

**Evaluation of Effect on Catch
Efficiency of a Turtle Excluder
Devices (TED) in Mid-Atlantic Trawl
Summer Flounder Trawl Fishery:
Summer 2007**

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Research Objectives

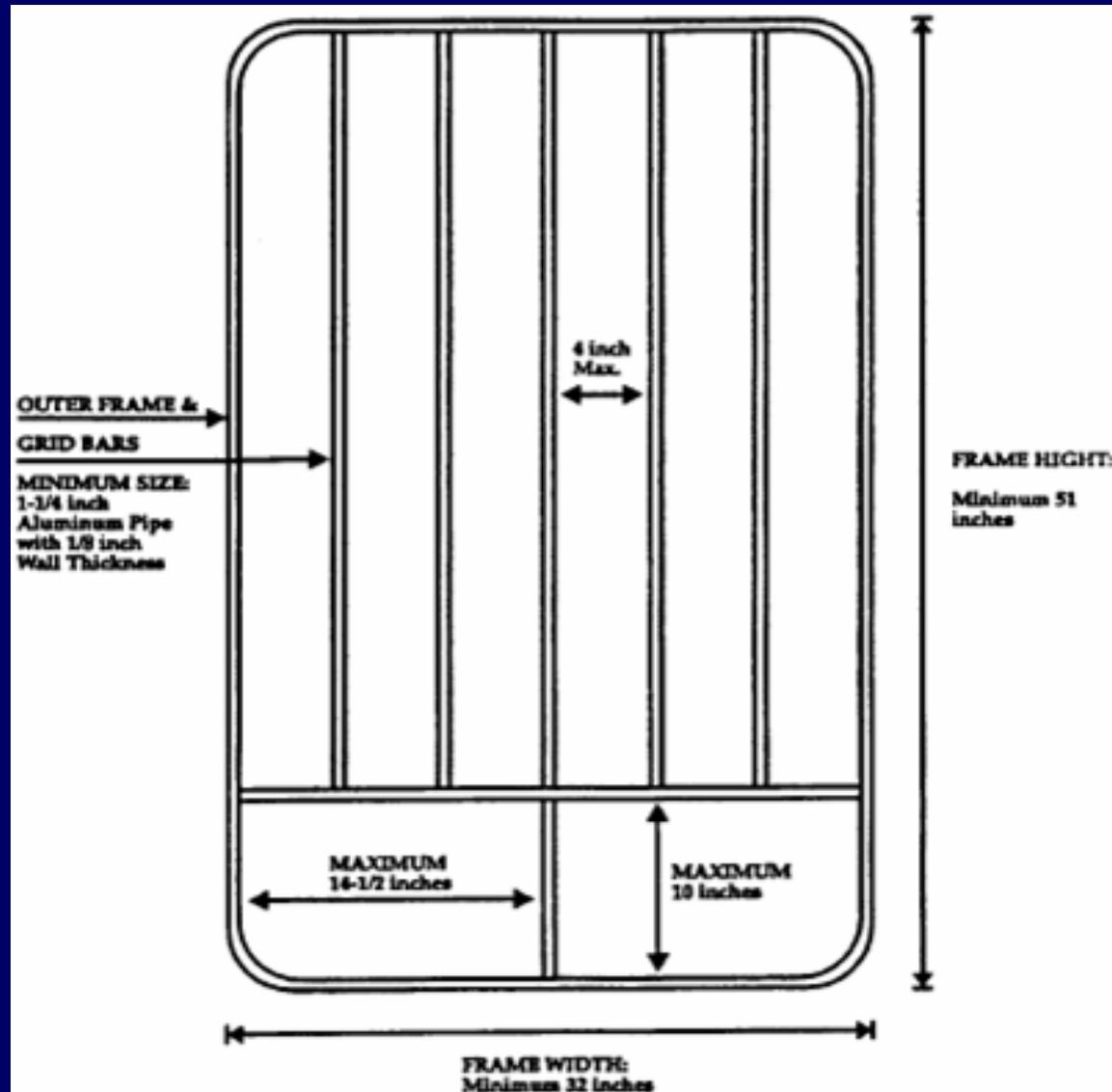


- Evaluate the effect of TED on catch efficiency
 - Target catch weight
 - Target catch size distribution
- Bycatch Rates

