CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC)	DATE (UTC) SEP , 2014	NAV FILE NO.	VIDEO TAPE NO.

USGS STA	SBNMS SITE	SBNMS STA	CONSEC. STATION	DVD NO.	DVD TITLE NO.

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD	NAV GPS

VIDEO ON BOTTOM	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab temp logr invert- grab ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C ; Surface (-1 m) temp deg C ; Difference deg C ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

105684

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA____USGS STATION_____

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site_____, Sta_____

AUK 2014055

STA 4151-4199
4415-4416

NOTE: ALL VIDEO TAPES (8MM) ARE
FROM THE DWN CAMERA.
NO VT FROM FWD CAMERA

TIME EDT = TIME UTC - 4 HRS

Parallel lasers 15 cm apart

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014 (= 23 SEP EDT)	NAV FILE NO. 1	VIDEO TAPE NO. 1
USGS STA 4151	SBNMS SITE S1	SBNMS STA	CONSEC. STATION 1	DVD NO. 1	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD	NAV
17 50 37	1351 10 EDT		2	GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	175110	41	.2119 11.212 min	.4871 70 deg 20.486 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	175635		.2511 42 deg 11.251 min	.4377 70 deg 20.436 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly — too little stuck sample

V TAPE COUNTER FORWARD	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS 00 00 00	END: HH MM SS 00 08 04	sed grab (temp logr) invert- grab (ctd)

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	(y), n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, (n)
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, (n)
	juvenile cod		ocean pout	✓	spg	sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner	✓	red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, (n)
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, (n)
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
✓	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake		NO DATA	ambient light	(y), n

Bottom temp deg C 9.5 ; Surface (-1 m) temp deg C ; Difference deg C : (Onset TidbiT v2)

Photo of sample in grab on deck = # _____ (EDT 135636) Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	1	175126	8548			
2	2	5435	8549			
3					NO SAMPLE	
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 1 USGS STATION 4151

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1

USGS STA 4152	SBNMS SITE S2	SBNMS STA	CONSEC. STATION 2	DVD NO. 1	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD	NAV
181023			2	GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	181109	27	.4109 11.411 min	.2824 18.280 min
SAMPLE TAKEN	181608		.4703 11.470 min	.2245 18.223 min
VIDEO OFF BOTTOM	181626		.4739 11.474 min	.2209 18.220 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 0804	001506	sed grab, temp logr
V TAPE COUNTER DOWN			invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples low	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars ok			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 9.1 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 6.6 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS
EDT 141626
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	3	181151	8550			
2	4	1406	8551			
3					SAMPLE	
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 2 USGS STATION 4152

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S2, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1
USGS STA 4153 / SBNMS SITE 53	SBNMS STA	CONSEC. STATION 3	DVD NO. 1	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS
18				

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 29 14	23	.4567 11.457 min	.4095 16.406 min
SAMPLE TAKEN (six)	18 34 30		.5194 11 .520 min	.3117 16.310 min
VIDEO OFF BOTTOM	18 34 45		.5231 11 .523 min	.3077 16.305 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 15 06	END: HH MM SS 00 23 12	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION			
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y,	n	low
	brachiopod		moon snail		squid	gvl in ripple troughs	y,	n	
	bushy bry/hyd		mussels		yellow encr. spg	small ripples (est pt)	y,	n	
	juvenile cod		ocean pout			sand partial veneer on gravel	y,	n	
	cancer crab		Polymastia spg			gravel pavement	y,	n	
	cod		red encr. spg						
	cunner		red hake						
	dk yellow spg	✓	sand dollars (at)			**sand lance in water column**	y,	n	
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y,	n	
	dogfish		**sand lance juvs**			not seen in video but in sed smpl			
	Eucratea loricata	✓	scallops						
	Filograna implexa	✓	sculpin						
	finger spg		sea stars			~12 indiv			
	flounder	✓	shells & fragments			trawl/dredge marks	y,	n	
	haddock	✓	silver hake			ambient light	y,	n	

Bottom temp deg C 9.3 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 6.5 ; (Onset TidbiT v2)

EDT 142446

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	5	182953	8552			
2	6	3207	8553			
3						
4						
5					sand lance	
6					in sed smpl	
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 3 USGS STATION 4153

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 53, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1

USGS STA 4154	SBNMS SITE 54	SBNMS STA	CONSEC. STATION 4	DVD NO. 1	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS 18 56 24	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 57 04	27	11.737 (.7365) min	14.435 (.4386) min
SAMPLE TAKEN (STA)	19 06 12		11 .825 (.8248) min	14 .255 (.2613) min
VIDEO OFF BOTTOM			, min	~~70.22765~~ , min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 23 12	END: HH MM SS 00 30 23	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS ,	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n (low)
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars d/k			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops			not seen in video	
	Filograna implexa		sculpin			13 s.l., mostly small-med	
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.7 ; Surface (-1 m) temp deg C 16.0 ; Difference deg C 6.3 ; (Onset TidbiT v2)

Photo of sample in grab on deck = # EDT 150616 _____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	7	185724	8554			
2		5950	8555			
3		190149	8556			
4	10	0298	8557		partial video	
5						
6					sand lance	
7					used sample	
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 4 USGS STATION 4154

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54 , Sta _____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1

USGS STA 4155	SBNMS SITE 55	SBNMS STA	CONSEC. STATION 5	DVD NO. 1	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	19 19 42	34	.8683 11.868	.4729 12.470
SAMPLE TAKEN (STA)	19 24 51		.9131 11.913	.3797 12.377
VIDEO OFF BOTTOM				

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 30 23	END: HH MM SS 00 38 18	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n (?)
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
✓	cod		red encr. spg				
	cunner	✓	red hake by scallop				
	dk yellow spg	✓	sand dollars up			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			7 Sl.; Sml to 1 g	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.0 ; Surface (-1 m) temp deg C 15.6 ; Difference deg C 5.6 ; (Onset TidbiT v2)

Photo of sample in grab on deck = # EDT 152446 Prelim. visual texture from VIDEO or SAMPLE = cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	11	191959	8558			
2	12	2215	8559			
3						
4						
5						(no S.l. in video,
6						but in sed
7						Smpl
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 5 USGS STATION 4155

