

1931

~~1931~~

1931.

1931

June 17. Left 6 a.m. arrived 1.30 p.m.  
uneventful trip over.

# 1-31. Went out with Dr. Pearse in afternoon  
on west side Island below light-  
house dock. Got a couple of crabs  
a small *Calappa* and a  
*Gonodactylus oerstedii* which I gave Pearse.  
Got also a *Penbella*, west side Soggerhead Key.

June 18. Pearse went over to Long Key <sup>one saved</sup>  
got several *Desarma riccardii*; a  
*Call. ornatus*.

This day - afternoon  
M. Johnson under  
black box

Pearse # 34 } young *Mithras*, perhaps *foratus*  
June 18, 1931.

" # 31 } Spider crab; *Spongia*: June 18, 1931.  
= *Microphyrus bicornutus*.

June 19 got a few things at high water  
10-11 a.m. and rough. could not see well  
& only was able to pick up things at arm  
length depth. Banded *Crangon* = *armillatus*  
# 2-31

1931

June 19 could over suffer time went over on  
 Bird Key reef. general collecting got  
 #3-31 Erithia gonagra (had 4-5) but  
 all but 2 got away climbed out of  
 bucket; got lot of Milvina <sup>specimens</sup>  
 and one M. venucosa.

plain color ±  
 large chela  
 spotted green  
 + white large white  
 spot on inner wh-  
 ker side.

A red shrimp, Stenopus? and  
 a Gnathophyllum, a Piltho  
 and a number of small grubs  
 (xanthids) and a Crangon that I  
 see calling Heterochela.

Tide low ~~between~~ 1:30 + 7:00 p.m.  
 While we were there not fully uncovered.  
 Also got from Thoe puella, which I turned  
 over to Mr. Pearse

June ~~20~~ <sup>21</sup> Pearse got a lot of Sesarma  
 under coral frag and debris  
 near moat wall.

220

1931

June 20.

(Depth. 67-5 feet)



Haul # 4-31

Left dock at 8.08 a.m.

Hauled otter trawl in general direction of Nun buoy to black C1 buoy. Course about S.W. Tide running in.

Net over 8.40 a.m. about 200 yds below buoy.

Net on bottom 8.45 a.m.

Net up. at 9 a.m.

Net on deck. 9.10 a.m.

Bearings at end  
Light hous. N  
C1 buoy due W.

Small weedy haul.

Got Parthenopid, Mithras  
and several small Xanthids.

Nice clear day, some  
freeze, not had left too much  
to try 'gulf shea' + deck hauls  
with

1931  
June 20 -

(2)

(Depth 67 feet)

Haul # 5-31

Start over again not far  
from Nun buoy. Course SxW.

Net over	9.35	} Light H. 328°
On bottom.	9.45	
		} Nun 10
		} Fort rthdside 63°

Haul in	10. <del>40</del> <sup>04</sup> a.m.	} Light. 344°
Net on surf.	10.10	
On deck	10.45	} Can buoy I = 280°.

Very weedy haul, four loggerhead  
sponges one of fairly good size mollet  
about 2 feet dia each way.

was a bad job getting on deck  
net badly torn in operation

Tried two dips with orange peel  
bucket, but drew blanks each  
time. let it run at fast.  
a slow trial later at dock  
worked O.K.

222

Sunday  
June 21, 1931

Got a Pinnotherid from lot of ascidians dredged at this station. 57 feet

(3)

Haul # 6 - 31 (Depth 57 feet)  
(in channel between White Shoals and Soggerhead Key)

Net over	8.25	Left cor. fort.	103°
Down	8.36	White shoal buoy	57°
Haul in	8.43	Light	225.

Up at 8.50  
On deck 8.55 a.m.

Good fish haul  
lots of flounders  
Small haul, Parthenopids, Scydarids +  
2 *Ampoconcha*, few weeds  
2 *Stenorhynchus* to Colman. I saved  
Colman got some parthenopids and  
maybe some *Portunus spinicarpus*  
on I got one. + several Parthenopids.

I thought I had given me a *Eusicyonia*,  
a whole I thought was one out of sandy  
mud of first haul, but I did not find it  
on sorting

See note on Pearson  
shore collect near  
P. 219 bottom  
Sesarma  
mud crab  
debris

June 21, 1931  
 # 7 - 31, (Depth 65 feet)

4

over. 9.07. a.m.

Temp. 97°

On bot. 9.10.

Sight 50°

Start up 9.22

Up at 9.25

On deck —

Gave Pearce a Crangon  
 Johnsons I got from  
~~some~~ sponge.

Number of macrodema (decorated)  
 + Synalpheids from sponges.

June 21, 1931 (First dit with)

# 8 - 31 (Orange feel bucket. Depth 65 fms.  
 Sample of mud saved)  
 Sta. in line connecting light house + N. B red buoy.  
 + about opposite N. end White Shoal.

# 9 - 31 Orange feel bucket } Couple of  
 Sample of mud saved } Crangons.  
 Second dit, about due } several tiny Syn-  
 north of first dit and } alpheas  
 2/3 distance from it by } 2 tiny crabs  
 an East + West line through } Squid-like  
 N. B red bouis.



224 1931

June 22, 23, 24 rough windy and cloudy; no going out and besides very high tides + no minus low ones.

Th. Pearce was freezing blood of Geocarum gave me about 20 ± with will serve as school duplicate, no females among them although he said he got one <sup>from</sup> which ~~was~~ <sup>he got</sup> ~~the~~ <sup>the</sup> ~~female's~~ blood.

Incision is made through carapace in region of heart + some pressure applied with thumb + index + fingers beneath, I cannot see but if other body juices would contaminate the sample, Pearce admitted that first one had liver juices, but said his subsequent samples were O.K. ~~changed~~ <sup>also</sup> identified a considerable number of my specimens.

1931

225

June 25 - '31  
(#754)

(fish = 9 3/4 inches long)

Maunier, got a gill-netted Priacanthus eruentatus <sup>9 3/4 inches long.</sup> from gill

net. Phil calls it a "glass-eyed" Snapper

Stomach contained 13 species crustacea

2 small grunts (fide Longley) and 1 small annelid <sup>15 mm. long.</sup>

Entomostrea:

1 ostracod

Malacostraca:

1 Nebalia (?) bipes

1 Cumacean: "Diastylis"

1 Mysid: prob. macerated

5 Isopods, <sup>prob.</sup> same species

2 Amphipods, diff. species

3 Crangon: <sup>certainly</sup> 2 species

1 Leptochela carinata Ort, ovigerous

1 Crab megalops (Claws much like a Calappa)

1 Small macerated crab, without carapace 10mm. wide probably a Portunid.

Stomatopoda:

2 Chloridella (1 = frags. only) aff. attenuata

Some notes and sketches on these Squilla's on sepo white octavo sheet with fish stomach notes

young, eyes not typical Squilla type; telson near intermedia Bigelow.

