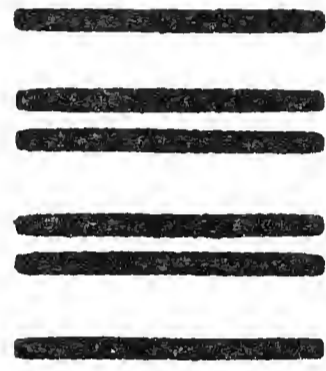


Higgins NHB 163
SMITHSONIAN INSTITUTION
WASHINGTON, D.C. 20560

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300



POSTAGE AND FEES PAID
SMITHSONIAN INSTITUTION

651

IF FOUND PLEASE RETURN TO:

Dr. Robert P. Higgins
Curator
Department of Invertebrate Zoology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20560 USA

3/21	4000	/30	800	
/22	<u>220</u> taxi	/31	2680	calculator
			1900	
/23	<u>3500</u> car rental		980	
	<u>800</u> taxi		800	
/24		/	600	
/25	<u>980</u> boat			
	9300			
	<u>430</u> bus			
			69230	to ship
/26	11000		92770	1st trip trans costs
	<u>980</u> boat			
	<u>470</u> taxi			
	<u>200</u> taxi		73670	2nd trip trans costs
	500		73670	trans costs
	1500			
	300			
/27	600			
	4500			
	370			
	500			
	2250			
/28	900			
	520			
	<u>1200</u> gas			
	<u>5000</u> car rental			
	700			
	1000			
/29	600			
	4500			
	670			
	130			
	<u>350</u> taxi			
	3500			

3/22 AX 46300

3/23 AX 15000

4/1 VISA 9000

4/3 AX 144520

4/4 AX 17500

232320 \$1324.00

\$1232 do SI

1232 Given air fare

$\frac{1}{35}$	3/21	4000	supper	4000
		600	post cards	4600
		1000	stamps	5600

$\frac{2}{34}$	3/22	46300	hotel AX	51900
		500	beer	52400
		220	taxi	52620

$\frac{3}{33}$	3/23	15000	hotel AX	67620
		600	prosepple	68220
		500	entry fee	68720
		1000	lunch	69720
		2000	conv.	71720
		300	stamps	72020
		180	post cards	72200
		3500	car rent	75700
		800	taxi	76500

$\frac{4}{32}$	3/24	1000	lunch	77500
----------------	------	------	-------	-------

$\frac{5}{31}$	3/25	9300	hotel	86800
		430	bus	87230
		980	boat	88210

$\frac{6}{30}$	3/26	11000	hotel	99210
		980	boat	100190
		500	lunch	100690
		300	coffee	100990
		240	post cards	101230
		200	taxi	101430
		300	beer	101730
		470	taxi	102200
		400	TV	102600
		1500	dinner	104100

$\frac{7}{29}$	3/27	600	break fast	104700
		4500	hotel	109200
		370	lunch	109570
		500	snack	110070
		2250	dinner	112320
		150	snack	112470

4/2 received ¥ 177,490

92,770 air fare ^① owed to Shirayama
 69,230 paid to Shirayama
 93,670 owed for RPH trip ^②
 793,670 " " GAH ^②

¥ 543.29

1232

920000 due -177490 742570 - bal due
 -221700 Wash - Tokyo RT
 698240
 -92770 trip ^① 698240
 605470 520750
 -93670 trip ^② 927000 /26 = 16423/days
 511800

1232 to SI
 543 } given
 1232 }

3007 trip cost
 200
 74100 to Hilton 3
 123500 5
 49400 2
 247000 10

920000
 -177490
 742510 to be paid
 -73670 RPH trip ^②
 -73670 GAH trip ^②
 -92770

170

8/28 3/28 900 hotel 113370
 520 lunch 113890
 700 coke 114590
 5000 rent car 119590
 1200 gas 120790
 300 beer 121090
 100 TV 121190
 1000 supper 122190

9/27 3/29 600 breakfast 122790
 4500 hotel 127290
 670 lunch 127960
 200 TV 128160
 350 Taxi 128510
 130 snacks 128640
 320 beer 128960
 3500 dinner 132460

132460 expenses to date
 92770 air fare owed
 225230
 177490 paid
 47740 amt over income

10/26 3/30 360 postcards 132820
 600 stamps 133420
 800 lunch 134220
 800 dinner 135020
 22550 hotel 157570

