Ophiothrix spi	culata	CLASS Opl	niuroidea
		ORDER	
BATHY. ZONE: Shore (SHORE, PILING, DREDGI	e and dredged	FAMILY	
OBVIOUS CHARACTER			
XPOSURE TO SURF (OR, IF TATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEP	TH IF DREDGED)	TYPE OF BOTTOM:
EXPOSED, SEMI-PROTECTED,	(HIGH, MEDIUM, LOW, EXTRI		(REEF, ROCKS, BOULDERS
SHELTERED)  SITION: ON OR UNDER	SUMMARY OF OBSERV	ATIONAL DATA	GRAVEL, SAND, MUD)

ROCKS, WEED, IN SUBSTRATUM, ETC.)

(BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

ASSOCIATES, COMMENSALS:

BREEDING SEA-SON, COLOR IN LIFE, ETC: Variable. Vivid greens and reds

Pate Region, Station, Position, Etc. Bathy-metric Zone Tidal Exposure of Bottom Observ  4 Jan and 1 Jan'25 Mont Bay, prob. off Del dredg 15-20 clay many Monte ? Carmel, reef region, in abalone pool Also under rks in Patiria association	
Monte ? Carmel, reef region, in abalone pool Also under rks in	OR (OR
Monte ? Carmel, reef region, in abalone pool shore low semi rky few Also under rks in	
in abalone pool shore low semi rky few Also under rks in	EFR
Also under rks in	
[12] 12: 12: 12: 13: 13: 13: 13: 13: 13: 13: 13: 13: 13	EFR
Patiria association	
IF ADDITIONAL SPACE IS NEEDED, USE UNPRINTED 4 X 6 WHITE CARDS	

Ophiopholis bakeri		CLASS				
NAME						
		ORDER				
APPROX. GEOGR. RANGE DY	dged	FAMILY				
(SHORE, PILING, DREDG	ED, PELAGIC, ETC.)					
OBVIOUS CHARACTER	s					
EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR	DEPTH IF DREDGED)	TYPE OF BOTTOM:			
(EXPOSED, SEMI-PROTECTED, SHELTERED)	SUMMARY OF OBSE		(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)			
POSITION:  (ON OR UNDER  ROCKS, WEED, IN SUBSTRATUM, ETC.)		×				
VEGETATION: (BARE, ROCK- WEED, KELP, EEL GRASS, ETC.)						
ASSOCIATES, COMMENSALS:						
son, color in	orred bands on	a lighter backgr	ound			

NAME	Ophiopholis be	keri					
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
	Borught in on gorgon- ians by black cod fish erman, Santa Cruz	- dredg	400fms		Blk shale		EFR or
	IF ADDITIONAL SPACE IS NEE	DED, USE	JUPRINTED	4 X 6 WHI	TE CARDS		

Amphilimna pentacantha	CLASS Ophiuroidea
	ORDER
APPROX. GEOGR. RANGE	
BATHY. ZONE: Dredged	FAMILY
(SHORE, PILING, DREDGED, PELAGIC, ETC.)	

EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEPTH IF DREDGED)	TYPE OF BOTTOM:
(EXPOSED, SEMI-PROTECTED,	(HIGH, MEDIUM, LOW, EXTREME LOW, DRDGED)	(REEF, ROCKS, BOULDERS
SHELTERED)	SUMMARY OF OBSERVATIONAL DATA	GRAVEL, SAND, MUD)

(ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)

VEGETATION; (BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

ASSOCIATES, COMMENSALS:

BREEDING SEA-SON, COLOR: IN Drab red or tawny

PBL SURVEY CARD-BUFF

NAME	Amphilimna pentacan	tha					
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
4Jan and 11Jan 25	Off New Monterey Station No. 2	dredg	15-20		olack shale and cl	ay	EFR or WKF
		-					
	IF ADDITIONAL SPACE IS NEE		,	4 V C WILL	TE CARDO		

