

**Finfish Bycatch for the Georges Bank and Hudson Canyon
Closed Areas During 4 Inch Ring Dredge Experiments**

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**Sea Scallop Plan Development Team
Plymouth, Massachusetts**

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Finfish Bycatch in the Georges Bank and Hudson Canyon Closed Areas During 4 inch Ring Dredge Experiments

This report documents the finfish bycatch encountered during the experimental trials of a 4 inch ring dredge in the Georges Bank and Hudson Canyon South Closed Areas. Data was collected on 8 trips from June 2000 to September 2001 aboard the F/V *Celtic*, a commercial sea scallop dredge vessel operating out of New Bedford, Massachusetts.

The primary objective of this study was to characterize changes in sea scallop selectivity and relative efficiency of an experimental 4 inch ring dredge relative to the standard 3.5 inch ring dredge. In addition to information regarding sea scallop catches, finfish bycatch data was also collected. This report presents the frequency and size distribution of finfish bycatch.

The vessel in the study utilized two 15 ft. (4.57 m) New Bedford style sea scallop dredges towed simultaneously. The dredges were identical except for the size of the rings in the chain bag. One dredge had the regulated 3.5 inch (88.9 mm) rings, while the other dredge had an experimental chain bag comprised of 4 inch (101.6 mm) rings. When sampled, finfish bycatch was counted and measured to the nearest centimeter. The catch data was compiled to reflect the total number of individuals of each species captured for each experimental trip (Table). Length frequency distributions are also included for yellowtail flounder (*Limanda ferruginea*), blackback flounder (*Pseudopleuronectes americanus*) and monkfish (*Lophius americanus*). Data relative to the operation of the ship (tow time, towing speed) were also recorded and resulted in an estimate of area covered by the dredge.

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Finfish Bycatch Totals

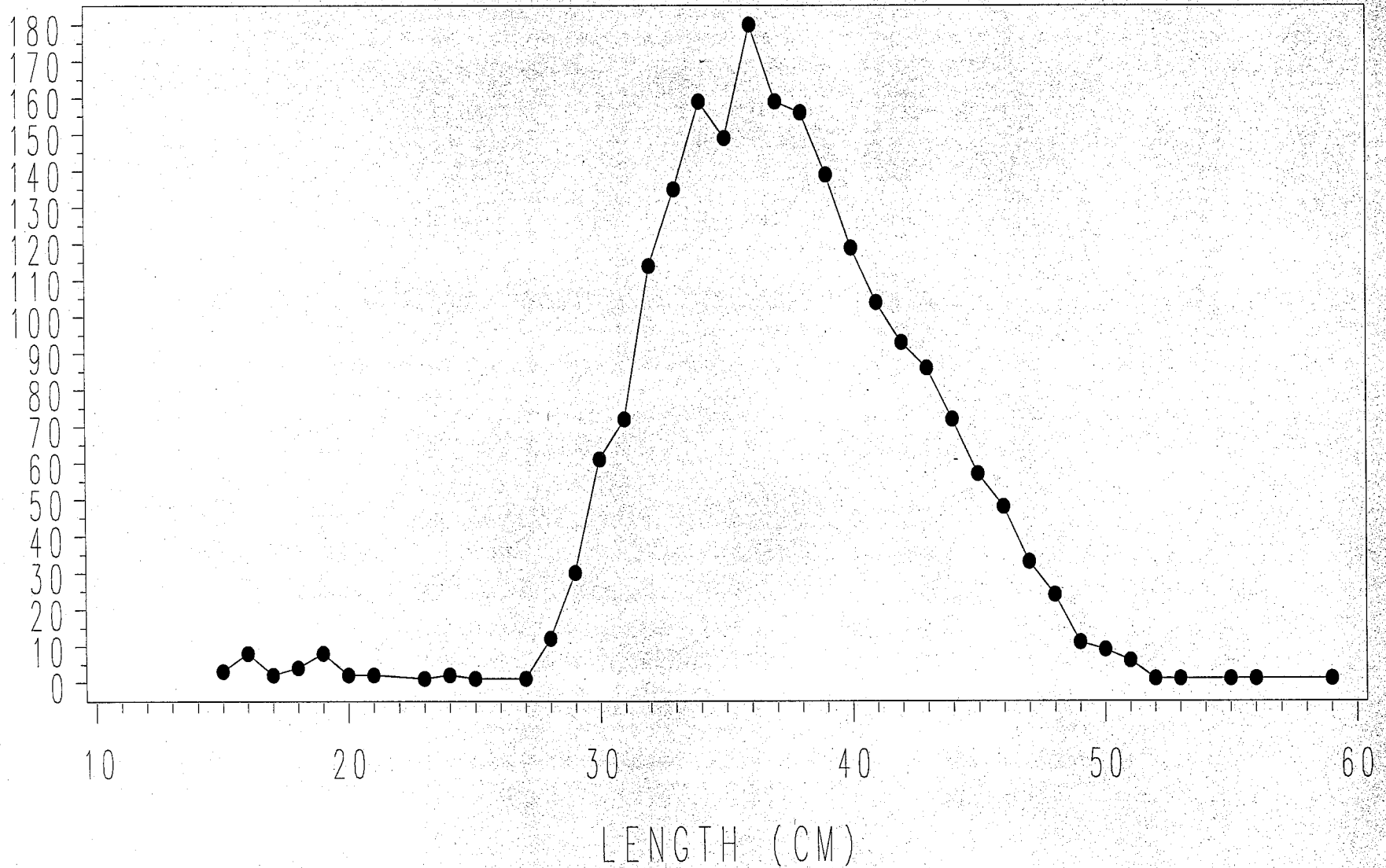
Species	Area II July 2000		Area II Sept 2000		Area II June 2000		H. Canyon June 2001		H. Canyon Sept 2001		Area I Oct 2000		Lightship Aug 2001		Totals	
	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"	3.5"	4.0"
Yellowtail Flounder	1069	998	1118	1131	788	830	0	0	12	11	39	43	21	35	3047	3048
Yellowtail <30 cm	54	22	194	76	66	41	0	0	0	0	2	3	0	0	316	142
Witch Flounder (Grey Sole)	41	46	2	1	107	104	1	0	0	0	0	0	0	0	151	151
Witch <35 cm	4	1	2	0	11	6	1	0	0	0	0	0	0	0	18	7
American Plaice	21	18	6	4	46	52	7	7	2	0	0	0	2	2	84	83
Plaice <35 cm	13	5	4	0	14	18	5	3	2	0	0	0	0	0	38	26
Winter Flounder (Blackback)	4	3	12	9	1	0	0	0	8	4	47	52	14	13	86	81
Monkfish (Goosefish)	87	132	157	159	147	138	111	148	424	373	40	34	5	8	971	992
Red Hake	112	64	75	33	75	81	18	22	188	185	11	9	0	1	479	395
Silver Hake	321	241	129	81	494	422	0	0	157	192	18	8	0	0	1119	944
Windowpane	50	53	55	70	56	61	0	0	52	34	62	68	0	2	275	288
Fourspot Flounder	193	139	397	277	197	211	47	31	361	214	60	47	4	2	1259	921
Sculpin	141	74	323	189	200	121	0	0	0	0	79	69	10	6	753	459
Sea Raven	12	11	12	4	37	28	0	0	1	0	20	14	2	5	84	62
Skates	740	744	4103	4083	1711	1672	1086	1103	3520	3117	607	584	204	222	11971	11525

LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

4 INCH RING EXPERIMENTS

Cruise=CELTIC, CA 11, JULY 2000, N=54 TOWS, AC=2.25 KM² SpCode=YELLOWTAIL

FREQUENCY



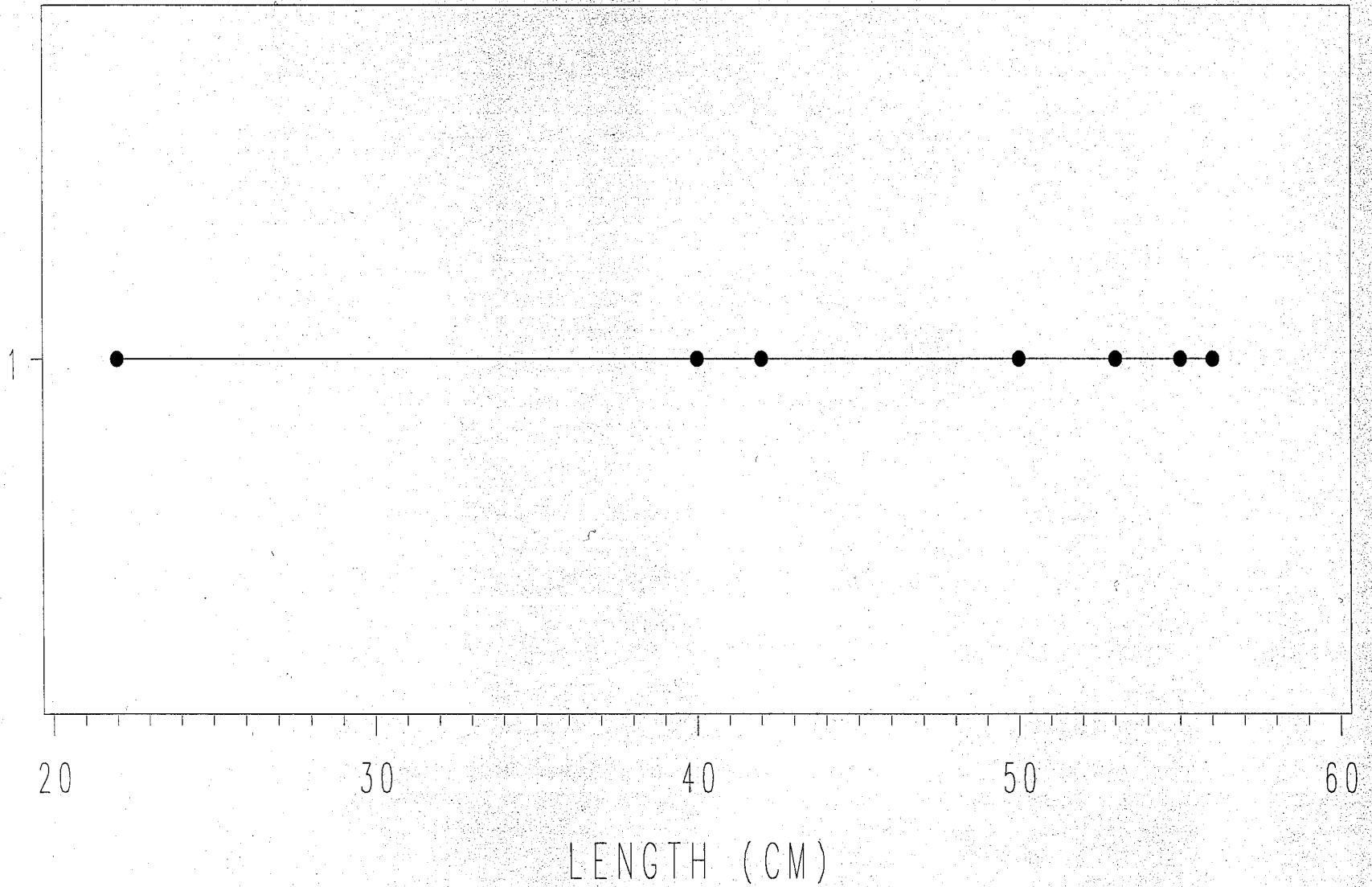
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LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

