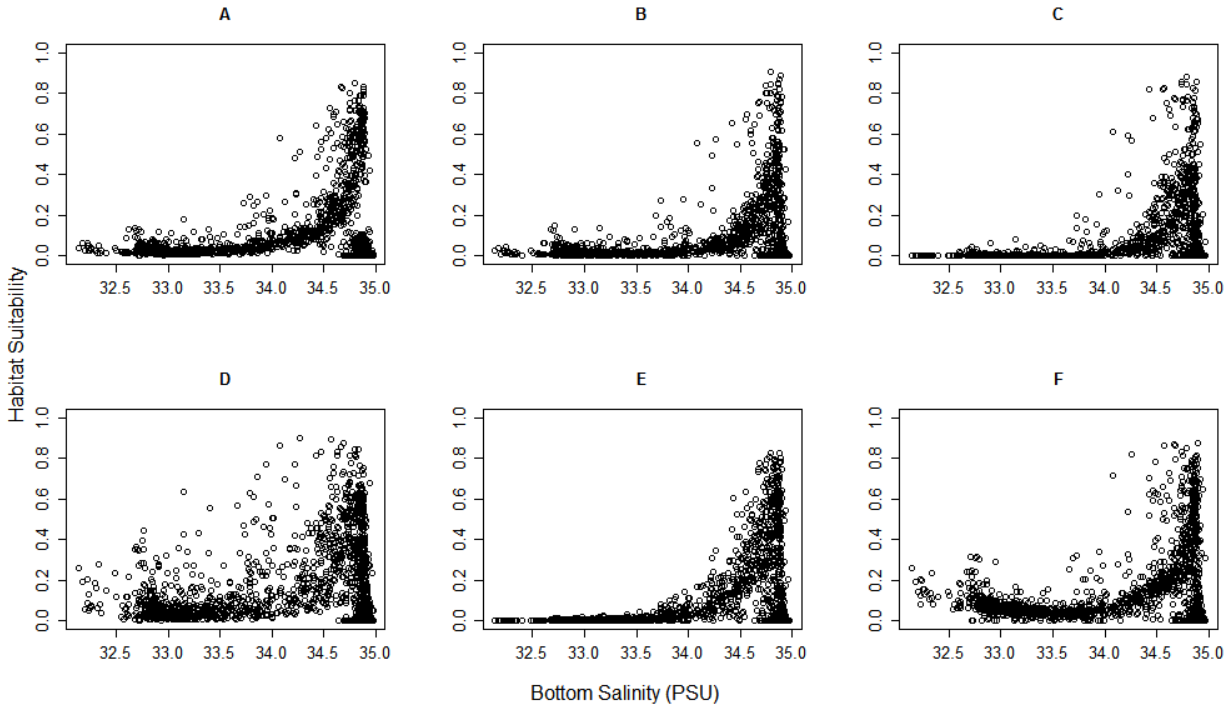

Figure S19: Comparisons of habitat suitability scores for species of Sea Pen corals with respect to bottom salinity (PSU) (A = *Anthoptilum grandiflorum*, B = *Funiculina quadrangularis*, C = *Halipteris finmarchica*, D = *Pennatula aculeata*, E = *Pennatula grandis*, F = *Pennatula* sp.)

Slope ranges were unable to be used to discriminate between sea pens, as all modelled species were found to have highest habitat suitability in areas with slope below 9° (Figure S20A – S20F).

