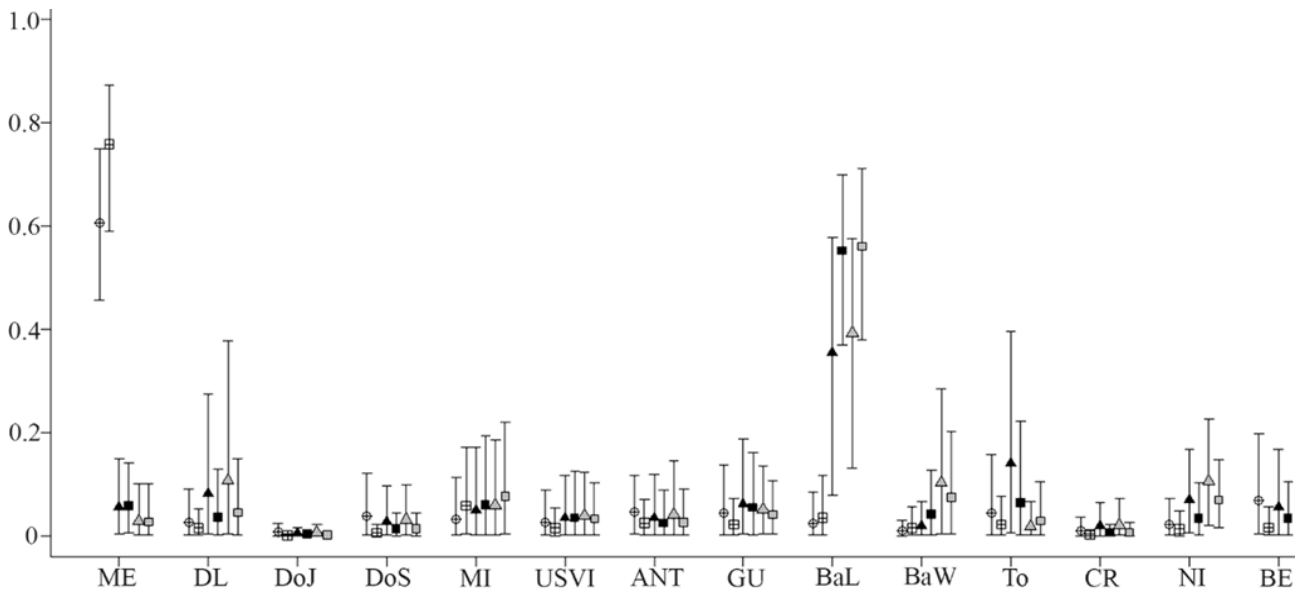
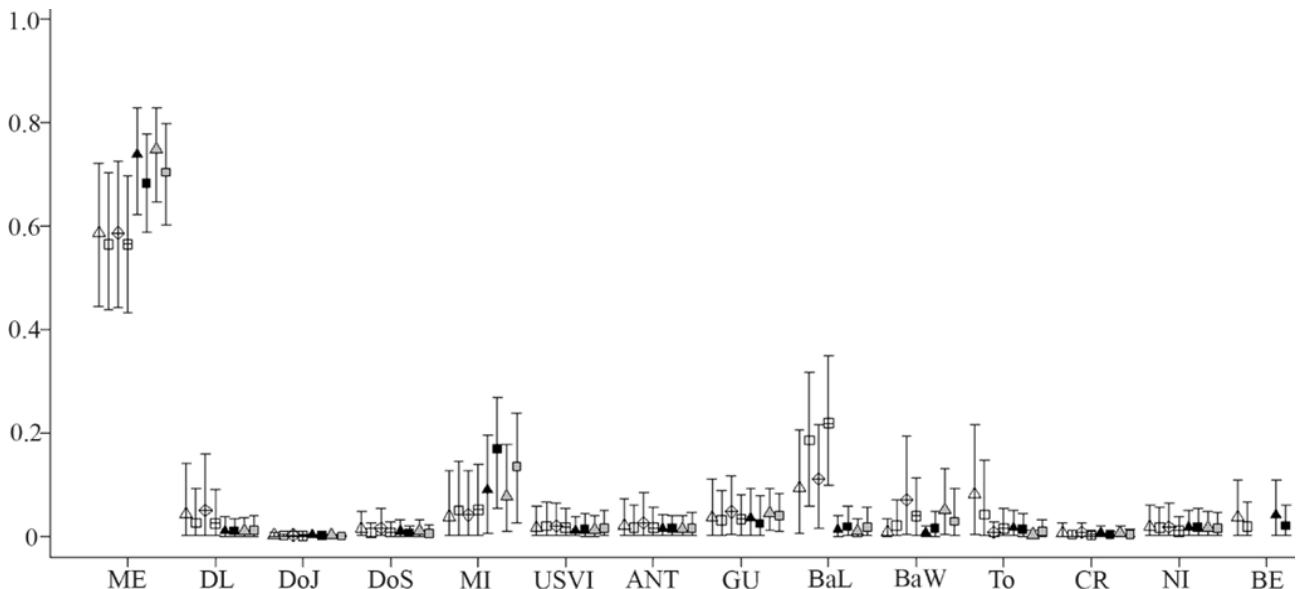