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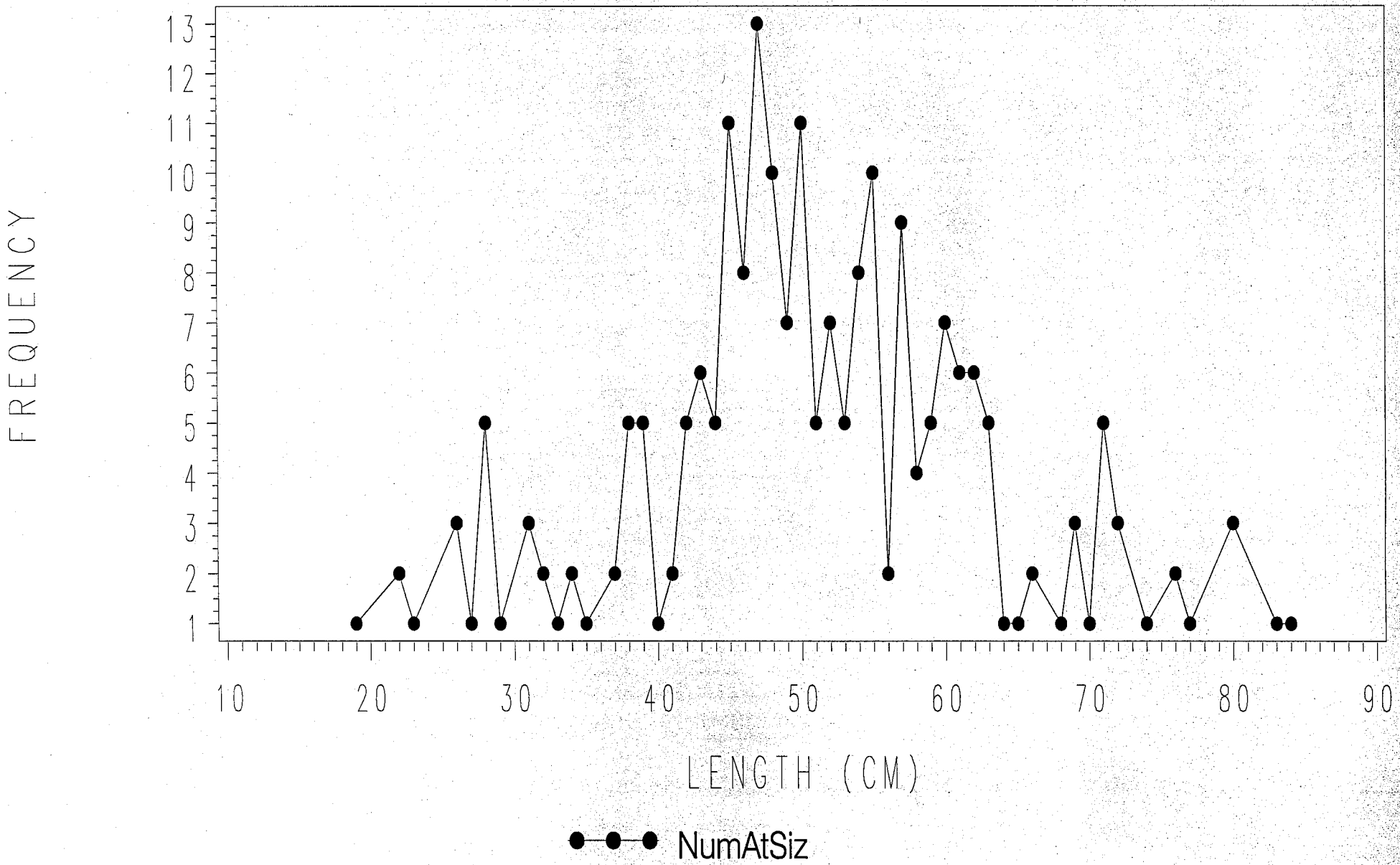


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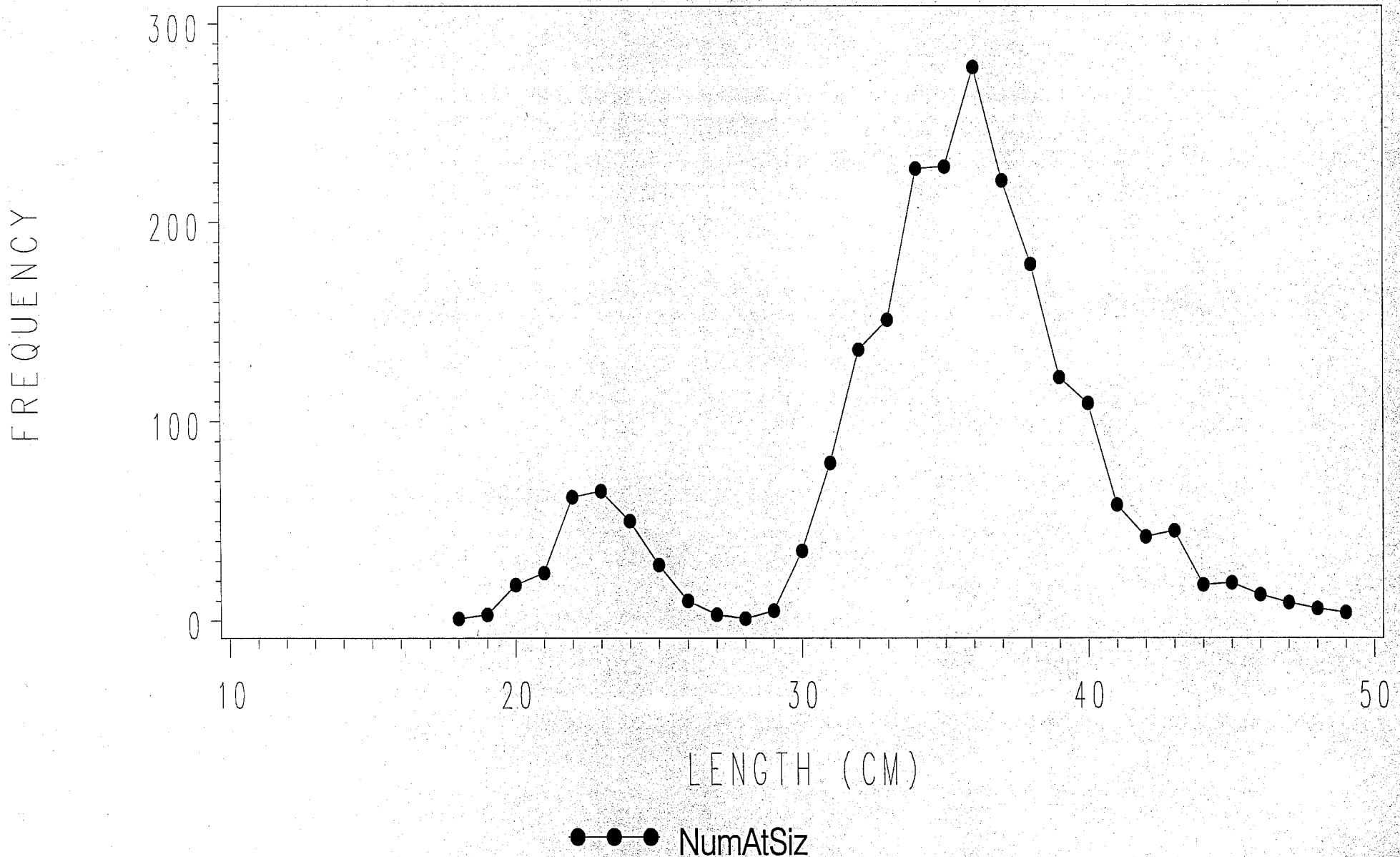
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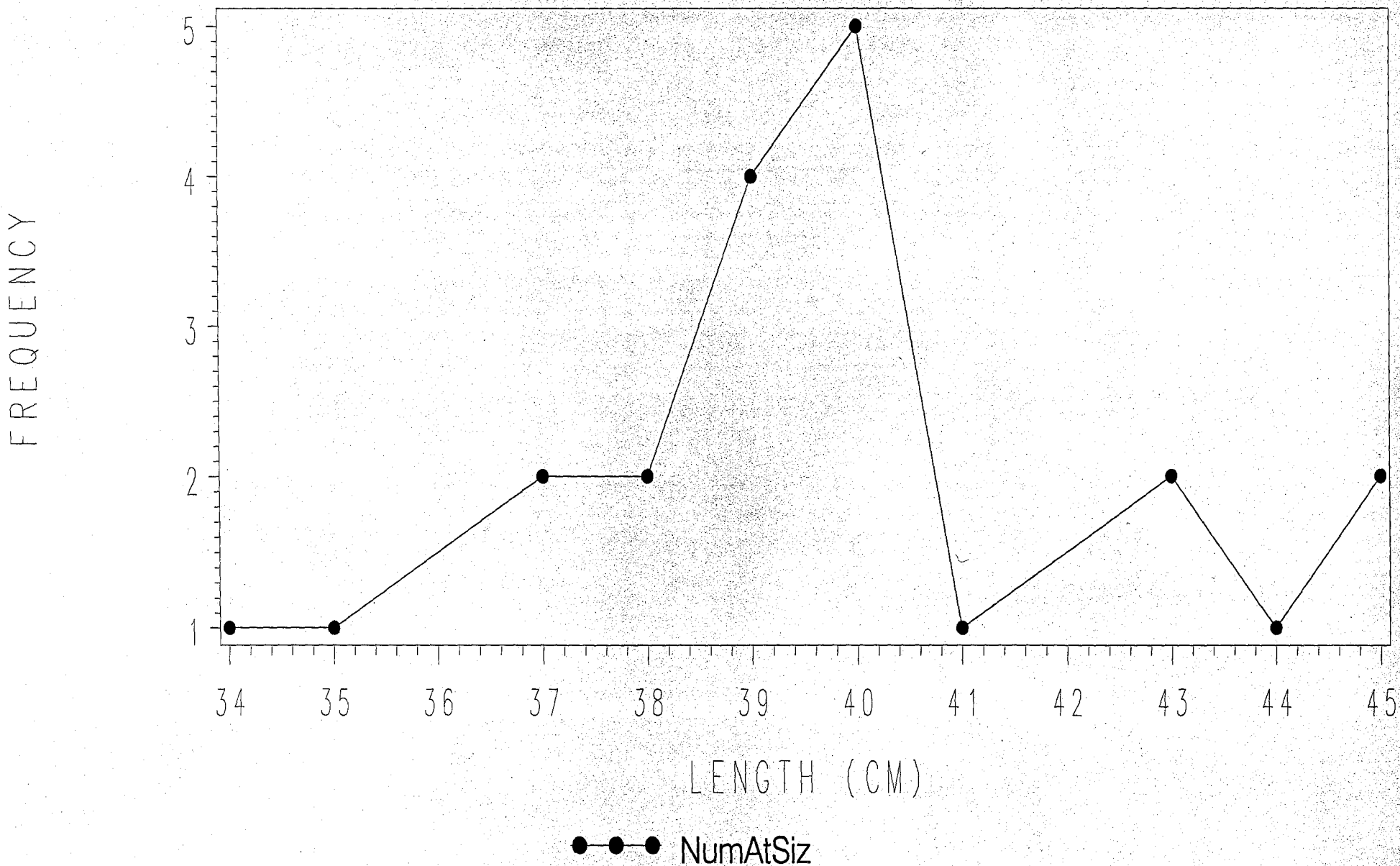
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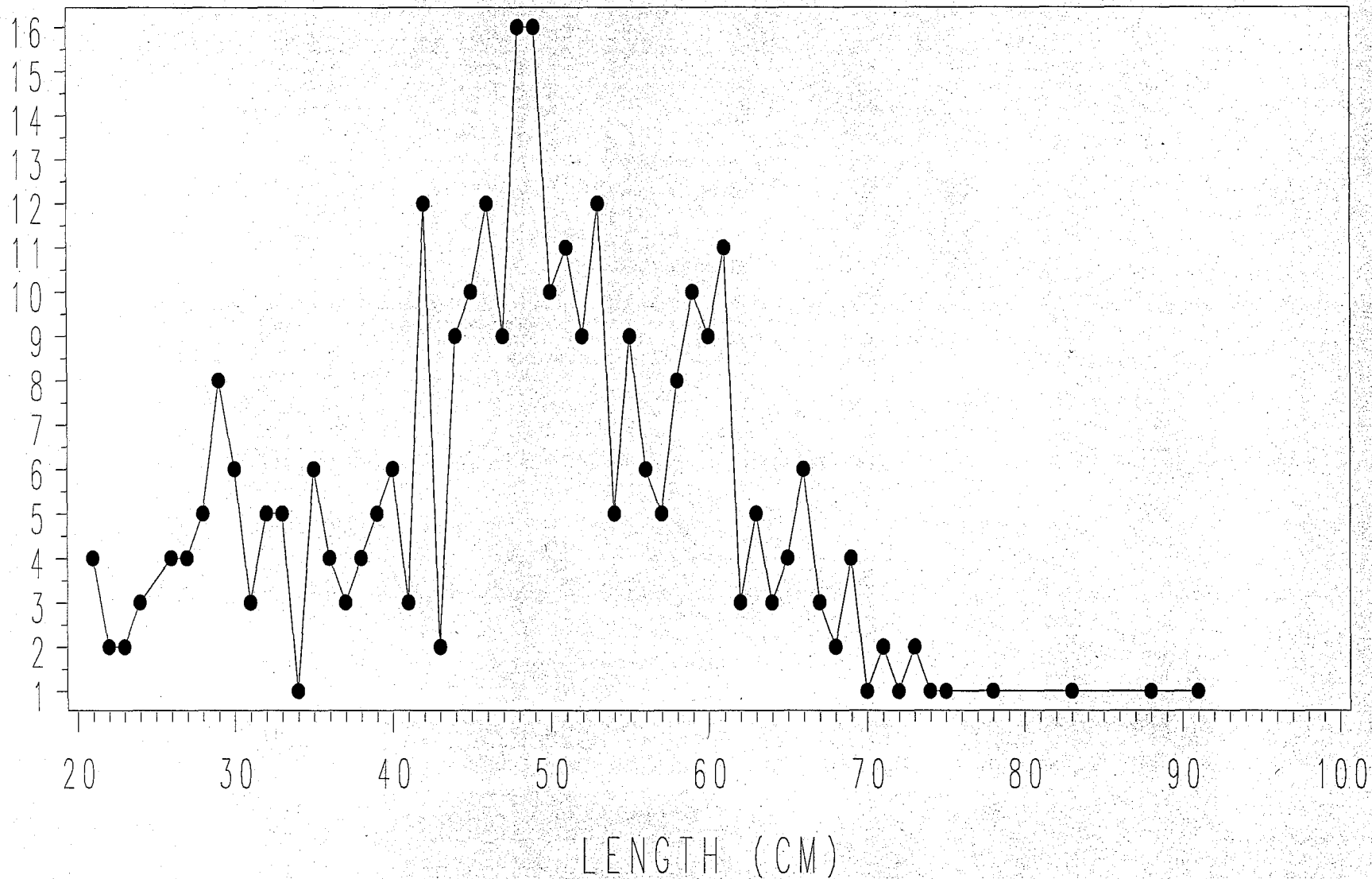