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1931

Haul # 10-31 June 25, 1931.

Song Key in afternoon scooped up sand against steep beach & washed through dip net. got at least three species of small Portunids, separately identified.

# 11 - 31 Hess & I went ~~also~~ <sup>around</sup> mount wall & with dip net. he pulled up empty Streblospira shells. Got 2 Crangon formosus which I give Pearce, a Palaeomon like, & a Crangon floridanus? a Xanthid 2 little hithax. In enclosed section of mount, north side ~~west~~ <sup>east</sup> of water gate got 3 (2 ♂ + ♀) P. depressifrons. ~~at~~ flats at S.W. corner of flat past water gate Hess got a large Call. sapidus. Where acidium grow I got 2 Asomids sitting together.

#11-31  
made for

Put one Portunid mule in alcohol. held his breath almost 10 min  
though very active right side up in a quain apparently show  
death feigning in dish on table or out of water; when  
turned on their backs.

Pithor's + domias in sponges quite  
easy to get on P. vitis flats near north  
end of Bird Key Reef, west side of course

got Amphioxus from this haul

# 12-31 — June 26, 1931 (57 feet)  
 Left dock about 1.40, very low water, had a  
 little difficulty getting away.  
 S.W. Channel North of No. 2 Red buoy 9-10 fms.  
 Arrive No 2 Red buoy 1.15 and turn.

Sight N x E } Course N.E. x N. little  
 Fort E.N.E. } to right of black buoy C.1.

Net over 1.22 } net badly torn though  
 On bottom 1.24 } a very weedy haul.  
 Start up 1.40 } few smaller crustacea  
~~On deck~~ 1.44 } and 2 flounders ±.  
 On deck 1.50 }  
 Depth from chart about 57 feet throughout

# 13-31 June 26, 1931  
 Start little west of north, and run in  
 channel to about opposite end east of  
 Red N. 8 buoy. (of Red N. 4 buoy)  
 Depth approx 64 feet

Net over 2.15 } 25 min haul. took  
 On bottom 2.19 } perhaps half an hour  
 Start up 2.44 } to get on deck. Rich

haul lots of sponges; many crustacea  
 all kinds, including small galatheid  
 this lives in alcyonarians. Got

# 13-31 June 26 - 1931 (cont'd)

a number of alcyonarians + large tubular sponges like last year.

1 A number of throunids  
1 Several red striped shrimp from tubular sponges; sample saved, for de Saubertels.

1 A number of Xanthids

1 Blue banded Synalpheids, {green + yellow fringed blue legs.}

1 A large to Pearse,

United States National Museum  
Smithsonian Institution  
Box 1000  
Port h. S. C.  
sand in break  
in meat water

turned over all bottles

ds 3 or 4 some species

1 Sarge +

But a fourth = U. spinicarpus when seen last year.

1 Petrolisthes galathinus

10 spec.

one with bopyrid given to Pearse

A number of hydroids and mollusks.

Also gave Pearse a Crangon formosus.

United States ~~wrapped~~ National Museum.

Smithsonian

Institution.

~~Box contents of~~  
For ~~half size~~  
sand in ~~break~~  
in ~~mount~~ wall

July 25 '31

Barthman

coll.



# 13-31 June 26 - 1931 (cont'd)

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a number of alcyonarians + large tubular sponges like last year.

1 A number of thronoids  
1 Several red striped shrimp from tubular sponges; sample saved, for de Saubert.

1 A number of Xanthids

1 Blue banded Synalpheids, (green + yellow fringed)  
blue legs.

1 A large *Mithras hispida* turned over to Pearce, a number of small *Mithras*

1 Large + 2 small *Portunids* <sup>3 or 4</sup> same species  
But a fourth = *P. spinicarpus*  
collected last year.

1 *Petrolistes galathinus* 10 spec.

one with bopyrid given to Pearce

A number of hydroids and mollusks.

Also gave Pearce a *Crangoniformis*.

June 26.-1931

Mr. Pease seined the moat

got a lot of Portunids  
 one = even more grey or light-banded  
 legs = ornatus  
 great many little P. depressus purple  
 fingers + <sup>purple</sup> spot at articulation  
 And several shrimp, Penaeus brazilianus

June 27, Had enough to do  
~~with~~ dredged material, till late  
 in evening color noting, and sorting  
 over debris. In that from Sta  
 #12-31 found a small Amphipod  
 about an inch long, + a number  
 of amphipods.

June 28. - 1931  
# 14-31

Dr. Pease took me

seining in moat 2-3 places  
first to south of water gate against  
sand bank there, got only small  
Hypholitia, a water sample at that

used a salinity of  
se determined it

United States National Museum.  
 Smithsonian Institution  
 Tortugas  
 Eriphia gonagra } from  
 Panopeus herbstii } little  
 } centr  
 } pool  
 Geograpsus lividus } hist  
 Cyclograpsus integer } up  
 } dier  
 Bush Key Reef. July 27, 1931.

in large pool north and  
east of water gate isolated from  
gate and rest of moat by a sand  
bank at each end has seined  
but produced nothing except a  
few small fish + porcupine I believe, for  
I seem to have bottled none.

United States

National Museum.

Tortugas

Smithsonian

*Friphia gonagra*

*Panopeus herbstii*

from  
little  
centr  
pool

*Geograpsus lividus*

*Cydoagrapsus integer*

Institution  
his  
drier

Bush Key Reef. July 27, 1931.

Spec file  
in start.

# 14-31.

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June 28. - 1931

# 14-31 Dr. Pease took me  
seining in moat 2-3 places  
first to south of water gate against  
sand bank there, got only small  
Hypolimnion, a water sample at the  
blind end showed a salinity of  
36.45‰ Pease determined it

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In large pool north and  
east of water gate isolated from  
gate and rest of moat by a sand  
bank at each end has seined  
but produced nothing except a  
few small fish & portunids I believe, for  
I seem to have bottled none.

