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## Introduction

The history of the Florida-Georgia shark gillnet fishery in the US Atlantic, and observer coverage of that fishery, has been previously described (e.g. Carlson and Bethea 2007 and references therein, Passerotti and Carlson 2009). Currently, there are nearly 500 total directed and incidental shark permits issued to fishers in the US Atlantic and Gulf of Mexico, with the number of fishers using gillnet gear varying from year to year.

Since the implementation of Amendment 2 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan (NMFS 2007), the directed large coastal shark (LCS) gillnet fishery has been greatly reduced. The 33-head LCS trip limit has essentially ended the strike net fishery and limited the number of fishers targeting LCS with drift gillnet gear. The small coastal shark (SCS) fishery was also limited by Amendment 2, but was more directly impacted by Amendment 3 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan (NMFS 2010) which significantly reduced the SCS quota and established an individual quota for blacknose sharks, *Carcharhinus acronotus*. As a result, many gillnet fishers that historically targeted sharks are now targeting teleost species such as Spanish mackerel *Scomberomorus maculatus*, king mackerel *Scomberomorus cavalla*, and bluefish *Pomatomus saltatrix*, with varying types of gillnet gear. The southeast gillnet observer program currently covers all anchored (sink and stab), strike, or drift gillnet fishing regardless of target by vessels that fish from Florida to North Carolina and the Gulf of Mexico year-round.

Herein, we summarize fishing effort and catch and bycatch in these fisheries during January 2010 - December 2010, collectively referred to as '2010'.

## **Methods**

### *Observer protocol*

Vessels were selected on a quarterly basis (January, April, July, and September) randomly from a pool of vessels that had reported fishing with gillnet gear during the same quarter in the previous year. Selection letters notifying permit holders of required observer coverage were issued via U.S. Certified mail approximately one month prior to the upcoming selection period. Receipt of selection letters was confirmed via signature upon acceptance by the permit holder or their proxy. Once the permit holder received the selection letter, he or she was required to make contact with the observer coordinator and indicate intent to fish during the upcoming selection period. Contact was usually made by phone, and the observer coordinator gathered information concerning the vessel's name, captain, contact persons and phone numbers, communications and safety equipment available aboard the vessel, and information about the vessel's location, dates, and times of departure and return. Additional information collected included whether the vessel was active in another fishery, under repair, or no longer fishing. Upon notification of the intention to fish, the observer coordinator deployed an observer to the reported port of departure of permit holder's vessel. Because gillnet trips are generally 24 hours or less (from the time of departure from port to the time of return), the observer remained assigned to the vessel for a minimum of 3 trips to attain a sufficient level of coverage.

Observations were made as the net was hauled aboard. The observer remained on the deck of the vessel in a position with an unobstructed view and recorded species and numbers caught. When species identification was questionable, the crew stopped hauling so that the observer could examine the animal(s) for positive identification. Status (alive or dead when boated) of individuals was recorded when possible, and disposition of individuals brought

onboard was recorded as kept, discarded alive, or discarded dead. Fork lengths (cm FL) were estimated for the entire catch. When time permitted after the haulback was complete, observers directly measured a random group of 10 individuals from each species caught for fork length (FL, measured on a straight line) in cm. Sex (sharks only) was determined when possible. Biological samples (e.g. otoliths, vertebrae, reproductive organs, stomach), when taken, were removed and placed on ice after collection. Data and samples were submitted to the NMFS Southeast Fisheries Science Center (SEFSC), Panama City staff immediately upon completion of observed trips. The data were entered and proofed by SEFSC staff, examined by NMFS/SEFSC Sustainable Fisheries Division staff, and reviewed with observer contract staff to resolve any questions.

## **Results**

A total of 295 sets comprising various gillnet fisheries were observed in 2010. Set locations ranged from North Carolina to the Florida Keys in the Atlantic Ocean (Figures 1 and 2). However, location-specific reports of trips cannot be documented herein due to vessel confidentiality laws, therefore observations will be summarized by gear type. Weights for shark and teleost catch referenced herein (Tables 5 and 6) were back-calculated using estimated length (cm FL) measurements and length-weight conversions (Wigley et al. 2003; NMFS, unpublished data).