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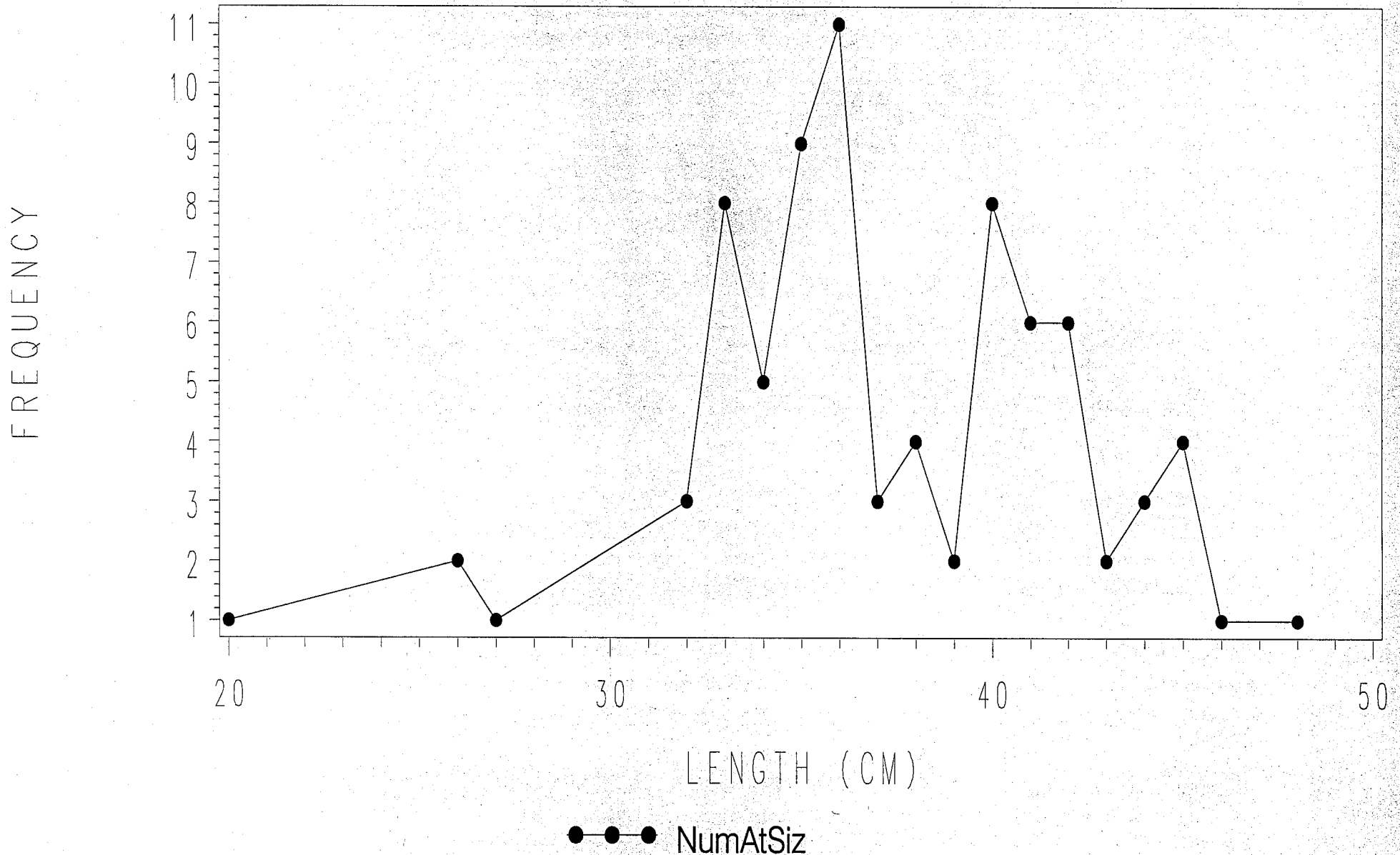