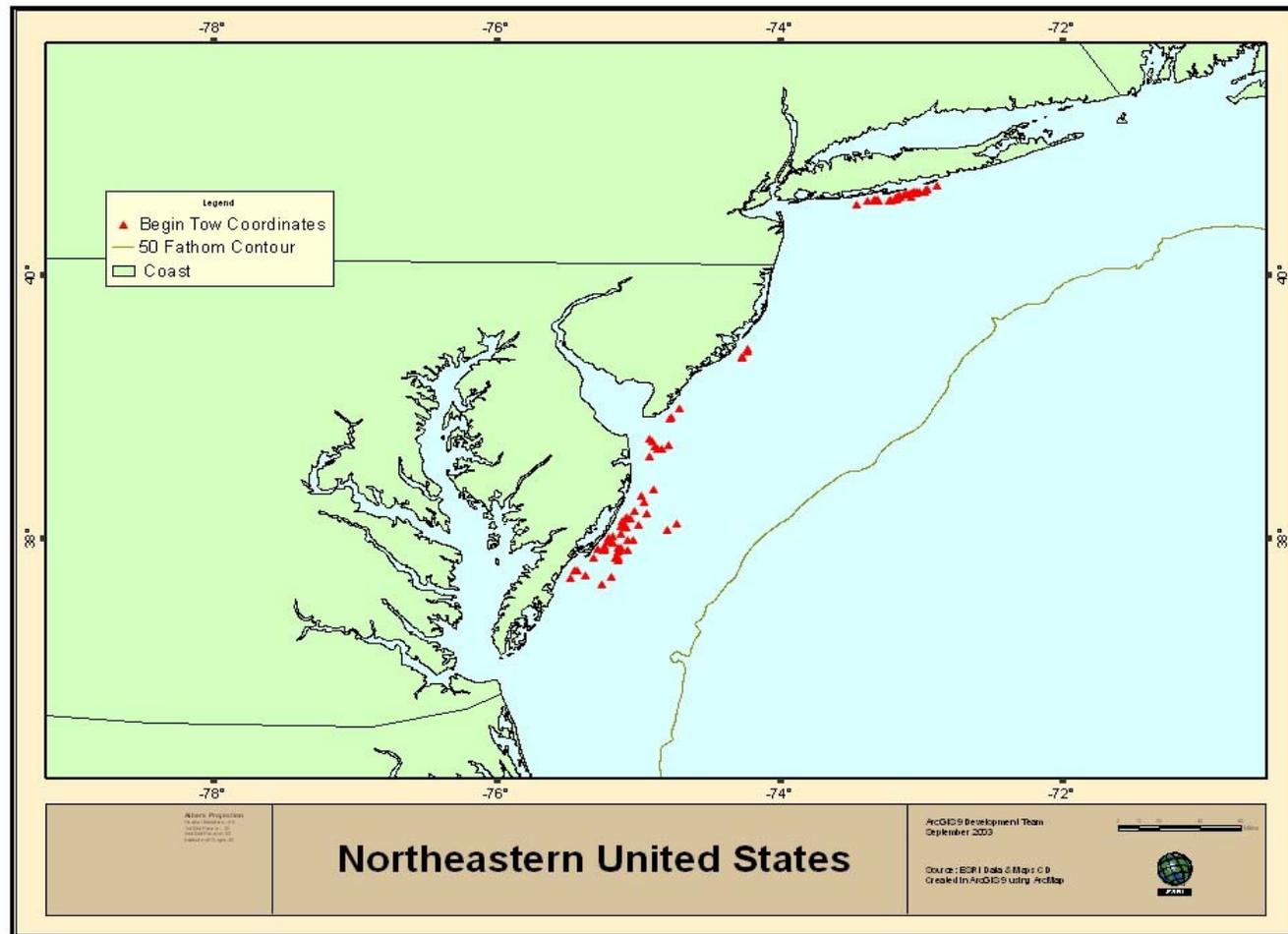
Experimental Design

- Charter a flounder trawl vessel from the mid-Atlantic
- Paired tow design using ABBA to minimize gear handling time
- Catch weight of flounder and bycatch species
- Length frequency data for flounder and bycatch species