### *Drift gillnet fishery*

A total of 4 drift gillnet vessels were observed making 14 sets on 8 trips in 2010. Vessels targeted either bluefish or Atlantic sharpnose shark *Rhizoprionodon terraenovae*. Refinement of

the data by target species was not possible due to violation of vessel confidentiality. The distribution of observed drift gillnet fishing effort is illustrated in Figure 1. The lengths of the nets on drift net vessels for all targets ranged from 183 – 1097 m (600 - 3600 ft), with net depths of 6.1 – 15.2 m (20 – 50 ft). Stretched mesh sizes ranged from 12.1 – 13.9 cm (4.75 – 5.50 in). The average set time was 0.13 hr (0.14 S.D.), and haul time was 1.40 hr (1.64 S.D.). The total process, from the time that the net went in the water until the haul back was completed, averaged 4.07 hr (4.88 S.D.).

#### *Observed drift gillnet catches*

Total observed catch composition for all drift sets was 58.9 % sharks, 41.0 % teleosts, and 0.04 % non-shark elasmobranchs (Table 1). Two species of sharks made up 96.6 % (by number) of the total observed shark catch: Atlantic sharpnose shark (73.5 %) and spinner shark *Carcharhinus brevipinna* (23.0 %). Composition of shark catch by weight was similar, composed of Atlantic sharpnose shark (71.1 %), followed by spinner shark (21.8 %), and scalloped hammerhead shark *Sphyrna lewini* (4.6 %) (Table 5). Three species of teleosts made up approximately 97 % by number of the overall teleost catch: bluefish (65.2 %), little tunny *Euthynnus alletteratus* (6.1 %), and king mackerel (4.4 %). Catches by weight of commercially important teleosts are given in Table 6.

#### *Strike gillnet fishery*

There were no vessels observed fishing gillnets in a strike fashion in 2010. Historically, strike netting for sharks occurs predominately in winter when the vessels target schools of blacktip sharks off the east coast of Florida (Carlson and Bethea, 2007 and references therein).

Shark-directed strike effort in 2010 was low mainly because of the reduced trip limits for LCS imposed by Amendment 2 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan (NMFS 2007), as fishers found the practice to be cost-prohibitive given the trip limits (J. Parks, NMFS, personal communication).

### *Sink gillnet fishery*

A total of 53 trips making 281 sink net sets on 17 vessels were observed in 2010. Trips were made targeting one or more of the following: shark, Spanish mackerel, king mackerel, Southern kingfish *Menticirrhus americanus*, Atlantic croaker *Micropogonias undulatus*, bluefish, weakfish *Cynoscion regalis* or smooth dogfish *Mustelus canis*. Refinement of the data by target species was not possible due to violation of vessel confidentiality. Observed sink gillnet fishing effort is illustrated in Figure 2.

For all targets, sink gillnet vessels fished with nets ranging 27.4 – 1097 m (90 - 3600 ft) long, net depths of 0.9 – 8.2 m (3 – 27 ft) and stretched mesh sizes 6.4 – 17.1 cm (2.5 – 6.75 in). Set duration averaged 0.07 hr (0.13 S.D.). Hauls averaged 0.49 hr (0.59 S.D.). The entire fishing process (time net was first set until time haul back was completed) averaged 3.66 hr (6.37 S.D.). Sets were made in waters averaging 13.9 m (29.5 S.D.) deep.

### *Observed sink gillnet catches*

Catch composition by number of all sets for all targets was 92.6 % teleosts, 6.2 % shark, 1.1 % invertebrates and 0.1 % non-shark elasmobranchs (Table 2). One interaction with a sea bird totaled 0.002 % of the total catch. By number, shark catch was primarily spiny dogfish *Squalus acanthias* (45.9 %), smooth dogfish (28.9 %) and Atlantic sharpnose shark (15.5 %). By



weight the shark catch was similar and made up mostly of spiny dogfish (84.6 %), followed by smooth dogfish (6.2 %) and Atlantic sharpnose shark (3.5 %) (Table 5). Southern kingfish made up 27.6 % of the teleost catch by number, followed by Atlantic menhaden *Brevoortia tyrannus* (21.6 %), Atlantic butterfish *Peprilus triacanthus* (13.7 %) and Spanish mackerel (13.5 %).

Catches by weight of commercially important teleosts are given in Table 6.

#### *Average size*

The average (S.D.) lengths of sharks measured by gear type can be found in Table 3. Average (S.D.) fork lengths of sharks caught in the drift gillnet fishery ranged from 69.1 cm (9.5) for spinner shark, to 76.9 cm (3.7) for Atlantic sharpnose shark. Observed sink gillnet sets resulted in measurements ranging from 65.7 cm (9.1) for sandbar shark *Carcharhinus plumbeus*, to 117 cm (0.0) for common thresher shark *Alopias vulpinus*.

