V.2

AUK 2013044

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC)	DATE (UTC) NOV _____ ,2013	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: Nov 4, 2013 1634 EST = 2034 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: (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 Auk2013044_sta_img #
1						
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____USGS STATION_____

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

STA [redacted] 4100

NOV 15, 2013 SUNSET 1622 local, 2122 UT

Parallel lines 15 cm apart.

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 4

USGS STA 4060	SBNMS SITE 511	SBNMS STA	CONSEC. STATION 41	DVD NO. 4	DVD TITLE NO. 11

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	19 53 13	27	42 deg 10.658 (.6586) min	70 deg 14.235 (.2377) min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg 10.690 min	Lon W 70 deg 14.178 min
VIDEO OFF BOTTOM	UTC HH MM SS 19 56 40	DPH, m	Lat N 42 deg 10.690 (.6903) min	Lon W 70 deg 14.178 (.1804) 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 00 48 02	END: HH MM SS 00 52 13	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 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

1956 LWS

Bottom temp deg C: (Onset TidbiT v2) 10.3 Surface 10.3 S-B=0

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 Auk2013044_sta_img #
1	51	19 53 57				
2		54 36				
3		55 36			NO	SAMPLE
4		56 16				
5	55	56 40				
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 4060

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 511, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 4

USGS STA 4061	SBNMS SITE 512	SBNMS STA	CONSEC. STATION 42	DVD NO. 4	DVD TITLE NO. 12

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	20 12 59	24	.5926 10.592 min	.2265 16.226 min
SAMPLE TAKEN	20 16 17		10.623 min	16.194 min
VIDEO OFF BOTTOM			.6227 min	.1956 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 00 52 13	END: HH MM SS 00 56 10	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

2016 MS

Bottom temp deg C: (Onset TidbiT v2) 10.5 surface 10.3 S-B = -0.2

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 Auk2013044_sta_img #
1	56	20 13 15				
2		1351			NO SAMPLE	
3		1428				
4		1506				
5	60	1539				
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 4061

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4062	SBNMS SITE 513	SBNMS STA	CONSEC. STATION 43	DVD NO. 5	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ 1634 ~~EST~~ = 2034 UTC	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	20 31 38	23	.4112 10.412 min	.3190 18.319 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg .3034 min
STA VIDEO OFF BOTTOM	UTC HH MM SS 20 35 30	DPH, m	Lat N 42 deg .4566 10.456 min	Lon W 70 deg 18.303 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 00 00 00	END: HH MM SS 00 04 30	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

2035 WS

Bottom temp deg C: (Onset TidbiT v2) 10.4 Surface 10.4 5-0=0

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 Auk2013044_sta_img #
1	61	203221				
2		3241				
3		3332			NO SAMPLE	
4		3408				
5		3451				
6	66	3520				
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 4062

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5
USGS STA 4063 / SBNMS SITE S14	SBNMS STA	CONSEC. STATION 44	DVD NO. 5	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	20 53 11	34	.1048 10.104 min	20.548 .5484 min
SAMPLE TAKEN	~~20 53 33~~		10.105 min	20.548 min
VIDEO OFF BOTTOM	20 57 13		.1428 10.143 min	20.536 .5370 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 00 04 30	END: HH MM SS 00 09 38	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 (lw			**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			(flounder on sea bed)	
	Filograna implexa	✓	sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

2057 lws

Bottom temp deg C: (Onset TidbiT v2) 10.3 Surface 10.5 S-B = 0.2

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 Auk2013044_sta_img #
1	6	20 54 11				
2						
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 44 USGS STATION 4063

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4064	SBNMS SITE 51	SBNMS STA	CONSEC. STATION 45	DVD NO. 5	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	220704	38	11.190 (.1701) min	20.319 (.3196) min
SAMPLE TAKEN	220747		11.179 min	20.314 min
VIDEO OFF BOTTOM	221017		11.198 (.1984) min	20.303 (.3037) 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 00 0938	END: HH MM SS 00 1358	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples (md)	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

2210 WS

Bottom temp deg C: (Onset TidbiT v2) 10.2 Surface 10.4 S-B = 0.2

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 Auk2013044_sta_img #
1	67	220721				
2		0818				
3	69	0950			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 45 USGS STATION 4064

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4065	SBNMS SITE 52	SBNMS STA	CONSEC. STATION 46	DVD NO. 5	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	22 24 17	27	.4223 11.422 min	.2907 18.299 min
STA SAMPLE TAKEN	22 24 48		.4280 11.429 min	.2917 18.291 min
VIDEO OFF BOTTOM	22 27 37		.4562 11.456 min	.3064 18.306 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 00 13 58	END: HH MM SS 00 18 22	sed grab, temp logr, invert- grab, ctd