25110 16420 8690 56430

11/25 3/31 2680 calculator 160250
 980 lunch 161230
 1900 tolls 163130
 800 dinner 163930
 22550 hotel 186480

28910 12490 68920

12/24 4/1 600 lunch 187080
 400 given 187480
 710 given 188190
 9000 tour 197190
 22550 hotel 219740

33260 16840 85760

13/23 4/2 100 coke 219840
 22550 hotel 242390
 680 given 243070
 1700 dinner 244770

4/10 received 742,510-

to shira 92,770 RPA ① air fare

73,670 RPA ② train

¥ 240110 73,670 BAH ② train

4500

1325

2600

13425

5000

4/8-9

total - 253535 to shira

remaining 488975
-247000 to hilton

241975

-180000 est trip 2

61975

= \$353

511800 U TOKYO PD

151300 SI PD

663100 TOTAL PD

24500/night or 30000/day

920000 U TOKYO TOTAL

151300 SI TOTAL

1071300

14/22	4/3	340 subway	245110
		300 snow	245410
		2200 lunch	247610
		1200 museum	248810
		360 train	249170
		6000 dinner	255170
		540 coffee	255710
		22550 hotel	278260

144520 AX

15/21	4/4	22550 hotel	300810
		8600 hotel adj	309410
		620 tel	310030
		1200 entry	311230
		1250 lunch	312480

663100
-312480

preliminary pd 350620

projected cost 510000

remaining pd -350620

16/20	4/5	17500 hotel	329480
		1920 breakfast	331900
		700 coffee	332600
		550 massage	333150
		1200 cookies	334350
		1000 lunch	335350
		300 donuts	335700
		600 quarry	336300
		1340 dinner	337640
		5000 trip share	342640

projected def. 159380

quarries ticket + 93670

total deficit 253050

credit -221760

31290

17/19	4/6	24700 hotel	367340
		600 garden	367940
		580 snack	368440
		350 cards	368790
		290 beer	369080
		540 donuts	369620
		1870 supper	371490

287500 / 24 21852 = \$123

18/18	4/7	24700 hotel	396190
		280 subway	396470
		150 cards	396620
		570 lunch	397190
		2800 dinner	399990

287500

535945
 -120 000
 355945
 -74100
 281845
 -221760 air fare
 60085 = \$343

471 655
 -240 110
 711 765
 +247 000 hotel - 49400
 958 765
 +180 000 taxes ✓
 1138 765

-1071 300
 67465 remaining \$ 384
 920 000 UT/ky }
 +151 360 SI } 116865 = \$668
 24700
 24700

1232
 +1232
 2464
 384

cost 2080

19 4/8 24700 hotel 424690
 4500 supper 429190
 2860 guest 432050

20 4/9 1325 grocery 433375
 2600 museum 435975
 2360 supper 438335

Σ 219175 = \$125

21 4/10 24700 hotel 463035
 15000 car 468035
 1500 lunch 469535
 1120 drinks 470655
 520 supper 471175

Σ 22437 = \$128

22 4/11 24700 hotel 495875
 300 coffee 496175
 1800 supper 497975
 1630 guest 499605

23 4/12 24700 hotel 524205
 520 subway 524725
 360 cards 525185
 5000 scarves 530185
 400 stamps 530585
 1350 lunch 531935
 3420 supper 535355

535945

Σ 23276 = \$133

24 4/13 24700 hotel 560055
 14000 beach 574055
 19200 party 593255
 18000 dinner 611255
 1000 subway 612255
 420 coffee 612675
 1350 supper 614025
 1550 rest 615575

Σ 25182 = \$144

$\frac{25}{11}$	4/14	24700	hotel	629075	
		600	coffee	630275	
		2100	taxi	632375	
		2000	misaki	634375	
		2300	coru/taxi	636675	
		900	lunch	637575	
		400	breakfast	637975	
		800	water	638175	
		400	tram	638575	
		(6700)	refund	631875	\bar{x} 25273 \$144

$\frac{26}{10}$	4/15	1500	hotel	633375	
		4500	car/taxi/ferry	637875	
		800	water	638675	
		500	snack	639175	
		1600	lunch	640775	
		3000	supper	643775	\bar{x} 24761 \$141