NMFS Certified TED Design Used in the Study



Tow Locations off Delmarva, New Jersey, and Long Island



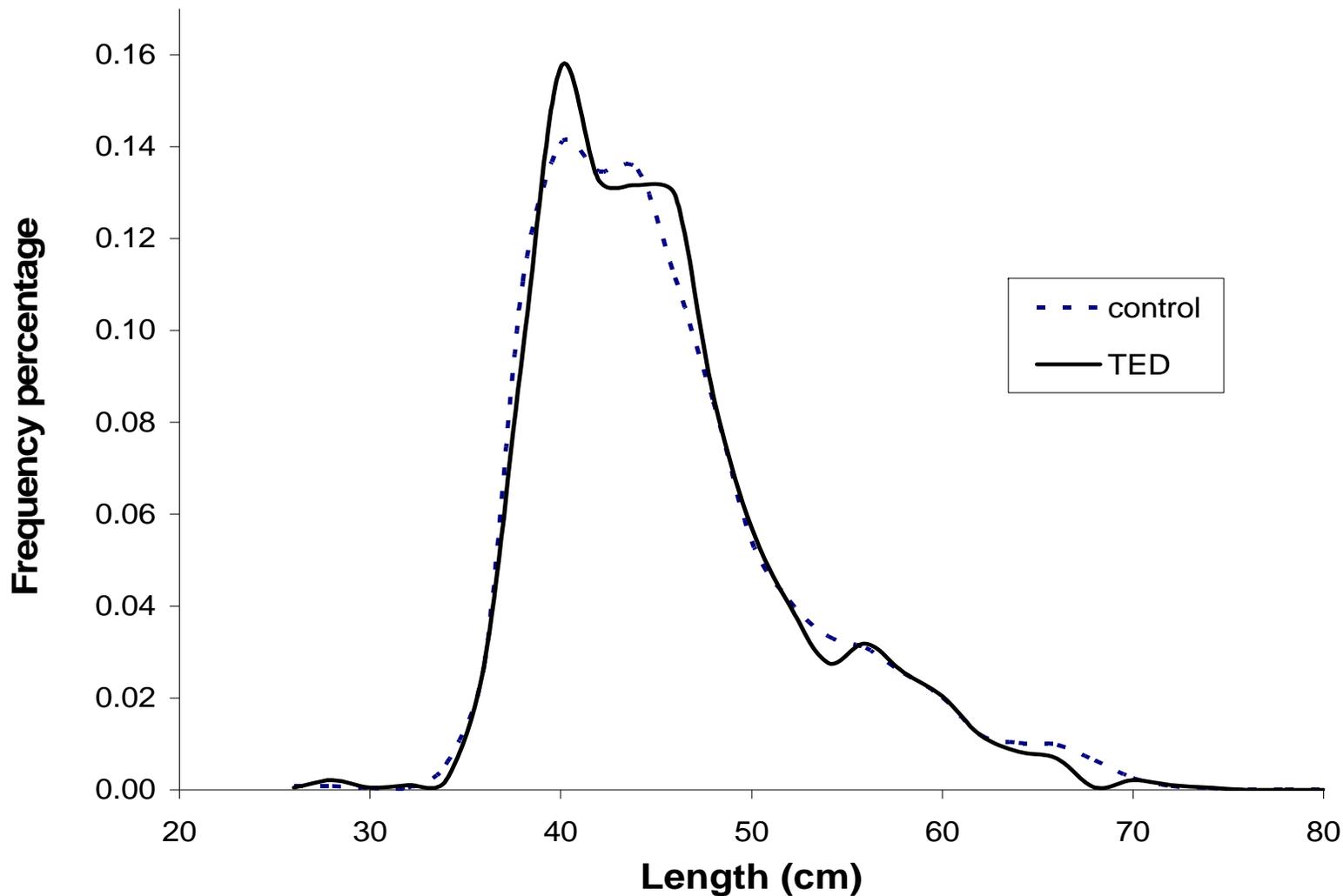
Results of Field Experiments for Summer Flounder

	control (kg)	TED (kg)	% loss	p-value	# of pairs
All tows	111.4	72.1	35	<0.001	37
Small tows <50 kg	16.1	10.2	37	0.001	19
Large tows >50 kg	212.0	137.5	35	<0.001	18

Effect of Total Catch Weight on Summer Flounder Catch Weight

Total catch weight	control (kg)	TED (kg)	% loss	p-value	# of pairs
Less than 900 kg	67.3	56.6	16	0.04	16
Greater than 900 kg	145.0	83.9	42	<0.001	21

Summer Flounder Total Length Frequency from All Paired Tows



Effect of the TED on Bycatch

	control (kg)	TED (kg)	% loss	p-value
Total bycatch	1153.6	737.8	36	0.001
Skates/ rays	829.2	446.9	46	0.001
Dogfish (smooth and spiny)	274.1	272.1	<0.01	0.482

TED Clogged by Skates and Rays



A Single Ray Clogging the TED



Conclusions

- TED caused a 35% reduction in summer flounder captured, 42% loss when catches exceed 900 kg
- No indication of size frequency change in the summer flounder catch
- Observed the TED being clogged with skates and rays on haul-back