Supplementary Material 1 Mixed stock analysis of the foraging or breeding aggregations (not in Jardines del Rey) assayed in the present study



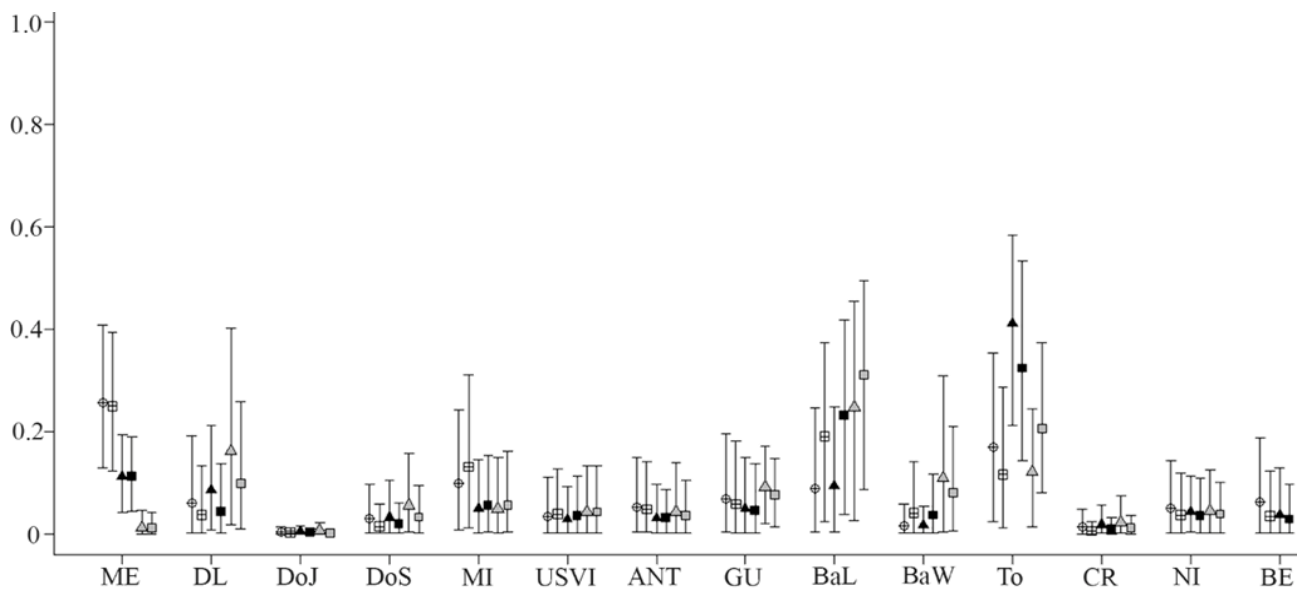
Supplementary Material 1A Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult feeding aggregations in Rio Lagartos (striped: 384 bp) and Tobago windward coast (black: 384 bp, gray: 740 bp)

Note: Circles: MSAoa for decade of 1990, triangles: MSAoa of the decade of 2000, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



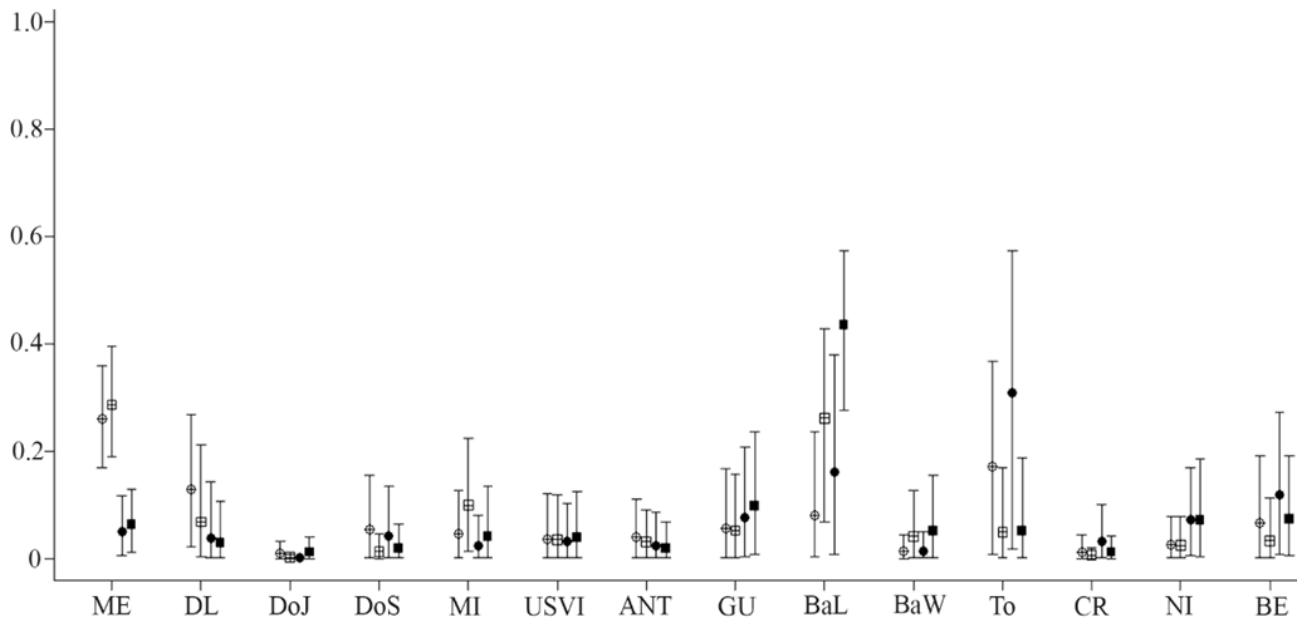
Supplementary Material 1B Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult feeding aggregations in Key West National Wildlife Refuge (vertically striped: 384 bp, horizontally striped: 740 bp) and Palm Beach County (black: 384 bp, gray: 740 bp), Florida

