Comments on FEIS/FMP for the Squid Fishery of the Northwest Atlantic Ocean, Supplement Number 1, November 1978.

A. M. T. Lange

National Marine Fisheries Service
Northeast Fisheries Center
Woods Hole Laboratory
Woods Hole, Massachusetts 02543

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p.4. II-5. Item 2. - re: reduction of Loligo OY. Note possible decrease in Loligo abundance, as described in NEFC Lab. Ref. 79-04, sent to the Mid-Atlantic and New England Councils on 23 January 1979.

Item 3. - What is the fishing season; and does the fishing year begin January 1 or April 1. Note our earlier comments (Dec. 22, 1978, letter from Brown to Bryson, attached) concerning the change in fishing year.

p.8. First paragraph, 3rd to last line - 110m. = 361 ft, not 9361 ft.

p.9. Last paragraph - a recent study indicates that male Illex are not necessarily heavier than females at given length (Lange and Johnson, 1978. Dorsal mantle length-total weight relationships of squid (Loligo pealei and Illex illecebrosus) from the Northwest Atlantic, off the coast of the United States, NEFC. Lab. Ref. 78-51).

p.10. Last paragraph. Should be updated to include 1977 and 1978 survey data. Information for 1977 reported in Lab. Ref. 78-36 (squid [Loligo pealei and Illex illecebrosus] stock status: June, 1978). 1978 Abundance and biomass data are attached here.

p.12.13. Tables 1 and 2 - note changes, as above. Paragraphs 1, 2 and 3 can be updated to include final 1977 and 1978 information.

Add to Table 1, pg. 12. Loligo.

		Total			Day			Night	
	#tows	Wt/tow	#/tow	#tows	Wt/tow	#/tow	#tows	Wt/tow	#/tow
1977 SNE-MA	119	11.92	577.89	46	14.20	729.54	35	1.89	94.67
G.Bank	101	.95	43.76	38	1.34	84.06	33	.23	7.31
G.Maine	71	.06	0.81	23	0.04	0.48	22	.02	0.11
1978 SNE-MA	134	5.68	198.36	41	8.93	362.0	52	1.37	23.26
G.Bank	156	1.57	45.63	53	4.04	116.1	50	0.41	11.01
G.Maine	120	0.01	0.18	39	0.06	2.1	45	-	0.01

Add to Table 2, pg. 13. Loligo.

	B_1 wt. (tons)	B_1 (No.x10^6)	B_2 wt. (tons)	B_2 No. (x10^6)
1977	31,600	1,526	27,421	3,157
1978	16,583	566	18,800	1,251

Also note: 1976 - B_2 wt. value should be 51,435, not 48,930.

p.18.-19. Status of the Loligo stock can be updated from November 1977 to present, based on Lab. Ref. 78-36, and attached tables for 1978.

p.20. Loligo pre-recruit indices mean number per tow

	All sizes	≤ 8 cm
1977	388.5	297.7
1978	144.2	93.5

Also note - pre-recruits are considered less than or equal to 8 cm.

p.20. Table 6. - 1977 mean number per tow in strata 63 is 0, not +3308.0. The original figure was based on preliminary data, later found to be erroneous.

p.34. Table 9 - 1. catches are available through 1977.
2. many errors throughout table (i.e. landings under wrong countries, sum of country landings not equal to total, countries missing). See attached table, updated from Lange and Sissenwine (Biological Considerations Relevant to Determining the Optimum Yield of Squid (Loligo pealei and Illex illecebrosus) of the Northwest Atlantic).

p.37. Table 12. The time frame is not indicated on this table.

p.48. Table 22. 1. Totals do not always equal sum of countries' landings.
2. 1977 Data is available - see attached table (updated from Lange and Sissenwine, MS 1978).

p.51. Table 26. Update for final 1975-1977 figures (attached)
Table 27. Update for final 1975-1977 figures (attached)