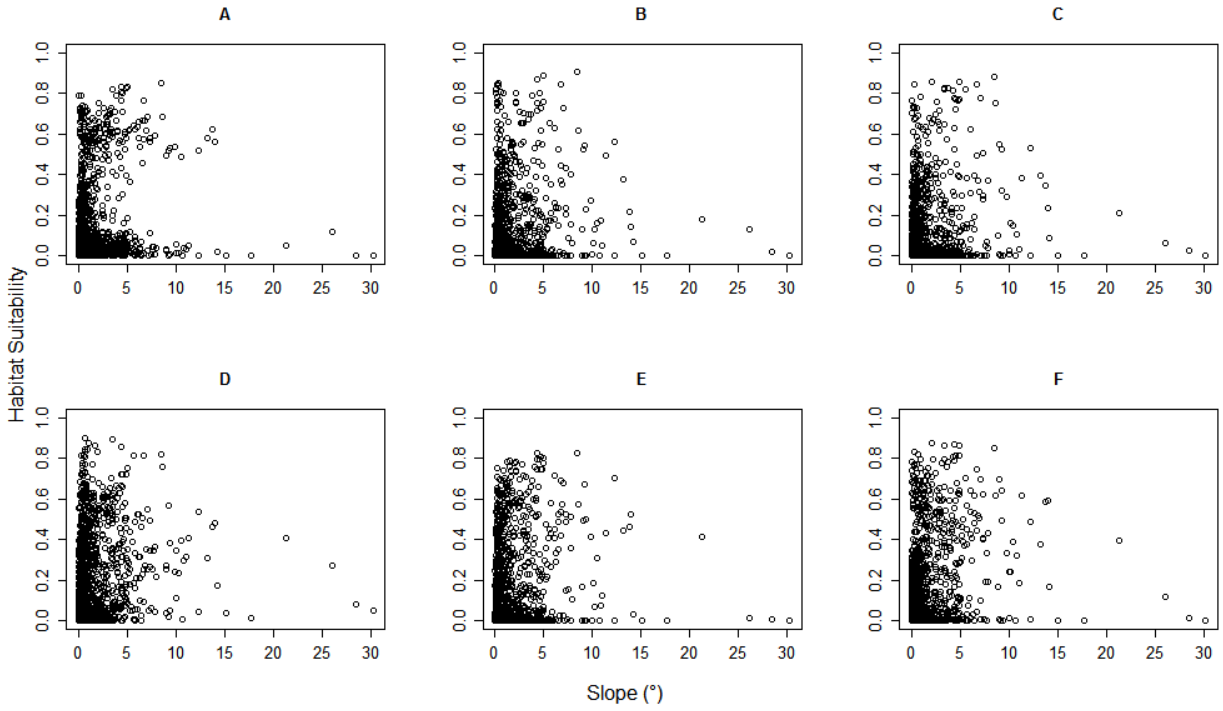

Figure S20: Comparisons of habitat suitability scores for species of Sea Pen corals with respect to slope (0°-90°) (A = *Anthoptilum grandiflorum*, B = *Funiculina quadrangularis*, C = *Halipteris finmarchica*, D = *Pennatula aculeata*, E = *Pennatula grandis*, F = *Pennatula* sp.)

2.2 Soft Corals

Found between 600 and 1,200 m, *A. agaricus* (Figure S21A) presented the widest range of suitable habitats (≥ 0.8), while *Anthomastus* spp. habitats were largely concentrated between 800 and 1,100 m depth (Figure S21B). Although not associated with habitat suitability scores above 0.8, scores were highest for *D. glomerata* between 200 and 500 m (Figure S21C), *Drifa* spp. between 500 and 1,000 m (Figure S21D), *D. florida* between 500 and 1,000 m (Figure S21E), and *Gersemia* spp. between 200 and 400 m (Figure S21F).