Note: Triangles and diamonds: MSAoa, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



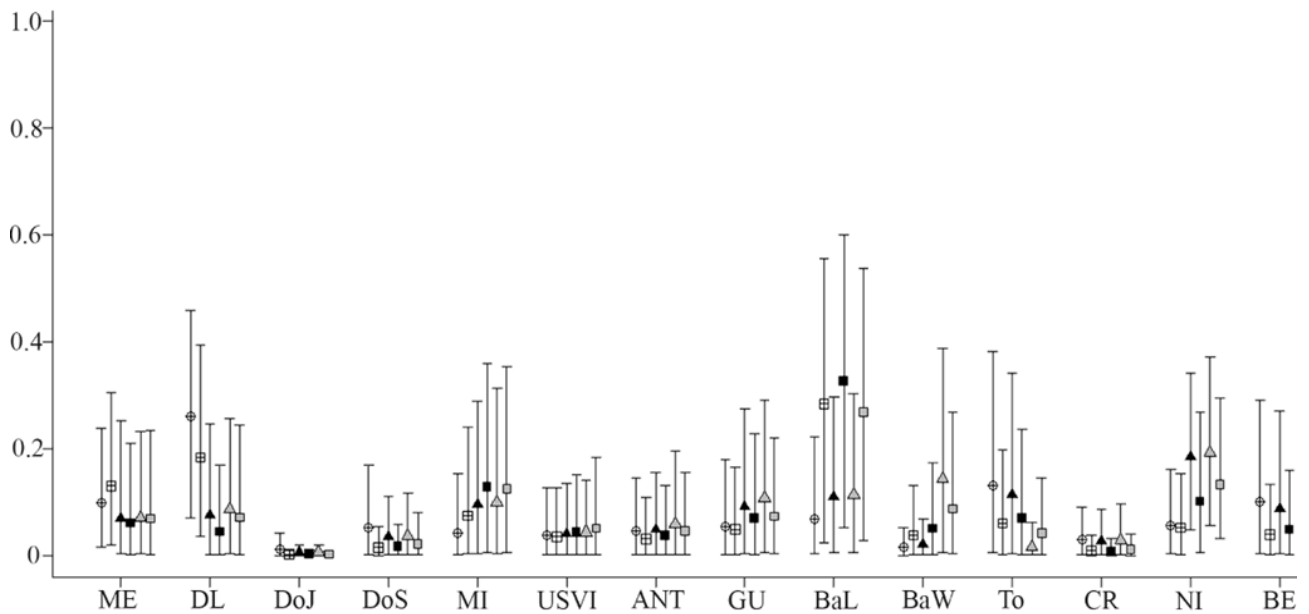
Supplementary Material 1C Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult feeding aggregations in Turks and Caicos (striped: 384 bp) and Cayman Islands (black: 384 bp, gray: 740 bp)

Note: Circles and triangles: MSAoa, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