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(cont'd)

#14-31

June 28-1931

But in ~~large part~~ further to  
 the eastward around the moat  
 where it gets continuous on around  
 to front of fort, a narrow place  
 bet. outer moat wall & pile of  
 sand inside against wall of fort  
 makes a narrow tide flat  
 from 3-6-8 feet wide in ~~the~~ <sup>direct</sup>  
~~connection~~ with the water outside.  
 Through a couple of holes under  
 the fort wall. The "flat" referred  
 was about a foot under water at  
 mid-tide and covered with quite  
 a thick growth of ~~Enteromorpha~~ <sup>also see</sup>  
~~thin ribbon filaments of color tending~~  
~~of Ulva but quite narrow~~ ~~flat~~  
 ends

Used a — ft.  $\frac{1}{4}$  inch sq. mesh <sup>233</sup> fine  
maybe a maximum of eight inches  
long (3-6 anyway) Here we got  
a lot of small *P. depressifrons*,  
Calametes — some with eggs

at a lot of times to small *Penaeus*  
brasilienis, and 2 about 4 inches  
or more long. The smallest was  
about  $\frac{1}{2}$  inch long, I have most  
~~about that size saved 3 or four~~  
specimens including the smallest  
were sent to Gutzell at Beaufort.

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The matted thin thread like fila-  
mentous stuff we pulled up in  
several bunches, is Cladophora.

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This was common at all seining places.

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June 28 - 1931.

Mante brought me several crabs off Bird Key Reef at low water yesterday while we were in Tort Mat. Got a piece Glyptoxanthus brown a Mithrax venereus + couple of <sup>one</sup> sculpin + one M. coryphe

#15-31 June 29 - 1931 = #15-31

Collected over S. end Bird Key Reef at low tide from ~~2:30~~ 2:30 to 4:00 p.m. Picked up Poite's dumps new + old + got most of what they contained. Lots of Chlorodiella longimana <sup>in Echin.</sup> Mithrax and little Hippolytids.

Up near channel separating northern from mid section got two Thalassidroma gave them to <sup>Plouse</sup> found little lemon yellow Gnathodactylus larvae in hole with an adult. In Poite's.

Got a little ocellated Blenny of which H. Sanger had only seen one specimen before. Beebe's tricoelated blenny may be just a younger stage of this.

# 15-31 (cont'd)

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June 29, 1931

Porter clumps S. end bird  
Key Reef, good collecting places.  
Found a nest with a large greyish  
gnathodactylus in it. Nest was lined  
with little lemon yellow burrows (carapace  
region only yellow), white tails + black eyes.  
These clumps are the real home of  
*Chirodiella longicauda* (at Forting at least)  
it seems got those saved plus 10  
large to medium sized specimens which  
I gave Pearson for examination.

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see also 8.239

First movie trial this day bet 1 & 2 p.m.

at lactide 3-4:30 p.m.

#16-31 June 30, 1931

went through a lot of Portia clump again, this time <sup>from</sup> on south side of channel through Bird Key Reef. Got much the same run of stuff & got another fish.

Found a Gnypactylus with egg drum, but she escaped into bucket, but later when she & eggs were put in dish seized them <sup>in</sup> between <sup>of</sup> ~~carapace~~ <sup>anterior</sup> of folded telae, holding with maxilliped & <sup>upper</sup> <sup>lip</sup> <sup>about</sup> with them a tripod one of the first became in bucket there were two Gnypactylus ~~at~~ either of which might have been the mother of the brood.

Thalysmata

kept running in a large dish. C. Formosa sorted the animals out in two different groups in large 40 in diameter dish. Species know one another fish of different species or old & young described & diff. species show by their behavior they are one & the same fish family. suggested try synalpleids. <sup>only</sup> <sup>or</sup> <sup>small?</sup> <sup>but</sup> they know their own shells.

after sunset 7:30 rather 237  
7-8 p.m.

17-31 - July 1-19 31

Mr. Smiley & I took of over bottom  
of Hledge table & shirved a lot of  
Portia slumps though it got about  
a dozen fish three species (one a young  
mura) about a foot long. Mr. Smiley says  
he expects to get a lot of fish he found  
though occurred only around

Got a number of Symbaltheids  
Striped Hippolytina + Crangon furcatus

Worked quite well but we need  
ray or spade fork to get more of  
a spungy slumps tend to fall apart  
on shovel.

Worked fourth side of main  
channel through Bird Key Reef.

Didn't save mithaxes gave 1 Crane  
1 Crangon furcatus + 4 Actea setigera.

One usually finds 2 Crangon  
but no more than 1  
+ Symbaltheids together  
of them in other places.  
send me to one place.

July 2 - 1931

Phil got 2 red groupers off North end Soyger head on west side where he frequently fishes; first one had *Colaptes* & *Mullus Rispidus* both of good size and second had only *Mullus Rispidus*

The Pearce went over in am. to Bird Key Reef N. End and got a lot of black sponges like what he got Pontonia out of. Got a number of *Synalpheus* & other crustacean:

- First 4 black sponges
- 2 *Leptodius floridanus*
- 5 *Gnoda dytiscus* one with eggs.
- 2 *Mullus paracanthus* ♂ + ♀ orig.
- 7 " *sculptus* 3 ♂ 4 ♀ (3 orig).
- ♂ + orig ♀ large yellow *Synalpheus*
- 4 little *Xanthids*

♂ 5th black *Synalpheus* piece separately saved

- 2 *Pontonia*
- 1 *Gnoda dytiscus* light afflegreen
- Small *Mullus* covered with black sponges

July 2. - 1931 had been in dish, with vial <sup>since night of June 30, 31</sup> 239  
*C. armillatus* at mole just  
frag of carapace left next morning.

July 2, 1931 Mr. Smiley + I this evening  
went through more Pinter's clump  
with shovel + hedge table.  
Got a misc lot of stuff

#16 - 31

July 6/31 *C. armillatus* I had alive in dish  
with vial (which ate mate couple of days  
ago was dead this a.m. and I gave  
it a piece dead fish last afternoon +  
to remove it, or replenish water.  
Took it back in tube, extended big claws  
forward + up tilted back so I could  
get down on it.

Lived from June 30 - July 5, midnight.

240 (Haul) Sta.

# 18-31 July 3, 1931. { 205-221 fms }  
about 18 miles due S. red No. 2 buoy

Hedging.

Start 7.45. Course S. of No. 2 Red Buoy.