$\frac{27}{9}$	4/16	19000	hotel	654775	
		2100	coffee	656875	
		1500	ink	658375	
		450	snack	658975	
		600	snack	658975	
		1200	taxi	660175	
		1300	supper	661475	\bar{x} 24499 \$140

$\frac{28}{8}$	4/17	5600	hotel food	667075	\bar{x} 23824 \$136
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$\frac{29}{7}$	4/18	1420	taxi	668475	
		640	lunch	669135	
		290	snack	669425	
		4705	Guem	674130	\bar{x} 23246 \$133

$\frac{30}{6}$ 4/19 1450 hotel 675580
 8690 Gwen 684270 \bar{x} 22809 \$130

$\frac{31}{5}$ 4/20 11400 tour 695670
 600 snack 696270
 320 bus 696590
 260 snack 696850
 100 coke 696950
 6430 Gwen 703380 \bar{x} 22696 \$130

$\frac{32}{4}$ 4/21 1600 bus 704980
 800 taxi 705780
 1200 tours 706980
 2000 tea 708980
 4000 lunch 712980
 9000 gift 721980
 13600 dinner 735580 \bar{x} 22987 \$131

$\frac{33}{3}$ 4/22 320 bus 735900
 1000 breakfast 736900
 7140 news paper 737040
 1560 train 738600
 2600 temple 742200
 6000 taxi 748200
 1760 lunch 749960
 1560 train 751520
 320 bus 751840
 800 snack 752440
 2300 Tape 754740
 1960 supper 756700
 420 breakfast 757120 \bar{x} 22943 \$131