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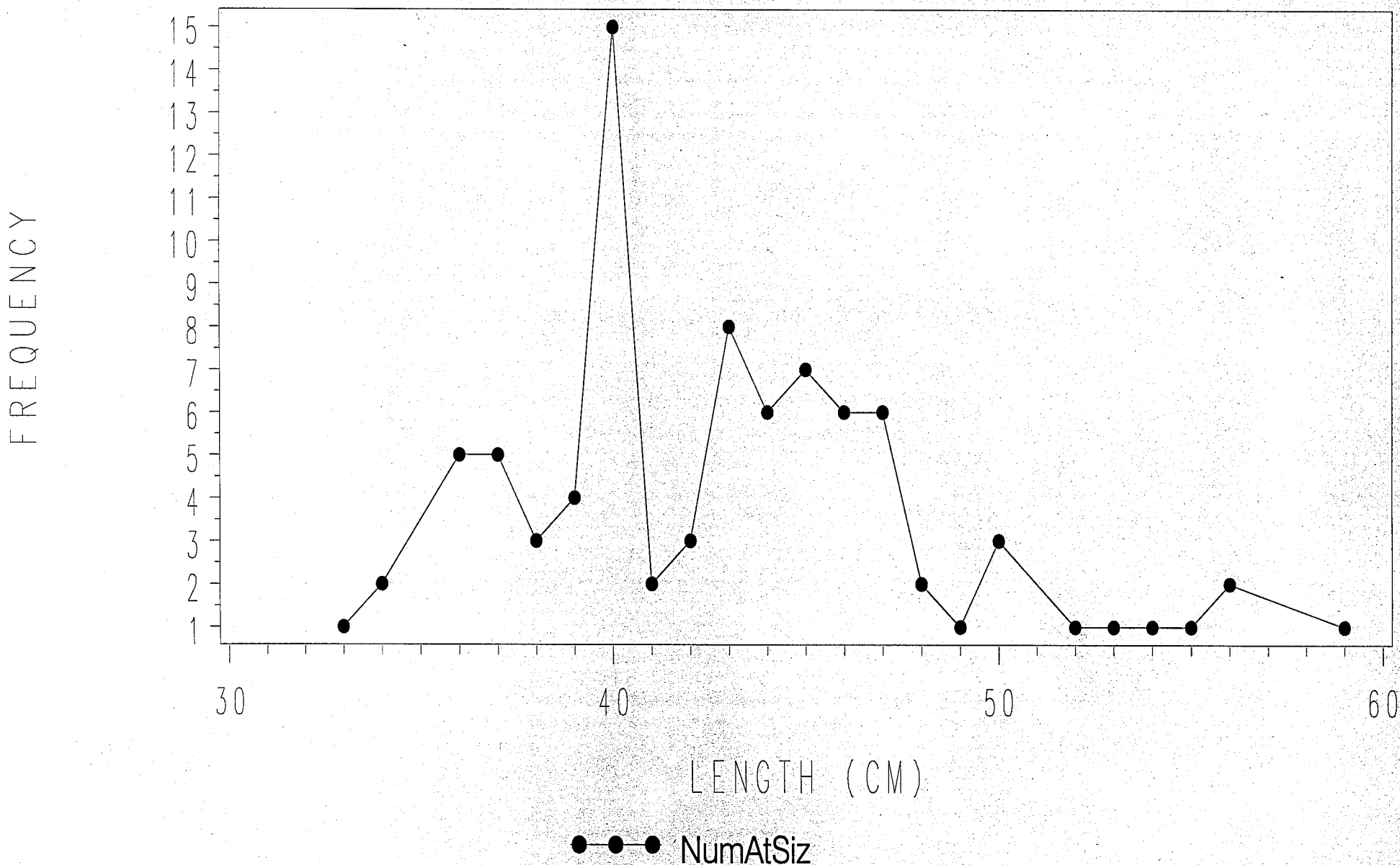
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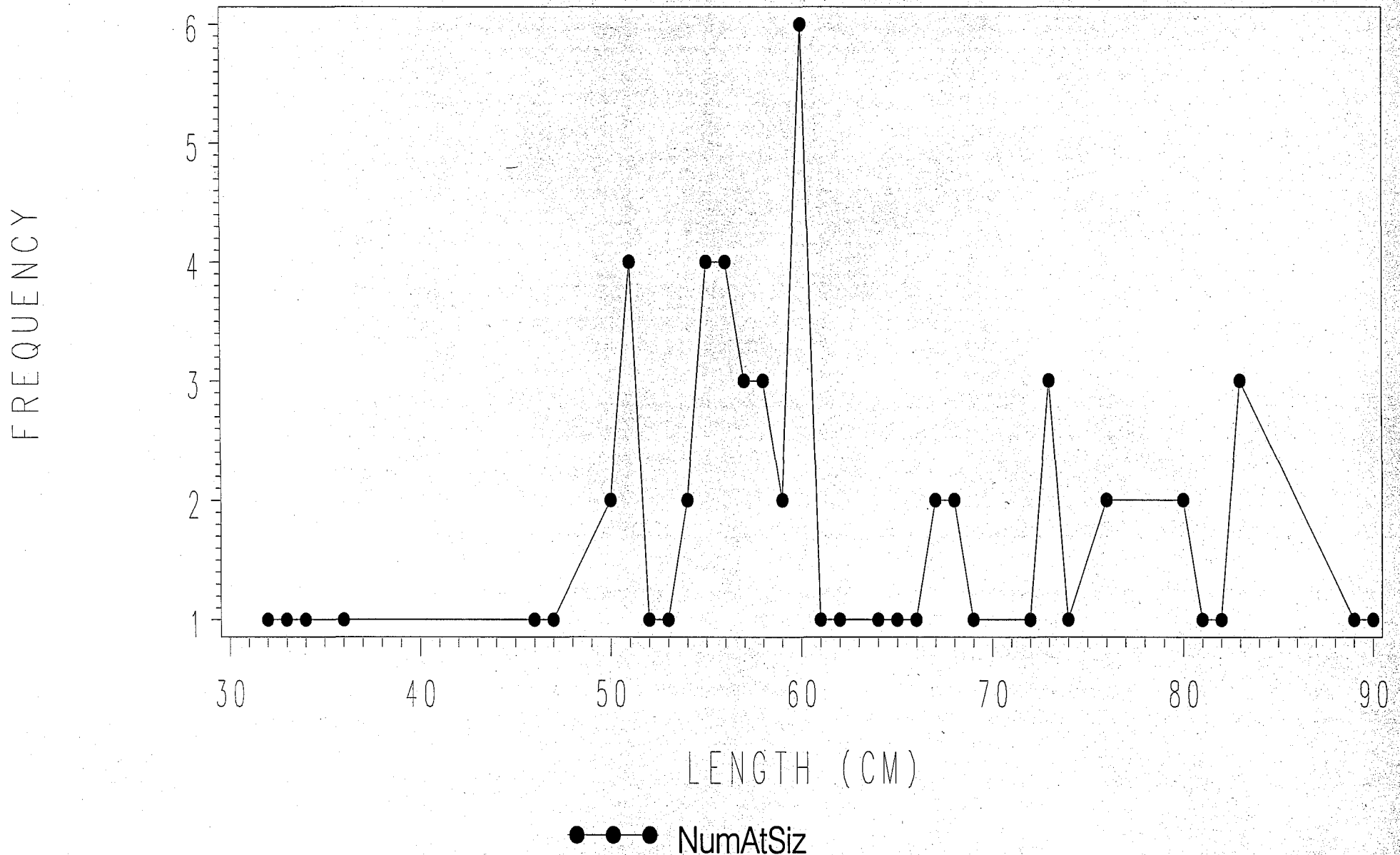
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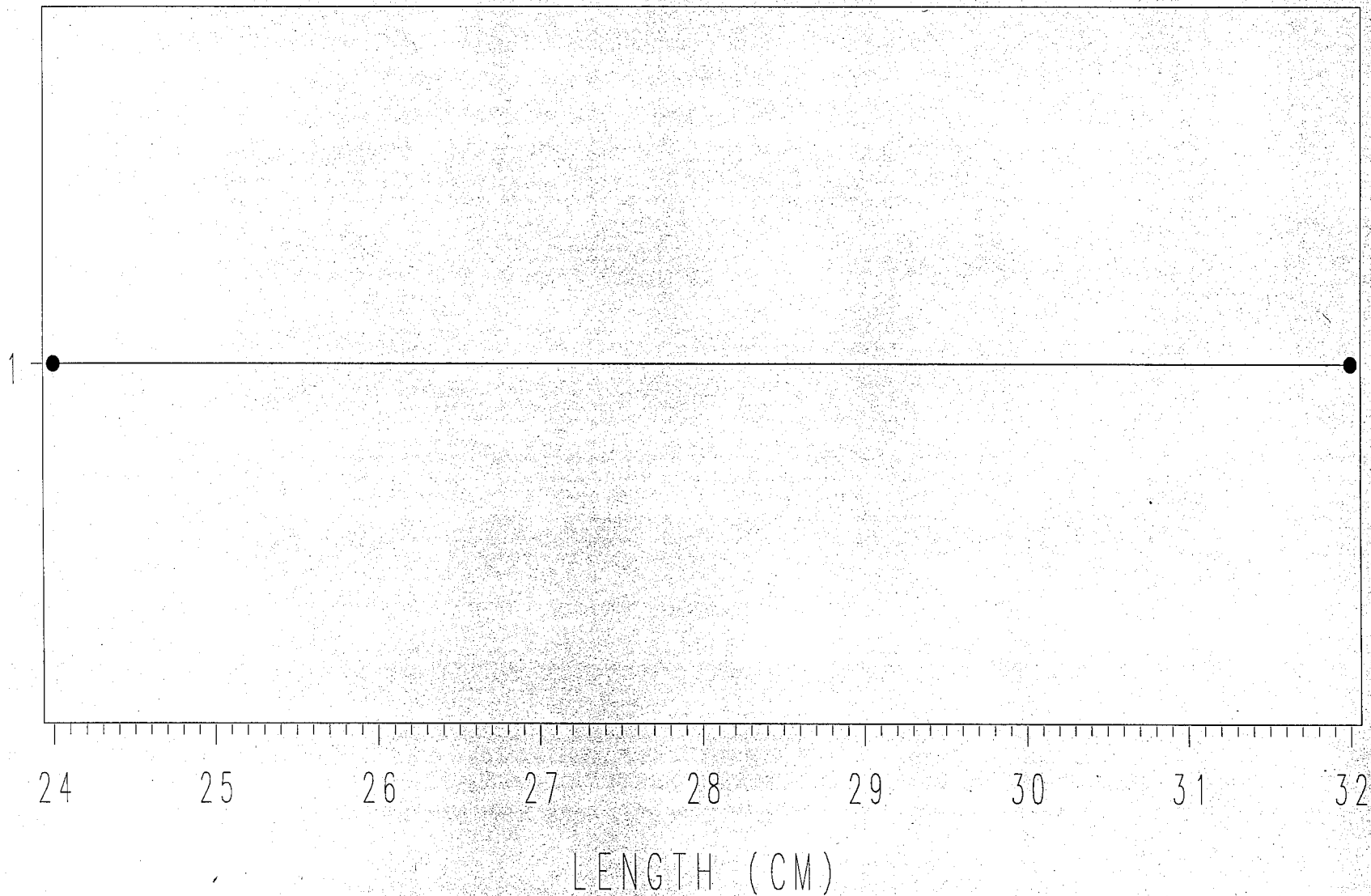


LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

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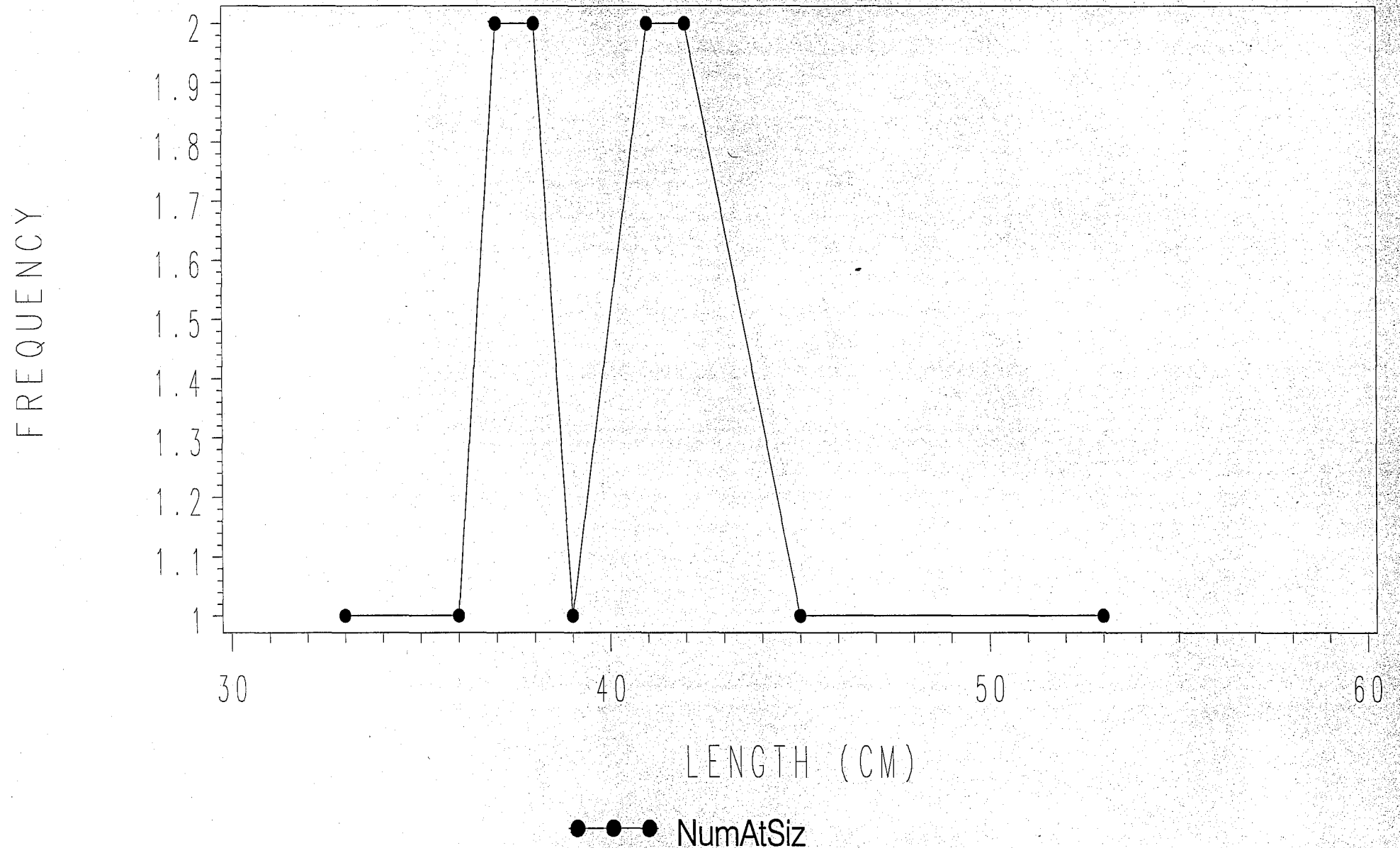


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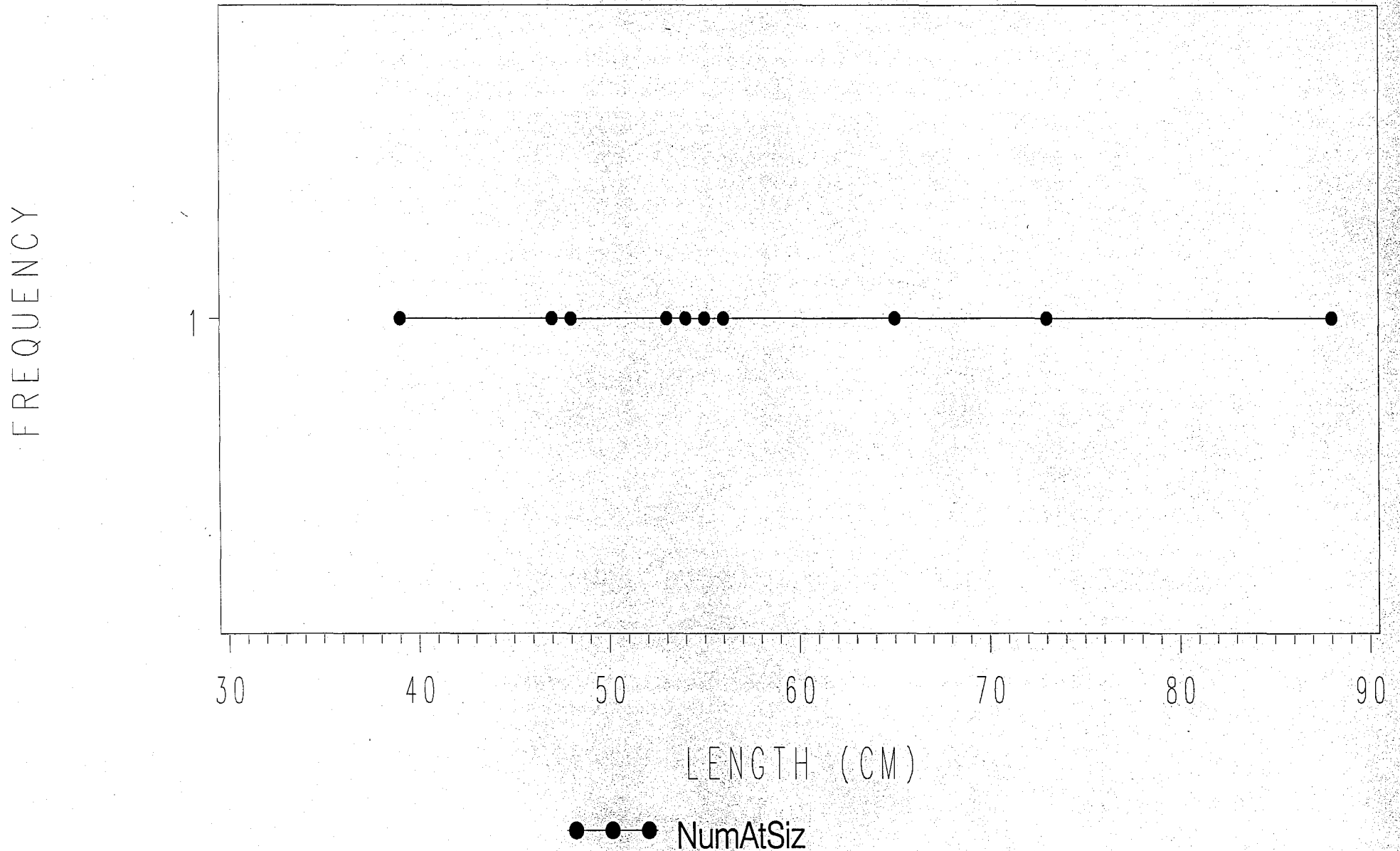
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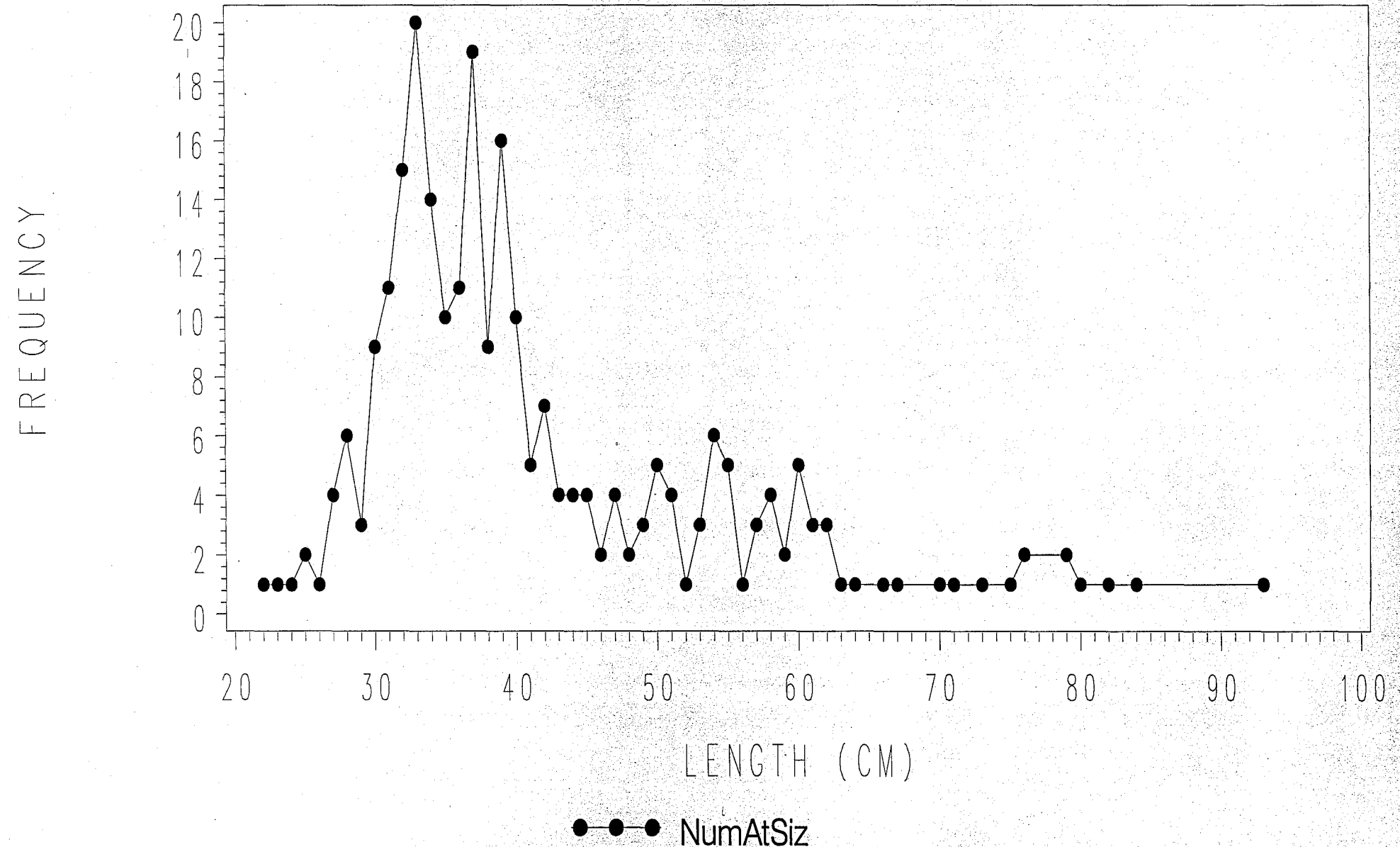
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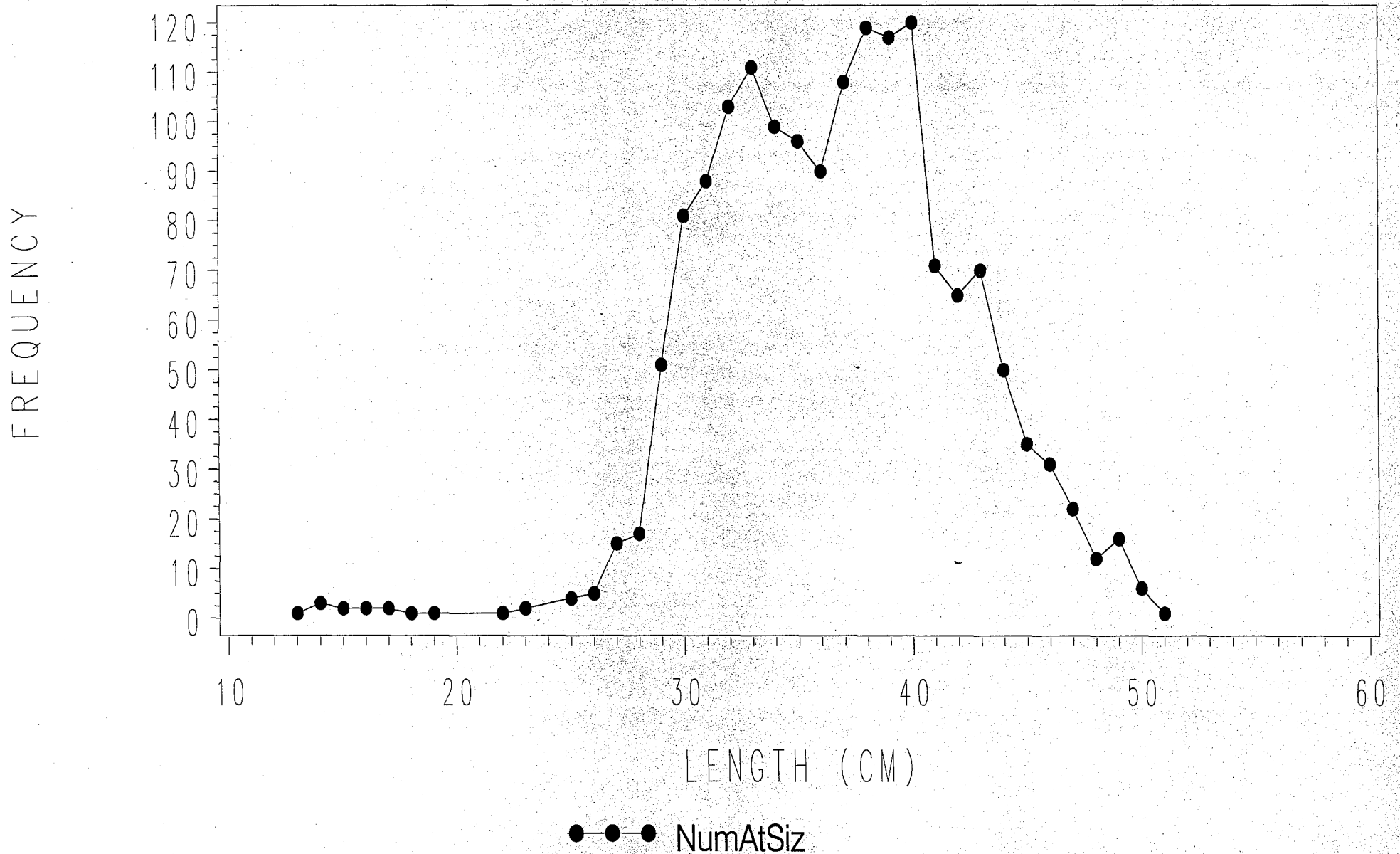
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LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

