

1931

~~1931~~

1931. 1931

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

went out with Dr. Pearse in afternoon
on west side Island below light-

1-31. 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 ^{one saved}
got several *Desarma riccardii*; a
Call. ornatus.

This day - afternoon
M. Johnson - under
black box

Pearse # 34 } young *Mithras*, perhaps *forsetz*
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

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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 ^{specimens} ~~ends~~
 and one M. verrucosa.

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 here not fully uncovered.
 Also got from Thoe puella, which I turned
 over to Mr. Pearse

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

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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 house. N
C1 buoy due W.

Small weedy haul.

Got Parthenopid, Mithras
and several small Xanthids.

Nice clear day, some
breeze, not had left too much
to try 'gulf shears' + 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. 40 ⁰⁴ 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 tow dip with orange peel
bucket, but drew blank 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

Haul # 6 - 31 (Depth 57 feet) 3
(in channel between White Shoals and Soggerland Key)

Net over	8.25		Left cor. fort.	103°
Ran	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

Small haul, lots of flounders, Parthenopids, Scydarids + 2 *Ampoconcha*, few weeds

2 *Stenorhynchus* to Colman. I saved Colman got some parthenopids and maybe some *Portunus spinicarpus* as I got one. + several Parthenopids.

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

See note on Pearson's 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
 Johnson, I got from
~~boat~~ sponge.

number of naucrodema decorated)
 + Synamphids 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 bouy. }
 } well mixed
 } or less
 } colorless.

224 1931

June 22, 23, 24 rough windy and cloudy; no going out and besides very high tides + or 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 ^{from} which ~~was~~ ^{he got} ~~the~~ ^{the} blood.

Dissection 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~~ ^{alcohol} identified a considerable number of specimens.

1931

225

June 25 - '31 (fish = 9 3/4 inches long.)
(#754)

Mante, got a gill-netted Priacanthus eruentatus 9 3/4 inches long. from gill net.

Phil calls it a "glass-eyed Snapper"

Stomach contained 13 species crustacea

2 small grunts (fide Longley) and 1 small annelid 15 mm. long.

Entomostrea:

1 ostracod

Malacostraca:

1 Nebalia (?) bipes

1 Cumacean: "Diastylis"

1 Mysid: prob. macerated

5 Isopods, prob. same species

2 Amphipods, diff. species

3 Crangon: ^{certainly} 2 species

1 Leptochela carinata Ort., ovigerous

1 Crab megalops (Claws much like a Galappa)

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

Stomatopoda:

2 Chloridella (1 = frags. only) affinis

Some notes and sketches on these Squilla's on Sepia 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 annotated.

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

#11-31
made for

One Portunid murex 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.

Pitho's + domias in sponges quite
 easy to get on P. vites 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.

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} east of north, and run up 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
Startup 2.44 } to get on deck. Rich

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

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 throuds
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 Pease,

~~United States National Museum~~
~~Box Crates for~~
~~South S. by~~
~~sand in break~~
~~in meat water~~
Smithsonian Institution

turned over
all bottles

1 Sarge + in meat water is 3 or 4 same species

But a fourth = U. spinicarpus
character last year.

1 Petrolistes galathinus 10 spec.

one with bopyrid given to Pease

A number of hydroids and mollusks.

Also gave Pease a Crangon formosus.

United States National Museum.

Smithsonian

Institution.

~~Box created for~~
Dorothy S. Ay
sand in beach
in mountain water

July 25 '31

Barthman

coll.

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

229

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 Saubertels.

1 A number of Xanthids

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

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

1 Large + 2 small *Portunids* ^{3 or} same species
And a fourth = *P. spinicarpus*
collected last year.

1 *Petrolistes galathinus* 10 spec.
one with bopyrid given to Pearse

A number of hydroids and mollusks.

Also gave Pearse a *Crangon formosus*.