1071300 total SI/UT
 -874010 spent
 197290 unspent

221760
 197290
 24470

221760 owed SI
 -197300

24465 deficit = ~\$140

AX/VISA 232320
 TC

\$1328
 360
 \$1688 spent out of pocket
 -460

\$1228 spent
 -550
 \$578

1232
 -578

654 owe SI

1232

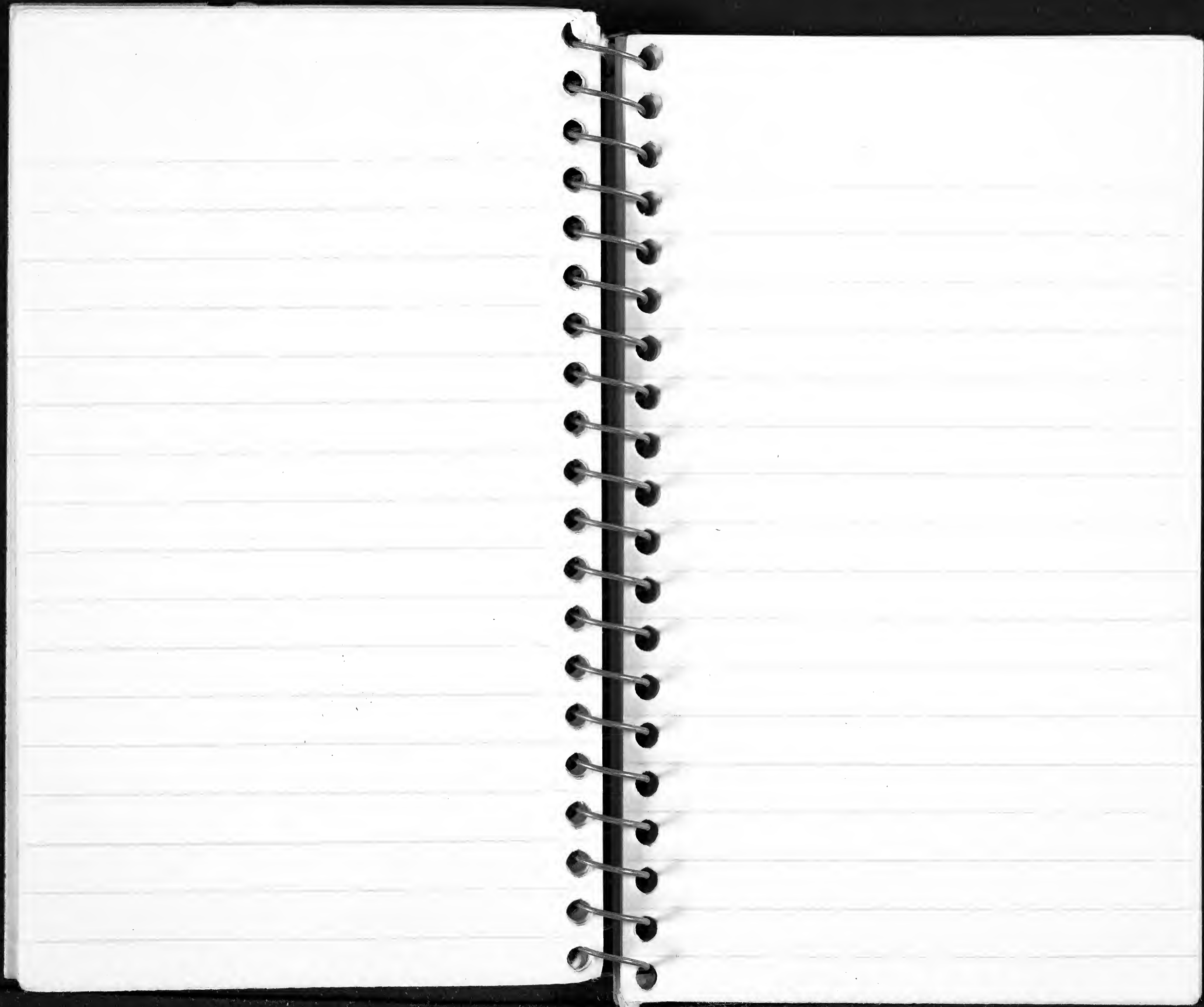
\$1886

787120

34	4/23	28160	hotel	785280	
2		320	bu	785600	
		2000	gift	787600	
		1800	gift (cards)	789400	
		10200	happy goods	799600	
		6000	wood print	805600	
		120	card	805720	
		300	locker	806020	
		1050	cards	807070	
		1650	lunch	808720	
		250	snack	808970	
		1750	supper	810720	X 23845 \$136

35	4/24	3000	theatre	813720	
1		1280	breakfast	815000	
		240	stamps	815240	
		500	lunch	815740	
		600	swim	816340	
		280	subway	816620	
		900	snacks	816750	X 23336 \$133
		130	carf		

36	4/25	44600	hotel	861350	
0		40	tel	861390	
		6000	lunch	867390	
		4000	airport tax	871390	
		1560	bowls	872950	
		160	gum	873110	
		900	bag check	874010	X 24278 \$140



RYUKYU IS.

860324.1 Kabira Bay, Ishigaki Island, Japan
SE corner of bay, 1.5 km S of Fisheries
station, 3 m, brown mud, HMD/B
[formalin, 1-30 ml bottle]

Echinoderes 2 spp abundant

Kinorhynchus 1 spm?

with few tanaids, copepods, nematodes,
many mites

24°20.64'N 124°08.42'E

860324.2 Kabira Bay, Ishigaki Island, Japan
near central west shore, 1 km S of
Fisheries station, 0.5 m muddy sand
HMD/S

[formalin, 1-60 ml bottle]

tanaids, copepods, poor sample

24°20.67'N 124°08.40'E

860324.3 Kabira Bay, Ishigaki Isl., Japan ✓
near north limits of open part of bay

0.7 km S of fisheries station

3 m coarse to med. coral sand

HMD/S

[formalin / 1-60 ml]

Cateria (1 sp) ? Echinoderm 3 spp
Anoplous, Copepoda, mites
1 Sipunculus, Tubicolus larva
gastropods, 3 spp tardigrades
nematodes, taraxids, entoproct (or
hydrozoan?).

