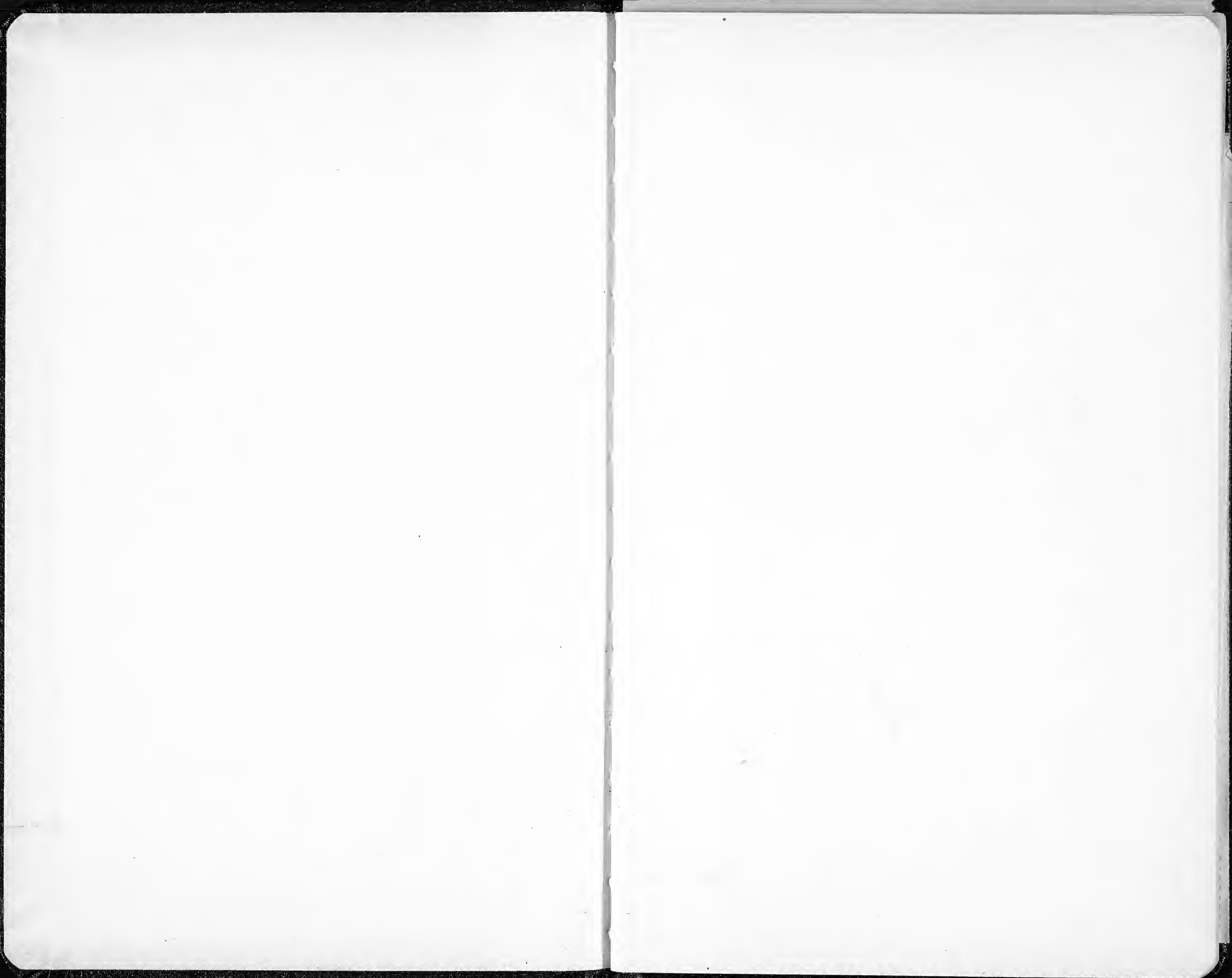
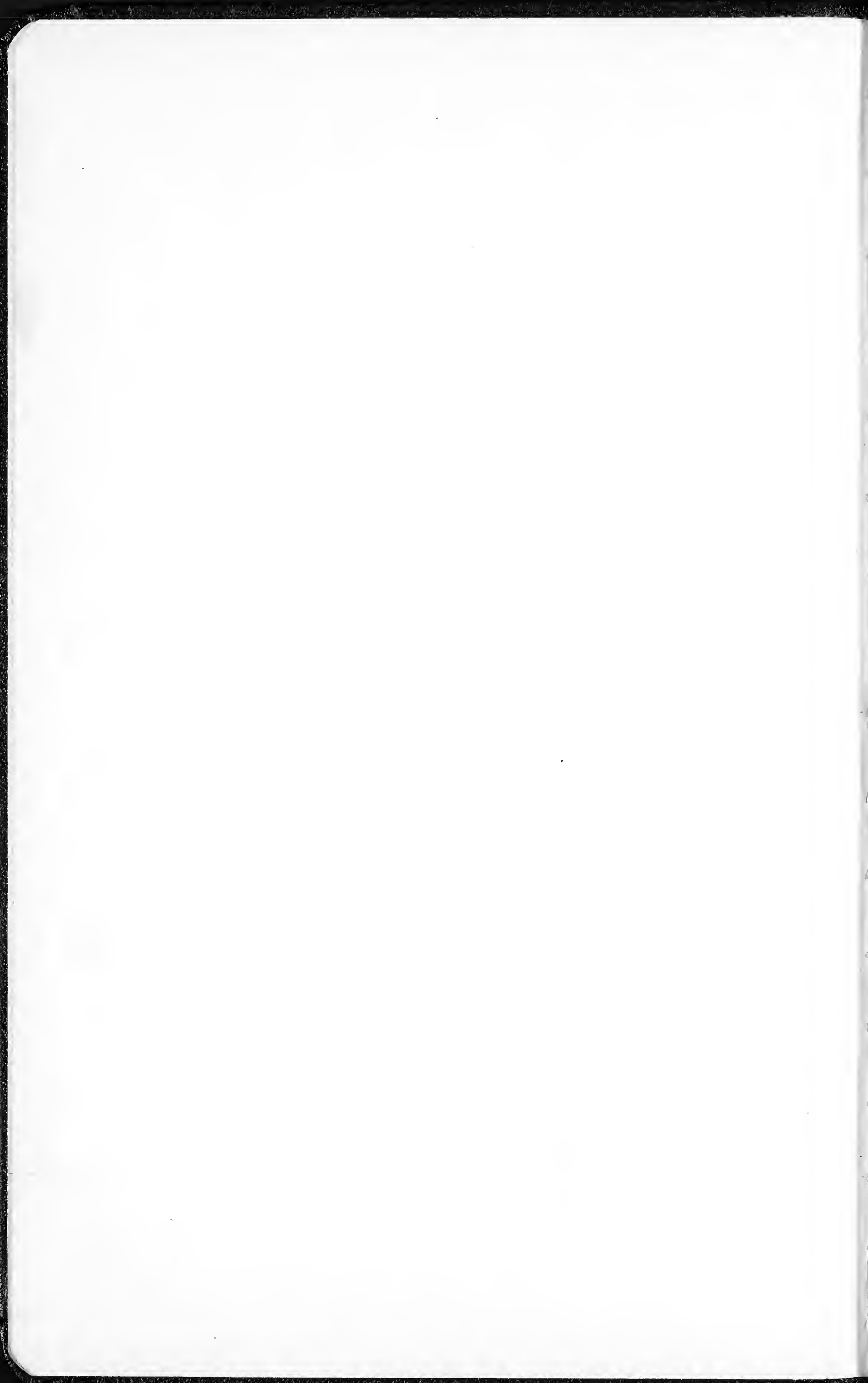


