



Results of Fish Sampling at French Frigate Shoals (23°45'N 165°10'W),  
Northwestern Hawaiian Islands- G.H. Balazs

Date	Time	Location	Type	inches length	lbs Weight	% Full	Contents	Gonads	Comments
7/9/74	PM	ESWR	W	21 1/8	-	-	TFP	-	
			W	23 1/2	-	-	TFP	-	
			W	24 3/4	-	-	TFP	-	
			W	13 1/2	-	-	TFP	-	
7/12	PM	ESWR	W	24 5/8	-	-	TFP	-	
			W	26 1/8	-	∅	∅	-	
			W	33 1/4	-	∅	∅	-	
7/27	PM	ES	K	-	-	∅	∅	-	
			K	-	-	∅	∅	-	
7/28	PM	ESWR	W	30 1/2	-	Partial	TFP	-	
			W	35	-	Partial	TFP	-	
			W	29 1/4	-	Partial	TFP	-	
			W	37	-	Partial	TFP	-	
			W	31 1/2	-	Partial	TFP	-	
			W	24 1/4	-	Partial	TFP	-	
			W	25 3/4	-	Partial	TFP	-	
7/29	PM	ES	W	37	-	∅	∅	-	
			W	25	-	-	TFP	-	
7/30	PM	RR	W	22	-	-	TFP	-	
		G	W	21	-	Partial	TFP	-	
			W	17 1/2	-	Partial	TFP	-	
			W	18	-	Partial	TFP	-	
			W	26 1/2	-	Partial	TFP	-	
8/1	PM	LP	B	27 1/4	-	-	TF	-	Round worms - Bulbous PARASITE IN STOMACH
			W	37	-	-	TFP	-	
			W	18	-	∅	∅	-	
8/2	PM	ESWR	B	23	-	-	TF	-	
			W	14	-	∅	∅	-	
8/3	PM	ESWR	B	24	-	-	TFP	-	
			W	24	-	∅	∅	-	
8/4	PM	RR	Bara	18	-	∅	∅	-	
			Bara	18	-	∅	∅	-	
			W	23	-	-	TFP	-	
			W	23 1/2	-	-	TFP	-	
8/5	PM	ESWR	W	49	-	∅	∅	-	
8/6	PM	G	W	22	-	∅	∅	-	
			W	21 1/2	-	∅	∅	-	
			W	22 1/2	-	∅	∅	-	
			W	21	-	∅	∅	-	
			W	19	-	∅	∅	-	
			W	15 1/2	-	∅	∅	-	
			W	21	-	∅	∅	-	
8/7	PM	UNKN	W	35	31 3/4	∅	∅	-	
			W	32	19 1/2	∅	∅	-	
8/8	PM	RR	B	20	-	-	TFP	-	
			B	23	-	-	TF	-	
			B	25	-	-	8" weke	-	
			W	22 1/2	-	∅	∅	-	
8/9	PM	LP	W	33	-	∅	∅	-	
			W	29 1/2	-	∅	∅	-	