24°20.70'N 124°08.40'E

Ryukyu Is. ✓

860325.1 Kuroshima Island

24°10.22'N 124°01.60'E

intertidal sandy mud on flat
of coral reef Formalin 1-60 ml

860325.2 Kuroshima Island ✓

24°10.22'N 124°01.60'E

intertidal sand on flat
of coral reef Formalin 1-60 ml

860325.3 Iramote Island, near ✓

bay (landing) on SW area

10 m mud HMD/B


formalin 1-30 ml

1 Pycnophyes juv, adult 3 Echinoderm

1 Sipunculus

24°10.60'N 123°55.0'E

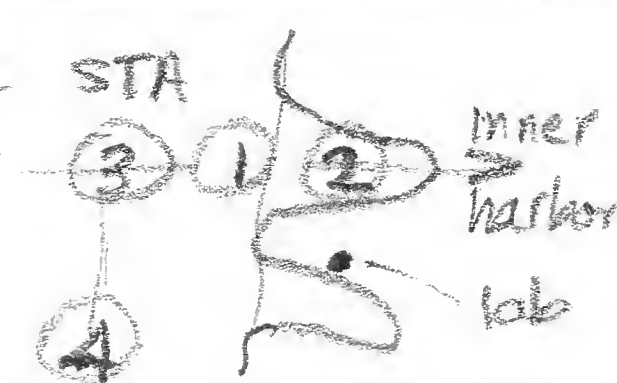
860325.4 Iramote Island
 same as 3 but
 24° 10.60' N in 1.5 m (near
 123° 55.0' E shore, By hand-held
 plankton net / 3 Foundin
 1-30 ml. Echinoderm 2 spp
 Pycnop. larv?

860325.5 Kuroshima Island
 Good sample! Many near port on south
 crustaceans / pycnogonids
 no tard / 2-3 kins (Squilla)? coast, coarse sand
 tunicates (?)
 1 tard!  8 m HMD/S
 Foundin 1-60 ml

860325 Helped by
 Keichi Nomura & Naoki Kamezaki

24° 10.22' N 124° 01.60' E

note STA
 SEE CHART MISAKI
 860411.1 Misikai coastline



20m

muddy sand HMD/Bubble (1-30 ml)
 foundin Echinoderm
 35° 10. 139° 37.

860411.2 Misikai

muddy sand, 10 m
 HMD/bubble (1-30 ml) foundin
Pycnophyes Kanohyechus Echinoderm
 35° 10 139 37

860411.3 Misikai ✓

53 m

sandy mud HMD/bubble sample
(1-30 ml) formalin Echinoderms

Tarreda, Scaphis,

35° 10' N 139° 37' E

860411.4 Misikai ✓

51 m. medium-coarse Dentalium sand

HMD/rinse-sample (2-60 ml) formalin

35° 10' N 139° 37' E

Y SHIRAYAMA col. ✓

15 Aug 85

KT 85-11
SK 1-2

Suruga Bay

39° 20.2' N

142° 1.6' E

120 m

muddy sand

in vial

4 spec. kms.

Pycnophyes

Condyloderes

~~Compto?~~

22 Feb 86 Suruga Bay ✓

KT 86-1
B-6 in

34° 15.87' N

138° 40.40' E

900T

972 m. depth

60 ml mud

Box corer

24 Feb 86

Suruga Bay

KT 86-1
A-3

35° 9.93' N.

138° 39.81' E

1354 m

brn. gr. clay surf
(mud)

Box corer

(coarse sand below
surface)

860415.1 Tomioka Bay, Tomioka,

Shimo Is (Amakusa Islands)

Harbor entrance, near breakwater

5 m mud

HMD/B

F/1-30ml

Echinoderm Pyrosoma Keenbyrnelus?