Average (S.D.) lengths of teleosts ( $n \geq 5$ ) measured by gear type can be found in Table 4. Average (S.D.) fork lengths of teleosts caught in the drift gillnet fishery ranged from 60.0 cm (7.5) for little tunny, to 86.8 cm (5.8) for cobia *Rachycentron canadum*. Average (S.D.) fork lengths of teleosts caught in the sink gillnet fishery ranged from 14.5 cm (2.8) for spiny puffer family *Diodontidae*, to 103.3 cm (10.0) for king mackerel.

#### *Protected resources interactions*

One interaction with a protected resource was documented over 295 sets observed in 2010. One common loon *Gavia immer* was caught with sink gillnet gear. The bird was discarded dead.

## **Discussion**

Since the implementation of Amendment 2 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan (NMFS 2007), there has been substantial decline in observed gillnet trips targeting LCS from years prior. This trend persisted in 2010, as most fishers continue to find operating costs too high given the small 33-head LCS trip limit. Additionally, the abbreviated season for LCS in the Atlantic (July 15<sup>th</sup> - December 5<sup>th</sup>) further restricted gillnet effort targeting these sharks. The small coastal shark fishery was also closed between January and June 2010 pending the effective date of Amendment 3, and the quota was filled and closed by November 2<sup>nd</sup>, 2010. This led to further reduction in the number of shark targeted trips observed as well as a reduction in trips deploying drift and strike gillnet gear. As a result of these declines, the southeast gillnet observer program has shifted focus to include coverage of teleost targeted gillnet trips as well. The scope of observer coverage will continue to change in response to the dynamics of the gillnet fishery, regardless of target. Continued fisheries monitoring will contribute to a better understanding of the impacts on all marine resources.

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Table 1. Total drift gillnet catch by species and species disposition in order of decreasing abundance for all observed trips, 2010. Catch disposition is by percent kept (Kept %), percent discarded alive (D.A. %), and percent discarded dead (D.D. %).

<b>Species</b>	<b>Common Name</b>	<b>Total Number Caught</b>	<b>Kept (%)</b>	<b>D.A. (%)</b>	<b>D.D. (%)</b>
<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	2006	99.7	0.2	0.1
<i>Pomatomus saltatrix</i>	Bluefish	1647	100.0	0.0	0.0
<i>Carcharhinus brevipinna</i>	Spinner shark	628	7.8	1.6	90.6
<i>Euthynnus alletteratus</i>	Little tunny	115	100.0	0.0	0.0
<i>Scomberomorus cavalla</i>	King mackerel	83	47.0	0.0	53.0
<i>Carcharhinus acronotus</i>	Blacknose shark	47	100.0	0.0	0.0
<i>Sphyrna lewini</i>	Scalloped hammerhead shark	33	78.8	0.0	21.2
<i>Rachycentron canadum</i>	Cobia	28	32.1	14.3	53.6
<i>Echeneidae</i>	Remora family	14	0.0	100.0	0.0
<i>Sphyrna tiburo</i>	Bonnethead shark	10	100.0	0.0	0.0
<i>Carcharhinus limbatus</i>	Blacktip shark	4	100.0	0.0	0.0
<i>Selene setapinnis</i>	Moonfish	4	0.0	0.0	100.0
<i>Sphyraenidae</i>	Barracuda family	4	100.0	0.0	0.0
<i>Istiophorus platypterus</i>	Sailfish	2	0.0	0.0	100.0
<i>Rhinoptera bonasus</i>	Cownose ray	2	0.0	100.0	0.0

Table 2. Total sink gillnet catch by species and species disposition in order of decreasing abundance for all observed trips, 2010. Catch disposition is by percent kept (Kept %), percent discard alive (D.A. %), and percent discard dead (D.D. %).