Ophiacantha sp		CLASS ()	phiuroidea
APPROX. GEOGR. RANGE		ORDER	
BATHY. ZONE: dred		FAMILY	Ophiacanthidae .
OBVIOUS CHARACTER	s		
EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEPTH IF	DREDGED)	TYPE OF BOTTOM:
(EXPOSED, SEMI-PROTECTED, SHELTERED)	(HIGH, MEDIUM, LOW, EXTREME I		(REEF, ROCKS, BOULDERS GRAVEL, SAND, MUD)
POSITION:			

SUBSTRATUM. ETC.) VEGETATION:

(BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

(ON OR UNDER ROCKS, WEED, IN

ASSOCIATES. COMMENSALS:

BREEDING SEA-SON. COLOR IN LIFE, ETC ..

NAME	Ophiacantha sp						
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
No.22/6	Channel rock, MontBay, brought in by ChinYip	dredg	80			usnm 1	01/365
	IF ADDITIONAL SPACE IS NEE	DED, USE	UNPRINTED	4 X 6 WHI	TE CARDS		

Gorgonocephalu NAME	s eucnemis caryi	CLASS	Ophi uroi dea
APPROX. GEOGR. RANGE		ORDER	
BATHY. ZONE: Dre	dged eb, pelagic, etc.)	FAMILY	
OBVIOUS CHARACTER			
EXPOSURE TO SURF (OR, IF	TIDAL HORIZON (OR DEPTH IF	DREDGED	TYPE OF BOTTOM:
STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEFIN IF	DREDGED)	
(EXPOSED, SEMI-PROTECTED, SHELTERED)	(HIGH, MEDIUM, LOW, EXTREME   SUMMARY OF OBSERVATIO		(REEF, ROCKS, BOULDER GRAVEL, SAND, MUD)
POSITION:  (ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)			1
VEGETATION: (BARE, ROCK- WEED, KELP, EEL GRASS, ETC.)			
ASSOCIATES, COMMENSALS:			
	with some rose and y elds gray. Shields and de of disc maroon	ellow. A	rms and borders of chial spaces of
PRI SURVEY CARD-BUFF		CAF	E FLATTERY TO PT. CONCEPTIO

NAME	Gorgonocephalus euc	nemis	caryi				
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
No.33/1 I	Prob MontBay dragboat	dredg	60 fms		mud	USNM 10	1/493
30Mch 125 July 124	MontBay South of the Farallone	物の	55 fms		gray mu slimy gray mu		
	IF ADDITIONAL SPACE IS NEE	DED, USE I	JNPRINTED	4 X 6 WHI	TE CARDS		

Ophiopholis ac	class (	phiuroi dea
	ORDER	
APPROX. GEOGR. RANGE		
BATHY. ZONE: she	pre FAMILY	
(SHORE, PILING, DREDG	ED, PELAGIC, ETC.)	
OBVIOUS CHARACTER	s	
XPOSURE TO SURF (OR, IF TATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEPTH IF DREDGED)	TYPE OF BOTTOM:
EXPOSED, SEMI-PROTECTED,	(HIGH, MEDIUM, LOW, EXTREME LOW, DRDGED)	(REEF, ROCKS, BOULDERS,
SHELTERED)	SUMMARY OF OBSERVATIONAL DATA	GRAVEL, SAND, MUD)
CITION		
SITION: ON OR UNDER		
OCKS, WEED, IN		
UBSTRATUM,		

GRASS, ETC.) ASSOCIATES. COMMENSALS:

BREEDING SEA-SON, COLOR IN LIFE, ETC ..

VEGETATION: (BARE, ROCK-WEED, KELP, EEL

Variable. Vivid greens, reds.