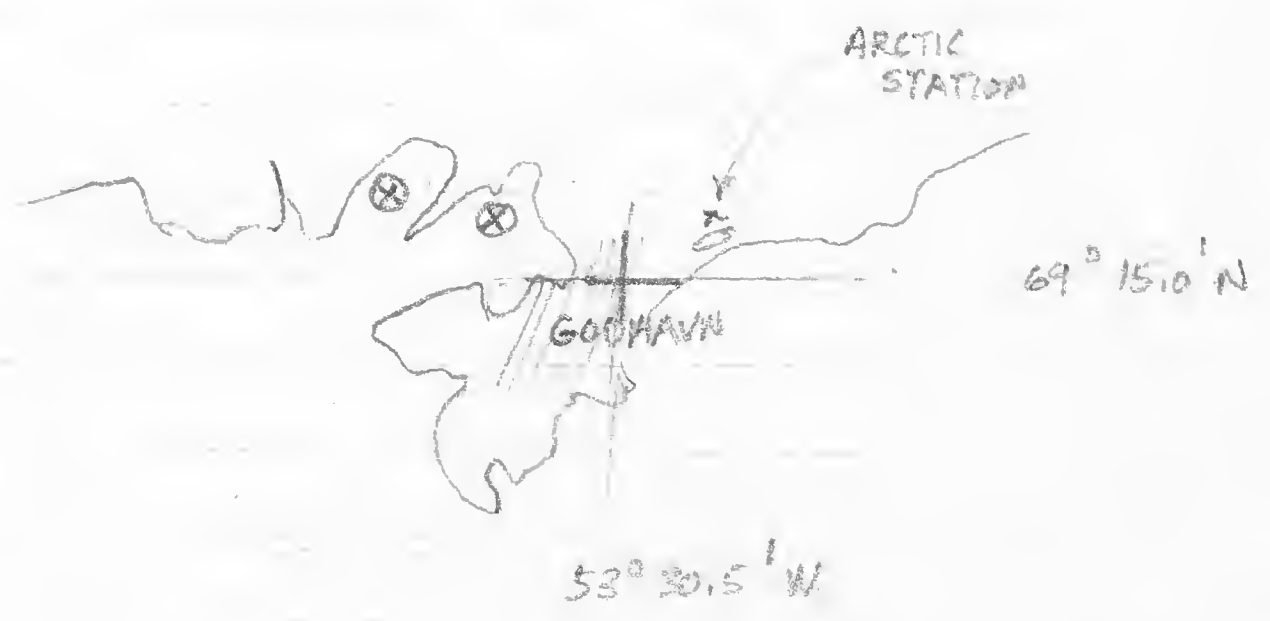
7530-274-5494  
FEDERAL SUPPLY SERVICE





810827/ GODHAVN, GREENLAND  
R HIGGINS & R KRISTENSEN

27 SEP 81  
810827.1



28 SEP 81 810828.1  
X 69° 08.6' N 53° 50.0' W

810903/4

DISKO FJORD, GREENLAND

R. HIGGINS & R. KRISSENSON

03 SEP 81

recorded as one sample <sup>Brk</sup> 810903.1 <sup>(K)</sup>

810903.1

200M 2°C SANDY MUD 2X 0.1M<sup>2</sup> VVG 34‰

(.2)

200M 2°C SANDY MUD HMB 34‰

(.3) x

1 M 3°C MUDDY SAND + ROCK 0.1M<sup>2</sup> VVG 25‰

04 SEP 81

810904

(.1)