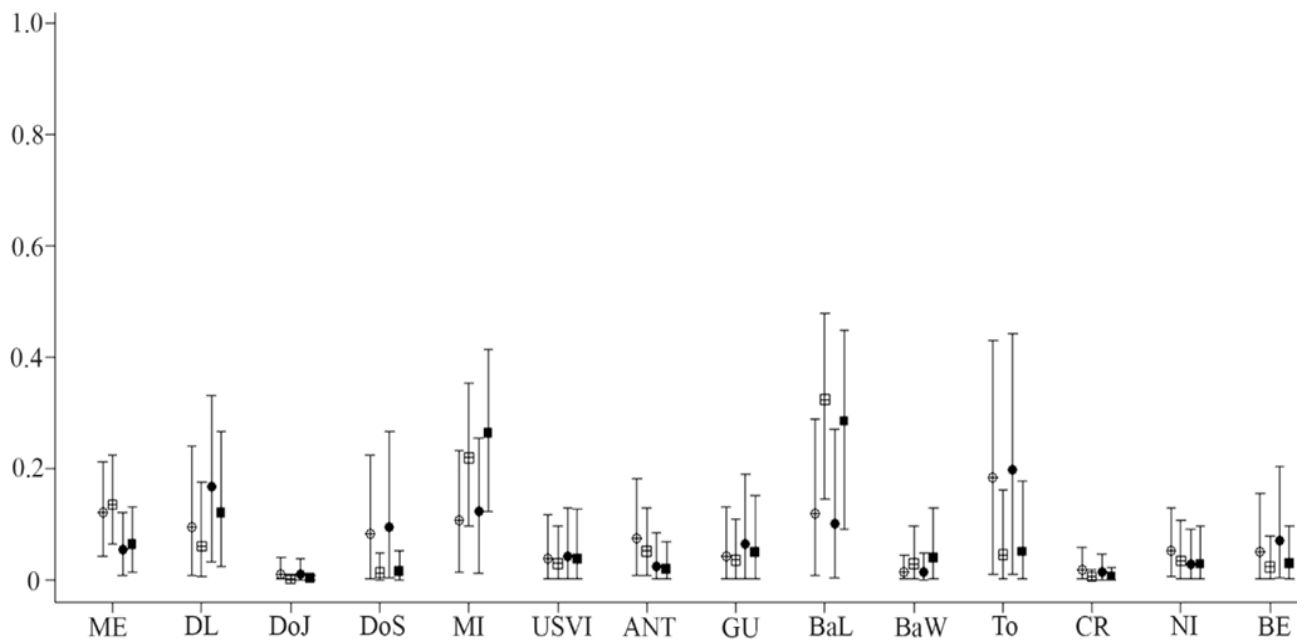
Supplementary Material 1D Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult feeding aggregations in Bahamas (striped: 384 bp) and Dominican Republic (black: 384 bp)

Note: Circles: MSAoa, squares: MSAgr; ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



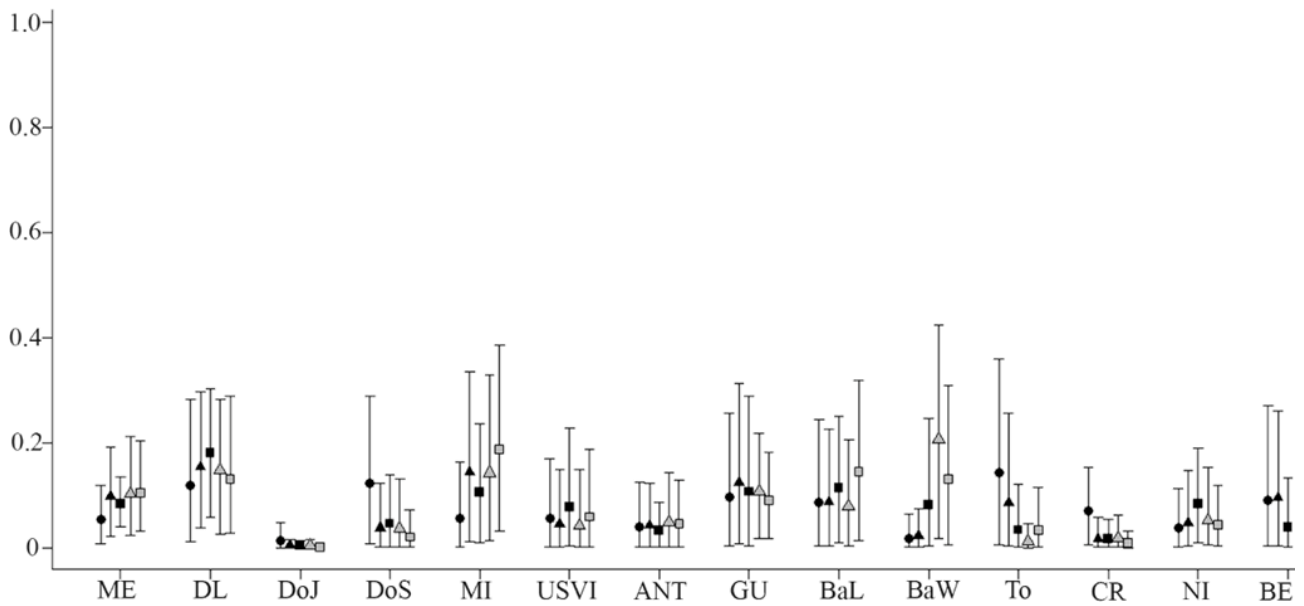
Supplementary Material 1E Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult fishing aggregations in Doce Leguas (striped: 384 bp) and Tobago leeward coast feeding aggregation (black: 384 bp, gray: 740 bp)

Note: Circles and triangles: MSAoa, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