Add to Table 26. Loligo

	USA Landings (MT)	% USA is of total	Foreign Landings (MT)	% Foreign landings are of total	Total landings (MT)
1975	1,620	5	34,343	95	35,936
1976	3,229	14	20,636	86	23,865
1977	856	5	15,586	95	16,442

Add to Table 27. Illex

1975	108	1	15,628	99	15,736
1976	601	3	22,564	97	23,165
1977	1,023	4	23,769	96	24,792

p.70. XII-4. First paragraph....TALFF for Loligo is less...., however TALFF for Illex is greater....therefore will be adverse effect.... This paragraph seems contradictory.

p.71. XII-5. Paragraph 1. Item 1. More recent evidence (1978) is not so convincing about present Loligo abundance. (NEFC Lab. Ref. 79-04).

p.97. First line - Therefore....OY of Illex at the 20,000 MT level... the OY is 30,000 and the TALFF 20,000.

Note: All references to - Sissenwine, M.P., A.M.T. Lange, and G.T. Waring. 1977. Biological considerations relevant to determining the optimum yield of squid (Loligo and Illex) of the northwest Atlantic continental shelf of the USA for 1978. NEFC, NMFS (manuscript); should be changed to - Lange, A.M.T., and M.P. Sissenwine. Biological considerations relevant to determining the optimum yield of squid (Loligo pealei and Illex illecebrosus) of the northwest Atlantic. This latter document has been sent to be published as a NMFS-SSRF, and contains all the data found in the first document.

Other spelling or typing errors.

p.15. paragraph 1, line 11 - proportion
p.68. XII-2, Item 1. - increase
p.74. NOTE: - intended
p.81. XVII. References - Anderson, E.D.
Mercer. 1974...Leslie-Delury
p.19. last paragraph - autumn

General Comment: Regulations limiting the total catch of Loligo (OY's in 1977-1978 and TAC's during the ICNAF era) have never been restrictive, although individual national allocations have restricted some countries. Given the current low abundance, as noted in Lab. Ref. No. 79-04, it is extremely unlikely that the proposed OY will restrict total catch. This implies that the total fishing mortality rate in 1979 will be virtually uncontrolled. The ecological impact of a drastic increase in fishing mortality (as will be necessary to catch 44,000 tons) is unknown. The fishing mortality necessary to catch OY would probably be higher than any fishing mortality rate ever applied to the resource.

Annual squid landings in metric tons, 1963-1976, by country (Gulf of Maine).