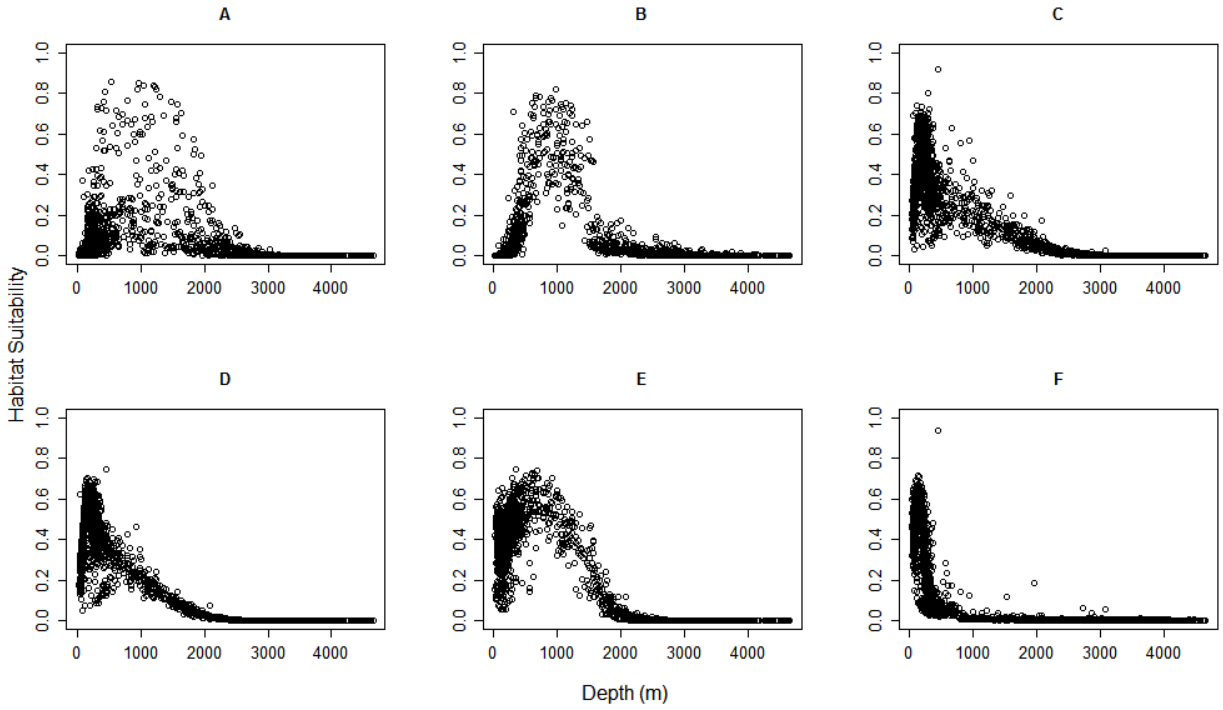

Figure S21: Comparisons of habitat suitability scores for species of soft corals with respect to depth (m) (A = *Anthomastus agaricus*, B = *Anthomastus* spp., C = *Drifa glomerata*, D = *Drifa* spp., E = *Duva florida*, F = *Gersemia* spp.)

A. agaricus was found to be concentrated in 3 - 4°C water (Figure S22A), while *Anthomastus* spp. occupied a smaller range between 3.5 and 4°C (Figure S22B). *D. glomerata* and *Drifa* spp. were found across a broader range of temperatures (0 – 2°C), none of which were associated with habitat suitability scores above 0.8 (Figure S22C & S22D). *D. florida* was also found over a broad range of temperatures; however, the species was most concentrated between 3 and 4°C (Figure S22E). Habitat suitability for *Gersemia* spp. was highest at -0.5°C (Figure S22F).