6.5 M MUD + PEBBLES

34‰ = 3°C

3X 0.1M<sup>2</sup> VVG

(.2) PE

140 M SANDY MUD

HMB

34‰

4°C

(.3) E

120 M BROWN MUD

HMB

34‰

5°C

(.4) x

20 M BROWN MUD

HMB

34‰

5°C

(.5) PE

200 M BROWN MUD

HMB

34‰

5°C

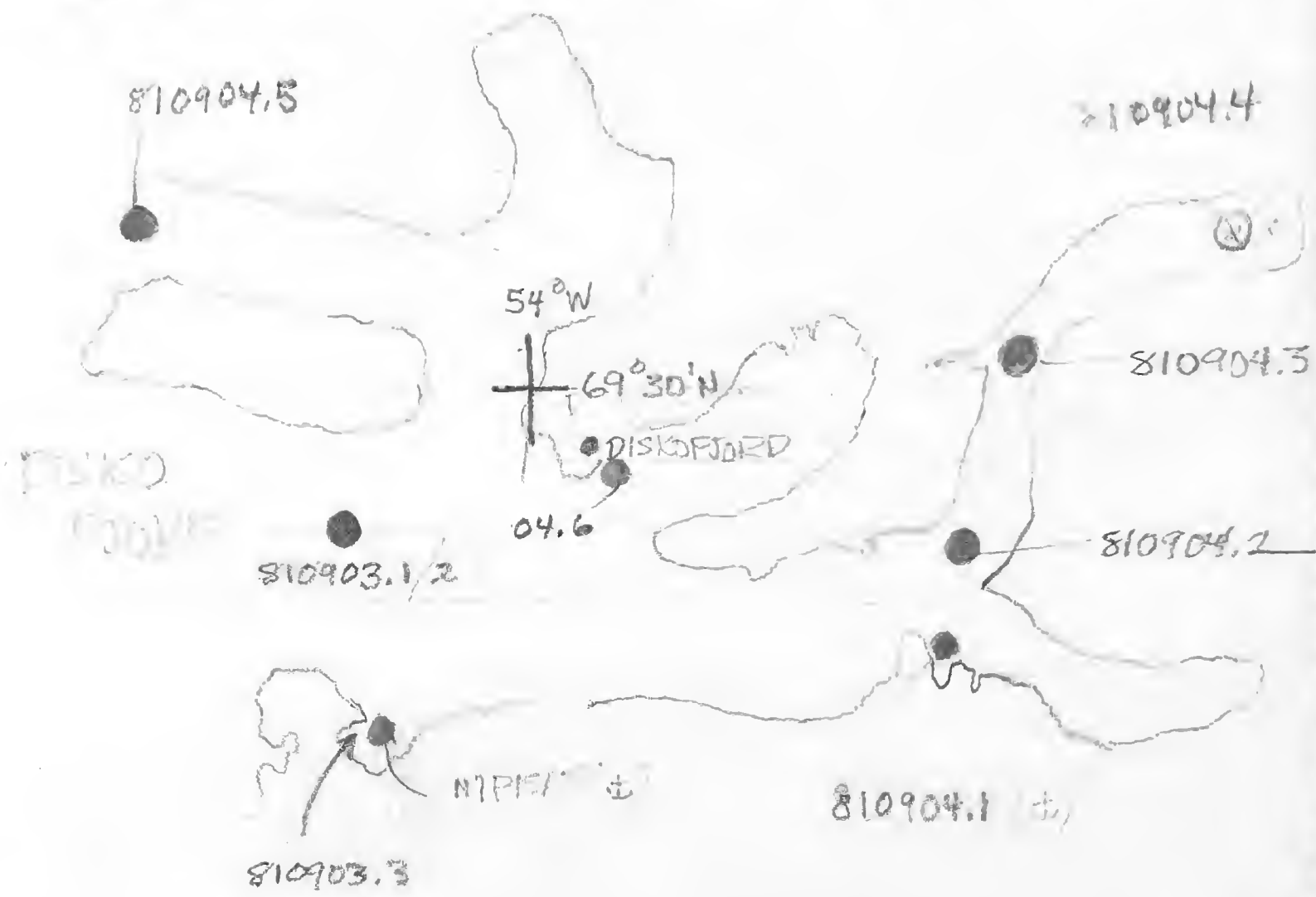
(.6) E

9 M MUD + ROCK

0.1M<sup>2</sup> VVG

34‰

3°C





810909.1 Tide pool, filamentous algae, near high tide level  
Tardigrade

810909.2 Tide pool, Fucus holdfast  
Isopod

810912.1	66M	0.1M VUC	}	No kinorhynchans
.2	90M	HMD		No kinorhynchans
.3	60M	HMD	}	Amphipods! No kinorhynchans
(.4)	100M	HMD		Pycnophyes w/ very few Echinoderms
.5	30M	HMD		amphipod / isopods, polychaetes
.6	15M	HMD		SKANSEN STATIONS
.7	5M	0.1M VUGX		
.8	3M	0.1M VUGX		
(.9)	225M			<u>Echinoderms</u>

Note where amphipods are abundant, samples had kinorhynchans and other fauna except for nematodes & harpacticoids.

SAUDI ARABIA / ARABIAN GULF

Acc. 353876

Keep for K

record but give to Reinhardt

81029.1

Acc. 353878  
(25 vials)

No Reinhardt Tardigrade only

MCO note

SATT proj see MCO sheet

Acc. 353877

RPH (Tardigr ?) to RMK

Acc. 353877

RPH (RH NOR!) w KIND

Saudi Arabian Collection

✓ Higgins collection

Aranceo

Tetra Tech - 30 sets  
500+

Reinhardt

Christensen

has Acc

26°N +  
50°E

HALF MOON BAY

821029.1 (100 m from shore)  
821029.2 (intertidal beach bay side)  
821029.3 (intertidal beach ocean side)

SUNSET BEACH

821029.3

821029.1 821029.2

HALF MOON BAY



Saudi Arabian  
Collection

✓ Higgins collection

Aramco

Tetra Tech - 20 lots  
500+

Reinhardt

Hustensen

has Acc.

Shehro

Saeedi

81029.1

81029.2

81029.3

~~Tree~~ Apr. 12

Am.