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 55, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1

USGS STA 4156	SBNMS SITE 56	SBNMS STA	CONSEC. STATION 6	DVD NO. 1	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	19 38 02	39	.9541 11.954 min	.4208 10.417 min
SAMPLE TAKEN	19 43 20		11.983 min	10.298 min
VIDEO OFF BOTTOM			.9831 min	.3006 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 38 18	END: HH MM SS 00 47 19	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish	✓	**sand lance juvs**				
	Eucratea loricata	✓	scallops			2 sl, med.	
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.5 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 6.3 ; (Onset TidbiT v2)

Photo of sample in grab on deck = # EDT 154316 Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13	193827	8560			
2		4032	8561			
3						
4						
5						
6						
7						
8						
9						
10						

sl on sed smpl not on video

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 6 USGS STATION 4156

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 56 , Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 1
USGS STA 4157	SBNMS SITE 57	SBNMS STA	CONSEC. STATION 7	DVD NO. 1	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 6	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	19 54 12	42	.1608 12.161 min	.4591 08.45 min
SAMPLE TAKEN (STA)	19 59 19		12 .191 min	08.312 min
VIDEO OFF BOTTOM			.1914 min	.3151 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 47 19	END: HH MM SS 00 55 18	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples v. faint	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa	✓	sculpin				
	finger spg		sea stars			✓ bottom shell	
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.1 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 6.7 ; (Onset TidbiT v2)

Photo of sample in grab on deck = # 15596 Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	15	195435	8562			
2	16	5712	8563			
3						
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 7 USGS STATION 4157

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 57, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2
USGS STA 4158	SBNMS SITE 58	SBNMS STA	CONSEC. STATION 8	DVD NO. 2	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	201127	42	11.150 .1502 min	08.236 .2397 min
SAMPLE TAKEN (STA)	~~UTC HH MM SS~~ 201629	DPH, m	Lat N 42 deg 11.175 min	Lon W 70 deg 08.120 min
VIDEO OFF BOTTOM	UTC HH MM SS	DPH, m	Lat N 42 deg .1752 min	Lon W 70 deg .1230 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 00 00	00 07 56	sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops			4 Sml-med	
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.0 (1616 26) ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 6.8 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	17	201141	8564			
2	18	1352	8565			
3						
4						
5						S.L. in sed smpl
6						not in video
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 8 USGS STATION 4158

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 58, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2
USGS STA 4159	SBNMS SITE 59	SBNMS STA	CONSEC. STATION 9	DVD NO. 2	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	20 30 41	39	.0167 11.016	.3167 10.314
SAMPLE TAKEN (STA)	20 35 58		11.049	10.208
VIDEO OFF BOTTOM			.0496	.2107

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 07 56	END: HH MM SS 00 16 21	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

							SEABED DESCRIPTION	
	att epifauna		**herring eggs**		skate			
	Boltenia tunic.		lobster		Suberites spg		storm ripples	y, n
	brachiopod		moon snail		squid		gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg		small ripples	y, n
	juvenile cod		ocean pout				sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg				gravel pavement	y, n
	cod		red encr. spg					
	cunner		red hake					
	dk yellow spg	✓	sand dollars				**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**				**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				1 lg	
	Eucratea loricata	✓	scallops					
	Filograna implexa		sculpin					
	finger spg		sea stars					
✓	flounder	✓	shells & fragments				trawl/dredge marks	y, n
	haddock	✓	silver hake				ambient light	y, n

Bottom temp deg C 9.1 ; Surface (-1 m) temp deg C 15.3 ; Difference deg C 6.2 ; (Onset TidbiT v2)

EDT 1635 56

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	19	20 31 01	8566			
2	20	33 10	8567			
3					1 sl on sed, sample not sorted	
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 9 USGS STATION 4159

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 59, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2
USGS STA 4160	SBNMS SITE 510	SBNMS STA	CONSEC. STATION 10	DVD NO. 2	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	20 50 01	35	.8776 10.877	2931 12.290
STA SAMPLE TAKEN	20 55 58		10.933	12.188
VIDEO OFF BOTTOM			.9330	.1905

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 1621	END: HH MM SS 00 2526	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars all			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	? y, n
	dogfish		**sand lance juvs**			on video	
	Eucratea loricata	✓	scallops			~205400 hrs	
	Filograna implexa		sculpin			3 small inches	
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 8.7 ; Surface (-1 m) temp deg C 15.5 ; Difference deg C 6.8 ; (Onset TidbiT v2)

EDT Photo of sample in grab on deck = # 165556 Prelim. visual texture from VIDEO or SAMPLE = cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	21	20 50 20	8568			
2	22	5240	8569			
3						
4						
5					sd on sed sample	
6					not in video	
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 10 USGS STATION 4160

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 510, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2
USGS STA 4161 / SBNMS SITE S11	SBNMS STA	CONSEC. STATION 11	DVD NO. 2	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	21 1101	26	.6981 10.698 min	.3671 14.364 min
SAMPLE TAKEN	21 16 23		10.755 min	14.292 min
VIDEO OFF BOTTOM			.7549 min	.2939 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	002526	00 32 40	sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN			

						SEABED DESCRIPTION	
	att epifauna		herring eggs		skate		
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout		dogfish	sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg			brun shell; drdg/trl; smooth sealed	
	cunner		red hake			faint ind. of storm rips,	
	dk yellow spg	✓	sand dollars			sand lance in water column	y, n
	Didemnum cols		sand lance adults			sand lance in substrate	y, n
	dogfish		sand lance juvs				
	Eucratea loricata	✓	scallops			s.l.? 211558 (?)	
	Filograna implexa		sculpin			11 sl in red, sml	
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.2 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 5.5 ; (Onset TidbiT v2)

EDT

Photo of sample in grab on deck = # 171616 Prelim. visual texture from VIDEO or SAMPLE = cgs
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	23	211140	8570			
2	24	1346	8571			
3						
4						
5					sl in red, smpl	
6					not in video	
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 11 USGS STATION 4161

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S11, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2