June 26. - 1931

Mr. Pease seined the moat

got a lot of Potamids
 one = even more grey or lighter banded
 legs = ornatus
 great many little P. depressus purple
 fingers + ^{purple} spot at articulation
 And several shrimp, Penaeus brasiliensis

June 27, Had enough to do
~~with~~ dredged material, till late
 in evening color sorting, 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
Hypholited, a water sample at bar

used a salinity of
se determined it

United States National Museum.
Smithsonian Institution
Tortugas
Eriphia gonagra } from
Panopeus herbstii } little
Geograpsus lividus } cent. pool
Cyclograpsus integer } hist. diff.
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

Geograpsus lividus

~~*Cydoagrapsus integer*~~

Bush Key Reef. July 27, 1931.

from
little
centr
pool

Institution

his
drier

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

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 & protozoa I believe, for
I seem to have bottled none.

(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~~ ^{direct}
~~connection~~ with the water outside
 through a couple of holes under
 the fort wall. The "flat" we saw
 was about a foot under water at
 mid-tide and covered with quite
 a thick growth of ~~Enteromorpha~~ ^{also see}
~~thin ribbon filaments of color tending~~
~~of Ulva but quite narrow~~ ~~ends~~

Used a — ft. $\frac{1}{4}$ inch sq. mesh ²³³ 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 tiny 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.

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

This was common at all seining places.

June 28 - 1931.

Mante brought me several oaks off Bird Key reef at low water yesterday while we were in Fort Mat. Got a piece Glyptoxanthus from a Mithrax venustus + couple of ^{one} sculpin + one M. coryphe

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

Collected over S. end Bird Key Reef at low tide from ~~2:30~~ 4:00 to 4:00 p.m. Picked up Poites dumps, new + old + got most of what they contained. Lots of Chlorodiella longimana ^{in Echin.} Mithrax and little Hippolytids.

Up near channel separating northern from mid section got two Thalassidroma gave them to Plouse found little lemon yellow Gnathodactylus larvae in hole with an adult. In Poites.

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 larvae (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 ^{from} on south side of channel through Bird Key Reef. Got much the same run of stuff. I got another fish.

Found a Gnypactylus with egg clump, but she escaped into bucket, but later when she + eggs were put in dish seized them ^{in between} ~~of~~ surface ~~from~~ of folded sleeve, holding with maxilliferous ~~and~~ ^{and} ~~and~~ ^{and} with them a tripod one other fish became in bucket there were two Gnypactylus ~~at~~ either of which might have been the mother of the brood.

Thalysmata

Went morning in a large dish C. Formosa sorted the anchors out in two different groups in large 10" 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 singly. suggested try synalpleids. ^{only a small?} but they know their own shells.

after sunset ~~6-7³⁰ rather~~ 237
7-8 p.m.

17-31 - July 1-19 31

Mr. Smiley & I took of over bottom of ledge table & shined a lot of Porites slumb through it, got about a dozen fish three species (one a gray mura) about a foot long. Mr. Smiley says he expects to get a lot of fish like Jensen's though occurred only around

Got a number of Symbaltheids striped Hippolytina & Crangon furc

worked quite well but we need rays or spade fork to get more of a sponge clump tend to fall apart on shovel.

worked part side of main channel through Bird Key Reef.

Didn't save mithrax gave 1 Crane formosus + 4 Actea setigera

One somewhat + Dymaltheids together as night
of some in other
send me to one place
tried 2 Crangon
tried the other
tried to

July 2 - 1931

Phil got 2 red groupers off north end Soyger head on west side where 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 flat before (west side) Bird Key Reef N. End and got a lot of black sponges like what we got Pontonia out of. Got a number of *Synalpheus* & other crustaceans:

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

♂ 5th black *Synalpheus* piece separately saved

- 2 *Pontonia*
- 1 *Gniodactylus* light *perstephii* aff. green
- Small *Mullus* covered with black sponges

July 2. - 1931 had been in dish, with arial ²³⁹
C. armillatus at male just ^{since night of June 30, 31}
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 arial (which ate mate couple of days
ago was dead this a.m. as I gave
it a piece dead fish last afternoon + fog
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
 Bouy.

Log at Mid Channel Black ^{+ white} Bouy "N" }
 7.54 a.m. 35.0

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

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

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

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

9 Geryon Cable out ^{10.52} 600 fms.

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

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

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

#15 Paris Museum
 #6 Sound at 1.00 p.m.
 221 fms

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. }
Op bottom 2.30 p.m. } 908 fms cable out.
Start up. 3.28 p.m. (Giant Bathy
nomes 14 inches
Net up. at 4.50 p.m.