Areas	Year	Cuba	Canada	Bulgaria	France	Ire[1]	FRG[2]	Japan	Italy	Spain	Poland	Romania	USSR	USA	GDR[3]	TOTAL
		COUNTRY														
Total Area	1963													2,105		2,105
	1964												4	941		945
	1965												176	1,154		1,330
	1966												389	1,173		1,562
	1967							6					833	1,829		2,668
	1968	10						1,731					3,176	1,762		6,679
	1969	1						7,122					1,340	1,461	1	9.924
	1970							13,639		4,510			655	1,061	20	19,885
	1971		1	90				10,602		4,197			6,138	1,182		22,210
	1972			499	296		463	18,691	3,200	11,859	5,428	67	6,976	1,214	14	48,707
	1973			410	820		1,641	15,526	3,165	14,932	9,199	150	8,977	1,635	313	56,768
	1974		27	592				16,820	4,260	16,144	6,709	9	8,495	2,422		55,478
	1975	151	0	205		4,958	27	13,985	4,234	9,902	6,836	48	8,928	1,728	898	51,700
	1976	267	78	23	1		1,123	8,353	4,421	13,193	6,756	22	7,644	3,830	1,313	47,024
	1977	34	15	44				12,734	4,183	13,438	888		8,010	1,879	9	41,234
So. New Engl. and North	1963													1,210		1,210
	1964												4	189		193
	1965												176	387		563
	1966												341	193		534
	1967												330	913		1,243
	1968	10						112					2,415	903		3,440
	1969	1						3,724					1,182	739		5,646
	1970							5,363					655	483	20	6,521
	1971		1	80				4,661		256			5,659	711		11,368
	1972			480	6		63	7,862		5,797	5,042	28	6,381	459	14	26,138
	1973			396	403		136	5,811		10,147	9,157	18	8,631	873	313	35,885
	1974		23	196				7,267	1,010	7,448	6,229	2	5,612	1,117		28,884
	1975	151	0	166			27	3,719	548	2,900	3,051	48	4,815	786	888	17,099
	1976	265	78		1		1,123	2,738	12	3,920	5,336	21	6,236	2,674	1,098	23,702
	1977	19	3	13				2,177	4,183	890	180		444	1,797		9,706
Mid Atl. Area	1963													895		895
	1964													752		752
	1965													774		774
	1966												48	980		1,028
	1967							6					503	916		1,425
	1968							1,619					761	859		3,239
	1969							3,398					158	722		4,278
	1970							8,276						578		8,854
	1971			10				5,941		3,941			479	471		10,842
	1972			19	290		400	10,829	3,200	6,063	836	39	595	748		22,559
	1973			14	417		1,505	9,715	3,165	4,785	42	132	346	762		20,883
	1974		24	396				9,553	3,250	8,696	480	7	2,883	1,305	10	26,594
	1975	0	0	39		4,758	0	10,226	3,686	7,002	3,795		4,113	942		34,601
	1976	2		23				5,615	4,409	9,273	1,220	1	1,408	1,156	215	23,322
	1977	15	12	31				10,557		12,548	708		7,566	82	9	31,528

1 Ireland
2 Federal Republic of Germany
3 German Democratic Republic

Estimated species breakdown of squid landings (MT)
Cape Hatteras to Gulf of Maine, 1963-1977.

Year	Can	Bulg	Fra	FRG	Jap	Ita	Spa	Pol	Ire	Rom	USSR	USA	GDR	Cuba	TOTAL
								Loligo							
1963												1294			1294
1964												572			576
1965											99	709			808
1966											226	722			948
1967					5						548	1125			1678
1968					177						2184	1083	5		3449
1969					7125						1080	898			9103
1970					13557		4483				482	652	10		19184
1971		50			10528		1881				3561	727			16747
1972		254	296	463	17102	2928	8165	2754		33	4045	742		7	36789
1973		410	820	1639	14396	2994	11145	5134		139	5000	1100	163		42940
1974		300	27		13493	3280	9375	1653		-	4485	2141	-		34754
1975	-	34		27	10748	3390	7698	3785	3098	-	4792	1620	620	151	35963
1976	19	23	-	22	5004	3304	9137	1706		13	832	3229	317	259	23865
1977	15	8			7814	2237	5236	232			7	856	9	28	16442
								Illex							
1963												810			810
1964												358			358
1965											78	444			522
1966											118	452			570
1967					2						286	704			992
1968					1655						1052	678	5		3390
1969					586						260	562	1		1409
1970					82		27				174	408	10		701
1971	1	40			48		2317				2578	455			5439
1972		245			1589	272	3694	2674		33	2927	472		7	11913
1973		-			1009	171	3784	4070		-	3976	530	156		13696
1974		293			3327	980	6769	5052		9	3945	148			20523
1975		171			3237	844	2204	3051	1660	48	4135	108	278		15736
1976	59	0	8	1101	3349	1117	4056	5050		9	812	601	996	7	23165
1977		56			4920	1946	8202	656			8003	1023		6	24792
1963-1974 [1]															
1975[2]															
1976[3]															

[1] As in Res. Doc. 76/VI/41

[2] From Summ. Doc. 77/VI/8 assigning N.S. to species using same species ratios as in Res. Doc. 76/VI/41 for 1975.

[3] When squid (NS), breakdown according to annual ratio for nation (or all nations) reporting by species.