USGS STA 4162	SBNMS SITE S12	SBNMS STA	CONSEC. STATION 12	DVD NO. 2	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	213755	23	42 deg 10.599 min (.5987)	70 deg 16.184 min (.1850)
SAMPLE TAKEN (STA)	213922		42 deg 10.617 min	70 deg 16.173 min
VIDEO OFF BOTTOM			42 deg .6170 min	70 deg .1738 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 32 40	END: HH MM SS 00 35 47	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg			shell frgs; faint storm ripples	
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			12 med indiv	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
✓	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 11.6 ; Surface (-1 m) temp deg C 15.9 ; Difference deg C 4.3 ; (Onset TidbiT v2)

Photo of sample in grab on deck = # 173916 Prelim. visual texture from VIDEO or SAMPLE = med-cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	25	213809	8572			
2						
3						
4						
5						SP in sed smpl
6						not in video
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 12 USGS STATION 4162

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S12, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2
USGS STA 4163	SBNMS SITE S13	SBNMS STA	CONSEC. STATION 13	DVD NO. 2	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	215132	22	10.364 min (.3644)	18.376 min (.3765)
SAMPLE TAKEN	215640		10.416 min	18.380 min
VIDEO OFF BOTTOM			.4163 min	.3807 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 003547	END: HH MM SS 004243	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg			Shellfgs, shells, tild/dudg, faint storm rips	?
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			" index kg, sml	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 11.6 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 4.2 ; (Onset TidbiT v2)

EDT

Photo of sample in grab on deck = # 175636 Prelim. visual texture from VIDEO or SAMPLE = cgS
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	26	215147	8573			
2		5400	8574			
3						
4						
5						
6						
7						
8						
9						
10						

Sl in red smpl
~~not in video~~

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 13 USGS STATION 4163

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S13, Sta

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 2

USGS STA 4164	SBNMS SITE S14	SBNMS STA	CONSEC. STATION 14	DVD NO. 2	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	22 09 10	28	10.234 (.2342) min	20.284 (.2848) min
SAMPLE TAKEN (STA)	22 14 46		10.303 min	20.262 min
VIDEO OFF BOTTOM			.3034 min	.2639 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 42 43	END: HH MM SS 00 53 02	SAMPLE TYPES: sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

	att epifauna		**herring eggs**	✓	skate 1	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
✓	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			2 indiv	
	Eucratea loricata	✓	scallops			sml to med	
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 10.1 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 5.6 ; (Onset TidbiT v2)

EDT 18:14:46

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	28	221034	8575			
2						
3						
4						
5						
6						
7						
8						
9						
10						

Sl on sed, smpl also on video

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 14 USGS STATION 4164

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S14, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3

USGS STA 4165	SBNMS SITE S1	SBNMS STA	CONSEC. STATION 15	DVD NO. 3	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 0855	39	11.234 (.2337) min	20.422 (.4230) min
SAMPLE TAKEN	23 14 17		11.292 min	20.399 min
VIDEO OFF BOTTOM	~~UTC HH MM SS~~		.2913 min	.3998 min

no smpl STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly — baddrop

V TAPE COUNTER FORWARD	START: HH MM SS 00 00 00	END: HH MM SS 00 09 54	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab (temp logr) invert- grab (ctd)

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	low
	Boltenia tunic.		lobster		Suberites spg	storm ripples	(y), n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, (n)
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, (n)
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops			no smpl.	
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 8.9 ; Surface (-1 m) temp deg C 15.5 ; Difference deg C 6.6 ; (Onset TidbiT v2)

EDT 191406

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = no smpl
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	1	230916	8577			
2						
3						
4						
5					NO SAMPLE	
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 15 USGS STATION 4165

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S1 , Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3

USGS STA 4166	SBNMS SITE 52	SBNMS STA	CONSEC. STATION 16	DVD NO. 3	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	232646	26	11.398 (.3942) min	18.273 (.3748) min
SAMPLE TAKEN (STA)	233149		11.499 min	18.231 min
VIDEO OFF BOTTOM			.4480 min	.2334 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 09 54	END: HH MM SS 001928	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION low	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars alv			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 10.1 ; Surface (-1 m) temp deg C 15.4 ; Difference deg C 5.3 ; (Onset TidbiT v2)

EDT 193136

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = gS
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	2	232734	8578			
2						
3						
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 16 USGS STATION 4166

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 52, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 266	DATE (UTC) SEP 23, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3

USGS STA 4167	SBNMS SITE 53	SBNMS STA 17	CONSEC. STATION	DVD NO. 3	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	234323	23	11.458 .4579 min	16.432 .4327 min
SAMPLE TAKEN	~~UTC HH MM SS~~ 234827	DPH, m	Lat N 42 deg 11.506 min	Lon W 70 deg 16.423 min
VIDEO OFF BOTTOM	~~UTC HH MM SS~~	DPH, m	Lat N 42 deg .5062 min	Lon W 70 deg .4235 min

STA

pre-tripped —; no smpl attempted —; jaws partly open ✓; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 001928	END: HH MM SS 002831	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab (temp logr) invert- grab (ctd)

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION (cgs)		
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y,	n
	brachiopod		moon snail		squid	gvl in ripple troughs	y,	n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y,	n
	juvenile cod		ocean pout		dogfish	sand partial veneer on gravel	y,	n
✓	cancer crab		Polymastia spg			gravel pavement	y,	n
	cod		red encr. spg					
	cunner		red hake					
	dk yellow spg	✓	sand dollars ab			**sand lance in water column**	y,	n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y,	n
	dogfish		**sand lance juvs**					
	Eucratea loricata		scallops					
	Filograna implexa		sculpin					
	finger spg		sea stars					
	flounder	✓	shells & fragments			trawl/dredge marks	y,	n
	haddock		silver hake			ambient light	y,	n

Bottom temp deg C 10.1 ; Surface (-1 m) temp deg C 15.1 ; Difference deg C 5 ; (Onset TidbiT v2)

EDT 194816

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgs
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	3	234351	8579			
2						
3					NO SAMPLE	
4					rock in jaws	
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 17 USGS STATION 4167

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 53, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3