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 }

Kumbel

July 4. Last night ~~the~~ got a
small male Pinnotherid crab in corner
of N.W. corner island (Loggerhead)
Front between cornea ^{translucent} white; upper surface of carapace
& chelae & outer face of latter mottled, but more or less
uniform orange buff with ~~light~~ spots of salmon red here and there. (over)

Sta. 20^{*} - 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.

Left 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.

Segs tend to be more Saturn red on upper margin & yellow on lower ^{lateral spot} faces & beneath.

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

Sta. 20-31 July 7, 1931 cont'd. 243
205-283 fms

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.

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

Note: { Shutt after the ^{trawl} 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, Kischer, almy,
Mantle th. Smyly + Schmitt

Got a lot of Nematocarcinus (first time?)
Pandalids

a little smooth Ptychogaster (first time)
or Uroptychus (time)
Bathynomus (3 "babies")
(1 young fish)
Large Salpa? maxima Visscher; one large Pyrosoma to Hess
Pasiphae (for first time)
Glyphocrangon (many)
Moridae (few)

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Sta.

20-31

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 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.

Total count. Penaeus serratus 350 ±
Glyphocrangon 400
Nephropsis 8 ♂ 9 ♀
 (2 ovig)
 (1 young)
Geryon with barnacles
 1 (to Kisser)

3 Benthocora

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

(11)

Stop + Net over 12.45 p.m.
 On bottom 1.30 800 fms cable out
 CR 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. 3/4 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. Penaeus serratus 71
Haliporus robustus 75
Glyphocrangon 450 ±
Bathynomus 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 ^{+ 46 specimens} latter to Kunkel + Hopkins

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10-11 fms

Sta. 23-31 July 9, 1931

10-11 fms 3 short hauls from No 8 Red Bovy to bot. Black C₃ and N. 4 Red Bovy, each time turning around to begin drag where preceeding one stopped



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

Net over. 1.50

Bot. 1.54

Start up. 2.00

Net over 2.20

start up. 2.30

On deck 2.45

Net badly ripped;
last haul of day

1 small Macrosetoma

2 Stenorhynchus 1 dromid to Colman

1 Stenorhynchus to Bullington

1 Stenrhyachus to Munter.

{ Other crabs mostly small Anithids saved }

{ 1 pycnogonid. large loggerhead sponge worked through by reverse }

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 eyes banded, one more ^{unfurling} greenish

Over a dozen *Mithras verrucosus*, (Bullington got about same no; larger ones taken over to Pearce.) These crabs were under loose aggregated coral slugs and fragments of more or less dead (not alga over grown) ^{apparently} *Sargassum*. Easily taken by working through the rocks by restacking them.

Petrolisthes galathinus close to a dozen seem to be more plentiful at this northern end, than I have found them elsewhere on reef. They are the first things to look for as they leave an overturned rock faster than shrinks.

reddish between white stripes. This is type of coloration given by King + Shue. Most of those I have seen are of the customary acellated type.

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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 ~~with~~ ^{which} 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
Mantel. And a large soft sponge

reddish inside ^{had inside} 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 for outer wall of moat. Part of water
inch about ~~at~~ ⁱⁿ ~~the~~ ^{the} ~~water~~ ^{water} ~~that~~ ^{that} ~~is~~ ^{is} ~~at~~ ^{at} ~~the~~ ^{the} ~~top~~ ^{top} looked like piece of wood
or old cork that had gotten stranded.

From a 2 1/2 x 3/4 inch sponge that yielded over 6,000 Synalpheis
mean 400 ^{mm.} wide 450 high.

July 13, 1931

26-31 from 3 ^{med. sized (old 2 younger)} ~~large~~ ^{Porites} clumps
off East side Fort Lock Ramped in
from top of steep channel slope. Just
a few isolated clumps here.

old ones have
tunnels through
heart wood
line with yellow
sponge.

^{fms} These Porites clumps are of much stouter
leaner Porites than on Bird Key reef &
because of more uniform? 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 piers and
also (1 clump) from under piers got
clumps of coral.