excellent sample

$32^{\circ}30.25'N$ $130^{\circ}0.60'E$

860415.2 Tomioka Bay

5 m sandy mud

HMD/B Formula/1-30ml

$32^{\circ}30.20'N$ $130^{\circ}0.60'E$

860415.3

12 m muddy ^{mud} sand

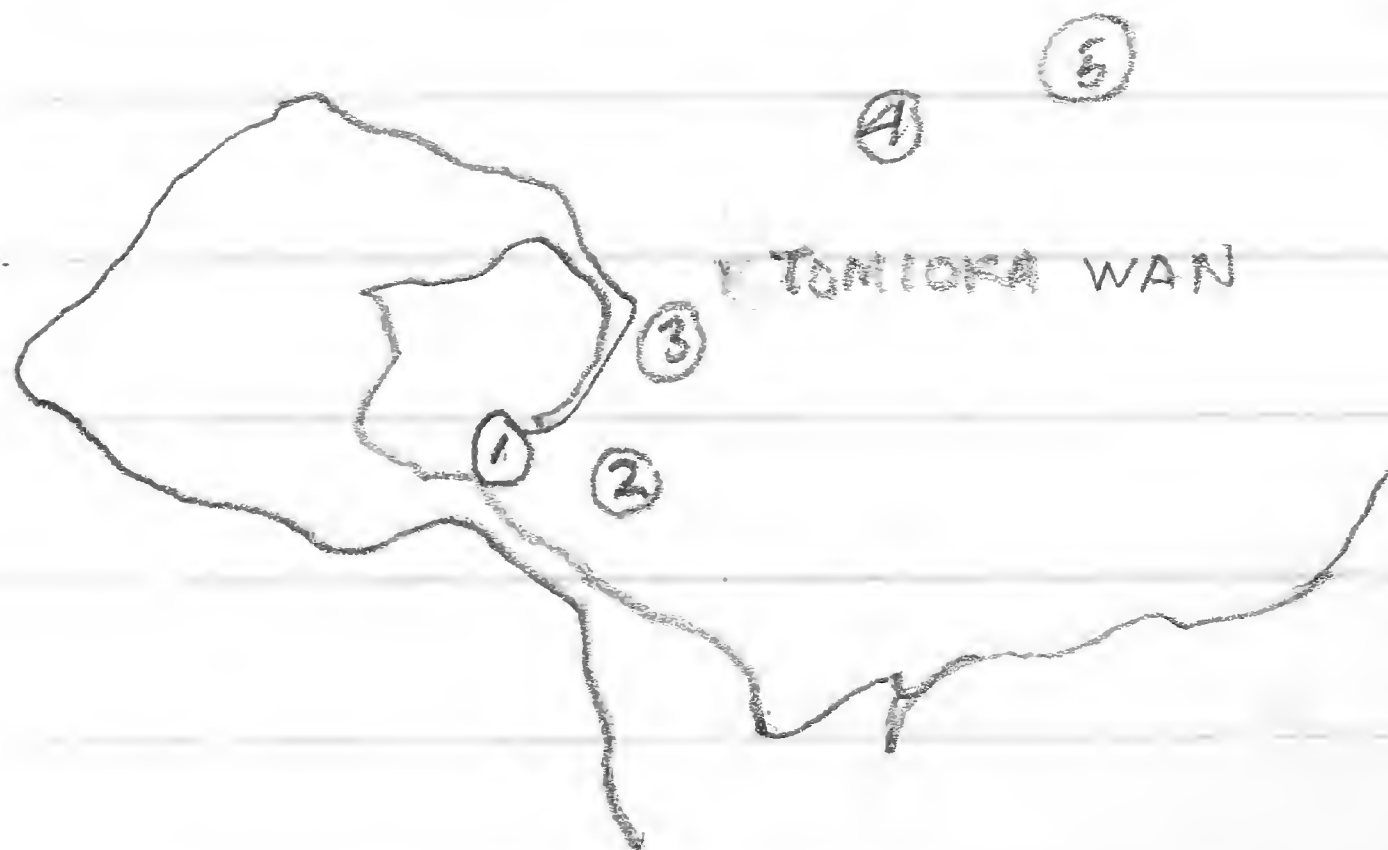
HMD/B Formula 1-30ml

$32^{\circ}30.30'N$ $130^{\circ}0.70'E$

860415.4

28 m muddy ^{mud} sand

HMD/B Formula/1-30ml



$32^{\circ}30.35'N$ $130^{\circ}03.80'E$

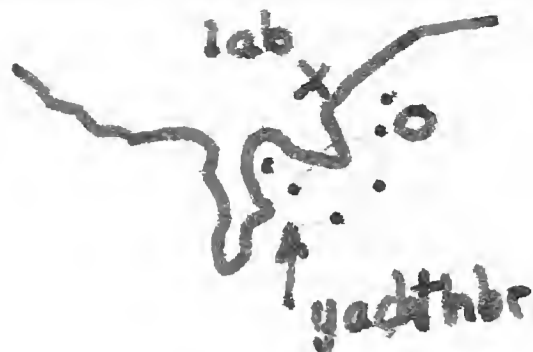
860415.5

22 m shelly coarse sand

HMD/SFW

Formalin 1-60 ml

32° 30.40' N 130° 03.90' E



860417.1 Mukaishima RH 2079
Inner half of SW of
Yacht harbor near main station, 3 m mud

HMD/B F/1-30 ml

Kinorhynchus poor sample

34° 21.5' N 133° 13.0' E

860417.2 Mukaishima
Outer half of
Yacht harbor near main station 10 m muddy,
sandy-mud.

HMD/B F/1-30 ml

Kinorhynchus Echinoderm?