<b>Species</b>	<b>Common Name</b>	<b>Total Number Caught</b>	<b>Kept (%)</b>	<b>D.A. (%)</b>	<b>D.D. (%)</b>
<i>Menticirrhus americanus</i>	Southern kingfish	12890	99.1	0.0	0.9
<i>Brevoortia tyrannus</i>	Atlantic menhaden	10071	42.5	1.2	56.3
<i>Peprilus triacanthus</i>	Atlantic butterfish	6408	99.5	0.1	0.5
<i>Scomberomorus maculatus</i>	Spanish mackerel	6325	99.2	0.0	0.8
<i>Pomatomus saltatrix</i>	Bluefish	3486	96.1	0.5	3.4
<i>Micropogonias undulatus</i>	Atlantic croaker	3224	71.2	21.4	7.5
<i>Leiostomus xanthurus</i>	Spot	2083	68.6	1.9	29.5
<i>Squalus acanthias</i>	Spiny dogfish	1436	0.6	96.2	3.1
<i>Mustelus canis</i>	Smooth dogfish	904	7.7	90.4	1.9
<i>Cynoscion regalis</i>	Weakfish seatrout	583	41.2	14.1	44.8
<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	485	13.2	65.6	21.2
<i>Asteroidea</i>	Sea stars	361	0.0	100.0	0.0
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	254	55.1	18.5	26.4
<i>Brevoortia smithi</i>	Yellowfin menhaden	237	89.9	2.1	8.0
<i>Sarda sarda</i>	Bonito	214	99.5	0.5	0.0
<i>Carcharhinus plumbeus</i>	Sandbar shark	144	0.0	100.0	0.0
<i>Callinectes sapidus</i>	Blue crab	133	0.8	92.5	6.8
<i>Larimus fasciatus</i>	Banded drum	129	0.0	9.3	90.7
<i>Scomberomorus cavalla</i>	King mackerel	115	81.7	6.1	12.2
<i>Cynoscion sp.</i>	Seatrouts	102	19.6	35.3	45.1
<i>Chaetodipterus faber</i>	Spadefish	70	4.3	51.4	44.3
<i>Rachycentron canadum</i>	Cobia	62	17.7	51.6	30.7
<i>Carcharhinus limbatus</i>	Blacktip shark	60	88.3	11.7	0.0
<i>Euthynnus alletteratus</i>	Little tunny	59	100.0	0.0	0.0
<i>Caranx crysos</i>	Bluerunner jack	53	100.0	0.0	0.0
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	53	100.0	0.0	0.0
<i>Lepisosteidae</i>	Gar family	39	66.7	20.5	12.8
<i>Sphyrna tiburo</i>	Bonnethead shark	39	10.3	18.0	71.8
<i>Carcharhinus brevipinna</i>	Spinner shark	35	85.7	11.4	2.9
<i>Diodontidae</i>	Spiny puffer family	30	0.0	100.0	0.0
<i>Rhinoptera bonasus</i>	Cownose ray	30	0.0	100.0	0.0
<i>Opisthonema oglinum</i>	Atlantic thread herring	28	0.0	53.6	46.4
<i>Cancer borealis</i>	Jonah crab	23	0.0	100.0	0.0
<i>Paralichthys sp.</i>	Flounders	23	8.7	91.3	0.0
<i>Prionotus sp.</i>	Searobins	21	0.0	33.3	66.7
<i>Clupeidae</i>	Herring family	20	15.0	0.0	85.0
<i>Sphyrna lewini</i>	Scalloped hammerhead shark	19	5.3	68.4	26.3
<i>Orthopristis chrysoptera</i>	Pigfish	17	11.8	88.2	0.0
<i>Raja eglanteria</i>	Clearnose skate	17	5.9	88.2	5.9