Porites
clumps
side
of
garden
key

July 13, 1931.

Explored sand flat between water gate
west side of Fort and southern coral sheds.
has changed quite a bit was covered with
long turtle grass for 1st & second years
here & was a great place for ^{Patmid} crabs
Coral heads on extreme outside remain, but ^{crice} ~~sticks~~
which in 24, 25 were filled with ^{verm} grass
seemed to be filled up with growth. Where these crabs were
so plentiful earlier I saw but none today. I saw
very storm beaten grass that had broken & stored
Smiling 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 ^{at} top.
I got a Disodactylus off top of ^{black} rock
Encopse, aboral side. Sorts just like some
of the fragments of Antineo & Stadelia
with which these fellows are covered. A very
deliberate move to $1\frac{1}{4}$ mm to move ^{on} rock
around the dish (Petrie $3\frac{1}{2}$ inch inside dia).
2 little quick moving Xanthids. Some Aphia
acmillata + Synalpheus caerules was 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 ^{meadow} crabs but not so regular.

July 15, 1931

29-31

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

Found a little chiton that takes its place
with acidia + Thoe puella in minima
expansa algae in bottoms of rocks.
Chitons with colored Synalpheid
Got two Thoe puella one nice large
beautiful male ^{which} gave Pearson.

Mid Section
Bird Key Reef.

#30-31 = July 16, 1931 =

Used
Sincor
Coke
cylinder

Over on Bird Key Reef again bet. 2.30
& 4 p.m. Took half ^{gallon} 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 moving rocks,
& allude of lining them, got
five specimens of
in four "pools" one each, except one in
which I got two. Also got ^{exactly}
five alpheids? armillated type with
uniform coloring greenish yellowish
speckled & spotted with white greenish
Chelae

#31-31, On rocks + turtle grass should be
light house dock East side Soggyhead Key
Got a Petrochirus buru in ^{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 panthia! Placusiopsis + Peronurus not
in evidence cracks in which I found their impressions
years filled with sand. In fact whole section

252

July 19, 1931 noticed zoae in the dish with *Pinnadactylus* 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 in current to more distant places + away from the entangling muck of the bottom).

#31-31 cul'd July 18, 1931, at low tide. seems 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. *Crangon* moved dish outside at 10³⁰ p.m. of red, four clawed ones in dish ^{because} 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 too muggy to go ^{F. 8 1/25} photographing

Ident 12 plus vials Squalphids

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 // Larv one died night of July 24
 had changed 3-4 times daily till hedge day
 on 24th B. forgot to change them for me this day
 & that evening when I got at them but one
 feeble specimen survived.

No. 33-31. 60 fms. S. of Red No. 2 Bory $\frac{94}{255}$

Run N x E @	1.30 pm	for 30 mins.	$\frac{2.28}{1.59}$
Stop + Sound	2.00 pm.	= 60 fms	$\frac{19}{1.40}$
Net over.	2.05.		
On bottom	2.15.	209 } fms cable out	
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 bucked dist. 1 qt to Vischer; 10 to
 1 to Pearce; 1 to Hess.
- ② *Acanthocarpus bispinosus* M. Edw. 6 to Pearce, 1 to Hess.
- ③ *Calappa* 2 ♂ 3 ♀
- ④ ⑤ ⑥ Spider crabs, 3 species (2 very large in tank grey }
 } (2 very large in tank grey }
- ⑦ *Pinnotheres* ♂ 1 + ♀
- ⑧ *Porcellana*
- ⑨ *Synalpheus*
- ⑩ *Hypochonca*
- ⑪ *Risopod*
- ⑪ ⑫ 2 species Hermit B

Great many (2nd dollar)
 in chains of species but
 apparently not hermit B
 taken by us.

July. 24, 1931.

Made nine dips with orange-heel bucket in afternoon seeking *Callinectes* 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 *Callinectes* lacking large claws + a Crangonid, ^{new to fauna.}

#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 plant for the hand.
 7 very few crustaceans.