moderately good sample

34° 21.5' N 133° 13.1' E

860417.3 Mukaishima RH 2080

100 m outside yacht harbor, coarse sand
w/ silt, 20 m

HMD/S F/1-60 ml

few kinorhynchs

34° 21.5' N 133° 13.2' E

860417.4 Mukaishima

Near Island in front of Mame Iot
coarse sand w/ silt, shell ¹⁰/₈ m

HMD/S F/1-60 ml

34° 21.8' N 133° 13.3' E

860417.5 Mukaishima

close to previous site ⁵/₄ m

HMD/S F/1-60 ml

poor sample coarse sand with
shell and silt

34° 21.9' N 133° 13.3' E

860417.6 Mukaishima

nearer to island (noted previously)

3 m coarse sand with silt

HMD/S F/1-60 ml

poor sample, few kinorhynchs

34° 22.0' N 133° 13.3' E

860419.1 Shirahama (see map)
Tanabe Bay off S-cent.
Itozuka

8m med sand w/silt

HMD/S F/1-60ml

33° 41.9' N 135° 21.2' E

860419.2 Shirahama

20m mud

HMD/B F/1-30ml

Pycnophyes, Echinoderm, Kinorhynchus

33° 42.1' N 133° 21.1' E

860419.3 Shirahama

30 m mud

HMD/B F/1-30 ml

Pycnophyes Echinurus, Condylodereis

Keurobryachus

33°42.04'N 135°20.53'E

860419.4 Shirahama

15 m med-coarse sand

HMD/S F/1-60 ml

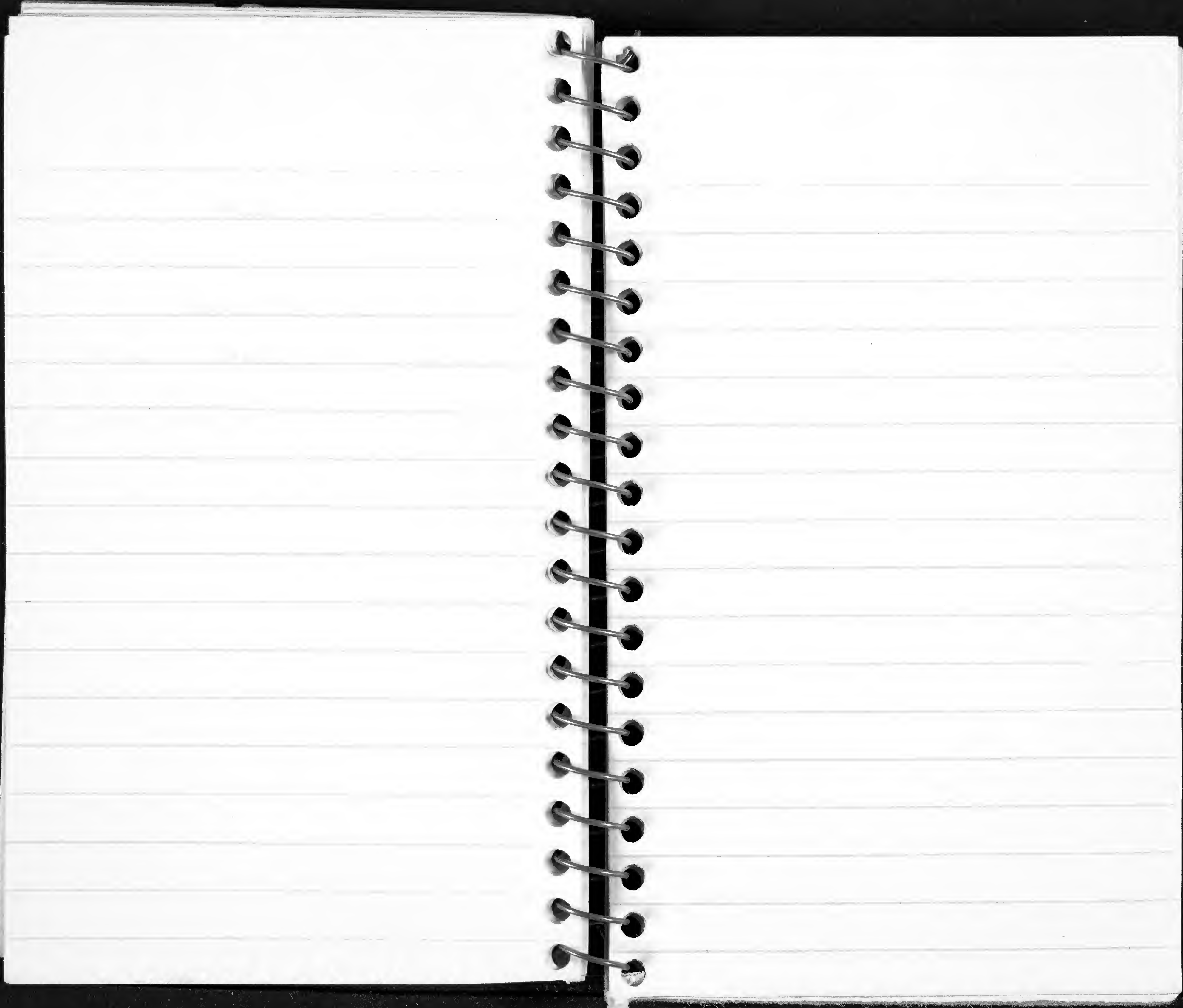
33°42.0'N 133°20.45'E

860419.5 Shirahama

3 m med-coarse sand

HMD/S F/1-60 ml

33°41.75'N 135°19.9'E



1. successfully collected *E. wasudai* for
redescription.

2. need additional specimens to define
limits of *E. wasudai* and other spp.
encountered.

YAEYAMA BRANCH OF OKINAWA
FISHERY STATION

* Mr. Masayoshi MURAKOSHI

UNIV TOKYO INST MAR RESEARCH

* Dr. Takahisa NEMOTO [Dir Prof / not met]

Dr. SWINBANKS (geol. / → Nature (Mag))

Dr. Koichiro NAKAMURA