**Table 2, cont.**

<b>Species</b>	<b>Common Name</b>	<b>Total Number Caught</b>	<b>Kept (%)</b>	<b>D.A. (%)</b>	<b>D.D. (%)</b>
<i>Scyphozoa</i>	Jellyfish	17	0.0	100.0	0.0
<i>Selene vomer</i>	Lookdown	16	0.0	68.8	31.3
<i>Selene setapinnis</i>	Moonfish	12	0.0	0.0	100.0
<i>Caranx hippos</i>	Crevalle jack	10	100.0	0.0	0.0
<i>Majidae</i>	Spider crabs	9	0.0	100.0	0.0
<i>Echinodermata</i>	Sea urchins	8	0.0	0.0	100.0
<i>Elops saurus</i>	Ladyfish	8	12.5	0.0	87.5
<i>Decapoda</i>	Shrimp	7	100.0	0.0	0.0
<i>Lagodon rhomboides</i>	Pinfish	7	0.0	85.7	14.3
<i>Trachinotus carolinus</i>	Florida pompano	6	50.0	0.0	50.0
<i>Dasyatis sabina</i>	Atlantic stingray	5	0.0	100.0	0.0
<i>Paralichthys lethostigma</i>	Southern flounder	5	0.0	100.0	0.0
<i>Arius felis</i>	Hardhead catfish	4	0.0	100.0	0.0
<i>Synodontidae</i>	Lizardfish family	4	0.0	0.0	100.0
<i>Archosargus probatocephalus</i>	Sheepshead	3	100.0	0.0	0.0
<i>Carcharhinus isodon</i>	Finetooth shark	3	33.3	33.3	33.3
<i>Pogonias cromis</i>	Black drum	3	0.0	100.0	0.0
<i>Scomber scombrus</i>	Atlantic mackerel	3	100.0	0.0	0.0
<i>Alopias vulpinus</i>	Common thresher shark	2	100.0	0.0	0.0
<i>Bagre marinus</i>	Gafftopsail catfish	2	0.0	0.0	100.0
<i>Mugil curema</i>	Silver mullet	2	100.0	0.0	0.0
<i>Myliobatis freminvillei</i>	Bullnose ray	2	0.0	100.0	0.0
<i>Aluterus monoceros</i>	Unicorn filefish	1	0.0	100.0	0.0
<i>Carcharias taurus</i>	Sand tiger shark	1	0.0	100.0	0.0
<i>Carcharhinus acronotus</i>	Blacknose shark	1	0.0	100.0	0.0
<i>Carcharhinus obscurus</i>	Dusky shark	1	0.0	100.0	0.0
<i>Gavia immer</i>	Common loon	1	0.0	0.0	100.0
<i>Peprilus alepidotus</i>	Harvestfish	1	0.0	0.0	100.0
<i>Sphyrna zygaena</i>	Smooth hammerhead shark	1	0.0	0.0	100.0
<i>Trachipteridae</i>	Dealfish family	1	100.0	0.0	0.0
<i>Trinectes maculatus</i>	Hogchoker	1	0.0	100.0	0.0

Table 3. Average size (fork length, FL) and standard deviation (S.D.) of sharks measured for all observed trips by gear type, 2010.

<b>Gear Type</b>	<b>Species</b>	<b>Common Name</b>	<b>n</b>	<b>Average FL (cm)</b>	<b>S.D.</b>
Drift	<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	31	76.9	3.7
	<i>Carcharhinus brevipinna</i>	Spinner shark	14	69.1	9.5
Sink	<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	78	74.7	11.1
	<i>Mustelus canis</i>	Smooth dogfish	77	66.2	19.9
	<i>Carcharhinus plumbeus</i>	Sandbar shark	25	65.7	9.1
	<i>Sphyrna lewini</i>	Scalloped hammerhead shark	12	87.0	11.6
	<i>Squalus acanthias</i>	Spiny dogfish	11	79.0	7.7
	<i>Carcharhinus limbatus</i>	Blacktip shark	10	107.8	22.6
	<i>Carcharhinus brevipinna</i>	Spinner shark	4	82.3	22.8
	<i>Sphyrna tiburo</i>	Bonnethead shark	3	78.3	29.9
	<i>Carcharhinus isodon</i>	Finetooth shark	2	81.0	45.3
	<i>Alopias vulpinus</i>	Common thresher shark	1	117.0	0.0
	<i>Carcharhinus obscurus</i>	Dusky shark	1	105.0	0.0
	<i>Sphyrna zygaena</i>	Smooth hammerhead shark	1	75.0	0.0

Table 4. Average size (fork length, FL) and standard deviation (S.D.) of non-sharks measured for all observed trips by gear type, 2010, where sample size  $\geq 5$ .