								SEABED DESCRIPTION	
	att epifauna		**herring eggs**		skate			storm ripples rnd	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	?	herring on bott				
	cod		red encr. spg						
	cunner		red hake						
	dk yellow spg	✓	sand dollars a f					**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					unident fish (herring) at	
	Filograna implexa		sculpin					222350 and 222354 hrs;	
	finger spg		sea stars					probable herring at 222407 hrs	
✓	flounder	✓	shells & fragments					trawl/dredge marks	y, n
✓	haddock		silver hake					ambient light	y, n

2227 hrs

Bottom temp deg C: (Onset TidbiT v2) 10.2 Surface 10.1 S-B = -0.1

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 Auk2013044_sta_img #
1	70	22 24 44				
2		25 14			Sampled, washed but left for analysis	
3		26 14				
4	73	26 59				
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 46 USGS STATION 4065

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5
USGS STA 4066 / SBNMS SITE 53	SBNMS STA	CONSEC. STATION 47	DVD NO. 5	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

VIDEO ON BOTTOM	UTC HH MM SS 22 42 30	DPH, m 25	Lat N 42 deg 11.601 min	Lon W 70 deg 16.434 min
SAMPLE TAKEN	~~UTC HH MM SS~~ ~~22~~	DPH, m	Lat N 42 deg .6002 min	Lon W 70 deg .4340 .4679 min
VIDEO OFF BOTTOM	UTC HH MM SS 22 45 38	DPH, m	Lat N 42 deg 11 .6305 .630 min	Lon W 70 deg 16.469 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 00 18 22	END: HH MM SS 00 21 58	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 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

2245 lwvs

Bottom temp deg C: (Onset TidbiT v2) 10.2 Surface 10.1 S-B = -0.1

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 Auk2013044_sta_img #
1	74	224255				
2		4357			NO SAMPLE	
3		4446				
4	77	4518				
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 4066

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5
USGS STA 4067	SBNMS SITE S4	SBNMS STA	CONSEC. STATION 48	DVD NO. 5	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 2	NAV GPS

VIDEO ON BOTTOM	UTC HH MM SS 23 1516	DPH, m 28	Lat N 42 deg 11.705 .7056 min	Lon W 70 deg 14.409 .4064 min
SAMPLE TAKEN	UTC HH MM SS ~~23 1544~~	DPH, m	Lat N 42 deg .712 min	Lon W 70 deg .410 min
VIDEO OFF BOTTOM	UTC HH MM SS 23 1877	DPH, m	Lat N 42 deg 11.718 .7178 min	Lon W 70 deg 14.464 .4628 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 00 21 58	END: HH MM SS 00 25 42	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 ah			**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

2318 lws

Bottom temp deg C: (Onset TidbiT v2) 10.1 Surface 10.1 5-B=0

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 Auk2013044_sta_img #
1	78	23 1532				
2		1647				
3	80	1736				
4					NO SAMPLE	
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 48 USGS STATION 4067

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S4, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4068	SBNMS SITE 55	SBNMS STA	CONSEC. STATION 49	DVD NO. 5	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 37 12	36	11.870 .8704 min	12.538 .5369 min
SAMPLE TAKEN	23 40 50		11.889 min	12.579 min
VIDEO OFF BOTTOM			.8893 min	.5774 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 00 25 42	END: HH MM SS 00 30 30	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**			2340 03 jun fish	
	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

2340 hrs

Bottom temp deg C: (Onset TidbiT v2) 10.1 surface 10.1 5-8 = 10.1

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 Auk2013044_sta_img #
1	81	23 37 30				
2		37 52				
3		38 39			NO	SAMPLE
4		39 20				
5	85	40 31				
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 4068

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 319	DATE (UTC) NOV 15 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4069	SBNMS SITE 55-6	SBNMS STA 5	CONSEC. STATION 50	DVD NO. 5	DVD TITLE NO. 8

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 51 14	37	.0431 12.043 min	11.956 min
SAMPLE TAKEN	23		min	.9560 min
VIDEO OFF BOTTOM	23 52 41		.0571 12.057 min	.9618 11.962 min

STA

STA

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 00 30 30	END: HH MM SS 00 38 54	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 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

2352 LWS

Bottom temp deg C: (Onset TidbiT v2) 10.1 surface 10.2 S-B = 0.1

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 Auk2013044_sta_img #
1	86	23 51 37				
2		52 00				
3	88	53 54			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 50 USGS STATION 4069

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 55-6, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 320	DATE (UTC) NOV 16 ,2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4070	SBNMS SITE 56	SBNMS STA	CONSEC. STATION 51	DVD NO. 5	DVD TITLE NO. 9