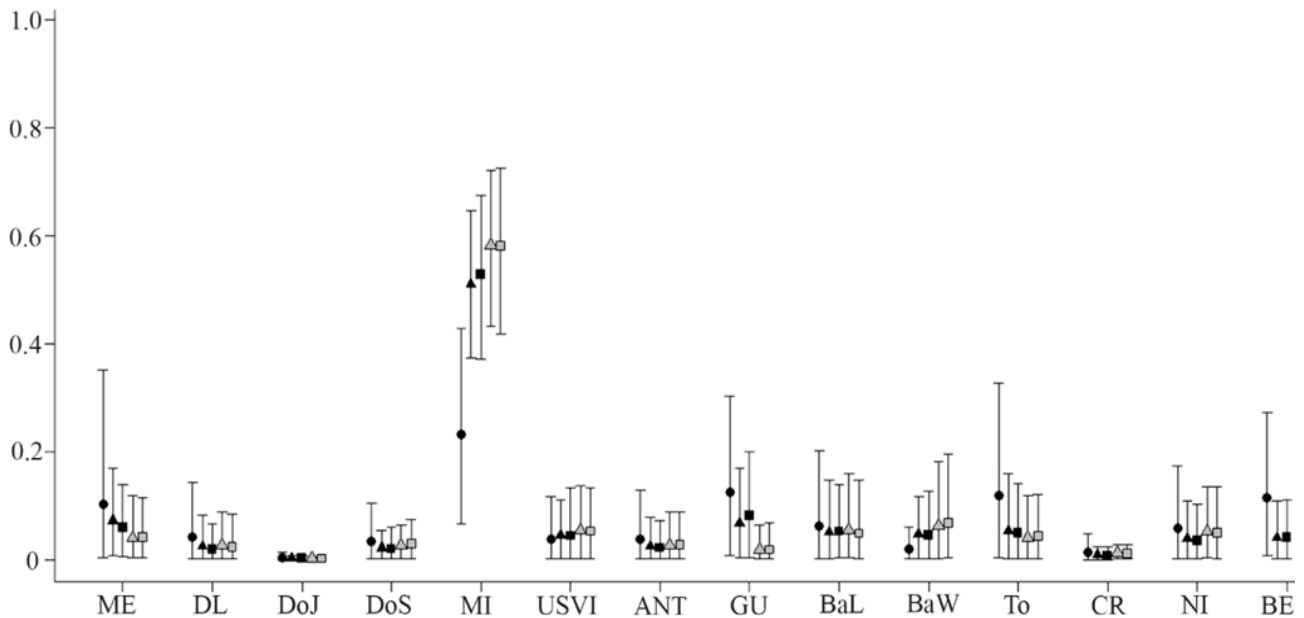
Supplementary Material 1F Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult aggregations of Buck Island (striped: 384 bp) and Cocodrilo (black: 384 bp)

Note: Circles: MSAoa, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



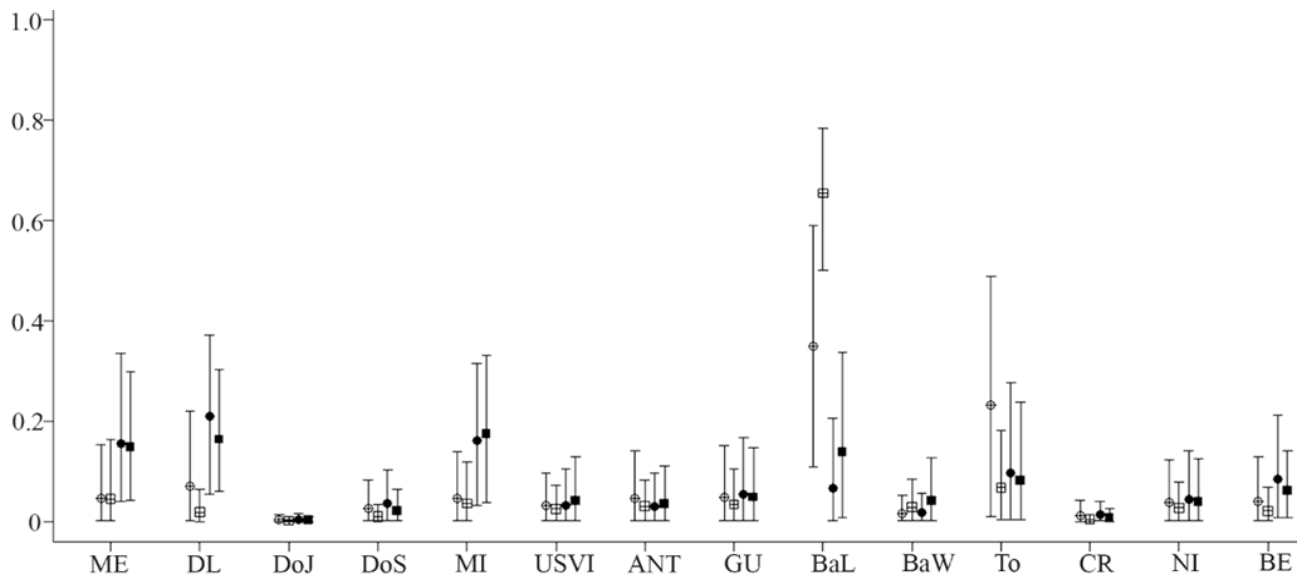
Supplementary Material 1G Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the non-adult feeding aggregations of Mona Island (black: 384 bp, gray: 740 bp)

Note: Circles: D íz-Fern ández (1999), triangles: platform resident individuals from Velez-Zuazo et al. (2008), squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