<b>Gear Type</b>	<b>Species</b>	<b>Common Name</b>	<b>n</b>	<b>Average FL (cm)</b>	<b>S.D.</b>
Drift	<i>Pomatomus saltatrix</i>	Bluefish	76	72.5	4.6
	<i>Scomberomorus cavalla</i>	King mackerel	12	83.5	7.8
	<i>Euthynnus alletteratus</i>	Little tunny	10	60.0	7.5
	<i>Rachycentron canadum</i>	Cobia	5	86.8	5.8
Sink	<i>Scomberomorus maculatus</i>	Spanish mackerel	908	47.0	5.6
	<i>Menticirrhus americanus</i>	Southern kingfish	468	30.3	2.7
	<i>Pomatomus saltatrix</i>	Bluefish	436	40.8	7.1
	<i>Peprilus triacanthus</i>	Atlantic butterfish	330	18.2	2.2
	<i>Brevoortia tyrannus</i>	Atlantic menhaden	216	23.0	7.5
	<i>Sarda sarda</i>	Bonito	134	56.2	4.6
	<i>Micropogonias undulatus</i>	Atlantic croaker	120	27.6	2.9
	<i>Cynoscion regalis</i>	Weakfish seatrout	87	33.6	2.7
	<i>Scomberomorus cavalla</i>	King mackerel	79	103.3	10.0
	<i>Euthynnus alletteratus</i>	Little tunny	31	59.0	5.1
	<i>Leiostomus xanthurus</i>	Spot	27	22.3	1.5
	<i>Rachycentron canadum</i>	Cobia	26	87.1	11.7
	<i>Brevoortia smithi</i>	Yellowfin menhaden	21	26.5	2.0
	<i>Chloroscombrus chrysurus</i>	Atlantic bumper	17	16.2	1.2
	<i>Cynoscion sp.</i>	Seatrouts	16	28.9	3.0
	<i>Chaetodipterus faber</i>	Spadefish	11	17.7	1.6
	<i>Lepisosteidae</i>	Gar family	11	95.1	4.8
	<i>Caranx crysos</i>	Bluerunner jack	10	25.5	1.8
	<i>Caranx hippos</i>	Crevale jack	8	17.9	1.5
	<i>Diodontidae</i>	Spiny puffer family	8	14.5	2.8



Table 5. Estimated shark catch by weight (kg), back-calculated from estimated lengths of all sharks observed caught in gillnet gear, 2010.

<b>Gear Type</b>	<b>Species</b>	<b>Common Name</b>	<b>Catch (kg)</b>	<b>% Total Sharks</b>
Drift	<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	5687.00	71.1
	<i>Carcharhinus brevipinna</i>	Spinner shark	1739.27	21.8
	<i>Sphyrna lewini</i>	Scalloped hammerhead shark	370.92	4.6
	<i>Carcharhinus acronotus</i>	Blacknose shark	154.66	1.9
	<i>Carcharhinus limbatus</i>	Blacktip shark	23.41	0.3
	<i>Sphyrna tiburo</i>	Bonnethead shark	22.11	0.2
	<b>Total – Drift Gear</b>			<b>7997.37</b>
Sink	<i>Squalus acanthias</i>	Spiny dogfish	26139.3	84.6
	<i>Mustelus canis</i>	Smooth dogfish	1927.7	6.2
	<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	1068.9	3.5
	<i>Carcharhinus limbatus</i>	Blacktip shark	562.3	1.8
	<i>Carcharhinus brevipinna</i>	Spinner shark	472.0	1.5
	<i>Carcharhinus plumbeus</i>	Sandbar shark	465.3	1.5
	<i>Sphyrna lewini</i>	Scalloped hammerhead shark	113.3	0.4
	<i>Sphyrna tiburo</i>	Bonnethead shark	57.8	0.2
	<i>Alopias vulpinus</i>	Common thresher shark	46.4	0.2
	<i>Carcharhinus obscurus</i>	Dusky shark	13.9	0.0
	<i>Carcharhinus acronotus</i>	Blacknose shark	7.8	0.0
	<i>Carcharhinus isodon</i>	Finetooth shark	6.4	0.0
	<i>Sphyrna zygaena</i>	Smooth hammerhead shark	4.4	0.0
	<i>Carcharhias taurus</i>	Sand tiger shark	3.8	0.0
	<b>Total – Sink Gear</b>			<b>30889.1</b>

Table 6. Estimated catch by weight (kg) of commercially important teleosts, back-calculated from estimated lengths of all individuals observed caught in gillnet gear, 2010.

<b>Gear Type</b>	<b>Species</b>	<b>Common Name</b>	<b>Catch (kg)</b>
Drift	<i>Pomatomus saltatrix</i>	Bluefish	9567.9
	<i>Euthynnus alletteratus</i>	Little tunny	596.0
	<i>Scomberomorus cavalla</i>	King mackerel	428.1
Sink	<i>Menticirrhus americanus</i>	Southern kingfish	9491.2
	<i>Scomberomorus maculatus</i>	Spanish mackerel	6025.7
	<i>Pomatomus saltatrix</i>	Bluefish	4195.3
	<i>Brevoortia tyrannus</i>	Atlantic menhaden	1472.9
	<i>Scomberomorus cavalla</i>	King mackerel	1370.0
	<i>Peprilus triacanthus</i>	Atlantic butterfish	427.7
	<i>Micropogonias undulatus</i>	Atlantic croaker	147.9

Figure 1. Distribution of observed drift gillnets sets, 2010.