Log at Mid Channel Black <sup>+ white</sup> Buoy "N" 7.54 a.m. 35.0

Log at Red No. 2 Buoy. 8.11 a.m. 37.0  
2

Sound at 10.11 a.m. Log. 53.4  
3 7  
16.4

Tow West. Otter trawl over at 10.25 a.m.

2 Polychaetes new this yr. Net on bottom. 10.52 a.m.

9 Geryon Cable out <sup>10.52</sup> 600 fms.

5 Bathynomus } Halipores  
"Shrimps" half bucket } Penaeus Cable out 11 a.m. 700 fms

Nephropsis aculeata half bucket Start haul in 11.58 a.m.

Meridax 2 sp. 1 1/2 qts. Net up at 12.45 p.m.

Sound at 1.00 p.m.  
221 fms

# 15 Paris Museum  
# 6

Sta. #19-31. July 3, 1931. ~~290~~ 290 fms 241 +

8

Run south 10 mins. from last sounding.

Stop 1.23pm Sound 12.27 p.m. 268 fms

Run South. to 1.35 p.m. Sound 1.42 p.m.

290 fms

Net over 1.55 p.m.

On bottom 2.30 p.m.

Start up. 3.28 p.m.

Net up. at 4.50 p.m.

908 fms cable out.

Giant Bathy-  
nomus 14 inches

Course home to Light. N.E. x N.

Log. over. 5.10 (ten mins after start)

Log. @ 7.31 p.m. read.

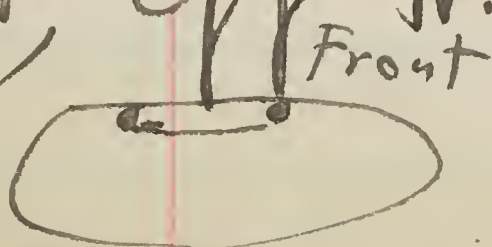
70.3  
53.4

- Curv Hess. 2 Nephropsis
- 1 Polycheles
- 3 Munida.
- 4 ~~Syllax~~
- 2 Glypocrangon

16.9.

Kumbel

July 4. Last night ~~the~~ got a small male *Pinnotherid* crab in corner, off N.W. corner island (Loggerhead)



between <sup>translucent</sup> cornea white, upper surface of carapace + chelae + outer face of latter mottled, but more or less uniform orange buff with ~~dark~~ spots of salmon red here and there. (over)



Sta. 20<sup>\*</sup> - 31 July 9 - 1931  
 = 205 - 283 fms =

Note: } First haul this day not given a no.  
 net did not fish as it apparently went  
 over badly twisted, the bridle, & came  
 up the same way. No applies to  
 successful haul of this day.

Sep. dock. 5.42 a.m.

Sog. @ 5.57 = 22 little part black boy

Sog. @ 6.14 24.3 @ No. 2 Red boy.

Squad @ 8.34 153 fms.

Same course 10 mins

Squad @ 8.55 a.m. 205 fms.

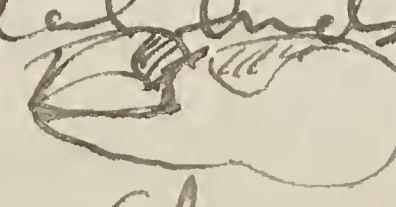
(Net over 9.05, going W. at 9.38, 700 fms cable out)  
 (Squad up 10.30 on deck 11.15, no haul)

Sta. 20-31

Net over @ 11.30 a.m.

On bottom 1.00 p.m. 833 fms. cable out.

Seeps tend to be more Saturn red on upper margin  
 & yellow on lower <sup>lateral part</sup> of faces & beneath.

dactyls & distal ends of first di translucent white  
 palm on inside  ed fixed fingers & greater part of mouth  
 fingers except distal at base, translucent white.

Sta. 20-31  
205-283 fms

July 7, 1931 cont'd. 243

Within about 5 mi  
of being S. of Rebecca  
at start; finished up  
South of Loggerhead

Net up @ 3.05 p.m.  
 Sound @ 3.12, 283 fms.  
 Head home @ 3.25 North x West.  
 Log over @ 3.53 = 43.5  
 Turn north @ 4.25 p.m. Log. 47.5  
 No. 2 Red buoy @ 5.39 p.m. Log. 57.8.

Note: { Shunt after the <sup>trawling</sup> line was cut  
 clean just before spinner; we  
 suppose a bandanda got a good  
 work ache as the result.

Pass black + white N. buoy @ 5.56  
 Off dock. 6 p.m. ±

Stone, Hopkins, Kisserer, almy,  
 Mantle, Dr. Smyly & Schmitt

Got a lot of Nematocarcinus (first time?)  
 Pandalids

a little smooth Ptychogaster (first time)  
 or Uroptychus (first time)  
 Bathynonus (3 "babies")  
 (1 young fish)  
 Large Salpa? maxima Visscher; one large Pyrosoma to Hess

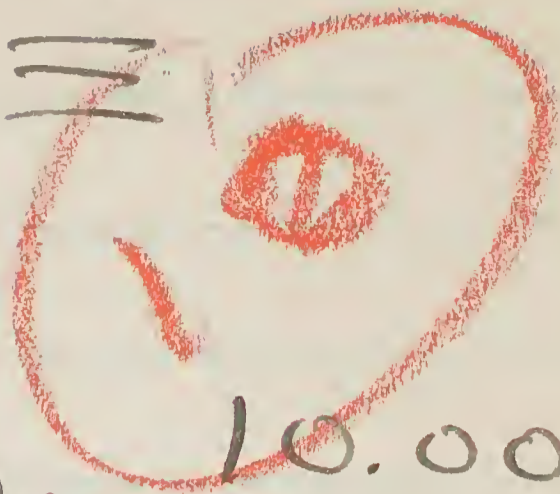
Pasiphae (for first time)  
 Glyphocrangon (many)  
 Meridas (few)

244

21

Sta. 21-31

July 8 1931

200 253 fms

Left dock @ 5.20 a.m.  
 Pass black wht. N. @ 5.52 Log. 10.00  
 Mile past No 2 red @ 6.06 a.m. Log. 12.00

Turn S. @ 8.02 a.m. about 10 mi S. Rebecca  
 Sound @ 8.59 = 176 fms Log. 36.3.

Ran East and  $\frac{1}{4}$  mi. S. for 15 mins, 9.08  
 to 9.23. estimated depth 200 fms.