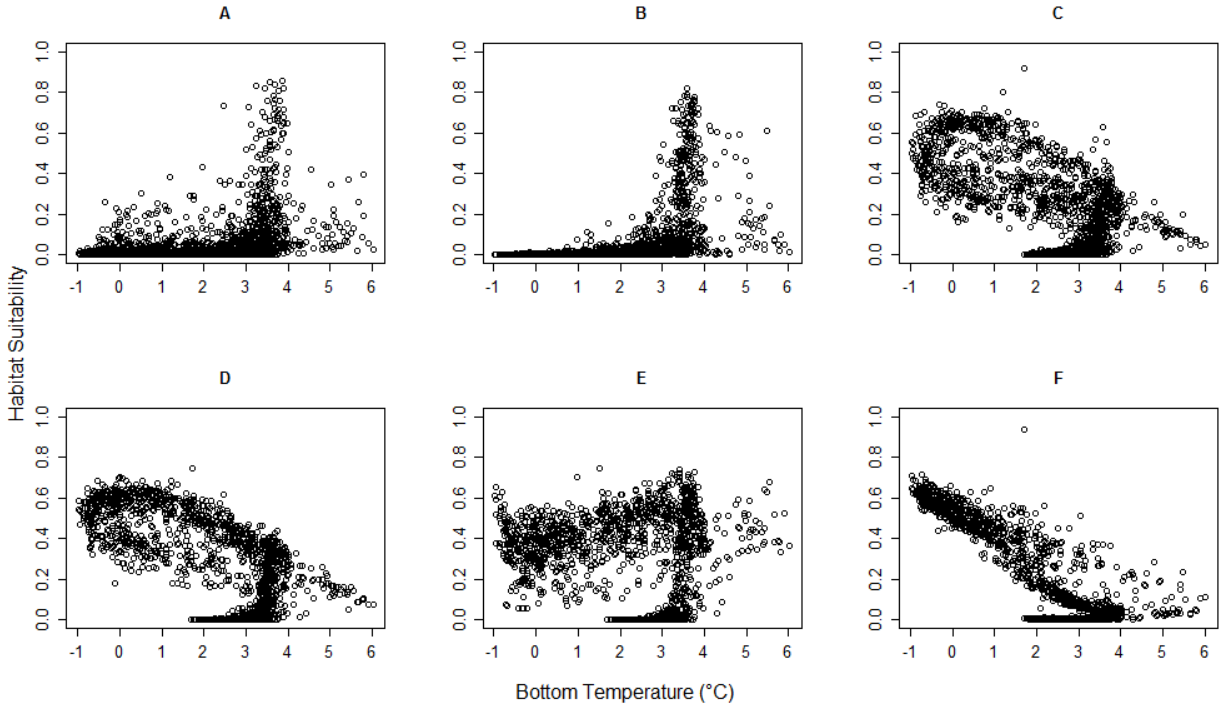

Figure S22: Comparisons of habitat suitability scores for species of soft corals with respect to bottom temperature (°C) (A = *Anthomastus agaricus*, B = *Anthomastus* spp., C = *Drifa glomerata*, D = *Drifa* spp., E = *Duva florida*, F = *Gersemia* spp.)

Salinity was only able to clearly define habitats for *A. agaricus* and *Anthomastus* spp. whose suitable ranges fell between 34.7 and 34.9 PSU (Figure S23A), and 34.8 and 34.9 PSU, (Figure S23B) respectively. Suitability scores for the remaining species did not reach 0.8. However, concentrations of *D. glomerata* and *Drifa* spp. were found over a broad range of salinities (Figures S23C & S23D), while *D. florida* was most common between 34.7 and 34.9 PSU (Figure S23E). G*ersemia* spp. was found to occupy the lowest range of salinities, peaking between 33 and 33.5 PSU (Figure S23F).