830131.4  
Simp # to 830206.4

Reinhardt ✓

RH 1668

+ Acc #

830201.0

Acc # 348815

SATT - Acc

353878

SAUDI ARABIA / ARABIAN GULF

Keep for K

Acc. 353876

record but give to Reinhardt



FROM ARAMCO see note

Acc. 353878 (25 vials) No analysis Tardigrade only

SATT proj see mimco sheet

Acc. 353877

RPH (Tardigr ?) to RMK

Acc. 353877

RPH (RH nos!) w KING

HALF MOON BAY

821029.1 (100 m from shore)  
821029.2 (intertidal beach bay side)  
821029.3 (intertidal beach ocean side)

SUNSET BEACH

821029.4

821029.1 821029.2

HALF MOON BAY

29 OCTOBER KHOBAR, SAUDI ARABIA

821029.1 / Half Moon Bay, S of Khobar (N 100 m off shore) <sup>E of beach</sup>

white on red

1 M (at midtide) 81°F 51‰ Fine sand with  
floc on surface

26° 9.9' N 50° 10.1' E

Echinoderes (possibly 2 spp)

5% Formalin Col. R. Higgins Benthic seep sampler/  
bubble  
1-5ml (R), 1-50ml (W)

**RH1674**

821029.2 Beach of Half Moon Bay, S of KHOBAR

intertidal beach sample (at midtide) 0-0.2 m stratum

fine sand 81°F 51‰

26° 9.9' N 50° 10.1' E

**RH1675**

5% Formalin Col. R. Higgins Shovel / FW wash + decant  
1-50ml (W)

Given to Reinhardt to check for  
Tardigrades

821029.3 Sunset Beach (E of Half Moon Bay) S. of KHOBAR

intertidal beach sample (at midtide) 0-0.2 M stratum

medium sand 81°F 45‰

26° 9.9' N 50° 10.1' E

**RH1676**

5% Formalin Col. R. Higgins Shovel / FW wash + decant  
1-50ml (W)

Given to Reinhardt to check  
of Tardigrades

54321



1 NOVEMBER Previously collected 63µm fractions (See notes enclosed)

ST 7140 31 JUL 82

SAFANIA

(5% F / FF) Tardigrades (5) (Bdellipus (5), Microtus (2))

Harporhynchids (1-2 spp) (5) Acarina (2), Nematoda (3)

Polychaeta (1)

714B 31 JUL 82

-do-

714A 31 JUL 82

Harpor (3) Nema (3) Tard (2) Poly (1)

ST 713A 31 JUL 82

(5% F / FF) Nematodes (5) Harpor (3) Acarina (1)

Tardigrades (1) (Bdellipus (1), Microtus (1)) Polychaeta (2)

Turbell (2)

713B

Nema (2) Poly (2) Harp (2) Acarina (1)

Tard (Academa (1)), Turb (2)

713C

Nema (2) Poly (2) Turb (2)

712A 31 JUL 82

Nema (2) Poly (2) Harp (1)

712B

Nema (2) Poly (2) Harp (1) Tard (1) Sest (1)

712C

Nema (2) Poly (2) Harp (2)

711A 31 JUL 82

nema (1) poly (1) cope (1) turb (1) arch (1)

711B

nema (1) poly (1) cope (1) turb (1) arch (1)

711C

-do- + nemat (1) ostra (1)

2 NOVEMBER

RAS AT TANAJIB

821102.1

ARAMCO Sediment Trap station  
Station 1 at Tanajib

**RN1677**

gray clay with some sand

2 sp *Pyrosophaga*; 1 sp *Semmoderes*,  
1 sp *Echinoderes*

Note: no juvenile stages noted, many detritus, some  
corals, mostly *Scleractinia*. In area recently  
developed through sand and to create harbor facility

note

821102.2

-do-

Station 4

402

Sand w/ some silt

**RN1678**

Few *Echinoderes*, few *Scleractinia*, ophiuroids,  
interesting *Chaetognaths*, *Strang* turbellarian?

821102.3

-do-

Station 14?

**RN1679**

Medium sand/shell w/ some silt

Many *Pyrosophaga* (2 spp)

27° 50' N

49° 58.6' E

6 NOVEMBER

ARAMCO

(spms received from Linda STANLAND, ARAMCO)

ARAMCO 740729 E2/IA

29 Jul 74

see note

*Echinoderes* sp1 (10 spms) (cf *E. coulli*)

*E.* sp (1 spm)

*Semmoderes*? (5 spms)

see ltr from J. Purchase

**RN1672**

730214 0/1

ARAMCO 740214 D/1

see note

*Kincidynetus* sp. JUV (1 spm)

14 Feb 1973

**RN1673**

27° 50' N

49' 50.6" E



2 NOVEMBER  
821102.1

RAS AT TANAJIB  
ARAMCO Sidunka Trap station  
Station 1 at Tanajib

**RH1677**

gray clay with some sand  
2 spm Planorbis; 1 spm Succinea,  
1 spm Echinoderm  
High in juvenile shells, many diatoms, some  
ostracods, small subradiata in area recently  
disrupted through coral reef de-creation facility

note

821102.2

- do - Station 4

402

Sand w/ some silt

**RH1678**

Few Echinoderm, few Planorbis, ostracods,  
interesting chaetognaths, strong turbellarian?