USGS STA 4168	SBNMS SITE 54	SBNMS STA	CONSEC. STATION 18	DVD NO. 3	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 02 58	27	11.630 min	14.422 min
SAMPLE TAKEN	00 07 54		11.645 min	14.392 min
VIDEO OFF BOTTOM			.6457 min	.3824 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 26 31	END: HH MM SS 00 35 58	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout		Reg fish	sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops			sl on video abundant	
	Filograna implexa		sculpin			sl on red	
	finger spg		sea stars			3 l med	
✓	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.0 ; Surface (-1 m) temp deg C 14.7 ; Difference deg C 4.7 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = Cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	4	000322	8580			
2						
3						
4						
5					sl on red and on video	Smpl
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 18 USGS STATION 4168

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3
USGS STA 4169	SBNMS SITE 55	SBNMS STA	CONSEC. STATION 19	DVD NO. 3	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	00 2026	34	11.785 .7856	12.544 .5443
SAMPLE TAKEN (STA)	00 25 28		11.803	12.560
VIDEO OFF BOTTOM			.8043	.5599

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 3558	00 4408	sed grab, temp logr
V TAPE COUNTER DOWN			invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples (hw)	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout		dogfish	sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner	✓	red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			4 sml indiv	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 9.5 ; Surface (-1 m) temp deg C 15.3 ; Difference deg C 5.8 ; (Onset TidbiT v2)

EDT 202516

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	5	002120	8581			
2						
3						
4					all in Sed smpl	
5					and in	
6					video	
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 19 USGS STATION 4169

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 55, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3
USGS STA 4170 / SBNMS SITE 56	SBNMS STA	CONSEC. STATION 20	DVD NO. 3	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

VIDEO ON BOTTOM	UTC HH MM SS 004105	DPH, m 40	Lat N 42 deg 11.985 (.9859) min	Lon W 70 deg 10.483 (.4837) min
SAMPLE TAKEN	UTC ~~HH MM SS~~ 004615	DPH, m	Lat N 42 deg 11.965 min	Lon W 70 deg 10.465 min
VIDEO OFF BOTTOM	UTC ~~HH MM SS~~	DPH, m	Lat N 42 deg .9656 min	Lon W 70 deg .4655 min

NO SPL STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 44 08	END: HH MM SS 00 53 14	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			SL in video	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 204606

Bottom temp deg C 9.2 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 6.6 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	6	004129	8582			
2						
3						
4					NO SAMPLE	
5						
6					SL in video	
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 20 USGS STATION 4170

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 56, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 3
USGS STA 4171	SBNMS SITE 57	SBNMS STA	CONSEC. STATION 21	DVD NO. 3	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 6	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	010326	43	12.160 (.1605) min	08.480 (.4817) min
SAMPLE TAKEN	010815		12.163 min	08.470 min
VIDEO OFF BOTTOM			.1631 min	.4707 min

NO SMPL STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 53 14	END: HH MM SS 00 59 45	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd ✓

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars		✓	broken shell	
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 8.2 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 7.6 ; (Onset TidbiT v2)

EDT 210806

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	7	010347	8583			
2						
3						
4						NO SMPL
5						
6						NO CTD
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 21 USGS STATION 4171

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 57, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 4

USGS STA 4172	SBNMS SITE 58	SBNMS STA	CONSEC. STATION 22	DVD NO. 4	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	012050	43	11.133 (.1329) min	08.275 (.2754) min
SAMPLE TAKEN (STA)	012540		11.132 min	08.277 min
VIDEO OFF BOTTOM			.1329 min	.2770 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 00 00	END: HH MM SS 00 08 33	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			no sl in video	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 212536

Bottom temp deg C 8.6 ; Surface (-1 m) temp deg C 15.8 ; Difference deg C 7.2 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = Cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	8	012209	8584			
2						
3						no sl in vid & smpl
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 22 USGS STATION 4172

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 58, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 , 2014	NAV FILE NO. 1	VIDEO TAPE NO. 4
USGS STA 4173	SBNMS SITE 59	SBNMS STA	CONSEC. STATION 23	DVD NO. 4	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	01 42 42	40	.9027 10.902 min	.3865 10.385 min
SAMPLE TAKEN	01 45 18		10.896 min	10.391 min
VIDEO OFF BOTTOM			.8971 min	.3908 min

no smpl

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS
V TAPE COUNTER FORWARD	00 08 33	00 14 55
V TAPE COUNTER DOWN		

SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			sl in video	
	Eucratea loricata		scallops			no smpl	
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 214506

Bottom temp deg C 9.4 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 6.3 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	9	014330	—		no smple	
2	10	4414	—		" "	
3						
4						
5					NO SAMPLE	
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 23 USGS STATION 4173

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 59 , Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 4
USGS STA 4174	SBNMS SITE 510	SBNMS STA	CONSEC. STATION 24	DVD NO. 4	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	020710	36	.8931 10.892	.3385 12.339
SAMPLE TAKEN (STA)	020736		.8921 10.892	.3405 12.341
VIDEO OFF BOTTOM	021215		.8826 10.882	.3592 12.359

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	001455	002316	sed grab, temp logr
V TAPE COUNTER DOWN			invert- grab, ctd

						SEABED DESCRIPTION	
	att epifauna		**herring eggs**		skate	storm ripples	y, n
	Boltenia tunic.		lobster		Suberites spg	gvl in ripple troughs	y, n
	brachiopod		moon snail		squid	small ripples	y, n
	bushy bry/hyd		mussels		yellow encr. spg	sand partial veneer on gravel	y, n
	juvenile cod		ocean pout			gravel pavement	y, n
✓	cancer crab		Polymastia spg				
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			Sl in sed 5 sml to med	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 9.3 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 6.4 ; (Onset TidbiT v2)

EDT 22/12:06

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	11	020810			deck shot	
2					strobe test	
3						
4	12	020814	6588		1st photo after new strobe	
5						
6						Sl in sed smpl
7						not in video
8					Sampled	near start.
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 24 USGS STATION 4174