PBL SURVEY CARD-BUFF

CAPE FLATTERY TO PT. CONCEPTION

NAME	Ophiopholis acu	leata					
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
?	Flats btwn Aumentos Rk and Lighthouse notuncommon here and in Crml. Perhaps 1 or 2 seen per tide	shore	low	semi	rky		EFR
	IF ADDITIONAL SPACE IS NEE	DED, USE	JNPRINTED	4 X 6 WHI	TE CARDS		

Ophiopholis acu	leata kennerlyi (L	yman CLASS Upl	niuroidea
		ORDER	
APPROX. GEOGR. RANGE			
BATHY. ZONE: dre	dged	FAMILY	
(SHORE, PILING, DREDO	ED, PELAGIO, EIC.)		
OBVIOUS CHARACTER	RS		
OBVIOUS CHARACTER EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEP	TH IF DREDGED)	TYPE OF BOTTOM:
EXPOSURE TO SURF (OR, IF			TYPE OF BOTTOM:

SUBSTRATUM, ETC.)

VEGETATION: (BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

ROCKS, WEED, IN

ASSOCIATES, COMMENSALS:

BREEDING SEA-SON, COLOR IN LIFE, ETC:

Α.	A.	A	-	
٦	IV	Ц	E.	

## Ophiopholis aculeata kennerlyi N

DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	OR TIDAL HORIZON	TO WAVE SHOCK	OF BOTTOM	TAKEN OR OBSERVED	(OR
No.24/5 and 24/8	From rock brought in by Chin Yip from MB channel	dredg	70 80 fms			usnm 10	1/365
			1				

IF ADDITIONAL SPACE IS NEEDED, USE UNPRINTED 4 X 6 WHITE CARDS

Amphi od:	ia occi	dentalis CLASSOphi	iuroidea
NAME			
APPROX. GEO	CD DANCE	ORDER	
APPROX. GEC	JGR. RANGE		
BATHY. ZO	NE: shore	and dredged FAMILY	
(SHORE, PIL	ING, DREDG	ED, PELAGIC, ETC.)	
OBVIOUS C	HARACTER	S	
EXPOSURE TO SURE		TIDAL HORIZON (OR DEPTH IF DREDGED)	TYPE OF BOTTOM:
		(HIGH, MEDIUM, LOW, EXTREME LOW, DRDGED)	
(EXPOSED, SEMI-PR		SUMMARY OF OBSERVATIONAL DATA	(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)
SHELTERED	)	SUMMART OF OBSERVATIONAL DATA	GRAVEL, SAND, MOD)
POSITION:			
(ON OR UNDER ROCKS, WEED, IN	The cor	nmonest littoral ophiuran of the	he region; occurs
SUBSTRATUM,		hundred in favorable environme	
ETC.)			
VEGETATION:		e of the great tidepool): where	
(BARE, ROCK- WEED, KELP, EEL	slight:	ly buried in muddy sand -with I	Ischnochiton magdal-
GRASS, ETC.)	enensi	5	

Gray and black

LIFE, ETC:. PBL SURVEY CARD-BUFF

ASSOCIATES, COMMENSALS:

BREEDING SEA-SON, COLOR IN

CAPE FLATTERY TO PT. CONCEPTION

NAME	Amphiodia occidental	is					
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
28/7	MON.Bay. Rock brought in by Chin Yip, rock cod fishermen. Some of the specimens were literally inside the rock and could be got only by breaking the rock itself	dredg	80 fms			USNM 1	01/365
	IF ADDITIONAL SPACE IS NEE	DED. USE	INPRINTED	4 X 6 WHI	TE CARDS		

Ophiopteris papillosa	CLASS	Ophiur oi dea
	ORDER	
APPROX. GEOGR. RANGE		
(SHORE, PILING, DREDGED, PELAGIC	FAMILY	
OBVIOUS CHARACTERS		
OSURE TO SURF (OR, IF TIDAL TED, TO TIDAL CURRENTS)	HORIZON (OR DEPTH IF DREDGED)	TYPE OF BOTTOM:
POSED. SEMI-PROTECTED, (HIGH, M	EDIUM, LOW, EXTREME LOW, DRDG	ED) (REEF, ROCKS, BOULDERS,
	ARY OF OBSERVATIONAL DATA	
	e were found in many	years collecting.

(ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)

EXP

(EX

POSI

One pair in the Great Tidepool region in the middle 20s, another pair down the coast below Highlands, in a little Channel below the real estate development (many years

(BARE. ROCK- back) that used to be called San Remo. A southern weed, kelp, eel species that was quickly exterminated here.

ASSOCIATES,

BREEDING SEA-SON, COLOR IN LIFE, ETC:

DATE	REGION,	STATION,	Position,	ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
			*							
							*			

IF ADDITIONAL SPACE IS NEEDED, USE UNPRINTED 4 X 6 WHITE CARDS

Amp	hipholis	pugetana	CLASS Opl	niuroidea
NAME				
			ORDER	
APPROX.	GEOGR. RANGE			
BATHY.	ZONE: Sh	ore and dredging	FAMILY	
(SHORE,		ED, PELAGIC, ETC.)		
OBVIOUS	CHARACTER	IS		
EXPOSURE TO S STATED, TO TIDA		TIDAL HORIZON (OR	DEPTH IF DREDGED)	TYPE OF BOTTOM:
(EXPOSED, SEMI	-PROTECTED.	(HIGH, MEDIUM, LOW, E	EXTREME LOW, DRDGED)	(REEF, ROCKS, BOULDERS,
SHELTER		SUMMARY OF OBS	ERVATIONAL DATA	GRAVEL, SAND, MUD)
POSITION: (ON OR UNDE	The se	cond commonest 1	littoral ophiura	n. In algae especia
ROCKS, WEED, II SUBSTRATUM, ETC.)	lly at	the base of hal	f buried boulder	s (under which
VEGETATION: (BARE, ROCK WEED, KELP, EE GRASS, ETC.)		dia occurs), hal	i tide and belov	<b>Y</b>
ASSOCIATES, COMMENSALS:				
BREEDING SEA SON, COLOR IN LIFE, ETC:				

PBL SURVEY CARD-BUFF

CAPE FLATTERY TO PT. CONCEPTION

NAME	Amphipholis p	ugetan	9				
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
24/7. 28/6 28/7	MontBay.Rocks brought in by Chin Yip from channel	dredg	70-80 fms			USNM 1	.01/365
						,	
	IF ADDITIONAL SPACE IS NEE	DED, USE	UNPRINTED	4 X 6 WHI	TE CARDS		

Ophi oploc	ous esm	arki	CLASS	Ophiur oi dea
APPROX. GEO		Shor e	ORDER	
	ING, DREDG	ED, PELAGIC, ETC.)	TAME	
XPOSURE TO SURF TATED, TO TIDAL C EXPOSED, SEMI-PRO SHELTERED)	OTECTED,	(HIGH, MEDIUM, LO	(OR DEPTH IF DREDGED)  W, EXTREME LOW, DRDGE	(REEF, ROCKS, BOULDERS,
OSITION: ON OR UNDER SOCKS, WEED, IN SUBSTRATUM,	Under format	large flat st ion. Used to	ones on sandy be not uncommo	ottom, upper Pelvetia n on tideflats btwn with all southern
GETATION: BARE, ROCK-	spp, se			ed almost immediately,

WEED, KELP, EEL GRASS, ETC.)

ASSOCIATES.

COMMENSALS: BREEDING SEA-SON, COLOR IN LIFE. ETC :.

perhaps as a result of my own collecting activity. I took probably a couple of dozen as I found them in the late 20s.

DATE	REGION, STATION, POSITION, ETC	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD"
			T 10				
	IF ADDITIONAL SPACE IS N	EEDED HOT	UNDRINTER	1 7 6 1111	TE CIRRO		

## Ophiura lutkenni (deter.not certain, class Ophiuroidea NAME based on old card ORDER APPROX. GEOGR. RANGE BATHY. ZONE: dredged (SHORE, PILING, DREDGED, PELAGIC, ETC.)