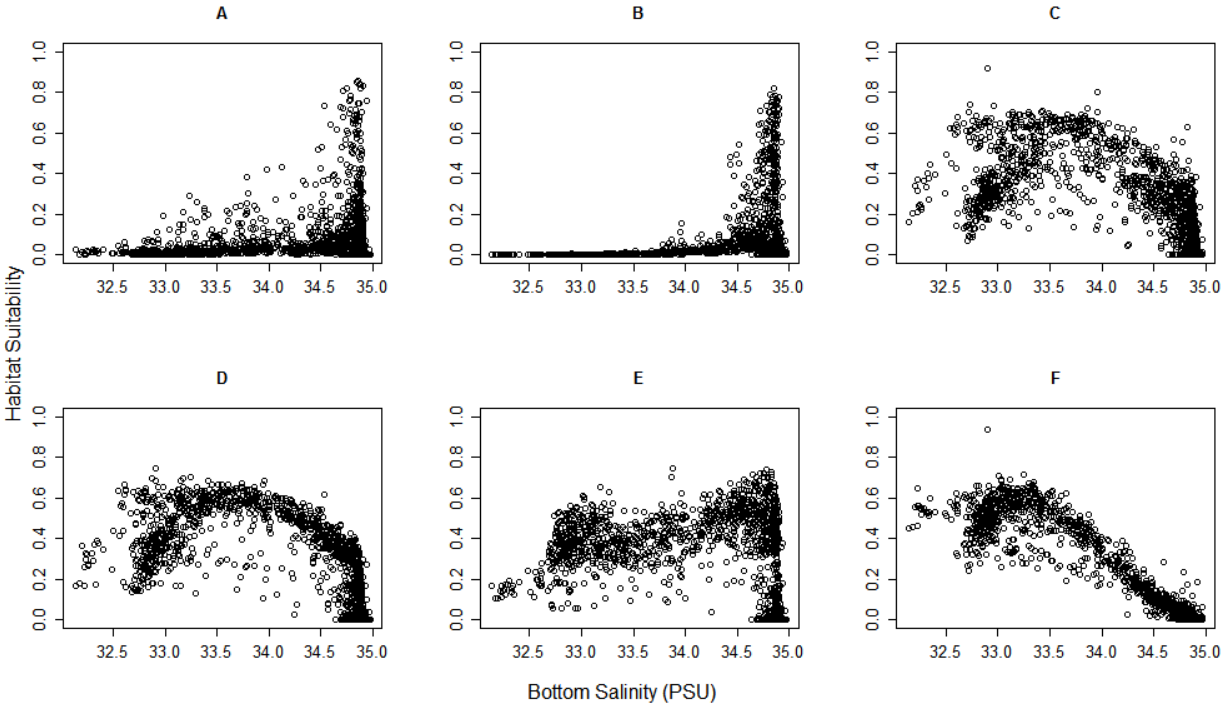

Figure S23: Comparisons of habitat suitability scores for species of soft corals with respect to bottom salinity (PSU) (A = *Anthomastus agaricus*, B = *Anthomastus* spp., C = *Drifa glomerata*, D = *Drifa* spp., E = *Duva florida*, F = *Gersemia* spp.)

Highest habitat suitability scores for *A. agaricus* were between 2.5 and 7° slope (Figure S24A), while *Anthomastus* spp. were distributed more broadly in areas where slopes were less than 13° (Figure S24B). As seen with bottom salinity, habitat suitability scores associated with slope did not reach 0.8 for the remaining soft coral species. However, the highest concentrations of *D. glomerata* and *Drifa* spp. existed where slopes were less than 6° (Figure S24C & S24D), for *D. florida* where slopes were less than 10° (Figure 24E), and for *Gersemia* spp. where slopes were less than 3° (Figure S24F).

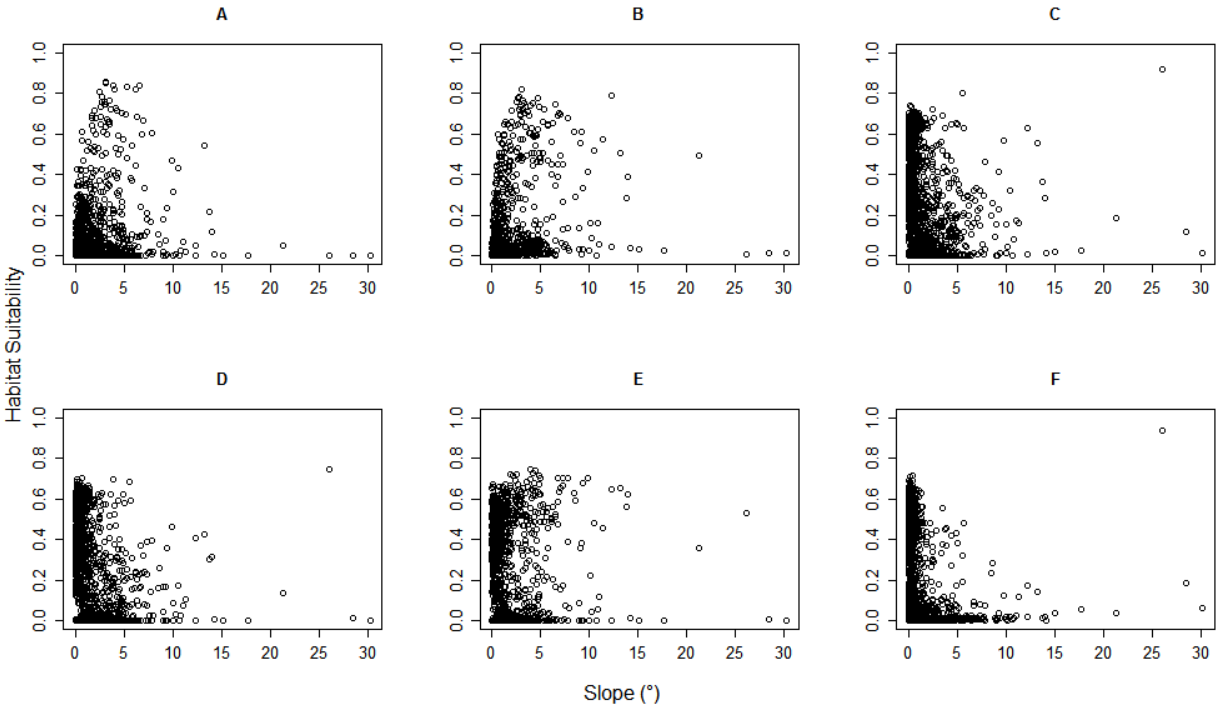

Figure S24: Comparisons of habitat suitability scores for species of soft corals with respect to slope (0°-90°) (A = *Anthomastus agaricus*, B = *Anthomastus* spp., C = *Drifa glomerata*, D = *Drifa* spp., E = *Duva florida*, F = *Gersemia* spp.)