SBNMS Site 510, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 4
USGS STA 4175	SBNMS SITE S11	SBNMS STA	CONSEC. STATION 25	DVD NO. 4	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	023056	28	10.6882 .688 min	14.261 .2630 min
STA SAMPLE TAKEN	023226		10.6883 .688 min	.2573 14.256 min
VIDEO OFF BOTTOM	023440		10.6866 .686 min	.2540 14.253 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 002316	END: HH MM SS 002941	SAMPLE TYPES: sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

						SEABED DESCRIPTION	
	att epifauna		**herring eggs**		skate		
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			22 med to sml	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 223426

Bottom temp deg C 9.5 ; Surface (-1 m) temp deg C 15.0 ; Difference deg C 5.5 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13	023124	8589			sampled in mud drift
2						
3						
4						
5						3 lm sed smpl
6						and video
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 25 USGS STATION 4175

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S11, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014 (=2350 EDT)	NAV FILE NO. 1	VIDEO TAPE NO. 4
USGS STA 4176 / SBNMS SITE S13	SBNMS STA =296 EDT	CONSEC. STATION 26	DVD NO. 4	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	030047	25	42 deg 10.381 (.3818) min	70 deg 18.232 (.2369) min
SAMPLE TAKEN (STA)	030206		42 deg 10.381 (.3815) min	70 deg 18.207 (.2083) min
VIDEO OFF BOTTOM	030404		42 deg 10.380 (.3801) min	70 deg 18.168 (.1681) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	002941	003742	sed grab, temp logh
V TAPE COUNTER DOWN			invert- grab, ctd

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			35 lg + med	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.7 ; Surface (-1 m) temp deg C 15.4 ; Difference deg C 4.7 ; (Onset TidbiT v2)

EDT 230356

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1		no photo				
2					sampled in mud bottom	
3						
4						
5					sl in sed smpl and video	
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 26 USGS STATION 4176

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 = 24 Sep EDT, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 5
USGS STA 4177	SBNMS SITE N1	SBNMS STA = 27 EDT	CONSEC. STATION 27	DVD NO. 5	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 7	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	17 46 04	34	25.277 (.2776)	26.915 (.9158)
SAMPLE TAKEN	17 48 53		25.289 (.2891)	26.952 (.9522)
VIDEO OFF BOTTOM				

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 00 00	END: HH MM SS 00 17 36	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C X ; Surface (-1 m) temp deg C X ; Difference deg C ; (Onset TidbiT v2)

DO NOT USE EDT 134843 SHORT TIME ON SEABED

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	1	174700	8591			
2						
3						
4					NO SMPLE	
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 27 USGS STATION 4177

SBNMS Site N1, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4178	SBNMS SITE N1	SBNMS STA	CONSEC. STATION 28	DVD NO. 5	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 7	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	18 09 50	34	42 deg 25.281 (.2817) min	70 deg 26.874 (.8740) min
SAMPLE TAKEN (STA)	18 10 08		42 deg 25.282 (.2825) min	70 deg 26.876 (.8760) min
VIDEO OFF BOTTOM	18 13 20		42 deg 25.295 (.2954) min	70 deg 26.907 (.9079) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 17 36	00 23 29	sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN			

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			in video down during drift	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.8 ; Surface (-1 m) temp deg C 15.9 ; Difference deg C 6.1 ; (Onset TidbiT v2)

EDT 141313

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med snd

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	2	181033	8592			
2						
3					NO SL in red smpl	
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 28 USGS STATION 4178

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N1, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 5
USGS STA 4179	SBNMS SITE N3	SBNMS STA	CONSEC. STATION 29	DVD NO. 5	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	183748	34	42 deg 24.675 (.6757) min	70 deg 24.342 (.3411) min
SAMPLE TAKEN (STA)	183805		42 deg 24.677 (.6774) min	70 deg 24.345 (.3446) min
VIDEO OFF BOTTOM	184115		42 deg 24.709 (.7099) min	70 deg 24.394 (.3944) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	002329	002926	sed grab, temp logr
V TAPE COUNTER DOWN			invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars few			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
✓	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 144103

Bottom temp deg C 10.2 ; Surface (-1 m) temp deg C 15.9 ; Difference deg C 5.7 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	3	184013	8593			
2						
3						
4						No SL in Seed Smpl
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 29 USGS STATION 4179

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N3, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 5

USGS STA 4180	SBNMS SITE N4	SBNMS STA	CONSEC. STATION 30	DVD NO. 5	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 58 04	32	24.183 .1832 min	23.114 .1131 min
SAMPLE TAKEN	[illegible]		[illegible] min	[illegible] min
VIDEO OFF BOTTOM	19 04 11		24.226 .2262 min	23.188 .1871 min

STH

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 29 26	END: HH MM SS 00 38 57	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

						SEABED DESCRIPTION	
	att epifauna		herring eggs		skate		
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod	✓	ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner	✓	red hake				
	dk yellow spg		sand dollars			sand lance in water column	y, n
	Didemnum cols		sand lance adults			sand lance in substrate	? y, n
	dogfish		sand lance juvs			? in video down can check	
	Eucratea loricata	✓	scallops ab sml	Swimming			
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.4 ; Surface (-1 m) temp deg C 15.9 ; Difference deg C 5.5 ; (Onset TidbiT v2)

EDT 150403

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	4	185836	8594			
2						
3						
4						NO SMPL
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 30 USGS STATION 4180

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N4, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 5
USGS STA 4181	SBNMS SITE N5	SBNMS STA	CONSEC. STATION 31	DVD NO. 5	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

STA SMPL AT START

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	19 18 19	33	23.784 (.7841)	21.968 (.9674)
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 19 22 57	DPH, m	Lat N 42 deg 23.812 (.8125) min	Lon W 70 deg 22.012 (.0113) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 38 57	END: HH MM SS 00 47 15
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS

SAMPLE TYPES: (sed grab) (temp logr) invert- grab (ctd)

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	(y), n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, (n)
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg		coll algae	gravel pavement	y, n
	cod		red encr. spg		spg	cobble, lg	
	cunner	✓	red hake			scattered	
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, (n)
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, (n)
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops small juv				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 10.1 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 5.6 ; (Onset TidbiT v2)

EDT 15 22 43

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	5	192026	8595			
2						
3						no sl in
4						seed Smpl
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 31 USGS STATION 4181