821102.3

- do - Station 14

**RH1679**

Medium sand/shell w/ some silt  
Many Pycnogonids (2 spp)

6 NOVEMBER ARAMCO (spms received from Linda STANLAND, ARAMCO)

ARAMCO 710729 E2/IA

29 Jul 74 see note

Echinoderms sp1 (10 spms) (cf E. coulli)  
E. sp (1 spm)  
Succinea? (5 spms)

see ltr from J. Burchard

**RH1672**

730214 0/1  
ARAMCO 730214 P/1

see note

Kimberlyella sp. JUV (1 spm)

14 Feb 1973

**RH1673**

1 2 3 4 5 6 7

JULY

- 7 NOVEMBER Previously collected 63µm fractions
- STA 2I4 (63µm) tard<sup>1</sup> nema<sup>1</sup> poly<sup>1</sup> cspa<sup>1</sup> mites<sup>1</sup>  
30 JUL 82 TANAJIB
  - STA 2I3 (63µm) tard<sup>1</sup> nema<sup>2</sup> poly<sup>2</sup> cspa<sup>3</sup> nemat<sup>2</sup> turb<sup>1</sup>  
30 JUL 82 TANAJIB
  - ~~STA 2I2 (63µm) nema<sup>1</sup> harp<sup>1</sup> poly<sup>1</sup> turb<sup>1</sup> hydrasoa<sup>1</sup>  
30 JUL 82 TANAJIB~~
  - STA 2I1 (63µm) nema<sup>3</sup> turb<sup>4</sup> poly<sup>3</sup> harp<sup>1</sup>  
30 JUL 82 TANAJIB

MAY

- STA 6I4 (63µm) nema<sup>1</sup> oligo<sup>1</sup> cspa<sup>2</sup> collembola<sup>1</sup> (w/orange floc!)  
18 MAY 82 TANAJIB
- STA 6I3 (63µm) -do- (but w/more fibers)
- STA 6I2 (63µm) -do- (no floc)
- STA 6I1 (63µm) -do- (no floc)

JULY

- 6I4 (63µm) poly<sup>4</sup> nema<sup>1</sup> tard<sup>1</sup> collemb<sup>1</sup> oligo<sup>3</sup> cspa<sup>2</sup>  
31 JUL
- 6I3 (63µm)
- 6I2 (63µm)
- 6I1 (63µm)

NO TARDY

50°E  
+ 27°N

7 NOVEMBER 82  
TARUT ISLAND



1I4 (W)

29 JUL 82

1I3 (W)

1I2 (W)

1I1 (W)

NO TIME TO LOOK

8I4 (W)

31 JUL 82

tard<sup>3</sup>

8I3 (W)

8I2 (W)

8I1 (W)

NOTE:

① T-Shirts	Small	2
	Medium	12
	Large	17
	X Large	3
		<u>34</u>

Brown w/ yellow

send bill to John for reimbursement

Rec'd 7 Nov \$150

Mail US shirts w/ Xmas card "John & Judy"

② Send SI teler number to John McCain

③ Send John info on VIMCO

9 NOVEMBER 1982

TANAJIB  
 821109.1  
 27°47.5' N  
 48°48.9' W

RH 1680

RAS AT TANAJIB

821109.1

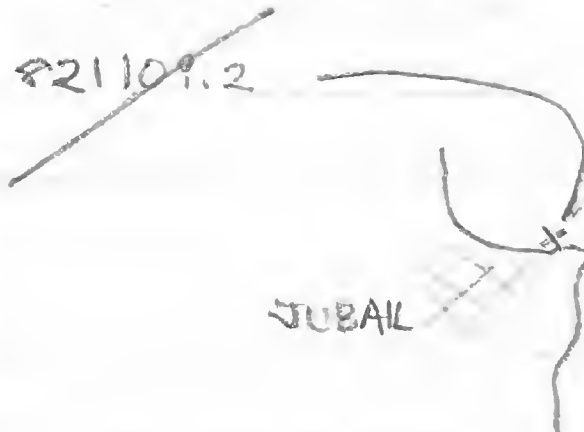


821109.1 shallow embayment  
 (hyperaline), ca 1 m depth  
 13-35°F  
 muddy sand 55-94‰  
 35-44‰

Echinoderm Psynophyce

DISCARDED

~~821109.2~~



JUBAIL

821109.2 Sand, ca 1-5 m depth, near marina at SE corner.

CLEAN SAND

TANAJIB

821109.1

27° 47.5' N

48° 48.9' W

NOTE:

① T-Shirts	Small	2	Brown w/ yellow
	Medium	12	
	Large	17	
	X Large	3	
		<u>34</u>	

send bill to John for reimbursement

Recd 7 Nov \$150

Mail US shirts w/ Xmas card "John & Judy"

② Send SI telex number to John McCain

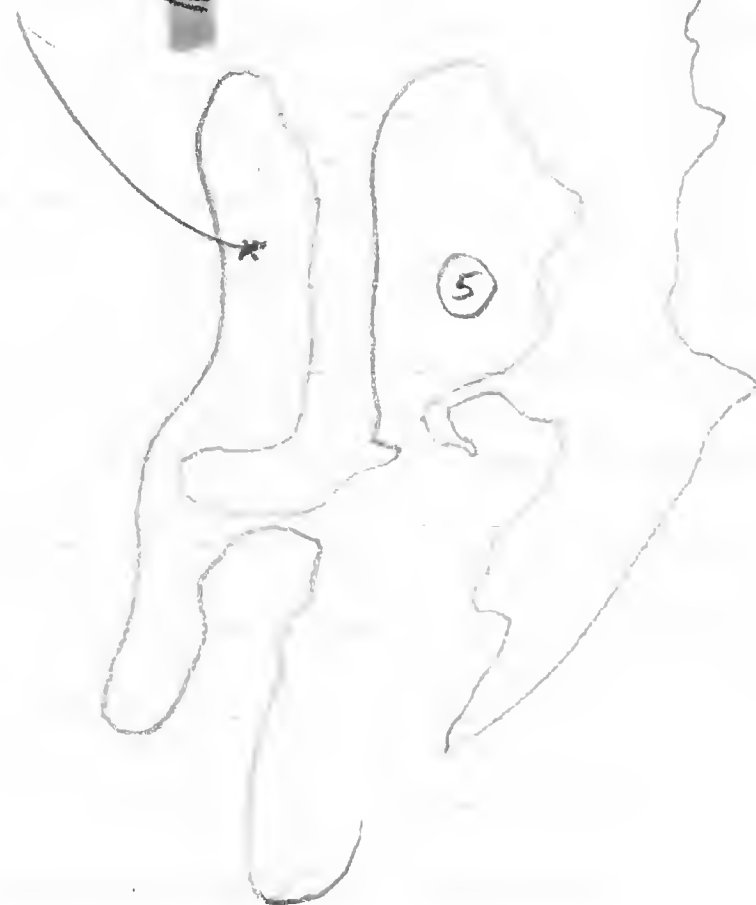
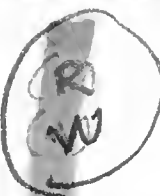
③ Send John info on VIMCO