Net over 9.30 a.m. { 600 fms cable out  
 On bottom. 10.17 a.m. { Towing West  
 Start up. 11.15 a.m.  
 Up at. 12.06  
 Sound @ 12.10 = 253 fathoms.

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Total count. Penaeus serratus 350 ±  
Glyphocrangon 400  
Nephropsis 8 ♂ 9 ♀  
 (20 vig)  
 (1 young)  
Geryon with barnacles  
 1 (to Kisser)  
 3 Benthocoron

Sta. 22-31 July 8, 1931 (2nd haul <sup>245</sup> this day)  
 ≡ 253-283 fms ≡

Stop + Net over 12.45 p.m.

On bottom 1.30 800 fms cable out

AR 1.51 p.m. 900 fms cable out

Start hauling 2.40.

Sound 4.05 p.m. = 283 fms.

Start home @ 4.20 p.m. Log. 36.3

Course N.N.W. to N. <sup>3</sup>/<sub>4</sub> W. to Red No. 2 buoy.

Pass Red No. 2 @ 6.42 p.m. Log. 57.5

Off dock. 7.15 p.m.

Total count.	<u>Penaeus serratus.</u>	71
	<u>Haliporus robustus</u>	75
	<u>Glyphocrangon</u>	450 ±
	<u>Bathynomus</u>	2 (about 4 in long)

Visscher got ♂ Bathynomus — inches long  
 1 lge Polychetes  
 2 lge Morida

Several small crinoids.

~~On large Pyrosoma belongs to # 20-31~~

Squid + Octopus ~~latter to Kunkel + Hopkins~~

Sta. 23-31 July 9, 1931

10-11 fms

3 short hauls from No 8 Red Bovy to bot. Black C<sub>3</sub> and N. 4 Red Bovy, each time turning around to begin drag where preceeding one stopped.

1. Leave dock. 12.45 p.m.

Net over 10.04

Bot. 1.10

Startup. 1.17

On deck 1.46

Loggerhead sponges saved  
Heavy load one of 2 lge

2. Net over. 1.50

Bot. 1.54

Startup. 2.00

3. Net over 2.20

Startup. 2.30

On deck 2.45

Net badly ripped;  
last haul of day

2 Stenorhynchus (1 small Macrosetoma) & 1 dromid to Colman

1 Stenorhynchus to Bullington

1 Stenorhynchus to Munter.

Other crabs mostly small Anathids saved

1 pycnogonid. large loggerhead sponge worked through by Rearse

July 10, Saw a Porcellana sayana from Petrochilus shell (bahamensis), with longitudinal stripes of creamy white, wide narrow, wedge shaped median stripe widest at the anterior end; with several lateral stripes of same

# 24-31 July, 11, 1931

From extreme N. end Bird Key Reef 247  
low tide 130 - 4.00 p.m.  
Under rocks

Afternoon of collecting on Bird Key Reef, near extreme north end across channel from Bush Key reef. Turning over rocks.

13

Got another *Stenopus* (young?)  
Number of *Synalpheus*

2 Crangons one eggs banded, one more <sup>unfertilized</sup>

Over a dozen *Mithras verrucosus*,  
(Bullington got about same no; larger ones turned over to Bearse.) These crabs were under loosely aggregated coral stumps and fragments of more or less dead (not algae over grown) <sup>apparently</sup> *Sargassum*. Easily taken by working through the rocks by restacking them.

*Petrolistes galathinus* close to a dozen seem to be more plentiful at this northern end, than I have found them elsewhere on reef. Are the first things to look for on the lower or overturned rocks further than shrub.

reddish between white stripes. This is type of coloration given by Day + Shue. Most of these I have seen are of the customary ocellated type.

248

12, 1931.

{ Specimen taken 2nd  
from sponge from bridge  
pier, Fort moat at surface  
at low-tide.

# 25-31 July 12, 1931

Bet. 2.30 and 4 p.m. waded from  
water gate around to entrance bridge  
S.W. angles of Fort. got very little tide  
almost too low to work with comfort.

did not see and Stromids <sup>y</sup> ~~with~~ were  
so plentiful my first year, also ascidians  
seem to be less. (moat in general  
seems much shallower than before, many  
places scarcely more than knee deep.)

Got one puffer which I turned over to  
master. And a large soft sponge  
reddish inside <sup>black inside</sup>, part saved, got several  
Synalpheids from inside, a great many  
amphipods, of which I don't suppose I  
got half of what there must have been  
maybe only a third with what deserted the  
sponge on taking in canals where I did not see  
them. ~~was~~ tangled in muck from which I got all  
of these. The sponge was loaded with anemones  
in all passages. Sponge was attached to second  
bridge pier from outer wall of moat. part of water  
inch about <sup>at top</sup> ~~at top~~ looked like piece of wood  
or old cork that had gotten stranded.

From a 2 1/2 inch head of sponge that yielded over 6,000 Synalpheis  
mean 400 <sup>mm.</sup> wide 450 high.

July 13, 1931

# 26-31 from 3 <sup>med. sized (1 old 2 younger)</sup> ~~large~~ <sup>old ones have tunnels through heart wood line with yellow sponge.</sup> ~~Portia~~ clumps off East side Fort Hook Ramped in from top of steel channel slot. Just a few isolated clumps here.

fms + These *Portia* clumps are of much stouter heavier *Portia* than on Bird Key reef & because of more unporosity? Terrain grows only in isolated football sized clumps very easily detached usually because point of attachment is smaller.

# 27-31 from off one of pier pilings and *Portia* clump also (1 clump) from under pipes got side of garden reef clumps of coral.

July 13, 1931.

A leveled sand flat between water gate west side of Fort and southern coral sheds. Has changed quite a bit was covered with long turtle grass first & second years here & was a great place for *Portia* crabs. Coral heads on extreme outside remain, but <sup>crabs</sup> ~~stacks~~ which in 24, 25 were filled with <sup>verm. corals</sup> ~~with grass~~ seemed to be filled up with growth. Where these crabs were so plentiful earlier I saw but one today. I saw <sup>one</sup> ~~one~~ very storm beaten grass short & broken & sparse. *Smittia* crabs are here but not in same evidence as in early years.



250 # 28-31

Extreme northern end

July 14, 1931 Bird Key Reef under rock <sup>at</sup> top of reef

Got a Limnodynastes off top of rock <sup>at</sup> top of reef  
Encopae, aboral side. Sorts just like some  
of the fragments of Antimedia & Medebis  
with which these fellows are covered. A very  
delicate moved to 1 1/4 mm hole to move <sup>on</sup> rock  
around the dish (Petrie 3 1/2 inch inside dia.).