Supplementary Material 1H Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the adult aggregations of Mona Island (black: 384 bp, gray: 740 bp)

Note: Circles: D íz-Fern ández (1999), triangles: breeding males aggregation from Velez-Zuazo et al. 2008, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize



Supplementary Material II Mixed stock analysis (foraging ground-centric) results showing mean proportional contribution ± 2.5 –97.5% confidence intervals for the adult fishing aggregations of Doce Leguas (striped: 384 bp) and Cocodrilo (black: 384 bp). Circles: MSAoa, squares: MSAgr. ME: Las Coloradas, ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize

Supplementary Material 2 Annual haplotype frequencies of source populations (rookeries) of *E. imbricata* in the Wider Caribbean employed in the MSAs according to our approach, and rookery sizes (Nr, number of nesting females/ year) used in the present study

Haplotypes (bp)	Rookeries															
	384 ¹	740 ²	ME ^{3,4}	DL ^{3B,5}	DoJ ⁶	DoS ⁶	MI ^{3,7C}	USVI ^{4,8}	ANT ^{1,4}	GU ⁹	BaL ¹⁰	BaW ¹⁰	To ¹¹	CR ^{4,12}	NI ⁴	BE ¹
A	EiA01		33		1	3	1	3	16	2	41	1	24 ^A			
α	EiA02													2	2	
	EiA52													1		
B	EiA03		2					1	12							
F	EiA09			2		1	1			55		3	2	1		
	EiA11			3	22	28	27	1				9	9	7	7	11
F+10	EiA84														1	
G	EiA12									1				1		1
Y	EiA13		1													
H	EiA14															1
I	EiA15															1
L	EiA18				2	1										
	EiA47			1										1		
N	EiA20				6	16	2									
O	EiA21					2										
P	EiA22	1														
Q+10	EiA25	1														
	EiA23	30		4			1									
Q	EiA41	1														
	EiA24															
	EiA43	3		4		1						1			2	

Continued Supplementary Material 2

Haplotypes (bp)	Rookeries														
384 ¹	740 ²	ME ^{3,4}	DL ^{3B,5}	DoJ ⁶	DoS ⁶	MI ^{3,7C}	USVI ^{4,8}	ANT ^{1,4}	GU ⁹	BaL ¹⁰	BaW ¹⁰	To ¹¹	CR ^{4,12}	NI ⁴	BE ¹
	EiA28											3			
	EiA29		1												
	EiA30		1										1		
	EiA65														1
	EiA72											1			
Total		36	38	15	33	50	35	31	58	41	13	40	14	13	14
Nr _{1980s}		129 ¹³	66 ¹⁴	6*	46*	39 ¹³	23 ¹³	29 ¹³	40 ¹³	52 ^{10,18}	8 ^{10,18}	112*	14 ¹³	25 ¹⁹	63*
Nr _{1990s}		583 ¹³	66 ¹⁴	3*	23*	99 ¹³	26 ¹³	33 ¹³	66 ¹³	90 ^{10,18}	13 ^{10,18}	112*	12*	43*	63 ¹³
Nr _{2000s}		745 ¹³	100 ¹⁵	3 ¹⁶	23 ¹⁶	247 ¹³	56 ¹³	52 ¹³	88 ¹⁷	422 ^{10,18}	61 ^{10,18}	112 ¹¹	10 ¹³	61 ²⁰	56 ¹³

Note: ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize. ¹Bass et al. (1996), ²Abreu-Grobois et al. (2006), ³D íz-Fern ández et al. (1999), ⁴Leroux et al. (2012), ⁵Project WWF-Canada "Population genetics of hawksbill *Eretmochelys imbricata*: new data for its conservation in Cuba and the Caribbean region" (2004 nesting season), ⁶Carreras et al. (2013), ⁷Velez-Zuazo et al. (2008), ⁸Bass (1999), ⁹Peter Dutton (personal communication), ¹⁰Browne et al. (2010), ¹¹Cazabon-Mannette et al. (2016), ¹²Tro öng et al. (2005), ¹³Mortimer and Donnelly (2007), ¹⁴Moncada et al. (1999) ¹⁵Moncada et al. (2010), ¹⁶Revuelta et al. (2012), ¹⁷Kamel and Delcroix (2009), ¹⁸Beggs et al. (2007), ¹⁹Incer (1984), ²⁰Lagueux et al. (2003), ^Awith 384 bp exist an additional haplotype A, ^Bnesting season of 1997, ^Cnesting season of 2003, *assumed in this study

Supplementary Material 3A Haplotype frequencies of the decade of 1990 of non-adult and adult (square bracket) aggregations of *E. imbricata* in the Wider Caribbean used in the MSAs according to our approach. For MSA of non-adult and adult aggregations were used the Nr_{1980s} and Nr_{1990s} respectively (see the values in Supplementary Material 2)