9 NOVEMBER 1982

**RH 1680**

RAS AT TANAZIB

821109.1

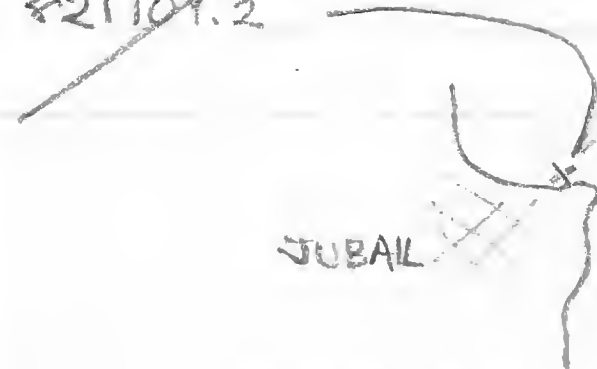


821109.1 shallow embayment (hypersaline) ca 1 m depth  
muddy sand 13-35°F  
55-94%  
35-44‰

Echinoderms Pycnophores

DISCARDED

~~821109.2~~



821109.2 Sand, ca 1-5 m depth, near marina at SE corner.

CLEAN SAND

1. Mail letters for John PAID
2. Mail letters for Mi
3. Mail large envelope CERT RET REC POSTD PAID
4. Mail pkg for Ralph PAID
- Mail pkg for Judy FIRST CLASS PAID
5. Order T-shirts
  - a) Send listed shirts to 7 people direct (see list by John)
  - b) INCLUDE xmas cards "Judy + John McCam" to 7 above PAID

SMALL 2

MED 12

LARGE 17

X-LARGE 3

34

+ 2 (one for Al  
one for RPH) = 36  
Yellow or Brown

rec'd. \$150 in advance

c) send bill for (36) shirts sent to John

d) send all but 7 shirts (above) to John via DHL (see attached)

e) bill John later for balance of shirts + DHL cost

NOTE  
see item 17 \*

6. Send John SJ Telex number
7. Send John VIMCO info
8. Send Burchard copy of BM(NH) NERL report on systematics
9. Send John copy also
10. Give copy of intertidal data to Duane Hope + DHL address
11. Send John "FRANKS LOUV TO GBL"
12. For Mary Rice - Do you want Spunculars?
13. For Al - Ghazlan 26°40'N 150°E
14. Send "How to collect Kurolygodes" to Linda et al / J. Burchard + to Ralph
15. Ref from John SR 820 for hotel, tips, taxi + 152 hrs @ \$1/hr = \$152  
for turn over to res. fund.

16. For Ralph 2 Large  
 1 med  
 2 small  
 (5) PAID

Send to PAID Ralph Hawn  
308 Kihapai St  
Kailua, HI 96734 ✓  
 (808) 261-6013

17. For Mic 9 large }  
 2 med } send to Mic Griben  
Whetstone Rd  
Harwinton CT 06991 ✓  
 (11) PAID  
 (203) 485-1448

\* → + 1 large } incl. w/ shipment to John via DHL  
 (1) PAID  
 (1) PAID by Ralph

TOTAL T-SHIRT ORDER

	JOHN	RALPH	MIC	BOB	AL	BY / M	E / M	
SMALL	2	(2)						4
+ 3 MED	12	1	2				1	16 15
+ 3 LARGE	17	2	10	1		(2)		34 + 3
X-LARGE	3				(1)		2	= 6
PAID FOR	34	5	12	1	1	3	3	