## OBVIOUS CHARACTERS

EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)

TIDAL HORIZON (OR DEPTH IF DREDGED)

TYPE OF BOTTOM:

(EXPOSED, SEMI-PROTECTED, SHELTERED)

(HIGH, MEDIUM, LOW, EXTREME LOW, DRDGED)
SUMMARY OF OBSERVATIONAL DATA

(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)

(ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)

POSITION:

VEGETATION: (BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

ASSOCIATES, COMMENSALS:

BREEDING SEA. note on old card More vivid than 0. sarsii, but otherson, color IN
LIFE, ETC: wise quite similar M

NAME		Ophiu	ra lu	tkenn	ni					
DATE	REGION, S	TATION,	Position	i, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
4 and 11 Jan '25	Dredgin	g off	New 1	Mont	dredg	15-25 fms		shale and clay		EFR?
	IF .	ADDITION	AL SPACE	IS NEE	EDED, USE	JNPRINTED	4 X 6 WHI	TE CARDS		

Ophiura sarsi	CLASS	5 Ophiuroidea
APPROX. GEOGR. RANGE	ORDE	R
	edged FAMIL	Y
OBVIOUS CHARACTER		
EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEPTH IF DREDGE	TYPE OF BOTTOM:
(EXPOSED, SEMI-PROTECTED, SHELTERED)	(HIGH, MEDIUM, LOW, EXTREME LOW, DRD	(REEF, ROCKS, BOULDERS,
COSITION: (ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)		

GRASS, ETC.) ASSOCIATES. COMMENSALS:

VEGETATION: (BARE, ROCK-WEED, KELP, EEL

POS

BREEDING SEA-Pale gray, dark gray markings SON, COLOR IN LIFE, ETC:.

NAME	Ophiura sarsii							
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")	
July '24	Off Farallones, almost unbelievable quantities, many gallons, literally	dredge		SHOCK	sticky gray mud		EFR	
	IF ADDITIONAL SPACE IS NEE	DED, USE	UNPRINTED	4 X 6 WHI	TE CARDS			

Asteronyx love	eni CLASS Ophi	CLASS Ophiuroidea				
	ORDER					
APPROX. GEOGR. RANGE						
BATHY. ZONE: Dreds	ged FAMILY					
(SHORE, PILING, DREDG						
(POSURE TO SURF (OR, IF FATED, TO TIDAL CURRENTS)	TIDAL HORIZON (OR DEPTH IF DREDGED)	TYPE OF BOTTOM:				
	(HIGH, MEDIUM, LOW, EXTREME LOW, DRDGED)	ABEET DOCKE BOWNERS				
EXPOSED, SEMI-PROTECTED, SHELTERED)	SUMMARY OF OBSERVATIONAL DATA	(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)				
SITION: ON OR UNDER OCKS, WEED, IN UBSTRATUM,						

GRASS, ETC.)
ASSOCIATES,
COMMENSALS:

VEGETATION: (BARE, ROCK-WEED, KELP, EEL

BREEDING SEA-SON, COLOR IN LIFE, ETC: Pale scarlet with yellow tinge

NAME	Asteronyx loveni						
DATE	REGION, STATION, POSITION, ETC.	BATHY- METRIC ZONE	DEPTH OR TIDAL HORIZON	EXPOSURE TO WAVE SHOCK	TYPE OF BOTTOM	NUMBER TAKEN OR OBSERVED	IDENT (OR "FIELD")
13Apr'25	Black Cod fishermen Santa Cruz	dredg	400 fms		Blk shale	l usni	άx
		40					
	IF ADDITIONAL SPACE IS NEE	DED, USE	UNPRINTED	4 X 6 WHI	TE CARDS		