Supplement 3.

3. AREAS OF CONSERVATION PRIORITY

3.1 Sea Pens

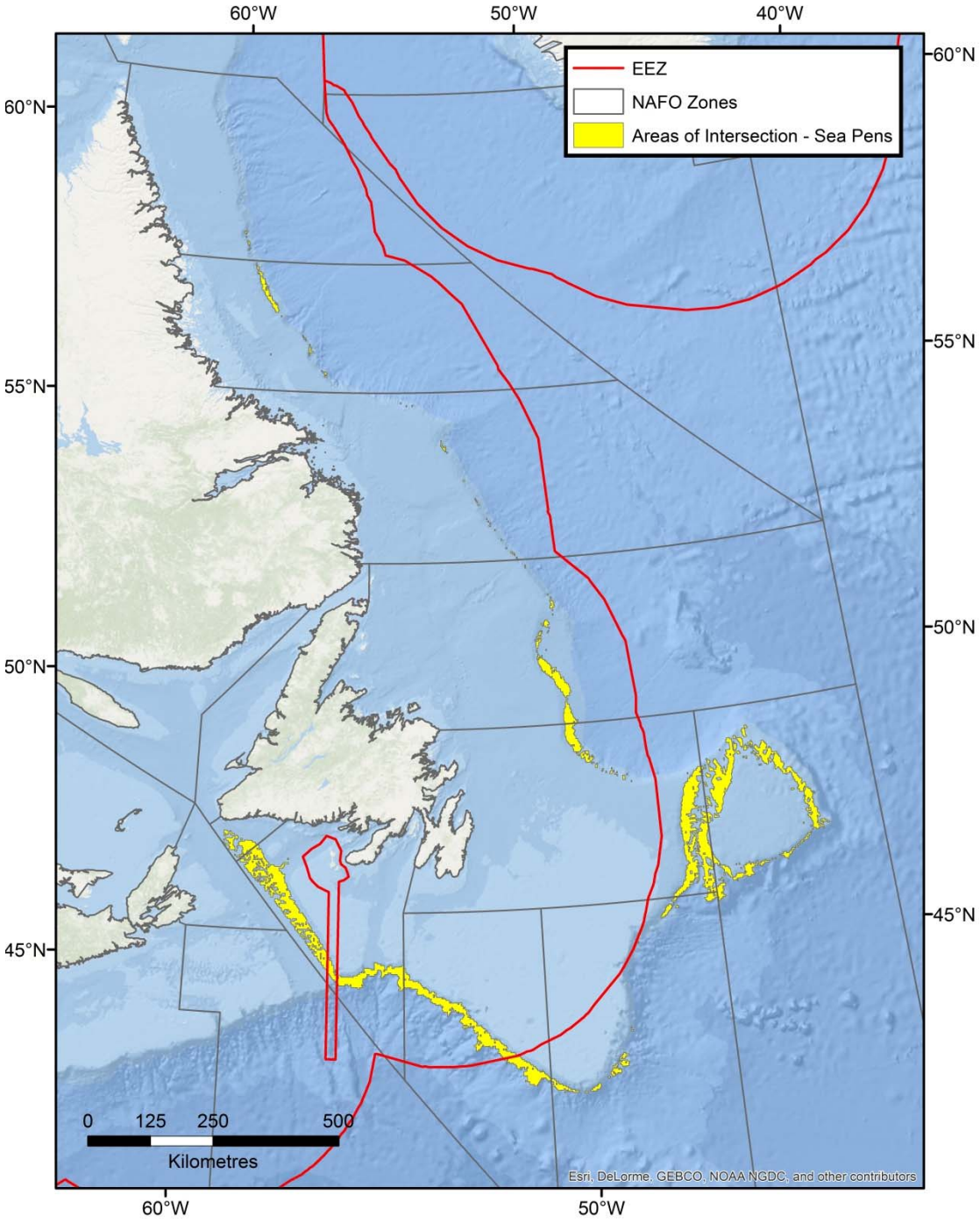

Figure S25: Areas where suitable habitat for sea pens species (n=6) intersected.