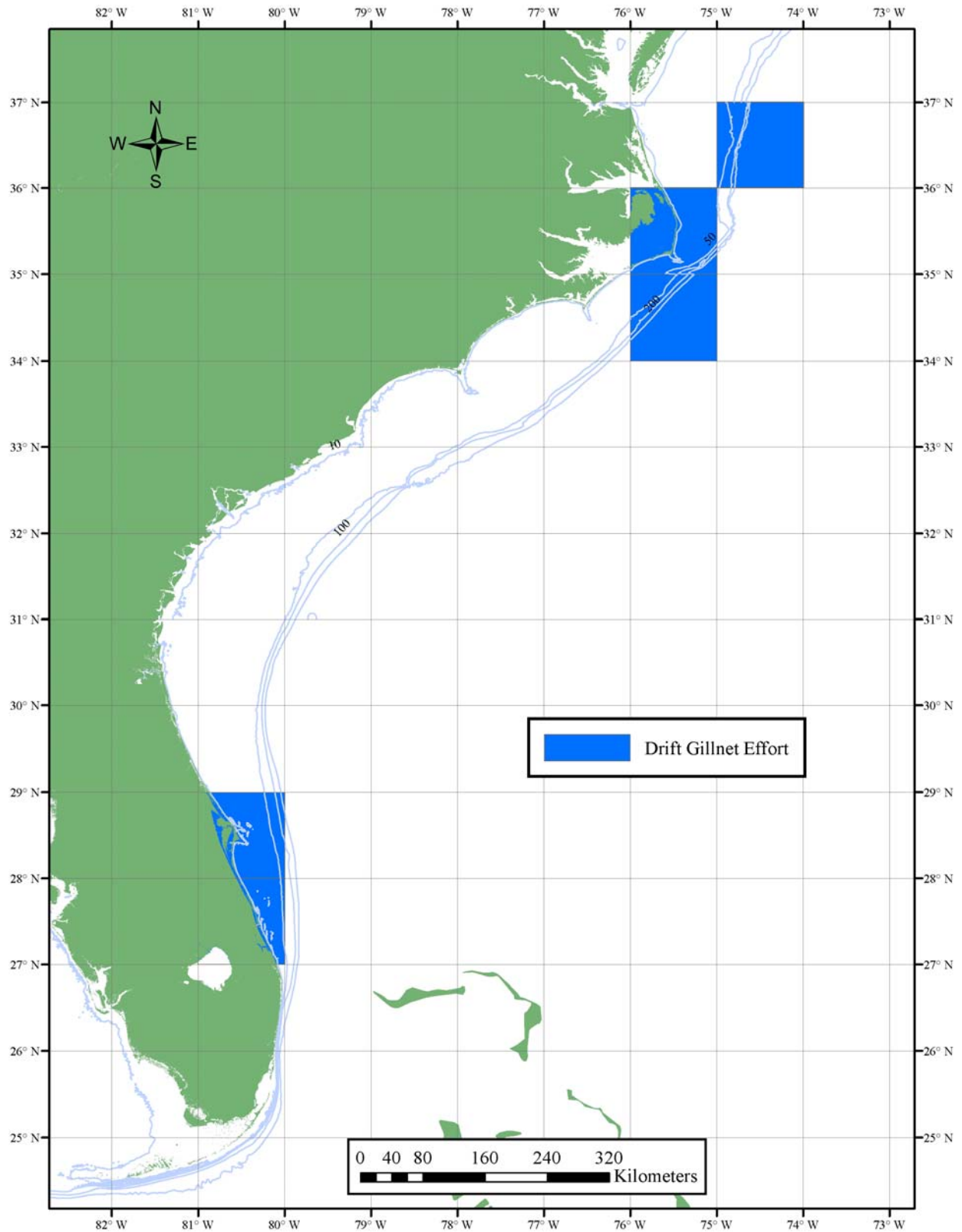


Figure 2. Distribution of observed sink gillnets sets, 2010.