Haplotype (bp)	Aggregations									
	384 ¹	740 ²	RL ³	JR ³	DL ³	IJ ³	BA ⁴	Do ⁴	USVI ⁴	MI ⁴
A	EiA01			6 [7]	8 [20]	34 [10]	28	42	28	29 [2]
	EiA61									
	EiA68									
α	EiA02			1 [1]	2	1	1	6	3	3
	EiA52									
B	EiA03	1		[1]			1	2		1
C	EiA05									
F	EiA09	1			1	9 [1]	20			7
	EiA11							30	17	
	EiA45	1		3 [7]	3 [2]	18 [6]				31 [5]
F+10	EiA84									
G	EiA12			[1]				2		[1]
Y	EiA13			1	1	2 [4]			1	
H	EiA14									
I	EiA15									
L	EiA18									
	EiA47			1 [1]		[1]		1		2
N	EiA20			1		7 [3]	2		6	3 [2]
O	EiA21									
P	EiA22	2					1			
Q+10	EiA25									

Continued Supplementary Material 3A

Haplotype (bp)		Aggregations							
384 ¹	740 ²	RL ³	JR ³	DL ³	IJ ³	BA ⁴	Do ⁴	USVI ⁴	MI ⁴
Q	EiA23	12			[2]	21			
	EiA41		3 [1]	2			6	9	6
	EiA24	1							
	EiA43				5 [2]				
	EiA28								
	EiA29			3	2 [1]	3			
	EiA30		[2]	1					5
	EiA65 EiA72								
Total		18	16 [21]	21 [22]	78 [30]	77	87	66	87 [10]

Note: RL: R ó Lagartos, Yucatan, Mexico; JR: Jardines del Rey, Cuba; DL: Doce Leguas, Cuba; IJ: Cocodrilo, Isla de la Juventud, Cuba; BA: Bahamas; Do: south of Dominican Republic; USVI: Buck Island, United States Virgin Islands; MI: Mona Island, Puerto Rico. [#]: adult individuals, ¹Bass et al. (1996), ²Abreu-Grobois et al. (2006), ³D íz-Fern ández (1999), ⁴Bowen et al. (2007)

Supplementary Material 3B Haplotype frequencies of the decade of 2000 of non-adult and adult (square bracket) aggregations of *E. imbricata* in the Wider Caribbean used in the MSAs according to our approach. For MSA of non-adult and adult aggregations were used the Nr_{1990s} and Nr_{2000s} respectively (see the values in Supplementary Material 2)

Haplotype (bp)		Aggregations									
384 ¹	740 ²	JR04	JR05	JR04-06	FKW ³	FPB ⁴	MI ⁵	ToL ⁶	ToW ⁶	CI ⁷	TnC ⁸
A	EiA01	5	11	[18]	13	2	15 [5]	5	29	44	
	EiA61						1				12
	EiA68						1				
α	EiA02					1	1	4	2	2	1
	EiA52										
B	EiA03	1				1	1			1	1
C	EiA05										
	EiA09			[2]	2	4	6	1	2	8	
F	EiA11	12	6	[12]	5	12	17 [29]	4	9	17	12
	EiA45						2	1			
F+10	EiA84										
G	EiA12					1					
Y	EiA13	1	1	[3]							
H	EiA14										
I	EiA15										
	EiA18						[6]			1	
L	EiA47						[1]				
	EiA20		2			1	2 [9]			1	1
O	EiA21					6	[1]				
P	EiA22	1					1				
Q+10	EiA25										
	EiA23	1	3	[3]	23	48	1 [1]				
Q	EiA41		3	[2]	3	12	2				
	EiA24	2		[4]			[1]			11	9
	EiA43		1	[1]	1	3	1 [2]		2		
	EiA28		1							4	1
	EiA29			[3]			2			1	
	EiA30										
	EiA65 EiA72										2
Total		23	28	[48]	47	91	53 [55]	15	44	86	36

Supplementary Material 4 Cumulative haplotype frequencies (384 bp) of rookeries and non-adult and adult (square brackets) aggregations of *E. imbricata* in the Wider Caribbean used in the different MSAs grouped

Haplotypes ¹	Rookeries										Aggregations																		
	ME ^{2,3}	DL ^{2,4}	DoJ ⁵	DoS ⁵	MI ^{2,3}	USVI ^{3,6,7}	ANT ^{1,3}	GU ³	BaL ⁸	BaW ⁸	To ⁹	CR ^{3,7}	NI ³	BE ¹	RL ¹⁰	FKW ¹¹	FPB ¹²	BA ⁷	JR ^{10,13}	DL ¹⁰	IJ ¹⁰	Do ⁷	USVI ⁷	MI ^{2,7,14}	ToL ⁹	ToW ⁹	CI ¹⁵	TnC ¹⁶	
A		69	1	3	3	13	42	2	54	3	25					13	2	28	23 [25]	8 [20]	34 [10]	42	28	53 [7]	5	29	44	12	
α											15	19				1	1	1 [1]	2	1	6	3	6	4	2	2	1		
B		2				3	29							1		1	1	[1]				2	3				1	1	
C							2																						
F		1	5	22	74	95	1	71		27	11	42	54	11	2	7	16	20	24 [21]	4 [2]	27 [7]	30	17	80 [34]	6	11	25	12	
F+10												5																	
G								1			8		1			1		[1]				2		[1]					
Y		6																	3 [3]	1	2 [4]		1	2					
H													1																
I													1								[1]								
L			1	2	2						6								1 [1]		[1]	1		3 [7]			1		
N				6	40	4											1	2	3		7 [3]		6	6 [11]			1	1	
O					7												6							[1]					
P	3														2			1	1					1					
Q+10	1																												
Q	69		8		3	1					1	16	13	27	63	21	19 [11]	2			5 [4]	6	9	16 [4]		2	11	9	
CU3		1									4								1 [3]	3				2			1	1	
CU4		1									1							3	[2]	1	2 [1]			5					
EiA28											3																	4	
EiA65												1																	
EiA72											1																	2	
Total	73	80	15	33	129	116	74	74	54	30	40	76	94	14	18	47	91	77	77 [69]	21 [22]	78 [30]	87	66	177 [65]	15	44	86	36	