2 little quick moving Xanthids. Some Aphia  
acmillata + Synalpheidae & artia were so active

was a windy day with fair sea running did not  
see any sea hares. Mess got one little nudibranch,  
shallow flats just of channel bet Bird &  
Bush keys had regular 10. coral fauna, lot  
of small <sup>meadow</sup> crab but not so regular.

July 15, 1931

# 29-31

On mid section of Bird  
Key Reef from deep hole to channel  
bet. northern + mid sections, under rocks  
mainly. Got some smaller Robertsonian for  
Mess.

Found a little chiton that takes its place  
with acidia + Thoe puella in minima  
lupinus algae in bottoms of rocks.

Chiton in with coloured Synalpheid  
Got two Thoe puella one nice large  
beautiful male <sup>which</sup> gave Parse.

#30-31 = July 16, 1931 = Mid Section, Bird Key Reef.

Used  
Since  
C. M.  
encl. 1/2

Over on Bird Key Reef again bet. 2.30  
& 4 p.m. Took half <sup>gallon</sup> made of  
gasoline drum half, & pipe perforated with  
driving end, got about a dozen fishes

By making little puddles in sandy  
area on top of reef by main rocks,  
& all side of lining them, got  
five specimens of  
*Jan* <sup>small</sup> *four* *poor*, one each, except one in  
which I got two. Also got <sup>exactly</sup>  
five alpheids? armillated type with  
uniform coloring greenish yellowish  
speckled & spotted with white greenish  
Chelae

#31-31. On rocks + turtle grass should be  
Tight house dock East side Soggyhead Key  
Got a *Petrochirus* *huber* *minor* on turtle grass +  
gave to Pearce. Cracked two *Euphia* *Gonagra*  
out of holes in rocks above low water, along beach.  
ditto a little *Siamera*, a small *Microphyes* bi-  
coloratus + a little *Janthina*! *Placusiopsis* + *Peranurus* not  
in evidence cracks in which I found them in previous  
years filled with sand. In fact whole section

July 19, 1931 noticed zoae in the dish with *Pinnodactylus* at about 11.30 p.m. at 12.45 or 30 put some in formalin + others in little glass dishes with the hope of getting next stage out of them. Changed water with pipette 1.30, 2.30, 3.30. All travel toward light, would distribute the little things if they get away from the bottom + work toward the surface, (these better carried by current to more distant places + away from the entangling fronds of the bottom).

#31-31 cont'd July 18, 1931, at low tide. seem to be much beaten up. On turtle grass flat where *Pinnas* formerly abounded got but one though I searched around quite a bit; grass flat seems more restricted. *Eriphia* scarce + of small size, + the holes in which they lived seem to be fewer in number this year.

Uniform-colored *Crangon*, near-arruletis make most noise at night. *Colman* moved dish outside at 10<sup>30</sup> p.m. of red, four clawed ones in dish <sup>because</sup> maybe were getting hungry + trying to eat one another.

July 20 - 1931 Changed water in larvae  
 16.30-45 a.m. Took picture of "yellow  
 shark" Hypoprion brevirostris Poey at  $7^{30}$  a.m.  
 Another day for mummy trays  $F. 8 \frac{1}{25}$  photographing  
 Ident 12 plus vials Synalpheids

Changed at 1.00 p.m. and, 5.45 p.m. and 10. p.m.  
 a couple dead each time

July 21, 1931 Changed water in larvae @ } 6.30 a.m.  
 Extended at 6.30 // Larva one died night of July 24  
 had changed 3-4 times daily till hedge day  
 on 24<sup>th</sup> B. forgot to change them for me this day  
 & that evening when I got at them but one  
 feeble specimen survived.

254

July 22, 1931

Sta. # 32-31,  
153-158 fms  
S. of Red No. 2 buoy

Left dock @ 6.54 am.

Pass B+W buoy @ 7.<sup>10</sup>~~25~~ a.m. Log. 10<sup>00</sup>

Pass Red buoy @ 7.25 a.m. Log. 12.2

Stop and sound 8.48 (Log. 25.2) 60 fms.

Sound 9.07 85 fms

Run 5 min ± 9.10 to 9.15 (th. 40 mins down trip).

Net over 9.24 a.m.

On bottom? 9.37. 340 fms cable out

Net up empty 10.50 No haul no applies to following 153 fms.

Underway 10.57

Net over 11.00 am

Cable out 11.38 600 fms cable out

Start haul in. 12.25 p.m.

At surface 1.13 p.m.

Sound @ 158 fms.

Sta. 32-31 (Column gr. 1 small spider, Nephopsis green egg shrimp.)

- ① 2 Nephopsis aculeata (ovig to Hartman)
- ② Bathynectes superba (Costa) } 10 to Pearse  
♂ 9 ♀ 60 ovig 4. } 5 to Visscher  
} 16 to Lab.

③ Acanthocarpus bispinosus M. Edw. 4 to Pearse

④ — Flux } ⑥ Green egged shrimp.

⑤ Hermit } ⑦ half dozen Munidas.

⑥ Cancer borealis

No. 33-31. 60 fms. S. of Red No. 2 Bory <sup>94</sup> 255

Run N x E @ 1.30 pm for 30 mins. <sup>2.28</sup> 1.59  
 Stop + Sound <sup>12 miles S</sup> 2.00 pm. = 60 fms <sup>19</sup> 1.40  
 Net over. 2.05. <sup>209</sup> } fms cable out  
 On bottom <sup>14</sup> 2.15. <sup>209</sup> }  
 Start haul in 3.00  
 At surface 3.20 pm.  
 Start home @ 3.30 pm. Log. 25.2  
 Red Bory @ 5.04 pm. Log 33.8  
 Black Bory 5.20 Log. 41.0  
 (4 hr. 34 m. back.)

Sta. 33-31.