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N5, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 1	VIDEO TAPE NO. 5
USGS STA 4182 / SBNMS SITE N6	SBNMS STA	CONSEC. STATION 32	DVD NO. 5	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

STA SMPL on gravel

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	19 40 15	33	.2761 23.276	.6754 20.676
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 1944 15	DPH, m	.2959 .295	.7090 .709

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 47 15	END: HH MM SS 00 56 33	SAMPLE TYPES: sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner	?	red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops sm				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 154403

Bottom temp deg C 10.6 ; Surface (-1 m) temp deg C 15.9 ; Difference deg C 5.3 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = gvlly cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	6		—		no photo	
2						
3						
4						no sl on red smpl
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 32 USGS STATION 4182

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N6, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 , 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6
USGS STA 4183	SBNMS SITE C1	SBNMS STA	CONSEC. STATION 33	DVD NO. 6	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

STA SMPL AT START

VIDEO ON BOTTOM	UTC HH MM SS 20 20 55	DPH, m 33	Lat N 42 deg 18, 577 .5779 min	Lon W 70 deg 17, 063 .0642 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 20 24 54	DPH, m	Lat N 42 deg 18, 582 .5826 min	Lon W 70 deg 17 .029 .0305 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 00 00	END: HH MM SS 00 67 06	SAMPLE TYPES: sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner	?	red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 162443

Bottom temp deg C 8.6 ; Surface (-1 m) temp deg C 15.2 ; Difference deg C 6.6 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = gravelly sand

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	6	202149	8596			
2						no sl in seed smpl
3						
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 33 USGS STATION 4183

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C1, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6

USGS STA 4184	SBNMS SITE C2	SBNMS STA	CONSEC. STATION 34	DVD NO. 6	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

STA SMPL AT START

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	20 41 23	32	17.638 .6383 min	16.808 .8083 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	20 44 55		17.648 .6489 min	16.810 .8103 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 07 06	END: HH MM SS 00 13 47	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	? y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg			lg sl&v in sand	
✓	cunner	✓	red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 164443

Bottom temp deg C 8.7 ; Surface (-1 m) temp deg C 14.9 ; Difference deg C 5.8 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med snd

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	7	204400	8597			
2						
3						
4						no sl m
5						med smpl
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 34 USGS STATION 4184

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C2, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6
USGS STA 4185	SBNMS SITE C3	SBNMS STA	CONSEC. STATION 35	DVD NO. 6	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

NO SMPL AT START

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	20 59 39	29	16.680 .6807 min	16.757 .7581 min
SAMPLE TAKEN				
VIDEO OFF BOTTOM	21 03 10		16.680 .6806 min	16.763 .7627 min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 13 47	END: HH MM SS 00 20 38	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab temp logr invert- grab ctd

						SEABED DESCRIPTION	
	att epifauna		**herring eggs**		skate		
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 170303

Bottom temp deg C 8.9 ; Surface (-1 m) temp deg C 14.9 ; Difference deg C 6.0 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	8	210129	8598			
2						
3						NO SMPL
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 35 USGS STATION 4185

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C3, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 , 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6

USGS STA 4186	SBNMS SITE C4	SBNMS STA	CONSEC. STATION 36	DVD NO. 6	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	21 15 16	28	42 deg 15.728 (.7288) min	70 deg 16.592 (.5930) min
SAMPLE TAKEN (STA)	~~UTC HH MM SS~~ 21 15 56		42 deg 15.726 (.7273) min	70 deg 16.594 (.5945) min
VIDEO OFF BOTTOM	21 19 15		42 deg .715 (.7159) min	70 deg .604 (.6043) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 20 38	00 26 57	sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN			

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			(smpl in not smpl)	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.0 ; Surface (-1 m) temp deg C 14.9 ; Difference deg C 5.9 ; (Onset TidbiT v2)

EDT 171903

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1				no	photo	
2						
3						
4						
5						(smpl sl m
6						sed smpl
7						smpl
8						not m
9						video
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 36 USGS STATION 4186

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C4, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 , 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6

USGS STA 4187	SBNMS SITE C5	SBNMS STA	CONSEC. STATION 37	DVD NO. 6	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

STA:

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	21 4103	27	14.634 .6345 min	66.220 .2197 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 214310	DPH, m	Lat N 42 deg 14 .6297 .629 min	Lon W 70 deg 66.229 .2298 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 26 57	END: HH MM SS 00 31 35	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			1 sml sl in sed	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 174303

Bottom temp deg C 7.7 ; Surface (-1 m) temp deg C 14.8 ; Difference deg C 5.1 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cg S
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	9	21 4149	8599			
2						
3						
4						
5						1 sml sl in sed sample not in video
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 37 USGS STATION 4187

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C5, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6

USGS STA 4188	SBNMS SITE C6	SBNMS STA	CONSEC. STATION 38	DVD NO. 6	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	215657	25	42 deg 13.688 (.6886) min	70 deg 16.354 (.3531) min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 220058	DPH, m	Lat N 42 deg 13.675 (.6747) min	Lon W 70 deg 16.397 (.3983) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 003135	END: HH MM SS 003742	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			5 med indiv in well smpl	
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.0 ; Surface (-1 m) temp deg C 14.9 ; Difference deg C 5.9 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	10	215807	8600			
2						
3						
4						
5						sl in
6						seed smpl,
7						not in
8						video
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 38 USGS STATION 4188

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C6, Sta_____

STA

EDT 180043

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6

USGS STA 4189	SBNMS SITE C7	SBNMS STA	CONSEC. STATION 39	DVD NO. 6	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	225220	23	42 deg 12.729 (.7298) min	70 deg 16.080 (.0786) min
SAMPLE TAKEN			42 deg min	70 deg min
VIDEO OFF BOTTOM	225538		42 deg 12.742 (.7440) min	70 deg 16.142 (.1474) min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 003742	END: HH MM SS 004339	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.2 ; Surface (-1 m) temp deg C 15.2 ; Difference deg C 5.2 ; (Onset TidbiT v2)

EDT 185523

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med sand

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	11	225513	8602			
2						
3						
4						
5						no sl in
6						red smpl
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 39 USGS STATION 4189