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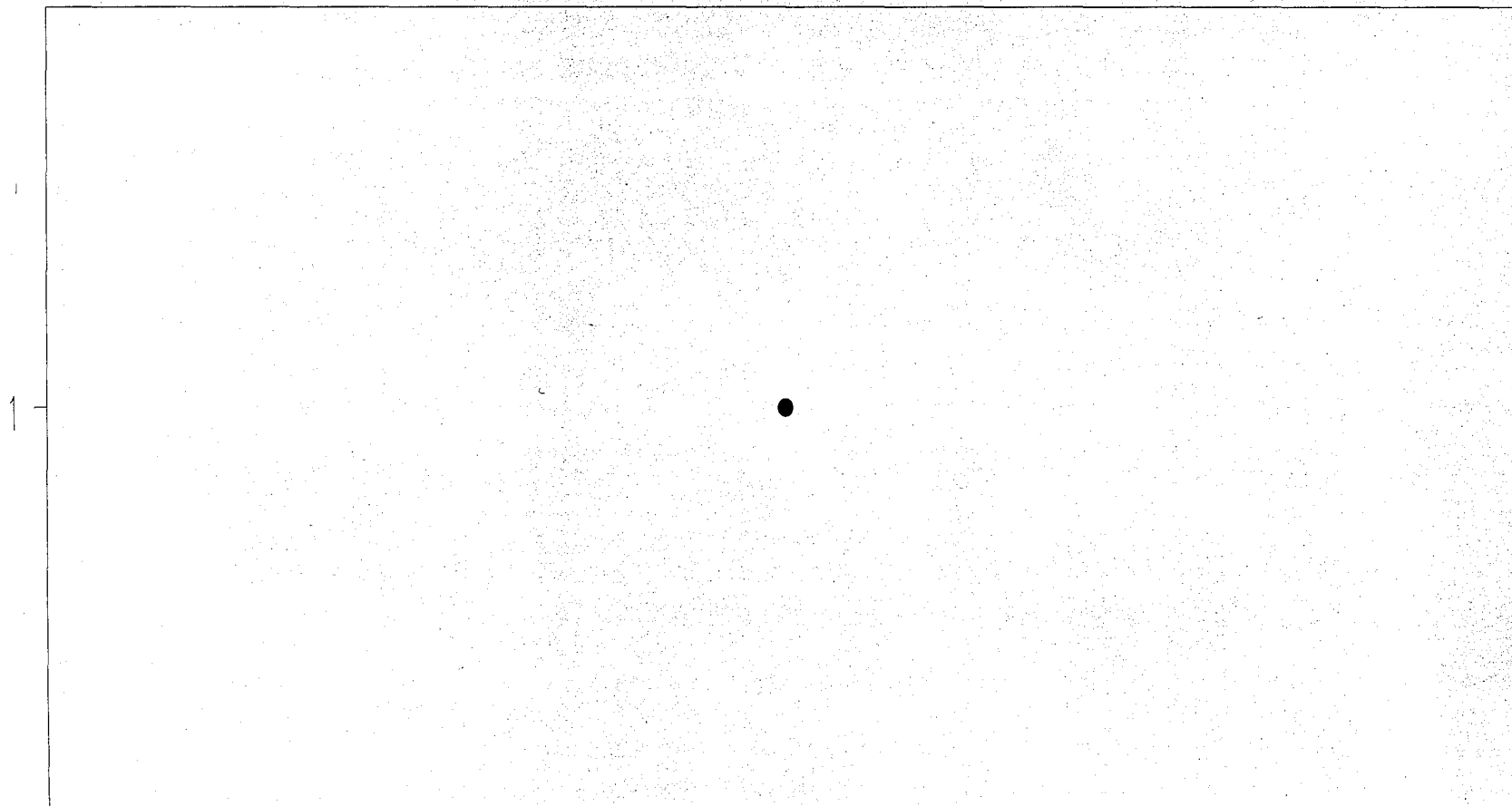


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4 INCH RING EXPERIMENTS

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FREQUENCY



43

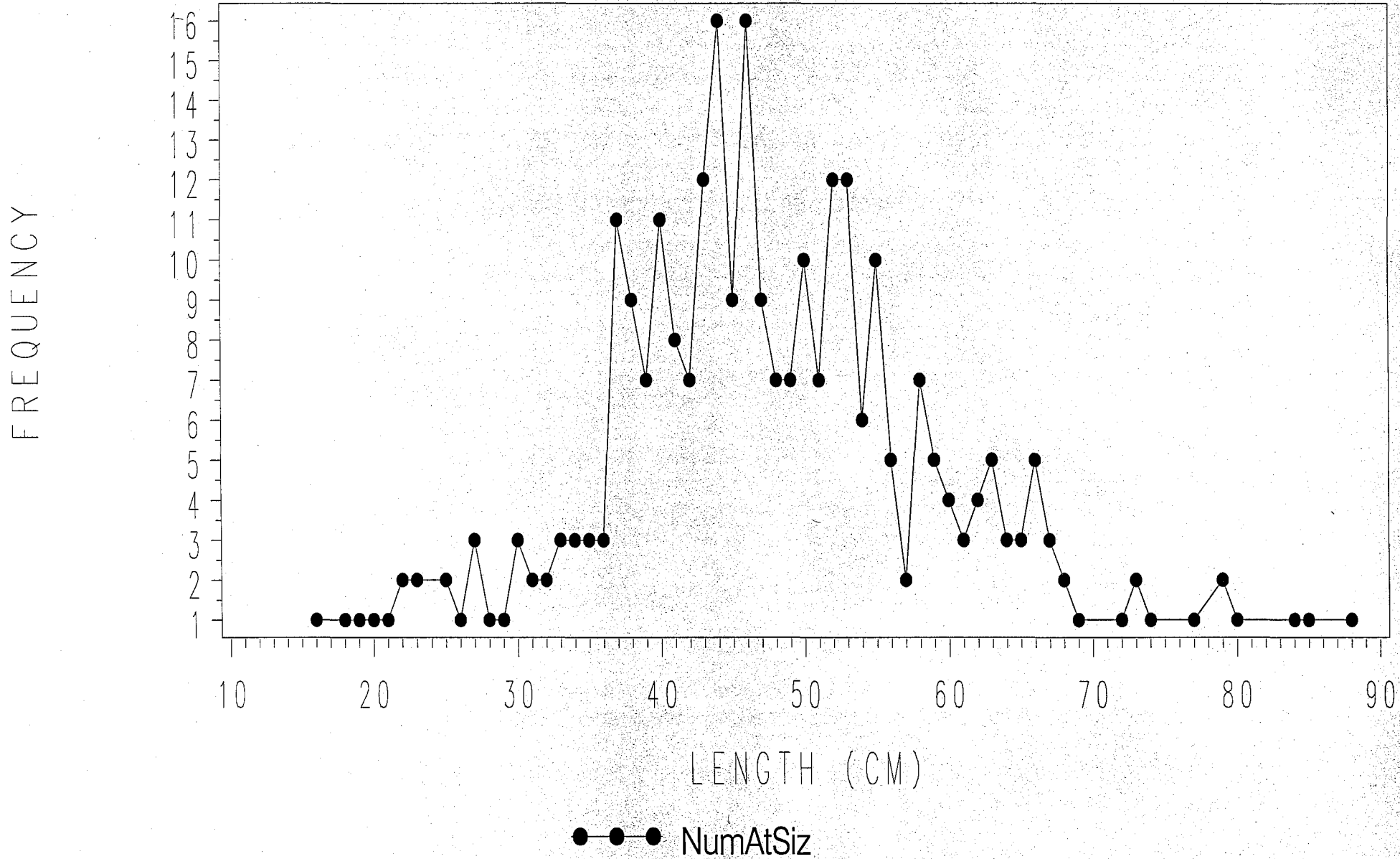
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LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