- ① { *Portunus spinicarpus* (Stimpson)  
 ♂ 158 (+ 2 off) ♀ 131 (+ 5 off) orig 1 to Hartman  
 half bracketed dist. 1 qt to Vischer; <sup>10 to</sup> <sup>1</sup> <sup>to</sup> <sup>Pearse</sup> <sup>to</sup> <sup>Hess.</sup>
- ② *Acanthocarpus bispinosus* M. Edw. 6 to Pearse <sup>1</sup> to Hess.
- ③ *Calappa* 2♂ 3♀
- ④⑤⑥ Spider crabs, 3 species (2 very large in tank <sup>grey</sup> <sup>tray</sup>)
- ⑦ *Pinnotheres* ♂ + ♀
- ⑧ *Porcellana*
- ⑨ *Synalpheus*
- ⑩ *Hypochonca*
- ⑪ *Isopod*
- ⑪⑫ 2 species Hermit B

Great many (paid dollar)  
 millions of species <sup>left</sup>  
 apparently not heretofore  
 taken by us.

July. 24, 1931.

Made nine dips with orange-heel bucket in afternoon seeking *Callinassa* on slopes of White Shoals.

Left dock at 2.18 pm. little past low tide.

At 2.37 first dip, upper end upper section of Shoal, west side, west of

① Red Bony, in 9 fms

Got one small *Callinassa* lacking large claws + a Crangonid, <sup>new to fauna.</sup>

#35-31 @ 3.52 p.m. dip in 7 fms.

② near lower end west side of upper section of Shoal

#36-31 @ 3.05 p.m. dip in 10 fms

③ near lower, east side of upper section of shoal

July 24, 1931 (cont'd)

used O.P. 126

# 37-31 At 3.15 p.m. dip in 9 fms  
 (4) just below + off red bog near upper  
 end east side, upper section of white  
 Shoal.  
 2 Crangon packardii.

# 38-31 At 3.40 p.m. dip in 9 fms  
 (5) near upper end east side, lower  
 section of white Shoal  
 1 Crangon packardii. Urchin sent H.L. Clark.

# 39-31 At 3.50 p.m. dip in 8 fms  
 (6) About  $\frac{1}{4}$  way down, east side, lower  
 section of white Shoal.

# 40-31 At 4pm. dip in 10 fms  
 (7) About  $\frac{1}{2}$  way down, east side lower section  
 white Shoal.  
 Gave Sandy plans for the haul.  
 7 very few crustaceans.



July 24, 1931 cont'd. used <sup>of</sup> Bundar

#41-31 @ 4.15 p.m. dth in 7 fms { fell on red spur.

⑧ near upper end, west side, of lower section of White Shoal

- 1 Crangon packardii, 1 larval Palaemon?
- 2 Red striped Hippolytids,

#42-31 @ 4.25 p.m. dth in 5 fms

⑨ About 1/4 way down, west side, lower section, White Shoal.

- 1 large Crangon packardii

1 sea urchin like that sent H.L. Clark taken here but broken, spines still missing at 8 p.m.

Between upper and lower section of Shoal made haul with tangle but it appeared not to have touched bottom except for one star-fish Hartmann got.

After last haul tangle was hauled nearly home with weight added to bridle got a number of starfish, small didemna, vermetus tubes + sponges, also a small Podochela

July 25 Hartmann + Bunker went over to Hartmann's sand in vicinity of N. buoy ball picked up a dead Calappa flammea. <sup>Hartmann</sup> <sub>gathered</sub> <sup>clean shells</sup>

#43-31

Pearse + Stone each got a *Sapidus* 1931 /  
or two. / Bush Key flats west side of reef  
Fandy + Coleman / reef got a *R. marginatus* each day

July 27, [too cloudy + windy to photo]

July 27 # 43-31. Collected "zooid" zone

in Bush Key, got half dozen *Platypodius*  
a brown *zanthopodatus*, 9 to be exact. Plus two ♂ + ♀ similar  
much the brown color of *Platypodius* marked in a aquarium, irrespective of markings  
+ yellow dorsal + color of carapace legs are banded and colored  
white may be mistake alike in all specimens.

The top of the reef is a great place for *Cydogaster*  
*frutiger*, *Geogaster* <sup>quite common</sup> *viridus* and *Goodridge*  
*Euphonia gonagra*, also *Panopaea herbstii* in little  
Pearse reined + got more little *Panopaea*  
found toward center of reef

*baziliensis*, *Hippolytia*, *Palaeon* like, *Sutanta*,  
+ *P. tenuicornis* these last two for drift  
in seine of course, + a little brown alga

*Platypodius* are most common under zooid grass and  
rocks, seemed to like a firmer substratum best. but  
found them among the debris too.

Brought home an *Euphonia gonagra*, *Panopaea*  
*herbstii*, and 2 *Geogaster viridus*, in full  
with couple of zooid covered rocks. before long  
*Euphonia* had legs of a *Geo.* + was eating it  
when I got to photo them in lab. a *Geo. gressus*  
+ had legs pretty well dismembered + "chewed" up  
sharply defined *Geo. lives where crabs*  
One of reasons for dist. of crabs on Bush Key. the *Euphonia* + *Panopaea*

Conflict of species and the  
Bush Key with *ginn* of course species  
they need more material by the  
conditioned in their diet.

and maybe is a mistake as in this reason from  
and maybe is a mistake as in this reason from  
and maybe is a mistake as in this reason from

July 28 / Rain ~~and~~ wind, raining on 27, continued on night, quite rough in morning very little in tow.

Too windy + all forenoon too windy to photo, water likewise probably too rough

In am. fixed up specimens, also noted a number of crabs, gotten on reef yesterday, am saving Platyrodias if possible to photo.

July 29. Somewhat quiet water + clearing days.

July 30 Breezy a.m. neither moonlight when we were out at 5.30 or sun when we were <sup>sun under heavy</sup> ~~in~~ <sup>dark till at dawn</sup>

July 31 rough + very cloudy not much in tow.

Aug. 1 still cloudy moderate sea, ~~not much~~ <sup>not much</sup> in tow.

Aug 2. quite smooth, few birds + Some eggs!!!

~~not collected~~ <sup>of *Alca maradon*</sup> 3 very smooth, quite cloudy. <sup>lots of little else in tow.</sup> <sup>Carry rags. some annelid</sup> sets of eggs no. in bags.

4 smooth tow very milky

5 smooth. " " "

6 smooth " ~~very~~ milky of a pinkish color

7 smooth very few eggs

8

9

Photo Platyrodias + holes on anemones + rocks rest of day.   
 + then did couple of Platyrodias for color markings.   
 saved rock shells + in cans.

1931

July 28. #44 - 31

Collected on crest of Bird Key Reef. Under rocks chiefly by microsponges got half dozen small 2 to please to fill with this quota of 10.

On underside of one rock found little red bladder forming alga Chrysomenia, ? pyriformis gave to Tandy. Therefore only dredged in 4 or 5 more fathoms.