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C7, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24 , 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6
USGS STA 4190	SBNMS SITE C8	SBNMS STA	CONSEC. STATION 40	DVD NO. 6	DVD TITLE NO. 8

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

STA VIDEO ON BOTTOM	UTC HH MM SS 23 0841	DPH, m 26	Lat N 42 deg 12 .448 (.4482) min	Lon W 70 deg 17 .449 (.4469) min
SAMPLE TAKEN	~~UTC HH MM SS~~	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 2311 40	DPH, m	Lat N 42 deg 12 .459 (.4593) min	Lon W 70 deg 17 .509 (.5071) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 004339	END: HH MM SS 004949	SAMPLE TYPES: sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
✓	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 10.1 ; Surface (-1 m) temp deg C 16.1 ; Difference deg C 6.0 ; (Onset TidbiT v2)

EDT 191133

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med sand

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	12		no	photo		
2						
3						
4						no sl in
5						med sand
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 40 USGS STATION 4190

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C8 , Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 6
USGS STA 4191	SBNMS SITE C9	SBNMS STA	CONSEC. STATION 41	DVD NO. 6	DVD TITLE NO. 9

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

VIDEO ON BOTTOM	UTC HH MM SS 232546	DPH, m 28	Lat N 42 deg 13.505 (.5054) min	Lon W 70 deg 17.655 (.6525) min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 232858	DPH, m	Lat N 42 deg 13.495 (.4954) min	Lon W 70 deg 17.728 (.7284) min

STA SMPL

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 004949	END: HH MM SS 005735	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars at			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			1 med in sed sample	
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDIT 192843

Bottom temp deg C 9.2 ; Surface (-1 m) temp deg C 15.0 ; Difference deg C 5.8 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cg S

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	12	no photo				
2						
3						
4						sl in red smpl
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 41 USGS STATION 4191

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C9, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 267	DATE (UTC) SEP 24, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4192	SBNMS SITE C10	SBNMS STA	CONSEC. STATION 42	DVD NO. 7	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	234314	31	14.520 (.5210) min	17.880 (.8775) min
SAMPLE TAKEN	~~UTC HH MM SS~~	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 234630	DPH, m	Lat N 42 deg 14.504 (.5046) min	Lon W 70 deg 17.957 (.9560) min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 00 00	END: HH MM SS 00 07 17	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab (temp logr) invert- grab (ctd)

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	(y), n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, (n)
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, (n)
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 194623

Bottom temp deg C 9.2 ; Surface (-1 m) temp deg C 15.0 ; Difference deg C 5.8 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	12	no photo				
2						
3						
4						No Smpl
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 42 USGS STATION 4192

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7
USGS STA 4193 / SBNMS SITE C11	SBNMS STA 2297 EDT	CONSEC. STATION 43	DVD NO. 7	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	000224	33	15.580 (.5811) min	18.016 (.0143) min
SAMPLE TAKEN			min	min
VIDEO OFF BOTTOM	000530		15.557 (.5567) min	18.104 (.1045) min

STA Sample

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 000717	END: HH MM SS 001333	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			Indiv in video	
	Eucratea loricata	✓	scallops			drop camera	
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C 9.1 ; Surface (-1 m) temp deg C 15.3 ; Difference deg C 6.2 ; (Onset TidbiT v2)

EDT 200523

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cg S
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	12	000507	8003			
2						
3						
4						
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 43 USGS STATION 4193

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7
USGS STA 4194	SBNMS SITE C12	SBNMS STA	CONSEC. STATION 44	DVD NO. 7	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	002017	34	16.473 (.4740) min	18.203 (.2015) min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
STA VIDEO OFF BOTTOM	002422		16.463 (.4634) min	18.296 (.2948) min

pre-tripped —; no ~~smpl attempted~~ —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 001333	END: HH MM SS 002104	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		spg	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin			trld/drgd	
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 202413

Bottom temp deg C 9.0 ; Surface (-1 m) temp deg C 15.4 ; Difference deg C 6.4 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = gvlly

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1		no photo				
2						
3						
4						NO SMPL
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 44 USGS STATION 4194

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C12, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4195	SBNMS SITE C13	SBNMS STA	CONSEC. STATION 45	DVD NO. 7	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM				
SAMPLE TAKEN (Start STA)	004914	32	17.511 .5110	18.367 .3645
VIDEO OFF BOTTOM	005235		17.523 .5233	18.448 .4489

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 002104	END: HH MM SS 002727	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops				
	Filograna implexa		sculpin			trawled/dredged	
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

EDT 20523

Bottom temp deg C 9.3 ; Surface (-1 m) temp deg C 15.1 ; Difference deg C 5.6 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13		no	photo		
2						
3						
4						no sl in
5						SedSmpl
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 45 USGS STATION 4195

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C13, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4196	SBNMS SITE C14	SBNMS STA	CONSEC. STATION 46	DVD NO. 7	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	010557	30	.4469 18.446 min	.4845 18.489 min
SAMPLE TAKEN	~~UTC HH MM SS~~ 010819	DPH, m	.4410 18.441 min	.5624 18.585 min
VIDEO OFF BOTTOM	010940	DPH, m	.4405 18.440 min	.6007 18.601 min

STA

pre-tripped —; no smpl attempted —; jaws partly open ✓; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	002727	003412	sed grab, temp logr
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	invert- grab, ctd

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg			Scatt Cbls w/ Sand	
	cunner	?	red hake			→ into sand	
	dk yellow spg		sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata		scallops				
	Filograna implexa		sculpin				
	finger spg		sea stars			trwld/dredged	
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 210933

Bottom temp deg C 9.2 ; Surface (-1 m) temp deg C 15.2 ; Difference deg C 6.0 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = gully cgS
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13		no	photo		
2						
3						
4						Sample partly washed
5						
6						
7						no pl in smpl
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 46 USGS STATION 4196

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C14, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4197	SBNMS SITE N9	SBNMS STA	CONSEC. STATION 47	DVD NO. 7	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

NO smpl

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	01 30 13	32	21.480 (.4818) min	19.190 (.1853) min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	01 33 15		21.464 (.4644) min	19.289 (.2904) min

