

Excerpts on genetics from 11/8/22 Wild Night presentation by Mary Duffy

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<u>www.ameliaislandseaturtlewatch.com</u> Find us on Facebook: Amelia Island Sea Turtle Watch

A Little About Genetics

- This is our 7th year of participating in genetic research
- We collected 1 fresh egg from each loggerhead nest
- Preliminary results from 2022



Starts first	GEO FLO	RGIA RIDA									_
Fort Clinch State Park	•		Sta	t Clinc te Par quatic eserve	k						
Amelia Island Lighthouse 😳 🛛 Be	Main ach Park										
Fernandina	Q										
offecti St A	0										
28 S S S S	0										
Egan's Creek O Greenway Trail											
	4										
Walmart 😋	7										
Prena Rino											
Publix Super Not at Island Walk	tet										
1974 No. 1976 1987 1977	Date	Beach	Activity	Eggs	Hatchlings	Nest #	Ref #	New Tags	Old Tags	PIT Tags	DNA ID
	2016-05-10	Amelia Island	Nest	97	90	1	MD1				CC008618
	2016-05-25	Amelia Island	Nest	101	96	21	LC5			1	CC008618
200 3	2016-06-06	Amelia Island	Nest	105	105	54	DHC13	-			CC008618
Amelia Island	2016-06-18	Amelia Island	Nest	124	116	97	SH14				CC008618
	2019-05-15	Amelia Island	Nest	96	79	13	LK1				CC008618
	2019-05-15	Amelia Island	Nest	89	80	68	RBB12				CC008618
		ed nest (26 day									2000010
	2019-06-23	Amelia Island	Nest	114	109	183	VW14				CC008618
	2019-07-04	Amelia Island	Nest	0		237	SRH18				CC008618
							28				
	2022-05-16	Amelia Island	Nest		100	8	SRH2				CC008618
	2022-05-29	Amelia Island	Nest	119	115	44	SRH9				CC008618
	2022-06-09	Amelia Island	Nest	122	117	78	JEL3				CC008618
<u>c</u>	2022-06-19	Amelia Island	Nest	121	112	119	SRH18				CC008618

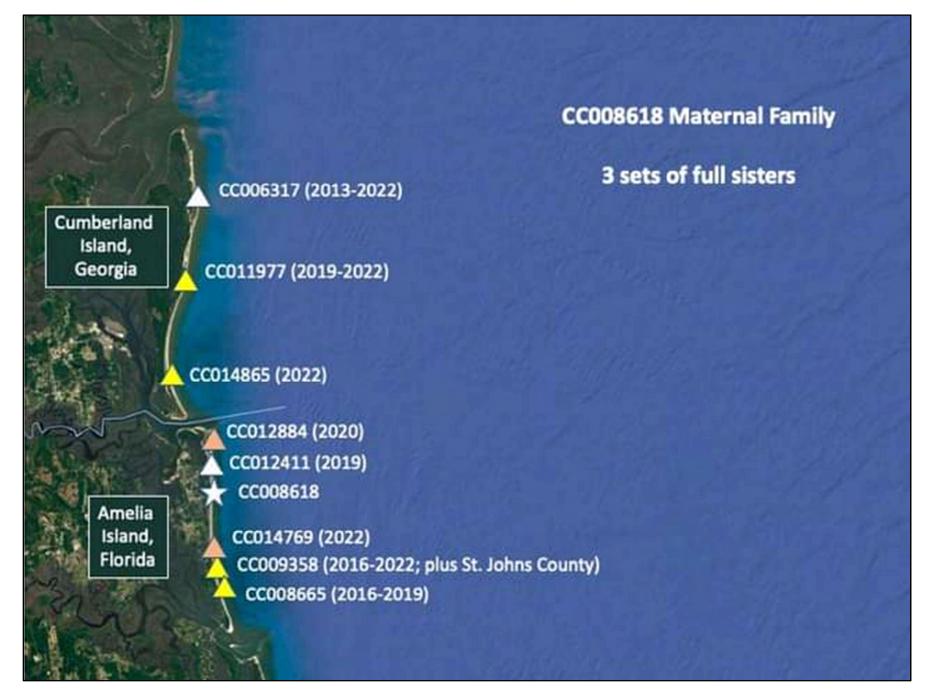
The DNA identifies each turtle named with a number. This turtle, identified as CC008618, returned to northern Amelia Island every three years, laying 4-5 nests each time. The gap in 2019 could be from a nest laid in Fort Clinch State Park, which does not participate in the genetics study.