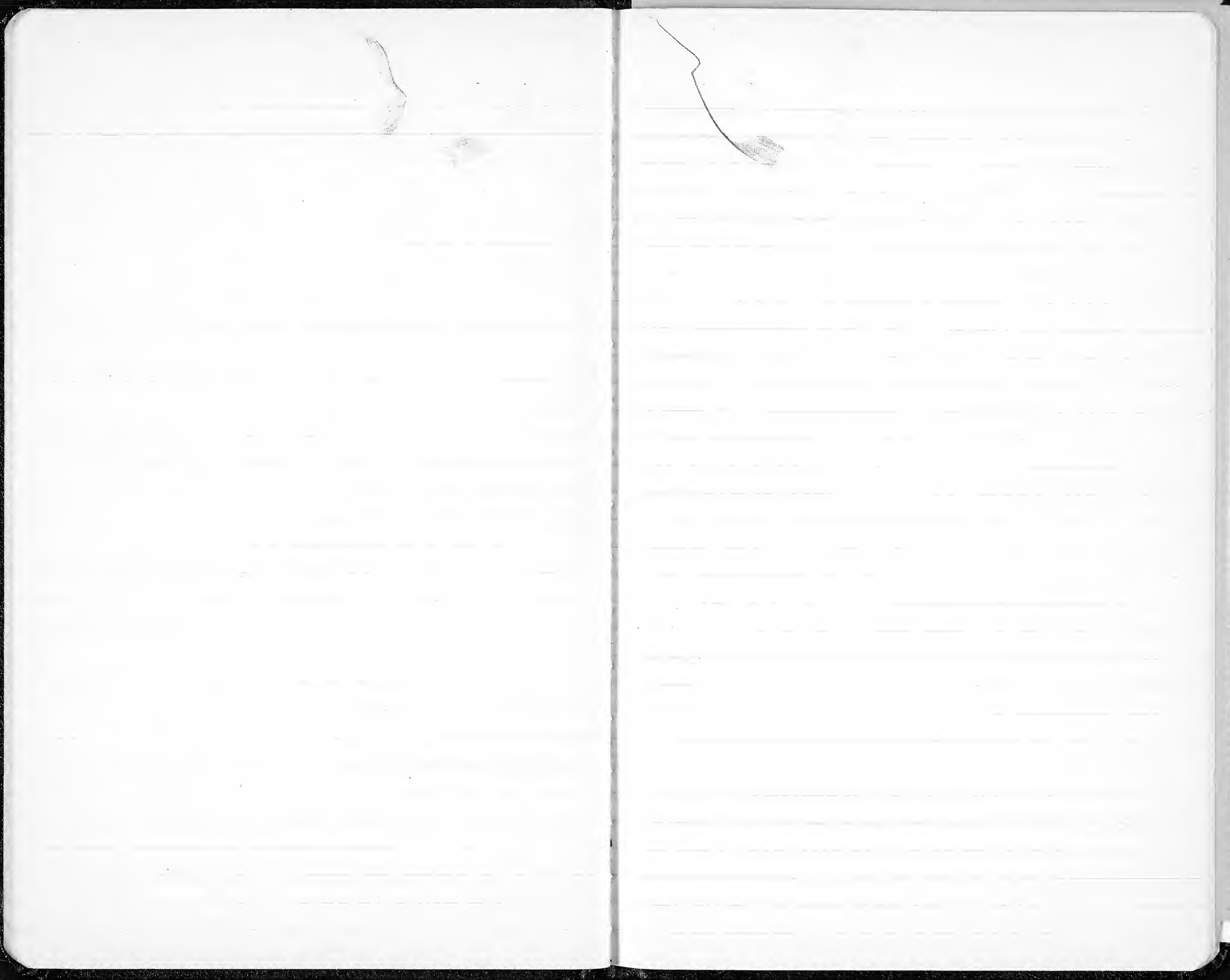
+ 6  
 (40) total  
 \$150 need  
 all one time  
 by Ralph via John  
 paid by Ralph

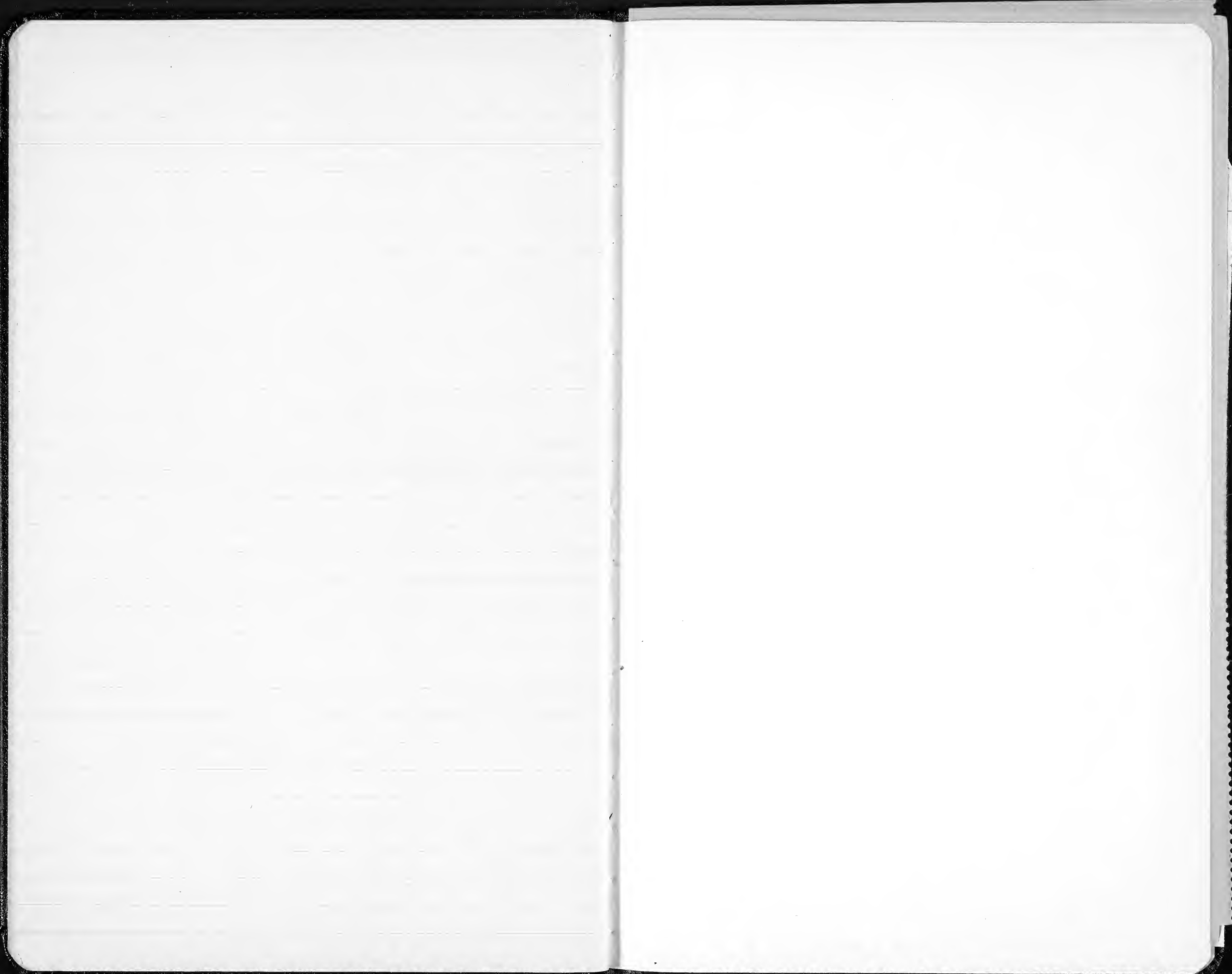
- 18. Make knowledge print for Ralph also membership badge plans
- 19. Make photocopy (for framing) T-shirt design for Ralph John + Mic