Date	Time	Location	Type	INCHES Length	lbs Weight	% Full	Contents	Gonads	Comments
8/9	PM	RR	B	22	-	-	TF	-	
			B	23 1/2	-	-	TF	-	
			B	24 1/2	-	-	TF	-	
8/10	AM	ESWR	B	26	11	∅	∅	-	
			B	25	9	-	TFP	-	ALSO 1-Fresh whole Triggerfish
			W	34	29 1/2	∅	∅	-	
			W	31	22	∅	∅	-	
			W	29	16 1/2	-	TFP	-	
			W	33	26	∅	∅	-	Round worms INTESTINE
			W	36	33 1/2	∅	∅	-	
			W	34	27 1/2	∅	∅	-	
			W	32	24 1/2	-	TFP-CP	-	
			W	40	50	-	TFP-CP	-	
8/11	PM	RR	W	36	-	∅	∅	-	
			Bara	28	-	∅	∅	-	
	PM	ESWR	W	30	-	∅	∅	-	
			W	26	-	∅	∅	-	
			W	32	-	∅	∅	-	
			W	34	-	∅	∅	-	
			W	32	-	∅	CP	-	
8/12	PM	RR	B	24	10	-	TFP	-	
			B	21	6	-	TFP	-	
			B	26	16 1/2	-	TFP	-	
			B	24	11	-	FP	-	
			W	14	8	∅	∅	-	
8/13	PM	ESWR	K	26	10 1/2	-	FP	-	
			W	48	76 1/2	∅	∅	-	Round worms
			W	32	21 1/2	∅	∅	-	
			W	27	13 1/2	∅	∅	-	Round worms
			W	30 1/2	17 1/2	∅	∅	-	
9/20	PM	RR	W	14 3/4	31	∅	∅	∅	
9/21	PM	ESWR	W	33	35	10	FP	M	
			W	32 1/2	32	∅	∅	F	
			W	32 1/4	33	∅	∅	F	
			W	27 1/4	17 1/2	20	FP	∅	
			W	25 3/4	14 1/2	∅	∅	M	
9/22	AM	G	W	37	48 1/2	80	TFP	F	PHOTOS-STOMACH 1/2lb CONTENTS 2lb
9/23	PM	RR	B	28 1/4	14 1/2	50	TFP	F	
			W	22	8	5	TFP	F	
			W	25 3/4	-	∅	∅	F	
9/25	AM	ESWR	B	25 1/2	12	50	TF	M	TRIGGER FISH 2" long
			B	20 1/4	6 1/2	80	TF	F	
			B	19 3/4	6 1/2	80	TF	M	
			Bara	28 1/2	6	-	FP	-	1-DIGESTED FISH-UNKN
	PM		W	44	6.5 1/2	50	TFP-CP	F-CP	UNIDENTIFIED JAWS
			B	21	-	50	TFP	M	
9/27	PM	T ESWR	15+W	15-21	-	∅	∅	-	
			W	40	-	10	TFP	M	
			B	28	-	80	TFP	F	

Date	Time	Location	Type	inches Length	lbs weight	% Full	Contents	Gonads	Comments
9/28	PM	ESWR	B	26	-	20	TFP	M	
10/1	PM	RR	B	29	18	10	TFP	F	
		ESWR	B	26	16 1/2	80	TFP	F	
			W	38	38 1/2	5	FP	M	
			W	33	30	5	FP	M	
			W	36	35	5	FP	M	
10/4	AM	ESWR	W	49	113	Ø	Ø	F	Mummified WORM EEL IN BODY CAVITY
10/5	PM	ESWR	W	35	-	Ø	Ø	M	

KEY TO ABBREVIATIONS

SEE ATTACHED CHARTS

ESWR - East Is, Southwest Reef Areas

FS - East Is, South side

RR - Round Is Reef Areas

G - Gin-Little Gin Is Areas

LP - La Perouse

T - Tern Is Areas

B - Blue Vlua w/ BIK spots (Caranx melampygus?)

W - 17 anal spines, chin scales (Carangoides ajax?)

Bara - Baracuda

K - Kawa Kawa

TFP - Partially digested Trigger Fish Parts

TF - Trigger Fish, only slightly digested (identified as Perragor spilosoma)

FP - Partially digested Fish Parts, not recognizable

CP - Cephalopod Parts

M - Male, reproduction organ present

F - Female, eggs present

Ø - nothing

- observation/data not taken

UNKN - Unknown

TOTAL by type of fish

25 - C. melampygus

(26) 91 - C. ajax

3 - Kawa Kawa

4 - Baracuda

Total 123

$$\bar{x} = \frac{2220.125}{76}$$

$$\bar{x} = 29 \frac{1}{4} "$$

$$N=25 \quad \bar{x} = \frac{607.75}{25}$$

$$N=4 \quad \bar{x} = 23 \text{ BARA}$$

add.									
9/26	PM	ESWR	W	20	-	10	FP	-	
			W	40	-	10	crab pieces	F	