4 INCH RING EXPERIMENTS

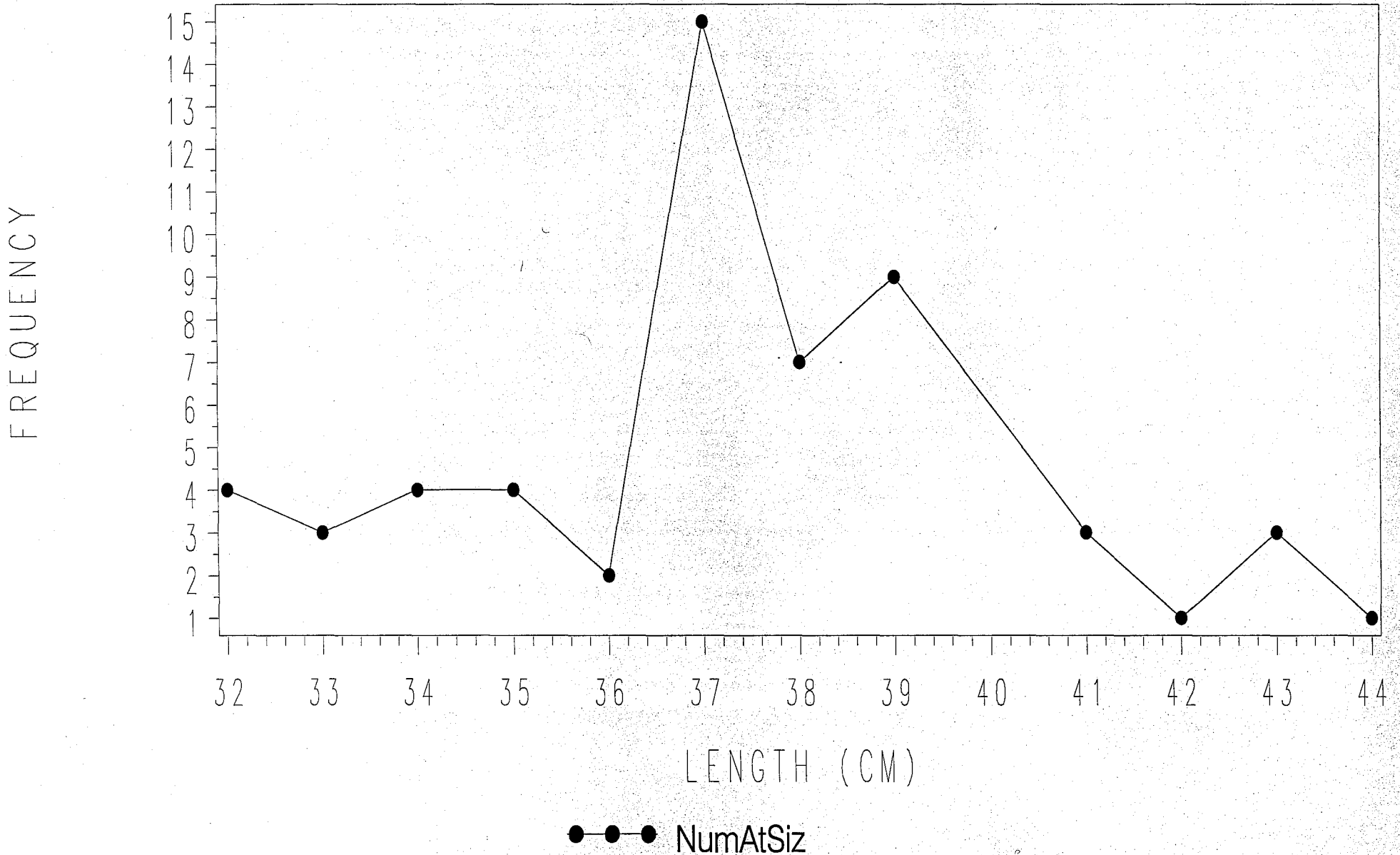
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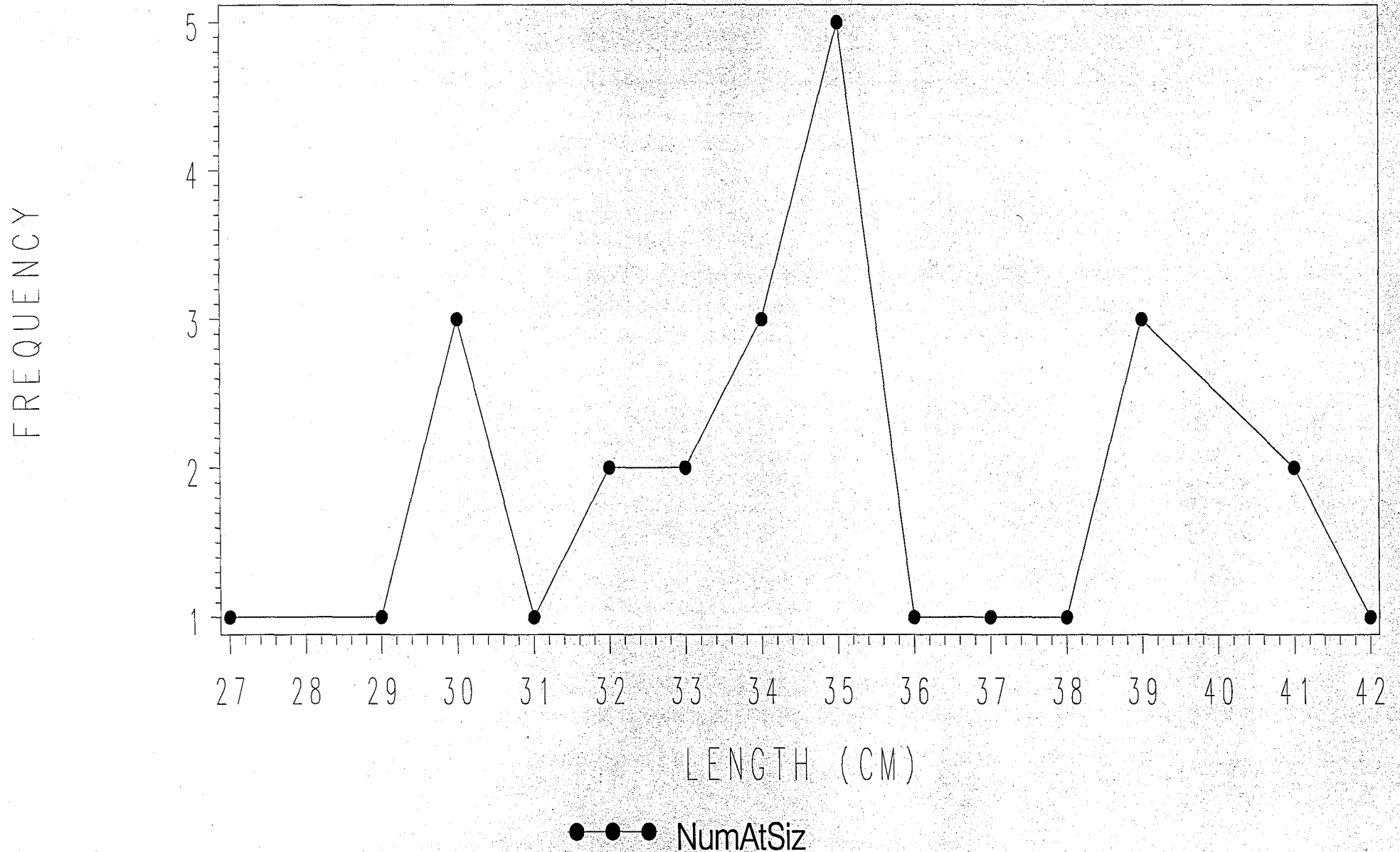
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LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