3.2 Soft Corals

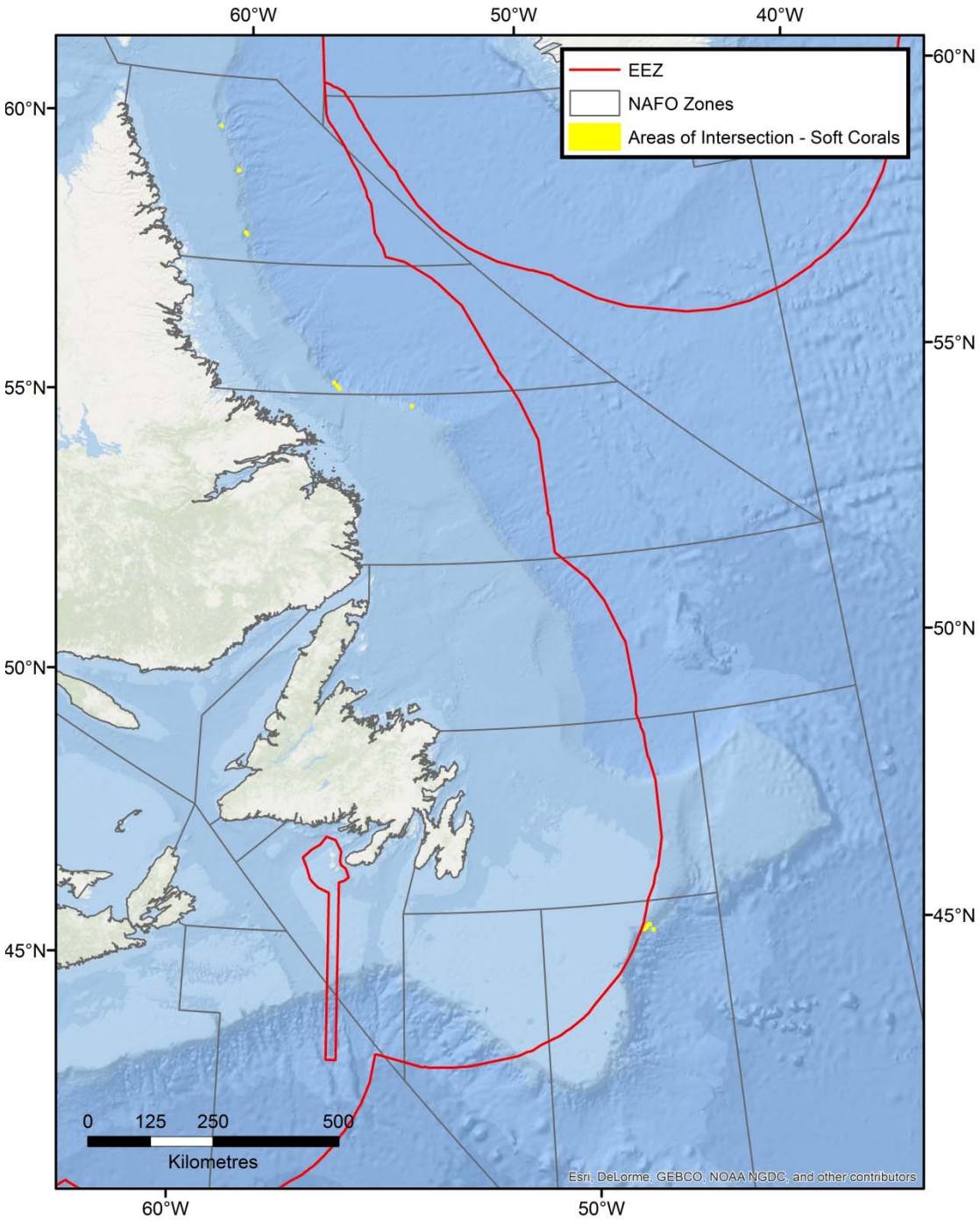

Figure S26: Areas where suitable habitat for soft coral species (n=6) intersected.

Table S17: Values of niche overlap (I) calculated for SDMs at the species level. Cells highlighted grey indicate models where $I < 0.5$.