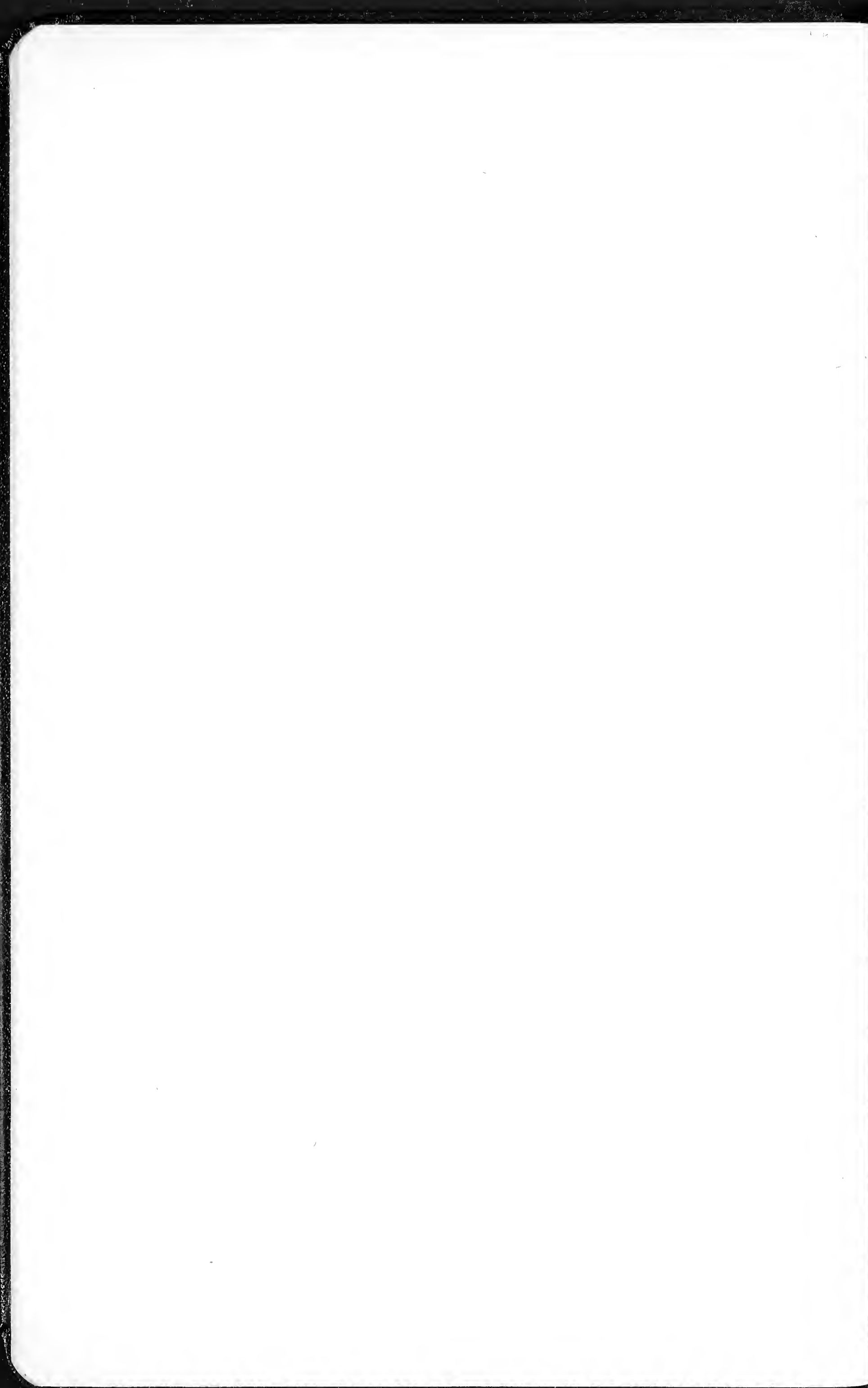
20. Get film (prints) developed (PAID) & send to Mic's address in CT.













Sunset Beach, S of Al Khobar (min)

821029.1 81° F 51‰  
fine sand w/  
surface flocc.  
in 5% formalin 1. M at mid tide  
2 sps *Echinoderus*

26° 9.9' N 50° 10.1' E

Sunset Beach S of Al Khobar

821029.2 81° F 51‰  
intertidal fine sand  
in 5% formalin 0-0.3 M in beach

26° 9.9' N 50° 10.0' E

Sunset Beach S of Al Khobar

821029.3 80° 41‰  
intertidal medium sand  
in 5% formalin 0-0.3 M in beach

26° 9.9' N 50° 10.1' E

EMPLOYEE	SIZE	PERMANENT ADDRESS
STEPHEN L. COLES	LARGE	HAWAIIAN ELECTRIC CO. ENVIRONMENTAL DEPARTMENT P.O. BOX 2750 HONOLULU, HAWAII 96840
THOMAS M. GRIEB	X-LARGE	6438 ASCOT DRIVE OAKLAND, CALIFORNIA 94611
ROBERT M. HANSEN	LARGE	3026 CIELO PL. CARLSBAD, CALIFORNIA 92008
ATSUHIRO KUBO	MEDIUM	2426 E NEW YORK DR. ALTADENA, CALIFORNIA 91001
CLARK LEWIS	LARGE	98-1694C KAAHUMANU ST. PEARL CITY, HAWAII 96782
DAVID PATTERSON	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107
THOMAS R. SOPER	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107

Christmas Cards - from  
 John & Joan McCain

ADD 2 mac med. to you.