Whether <sup>bottom</sup> this rock was above low tide level I cannot now determine but it was much on crest of reef as we were over there by two thirty. + tide was not low till much later.

Also got 2 Thoe puella probably fair but look.

July 29. Photo in a.m. John came in in afternoon. Holiday? men less.

July 30. An swell in p.m. worked around at Fort + Bird Key. After supper. went over on Bird Key Reef with tubs + poison, but no result.

July 31. As per usual 5.30 tow with Bullington

Aug. 1. <sup>on shore</sup> In a.m. photo some rocks + specimens, while Mante + Smiley went dredging in 10 foot channel 4 hauls old places. <sup>held at hand</sup> but I was not quite ready to go + missed the only haul <sup>odd at hand</sup>



Aug. 5. Pease got several *Plagusia*  
 down on west side rocks of Soggyhead  
 Key. where I got them on the East side  
 in pretty well sanded up, that is  
 the attractive areas in which they  
 loved to feed + hide, along with  
*Peronon*. *Manti* got several large  
*Behrethia* <sup>shameless</sup> + a few sized *Hardanus*  
*insignis* from yesterday's dredge hauls.  
 Put down here for matter of record.  
 Two hauls in 40 fms. lots of rocks +  
 sponges, mollusks, crustaceans + fishes.  
 Rich haul some algae

Aug. 6.

Aug. 7 1931 H. Sengley & Mantel  
 went dredging in 50 fms

Got a great many crustaceans  
 approx } ♂ 80      ♀ 80      orig by } Potamurus  
 nr. } 70      100      70 }      stinicaustus.  
 plus those bottled & discarded  
 was heavy stiff mud; lost <sup>one</sup> net. 4  
 Dredge sifted another.

On way home made haul in 26 fms net.  
 came up badly torn & very little in it  
 few things in bottom of 8 oz bottle plus  
 three or four (of which 2 large) worms, and  
 couple of Phoronians.

In 50 fm haul got 2 beautiful  
 squillan ~~no~~ had Potamurus stinicaustus  
 etc. a number 495 species Inephraids.

# 13-31

June 26, 1931.

(1)

Small, here med. sized hermit with purple markings + transversely ringed antennules + antennae + eyeslath. Legs with longitudinal areas of purple, inside + out.

(2)

Together with small white hermit in conical shell.

This has been color noted a previous year

△ almost pure white with suggestion of darker perhaps greyish areas on leg joints except dactyls.

Chelae quite white, carpa transversely barred, eyes, antennules antennae ditto.

(3)

Another small hermit in red encrusted

General color.

△ shell. legs with circle of long purple ( ) stripes around middle of each joint

antennae + antennules banded barred with solid bands of color + white antennal flagella narrow white bands wide colored ones antennular flagella

Chelae seem without color only on front.





#13 - 31 June 26 - 1933  
Largest hermit of this day  
collecting Clibanarius

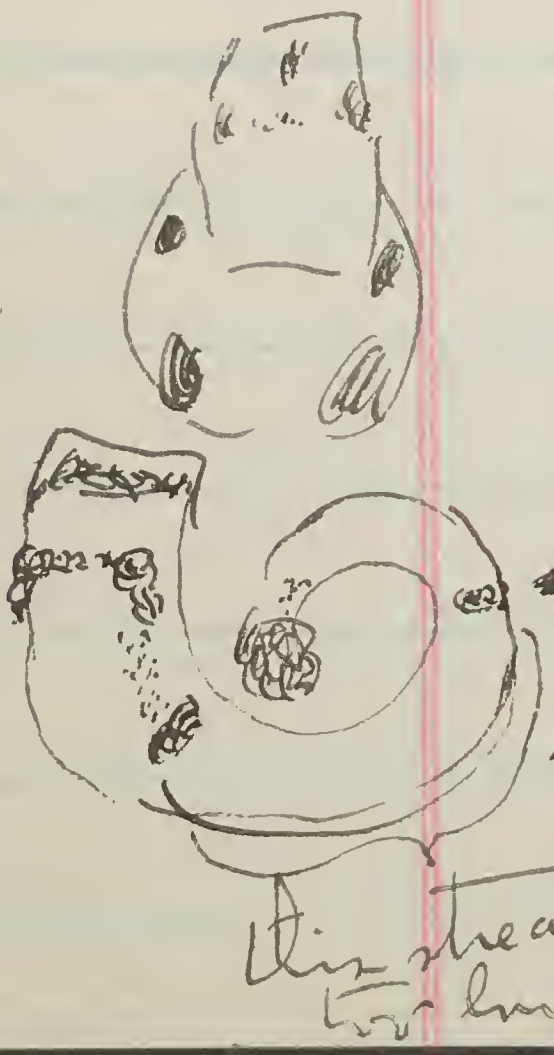
General ground color, bet. buff pink  
and salmon buff, with one longitudinal  
stripe <sup>inside</sup> ~~outside~~ and two outside of claws  
brown ~~but~~ interrupted appearing due  
to whitish (or white) maculations that  
are ~~not~~ scarcely noticeable without  
glass

Chelae quite hairy, as is upper  
margin of ambulatories, with a  
wide dark stripe down middle of  
palm, + narrower one down middle of  
upper surface of each finger. Palmar stripe  
as wide as two finger stripes combined.

Eye stalks Vinaceous pink, corneae  
black (or very dark blue black!)

Carapace like legs with darker patches  
with white maculations like legs.

Abdomen vermilion or very light  
saturated red to white ground, showing through  
by means of the light maculation. With  
darker bars + areas color of leg  
stripes, + telson + spots as indicated.



this stretch  
too long in sketch.

Hermit.

# 20 - 31 July 7, 1931

Dactyls distally appressed crimson  
basal  $\frac{2}{3}$  coral red. Propodi carpi +  
meri light ~~the~~ salmon red marked  
with a long stripe of an outer face of  
merus of light orange chrome.

Epimeral region of gaster base poppy  
red, fainter to whitish on dorsal  
surface (banded part)

Maxilla like epimera, distal  
joint like end of dactyl  
ant. ~~scale~~ scale ditto

antennae ~~antennular~~ peduncles  
flattened

like basal  $\frac{2}{3}$  of dactyl.  
antennal flagella, banded. orange chrome  
+ white translucent, antennular flagella  
white translucent  
cornue long.

sluts whitish perhaps iridescent pink.