	A. arbuscula	*A. armata*	*A. agaricus*	*Anthomastus* spp.	*A. grandiflorum*	*D. glomerata*	*Drifa* spp	*D. florida*	*F. alabastrum*	*F. quandrangularis*	*Gersemia* spp.	*H. finmarchica*	*K. grayi*	*P. arborea*	*Paramuricea* spp.	*P. aculeata*	*P. grandis*	*Pennatula* sp.	*S. arctica*
A. arbuscula	-	0.94	0.88	0.93	0.95	0.75	0.74	0.83	0.94	0.89	0.54	0.85	0.86	0.87	0.94	0.92	0.90	0.91	0.90
A. armata	-	-	0.91	0.89	0.91	0.81	0.79	0.85	0.90	0.83	0.61	0.77	0.79	0.79	0.90	0.92	0.85	0.88	0.95
A. agaricus	-	-	-	0.86	0.83	0.72	0.70	0.76	0.83	0.72	0.50	0.65	0.69	0.79	0.92	0.81	0.76	0.79	0.88
Anthomastus spp.	-	-	-	-	0.92	0.60	0.59	0.72	0.93	0.88	0.34	0.85	0.79	0.82	0.96	0.85	0.93	0.87	0.90
A. grandiflorum	-	-	-	-	-	0.74	0.74	0.85	0.98	0.95	0.54	0.92	0.86	0.84	0.90	0.94	0.95	0.95	0.91
D. glomerata	-	-	-	-	-	-	0.99	0.95	0.68	0.67	0.93	0.57	0.69	0.67	0.62	0.79	0.64	0.76	0.78
Drifa spp	-	-	-	-	-	-	-	0.96	0.68	0.68	0.94	0.59	0.69	0.67	0.61	0.78	0.65	0.77	0.77
D. florida	-	-	-	-	-	-	-	-	0.81	0.81	0.86	0.74	0.81	0.77	0.72	0.88	0.79	0.89	0.84
F. alabastrum	-	-	-	-	-	-	-	-	-	0.96	0.47	0.93	0.86	0.83	0.92	0.93	0.95	0.94	0.89
F. quandrangularis	-	-	-	-	-	-	-	-	-	-	0.49	0.98	0.91	0.79	0.84	0.92	0.96	0.96	0.85
Gersemia spp.	-	-	-	-	-	-	-	-	-	-	-	0.38	0.57	0.50	0.36	0.62	0.41	0.61	0.59
H. finmarchica	-	-	-	-	-	-	-	-	-	-	-	-	0.87	0.75	0.81	0.87	0.95	0.91	0.77
K. grayi	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81	0.78	0.87	0.85	0.91	0.79
P. arborea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	0.82	0.82	0.81	0.76
Paramuricea spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.84	0.88	0.85	0.88
P. aculeata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.92	0.96	0.90
P. grandis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.94	0.87
Pennatula sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.91
S. arctica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table S18: Values of niche overlap (*I*) calculated for SDMs of the large gorgonian functional group compared to those calculated for the individual species of large gorgonian corals.

	Large Gorgonians	*K. grayi*	*P. arborea*	*Paramuricea spp.*	*A. armata*
Large Gorgonians	-	0.79	0.84	0.95	0.96
K. grayi	-	-	0.81	0.78	0.79
P. arborea	-	-	-	0.85	0.79
Paramuricea spp.	-	-	-	-	0.90
A. armata	-	-	-	-	-

Table S19: Values of niche overlap (*I*) calculated for SDMs of the sea pen functional group compared to those calculated for the individual species of sea pen corals.

	Sea Pens	*A. grandiflorum*	*F. quadrangularis*	*H. finmarchica*	*Pennatula sp.*	*P. aculeata*	*P. grandis*
Sea Pens	-	0.96	0.94	0.88	0.95	0.93	0.91
A. grandiflorum	-	-	0.95	0.92	0.95	0.94	0.95
F. quadrangularis	-	-	-	0.98	0.96	0.92	0.96
H. finmarchica	-	-	-	-	0.91	0.87	0.95
Pennatula sp.	-	-	-	-	-	0.96	0.94
P. aculeata	-	-	-	-	-	-	0.92
P. grandis	-	-	-	-	-	-	-

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Edinger, E, Baker, K, Devillers, R, Wareham, V (2007a) Coldwater Corals off Newfoundland and Labrador: Distribution and Fisheries Impacts. WWF-Canada, Toronto