Dr. KOGURE (Bact. / U. Md)

Dr. MAEDA (Ciliates)

Dr. "Tomo" MIURA (Polychaetes)

YAMAMOTO (Polych.)

TSUKAMOTO (Techn. F)

HORIKOSHI

Dr. OHTA Assoc. Prof / deep sea macro (molluscs)

MUKAI Res Assoc. Sea grasses

AIOI Tech / sea grasses

E. TSUCHIDA Tech / moll
went to Misaki with us

MISAKI MARINE BIOLOGICAL STATION

Dr. Takeo MIZUNO Director [not met]

* Dr. Torao SATO instructor

AMAKUSA MARINE BIOLOGICAL LABORATORY

* Dr. Taiji KIKUCHI Director, Professor
Dr. Hiroaki TSUMI (Polychaetes)

1
Chittima ARYUTHAKA (Thailand)
(nematodes; PhD student)

Dr. NOJIMA (starfish ecol)

Raymond NAKAMURA (Canada)

MUKAISHIMA MARINE BIOLOGICAL STATION

[Dr. Ryo NATASHIMA, Director] not met

* Dr. Yoshiaki HIRANO Instr (nudibr)

Dr. Takaharu HOSHINO Instr (sponges)

Dr. Yoshiroh KITAZIMA (Post Doc)
(~~eratst~~ harpact.)

Dr. Yayoi HIRANO (coelent.)

SETO MARINE BIOLOGICAL LABORATORY

* Dr Eiji HARADA Director, Professor

* Dr Tatsunori ITO Assoc Prof (Harpact.)

Dr Keiji WADA Instr. (Ecol. Crabs)

Mr Horokuni NODA Grad Student (Tard/Kino Syst)

Ocean Research Institute

✓ Dr. Koichiro NAKAMURA pycnogonids

Dr. Sachiko TSUJI chaetognaths

Seto Marine Lab

Mr. Horokuni NODA (IAMS) tard/kino

Dr. Tatsunori ITO (IAM) non-retarded

~~Katsuki YOSHIMURA (IAM)~~

Tokyo Univ. of Agr & Tech

Mr. Masamichi ITO tardigrades

Hokkaido Univ. of Educ.

✓ Shinichi HIRUTA (IAM) tardigrades,
Jap. sea Syst. Lab. non-retarded

Amakusa

✓ Dr. Taiji KIKUCHI (IAM) Diels.
(semiter. exel)

Mekashiima

✓ Mr. Yoshiro KITAZUMA (IAM) (harpuacticornid)