Note: ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize. [#]: adult individuals, ¹Bass et al. (1996), ²D íz-Fern ández et al. (1999), ³Leroux et al. (2012), ⁴Project WWF-Canada "Population genetics of hawksbill *Eretmochelys imbricata*: new data for its conservation in Cuba and the Caribbean region" (2004 nesting season), ⁵Carreras et al. (2013), ⁶Bass (1999), ⁷Bowen et al. (2007), ⁸Browne et al. (2010), ⁹Cazabon-Mannette et al. (2016), ¹⁰D íz-Fern ández (1999), ¹¹Gorham et al. (2014), ¹²Wood et al. (2013), ¹³this study, ¹⁴Velez-Zuazo et al. (2008), ¹⁵Blumenthal et al. (2009a), ¹⁶Richardson et al. (2009)

Supplementary Material 5 Cumulative haplotype frequencies (740 bp) of rookeries and non-adult and adult (square brackets) aggregations of *E. imbricata* in the Wider Caribbean used in the different MSAs grouped

Haplotypes	Rookeries											Aggregations								
	ME ^{1,2}	DL ^{1,3}	DoJ ⁴	DoS ⁴	MI ^{1,2}	USVI ^{2,5,6}	ANT ^{2,7}	GU ²	BaL ⁸	BaW ⁸	To ⁹	CR ^{2,6}	NI ²	FKW ¹⁰	FPB ¹¹	JR ¹²	MI ^{13A}	ToL ¹⁴	ToW ¹⁴	CI ¹⁵
EiA01		33	1	3	1	3	16	2	41	1	24			13	2	17 [18]	15 [5]	5	29	44
EiA02												2	2		1		1	4	2	2
EiA52												1								
EiA03		2				1	12							1	1	1				1
EiA05							2													
EiA09			2		1	1		55	3	2	1		2	4	[2]	6	1	2	8	
EiA11			3	22	28	27	1		9	9	7	7	5	12	21 [12]	17 [29]	4	9	17	
EiA84												1								
EiA12								1				1		1						
EiA13		1														2 [3]				
EiA18				2	1												[6]		1	
EiA47			1								1						[1]			
EiA20				6	16	2								1	2	2 [9]			1	
EiA21					2									6		[1]				
EiA22	1														1	1				
EiA25	1																			
EiA23	30		4			1							23	48	4 [3]	1 [1]				
EiA41	1												3	12	4 [2]	2				
EiA43	3		4		1					1		2	1	3	1 [1]	1 [2]		2		
EiA28										3									4	
EiA29		1													1 [3]	2			1	
EiA30		1									1									
EiA65												1								
EiA72										1									2	
Total	36	38	15	33	50	35	31	58	41	13	39	14	13	47	91	54 [44]	49 [54]	14	44	81

Note: ME: Las Coloradas, Yucatan, Mexico; DL: Doce Leguas, Cuba; DoJ: Jaragua National Park, Dominican Republic; DoS: Saona Island, Dominican Republic; MI: Mona Island, Puerto Rico; USVI: Buck Island, United States Virgin Islands; ANT: Jumby Bay, Antigua; GU: Trois Ilets, Guadeloupe; BaL: Barbados leeward coast; BaW: Barbados windward coast; To: Tobago; CR: Tortuguero, Costa Rica; NI: Pearl Cays, Nicaragua; BE: Gales Point, Belize. [#]: adult individuals, ¹D íz-Fern ández et al. (1999), ²Leroux et al. (2012), ³Project WWF-Canada "Population genetics of hawksbill *Eretmochelys imbricata*: new data for its conservation in Cuba and the Caribbean region" (2004 nesting season), ⁴Carreras et al. (2013), ⁵Bass (1999), ⁶Bowen et al. (2007), ⁷Bass et al. (1996), ⁸Browne et al. (2010), ⁹Cazabon-Mannette et al. (2016), ¹⁰Gorham et al. (2014), ¹¹Wood et al. (2013), ¹²this study, ¹³Velez-Zuazo et al. (2008), ¹⁴Cazabon-Mannette et al. (2016), ¹⁵Blumenthal et al. (2009a), ^Aplatform resident juveniles and [breeding males]