4 INCH RING EXPERIMENTS

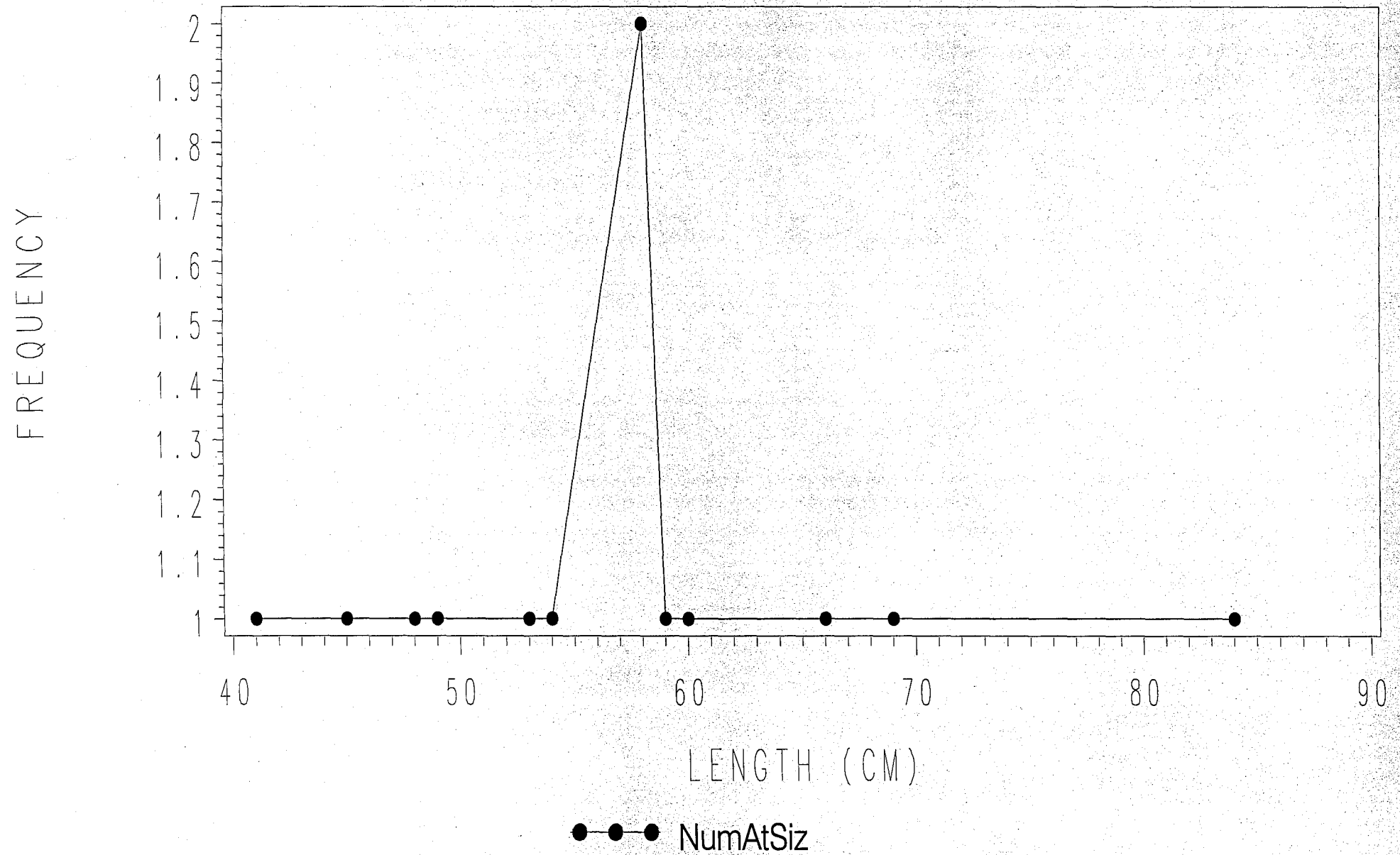
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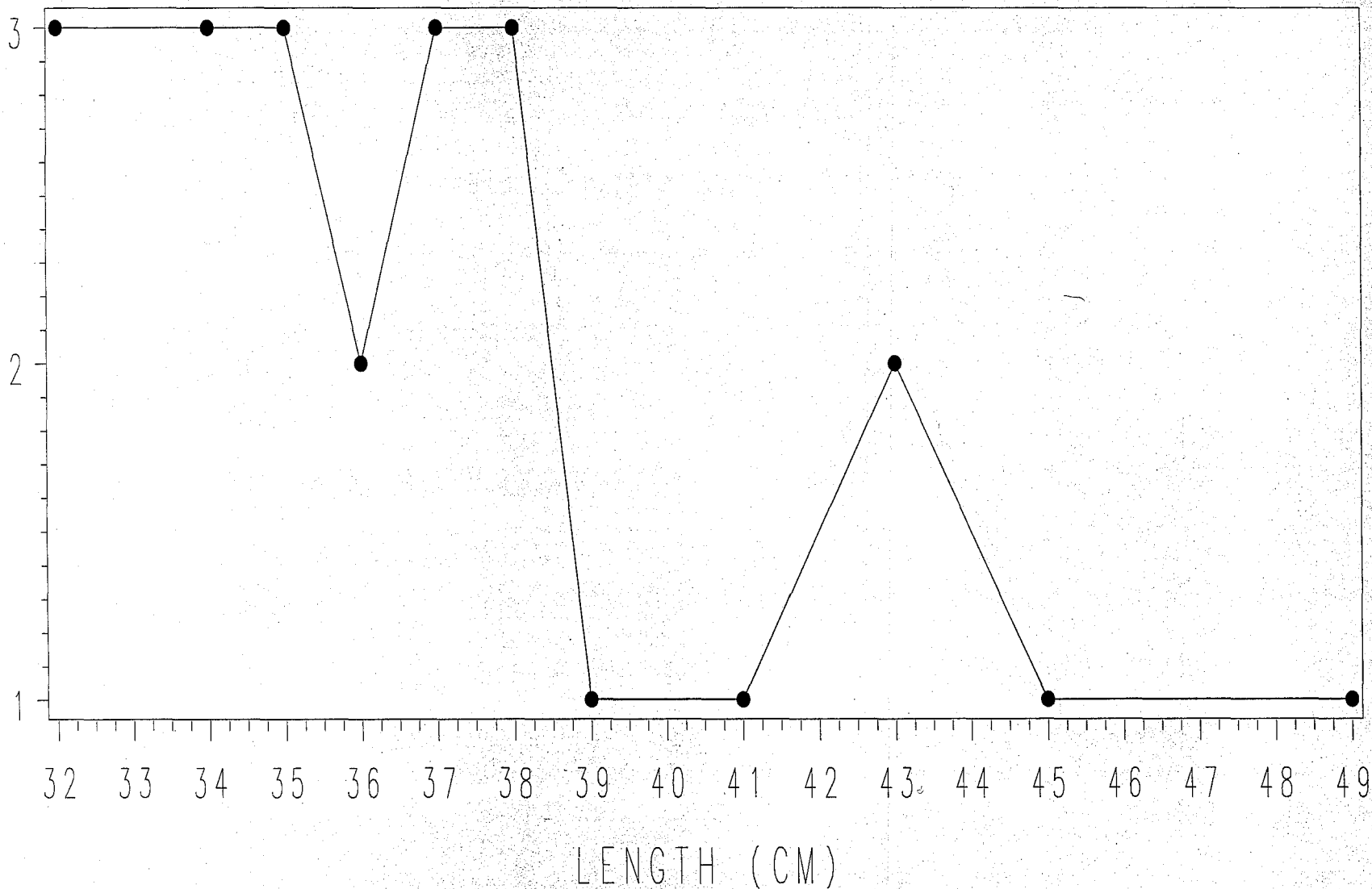


LENGTH FREQUENCY DISTRIBUTIONS OF FINFISH

4 INCH RING EXPERIMENTS

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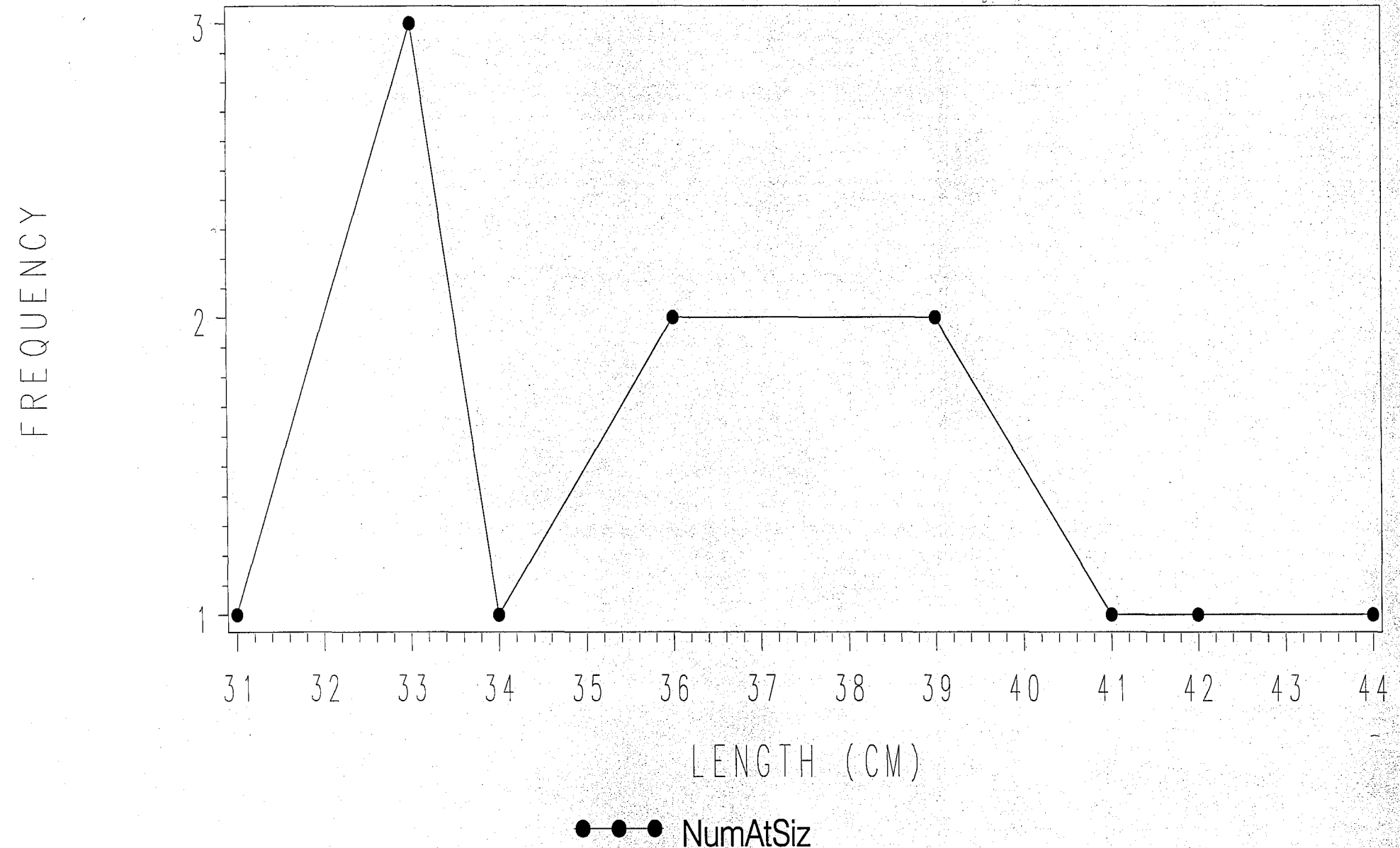


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Cruise=CELTIC, HC, SEPT 2001, N=31 TOWS, AC=1.528 KM² SpCode=BLACKBACK



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