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 34 12	END: HH MM SS 00 41 14	SAMPLE TYPES
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops at smpl				
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 213303

Bottom temp deg C 9.3 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 6.4 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgS

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13		no	photo		
2						
3						
4						NO SMPL cobble in sand
5						
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 47 USGS STATION 4197

SBNMS Site N9, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4198	SBNMS SITE N10	SBNMS STA	CONSEC STATION 48	DVD NO. 7	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	01 4457	31	42 deg 21.983 min .9844	70 deg 20.239 min .2367
SAMPLE TAKEN	01 4535		42 deg 21.977 min .9784	70 deg 20.254 min .2524
VIDEO OFF BOTTOM	01 4758		42 deg 21.959 min .9581	70 deg 20.322 min .3243

STA

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 00 41 14	END: HH MM SS 00 4657	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION low	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops sml				
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

EDT 214743

Bottom temp deg C 9.6 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 6.1 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = cgs
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13	no	photo			
2						
3						
4						nv. sl.
5						m sed
6						smpl
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 48 USGS STATION 4198

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N10, Sta_____

CRUISE: USGS AUK2014055 SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 7

USGS STA 4199	SBNMS SITE N11	SBNMS STA	CONSEC. STATION 49	DVD NO. 7	DVD TITLE NO. 8

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

STA SMPL

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	02 00 00	29	.4765 22.476 min	.4592 21.463 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF BOTTOM	UTC HH MM SS 020345	DPH, m	.4667 Lat N 42 deg 22.466 min	.5749 Lon W 70 deg 21.57 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 004657	END: HH MM SS 005345	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg		"Molgulid"		
	cunner		red hake		in ripple		
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**		troughs	in video 020240	
	Eucratea loricata		scallops		=Bostrichobranchus	1 sml 2 in red smpl	
	Filograna implexa		sculpin			1 mol	
	finger spg		sea stars		pilularis,		
	flounder		shells & fragments		a molgulid	trawl/dredge marks	y, n
	haddock	✓	silver hake		tunicate	ambient light	y, n

EDT 220333

Bottom temp deg C 9.8 ; Surface (-1 m) temp deg C 15.7 ; Difference deg C 5.9 ; (Onset TidbiT v2)

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med snd

DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	13	020137	8604		Bostrichobranchus	
2		0156	8605		pilularis,	
3		0240	8606		a molgulid	
4					tunicate	2 sl in
5						red smpl
6						
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)

SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 49 USGS STATION 4199

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N11, Sta_____

CRUISE: USGS AUK2014055 new no. SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014	NAV FILE NO. 2	VIDEO TAPE NO. 8
USGS STA ~~4200~~ 4415	SBNMS SITE N12	SBNMS STA	CONSEC. STATION 50	DVD NO. 8	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

STA Smpl

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	021657	28	.8905 22.890 min	.6666 22.669 min
SAMPLE TAKEN				
VIDEO OFF BOTTOM	022026		.9028 22.901 min	.7501 22.750 min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

	START: HH MM SS	END: HH MM SS	SAMPLE TYPES
V TAPE COUNTER FORWARD	00 00 00	00 0546	sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN			

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg		dogfish	gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars cw		B.p. tunic	**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**		in troughs	**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**			3 med in red smpl	
	Eucratea loricata		scallops		(a mogulid)		
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 10.4 ; Surface (-1 m) temp deg C 15.6 ; Difference deg C 5.2 ; (Onset TidbiT v2)

EDT 22 2013

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = med Snd
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	16	021940	8607			
2						
3						
4						
5						Sl in
6						red Smpl
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 50 USGS STATION ~~4200~~

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N12, Sta 4415 new no

CRUISE: USGS AUK2014055 new no. SBNMS Sep 2014	JD (UTC) 268	DATE (UTC) SEP 25, 2014 = 2400 EDT	NAV FILE NO. 2	VIDEO TAPE NO. 8
USGS STA 4201 4416	SBNMS SITE N13	SBNMS STA = 297 EDT	CONSEC. STATION 51	DVD NO. 8 / DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Sep 22, 2014 1842 EDT = 2242 UTC	QUAD 8	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	023252	28	23.410 (.4106) min	23.872 (.8691) min
SAMPLE TAKEN			min	min
VIDEO OFF BOTTOM (STA)	023602		23.409 (.4092) min	23.953 (.9525) min

pre-tripped —; no smpl attempted —; jaws partly open —; washout —; refusal —; too gravelly/shelly —

V TAPE COUNTER FORWARD	START: HH MM SS 000546	END: HH MM SS 001301	SAMPLE TYPES: sed grab, temp logr, invert- grab, ctd
V TAPE COUNTER DOWN	START: HH MM SS	END: HH MM SS	

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples	y, n
	brachiopod		moon snail		squid	gvl in ripple troughs	y, n
	bushy bry/hyd		mussels		yellow encr. spg	small ripples	y, n
	juvenile cod		ocean pout			sand partial veneer on gravel	y, n
	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg				
	cunner		red hake				
	dk yellow spg	✓	sand dollars			**sand lance in water column**	y, n
	Didemnum cols		**sand lance adults**			**sand lance in substrate**	y, n
	dogfish		**sand lance juvs**				
	Eucratea loricata	✓	scallops small only				
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock	✓	silver hake			ambient light	y, n

Bottom temp deg C 10.5 ; Surface (-1 m) temp deg C 15.6 ; Difference deg C 5.1 ; (Onset TidbiT v2)

EDT 223553

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE =
DIGITAL STILL PHOTOS OF SEABED: Canon digital G12 camera, 12 MPixels; jpeg images

No.	Cumul. No.	Time (UTC) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2014055_sta_img #
1	17		no photo			
2						
3						
4						NO SMPL
5						
6						NO GoPro video
7						
8						
9						
10						

HEIGHT OF CAMERA LENS ABOVE SEABED = 30 in (76 cm)
SIZE OF BOTTOM AREA IMAGED AT 30 in ABOVE SEABED = 30 x 20 IN (76 x 51 CM) CONSEC STA 51 USGS STATION 4201

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site N13, Sta 4416 new no.