July 24, 1931 cont'd. used ^{of} Budur

#41-31 @ 4.15 p.m. dip 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. dip in 5 fms

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

- 1 large Crangon packardii

in urchin like that sent H.L. Clark taken here but broken, spines still moving 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 hall picked up a dead Calappa flammea. ^{Hartmann} _{gathered} ^{clean shells}

#43-31 Please + Stone each got a Sapidus 1931/ 259
on tr. / Bush Key flat west side up to
Fandy + Coleman / reef got a R. marginatus each day

July 27, [too cloudy + windy to photo]

July 27 # 43-31. Collected "zoid" zone
in Bush Key, got half dozen Platypodid
a long zanthopodid, 9 to be exact. Plus two ♂ + ♀ similar
much the same color of Platypodid
marked in aquarium, irrespective of markings
& color of carapace legs are banded and colored
alike in all specimens.

The top of the reef is a great place for Cyclopus
pinnatus, Geograpsus lividus, and Eudorina
gonagra. Also Panopaea herbsti in little
Pearse reined + got more little ones
Brazilianis, Hippolyte, Palaemon-like, Squilla,
+ P. tenuicornis these last two for gulfweed caught
in seine of course, + a little brown amphipod
Platypodid are most common under zoid grass on
rocks, seemed to like a firm substrate best. but
found them among the debris too.

Brought home an Euphia gonagra, Panopaea
herbsti, ad 2 Geograpsus lividus, in full
with couple of zoid covered rocks. before long
Euphia had legs of a Geo. + was eating it
when I got to photo them in lab. on Geo. gulfweed
& had legs pretty well dismembered + "blended"
for dist. of crabs on Bush Key. the Euphia + Panopaea

Conflict of species
as Bush Key
they need more material
conditioned in their diet.

than terrain det. dist.
of some species
other are natural products
of absence of a

and maybe is a mistake in this reason. from
I had become disoriented
and lost their way.

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 dark

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

July 29. Somewhat quiet water + clearing sky.

July 30 Windy a.m. neither moonlight when we were out at 5.30 or sun when we were ^{sun under heavy} out ^{dark till 10}

July 31 rough + very cloudy not much in tow.

Aug. 1 still cloudy moderate sea, ~~not much in tow.~~

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

~~not much in tow~~ 3 very smooth, quite dark. ^{lots of eggs} ^{little else in tow.} ^{Carry rays} ^{some annelid}

4 smooth tow very milky

5 smooth. " " "

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

7 smooth very few eggs

8

9

Platyrodias + holes on anemones + rocks rest of day.
 did several of Platyrodias for color markings.
 saved rock shells + in dunes

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 ^{bottom} 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 dweller in. worked around July p.m. Photo at Fort + Bird Key. After supper. went over on Bird Key Reef with tubs + poison, but no result.

July 31. Car per usual 5.30 tow with Bullington

Aug. 1. ^{on shore} Photo some rocks + specimens, while Mante + Smiley went dredging in 10 foot channel 4 hauls old places. ^{held at hand} but I was not quite ready to go + missed the only haul ^{oddish material}

Aug. 5. Please got several *Plagusia*
 down on west side rocks of Soggyhead
 Key. where I got them on the East side
 is pretty well sanded up, that is
 the attractive places in which they
 loved to feed & hide, along with
Peronon. Mantle got 2 and larger
Pechinus ^{shameless} & a fair sized *Hardanus*
insignis from yesterday's dredge hauls.
 Put down here for matter of record.
 Two hauls in 70 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. } 70 100 701 } spinicauda.
 plus those bottled & discarded
 was heavy stiff mud; lost ^{one} net. 4
 Dredge ripped another.

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

In 50 fm haul got 2 beautiful
 squillidans no had Potamurus spinicauda
 etc. a number 495 species in all.

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 with solid bands of color + white antennal flagella narrow white bands wide colored ones antennular flagella

chela seems without color only as bent.

#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 ^{inside} ~~outside~~ and two outside of claws
now ~~not~~ 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, cornea
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, + ~~dots~~ spots as indicated.



This stretch
two legs in sketch.

Hermit.

20 - 31 July 7, 1931

Dactyls distally approx. 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

arrangement of antennular peduncles
~~together~~

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

come by.
sluts whitish perhaps iridescent pink.