Odum Jesup Screven 341 son Hortense - 32 (301)	0 0-	7 Plo Island										
ken Nahunta C	2 Dock Junction	Date	Beach	Activity	/ Egg	s Hatchlings	Nest	Ref #	New Tags	uia Tags	P11 Tags	DNA ID
	Brunswick	1 2012-05- 25	Blackbeard	Nest	0	0	6 1	N031	ays	rugs	Tuya	CC0090
Wave	rly 17 Jekyll Island											
		2 2015-06- 12	Cumberland	Nest	98	77	227					CC0090
Wood		3 2015-06- 25	Cumberland	Nest	112	32	361					CC0090
	3	2018-05-	Links Ch. Classes	Next				NEGUL				660000
	Cumberland Island	⁴ 31 5 2018-06-	Little St. Simons	Nest	110		11	NB011			-	CC0090
Folkston	sland 9	14	Talbot Islands State Park	Nest	99	90	15	LTCCN37	·		-	CC0090
11 34	17) St Marys	5 2018-06- 25	Cumberland	Nest	100	82	262					CC0090
Hilliard	Eerna A ha	? possible m 2018-07-	issed nest (21 day gap)	Neet	54	2	107	NORO				CC0000
	Yulee	16	Blackbeard	Nest	54	2	197	N089				CC0090
		3 2020-05- 15	Atlantic/Neptune/Jacksonville	Nest	121	117	2	NB-02				CC0090
Callahan St George	5	? possible m	Beaches issed nest (41 day gap)		1							
23 301	Timuc an Ecological	? possible m 2020-06-	issed nest (41 day gap)									
/3 T- V	Ecological and Historical	25	Cumberland	Nest	111	99	515					CC0090
O has h	Preser	2022-05-	Amelia Island	Nest	0	0	46	VL5				CC0090
Baldwin	csonville Atlantic Beach	29			12	ľ			I	1		
enny Baldwin	Donte Vedra											
ogle	Beach		Map data	02022 Goo	lgo							

In contrast, this turtle, CC0090, chose several islands to nest at, starting at Blackbeard Island in 2012, and eventually ending up at Amelia Island in 2022. There is only one nest shown in 2022 because data is still being processed.

Usta Summe 05 Ct	\sim	Myrtle Beach										
X V -	herville harleston	urrells Inlet										
Savannah									_			
		ach				Hatchlings			w Tags Ol	d Tags PI		
120	18-07-27 Cap	pe Hatteras NS		Nest	106	T	142	NH080				011694
2/20	022-05-17 Am	elia Island		Nest	102	92	10	SRH3			CC	011694
		nest (25 day g	ap)	1000	102		10					.011034
		ST (Northern O		Nest	102	82	5	N05			CC	011694
Ferr 2 ina Google Minimum Distance: 99.95 kr Maximum Distance: 807.80	m					p data ©2022 (1		

This turtle, CC011694, laid a nest on Amelia Island on May 17 of this year, then laid a nest on June 11 about 500 miles northeast near Nags Head on the Outer Banks.



The same mother shown earlier CC008618 (white star) has daughters identified by DNA. There are three sets of full sisters (colored triangles).

- "Most often in our data, offspring from the same mother are halfsiblings, so they have different fathers. This can occur via multiple paternity within nesting seasons. We also expect that for a female that nests over decades, she's unlikely to mate with the same male across years. Our working hypothesis is that these full sisters likely hatched the same year."
- "These two females have five potential half-sisters and a candidate mother in the database as well. We'll need to run additional markers to confirm these relationships."