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 0919	42	.9012 11.901 min	10.512 .5115 min
SAMPLE TAKEN	00 1240		11 .916 min	10 .525 min
VIDEO OFF BOTTOM			.9167 min	.5243 min

STA

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 00 3854	END: HH MM SS 004312	sed grab temp logr invert- grab ctd

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples loco rnd	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

0012 WVS

Bottom temp deg C: (Onset TidbiT v2) 10.0 surface 10.2 S-B = 0.2

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 Auk2013044_sta_img #
1	89	00 0933				
2		1003				
3		1029				NO SMPL
4		1041				
5		1121				
6		1132				
7	95	1211				
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 4070

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 320	DATE (UTC) NOV 16, 2013	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4071	SBNMS SITE 57	SBNMS STA	CONSEC. STATION 52	DVD NO. 5	DVD TITLE NO. 10

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 6	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 38 02	44	12.169 (.1088) min	08.470 (.4709) min
SAMPLE TAKEN	00 41 17		12.120 (.1200) min	08.463 (.4636) min
VIDEO OFF BOTTOM			min	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 004312	END: HH MM SS 004809	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 w/			**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			✓ brtn shell no beds	
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

0041 WS

Bottom temp deg C: (Onset TidbiT v2) 9.7 Surface 9.9 S-B = 0.2

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 Auk2013044_sta_img #
1	96	003824				
2		3900				
3		3936			No SMPL	
4	99	4032				
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 52 USGS STATION 4071

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 320	DATE (UTC) NOV 16 ,2013 = NOV 15 EST	NAV FILE NO. 2	VIDEO TAPE NO. 5

USGS STA 4072	SBNMS SITE 58	SBNMS STA	CONSEC. STATION 53	DVD NO. 5	DVD TITLE NO. 11

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 ~~1634 EST = 2034 UTC~~	QUAD 3	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 55 47	43	11.038 (.0380) min	08.314 (.3144) min
SAMPLE TAKEN (STA)	00 56 42		11.042 (.0424) min	08.316 (.3169) min
VIDEO OFF BOTTOM	00 58 58		11.050 (.0504) min	08.326 (.3255) 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 004809	END: HH MM SS 005251	(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 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

0058 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.8 surface 9.8 S-B = 0.0

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 Auk2013044_sta_img #
1	100	00 56 03				
2		57 15				
3		57 44				
4	103	58 49				
5					Last station in South; video cable snarled on takeup reel	
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 53 USGS STATION 4072

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6
USGS STA 4073	SBNMS SITE C1	SBNMS STA	CONSEC. STATION 54	DVD NO. 6	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	16 57 18	35	42 deg 18.587 .5874 min	70 deg 17.052 .0522 min
SAMPLE TAKEN (STA)	17 01 34		42 deg 18.585 .5853 min	70 deg 17.083 .0829 min
VIDEO OFF BOTTOM	~~UTC HH MM SS~~		~~42 deg 18.585 min~~	~~70 deg 17.083 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 00 00 00	END: HH MM SS 00 06 14	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**	✓	skate	SEABED DESCRIPTION		
	Boltenia tunic.		lobster		Suberites spg	storm ripples old	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

1701 Hrs

Bottom temp deg C: (Onset TidbiT v2) 9.7 Surface 9.7 S-B = 0

Photo of sample in grab on deck = #_____ Prelim. visual texture from VIDEO or SAMPLE = V.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 Auk2013044_sta_img #
1	1	16 57 33				
2		58 47				
3		59 34				
4		170019				
5		00 58				
6	6	01 26				
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 54 USGS STATION 4073

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4074	SBNMS SITE C2	SBNMS STA	CONSEC. STATION 55	DVD NO. 6	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	17 1613	34	.6565 17.658 min	.8697 16.870 min
SAMPLE TAKEN	17 1924		17.663 min	16.879 min
VIDEO OFF BOTTOM			.6634 min	.8790 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 00 0614	END: HH MM SS 00 1043	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	✓	calcalg	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			S/ pcb G; + gpment	
	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: (Onset TidbiT v2) 9.6 Surf 9.6 S-B=0

1719 hrs

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 Auk2013044_sta_img #
1	7	17 1649				
2		1712			S/ pcb G	
3		1800				
4	10	1856			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 55 USGS STATION 4074

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4075	SBNMS SITE C3	SBNMS STA	CONSEC. STATION 56	DVD NO. 6	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	17 31 34	33	.6677 16.667 min	.8002 16.800 min
SAMPLE TAKEN (STA)	17 35 23		16.669 min	16.795 min
VIDEO OFF BOTTOM			.6690 min	.7957 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 00 10 43	END: HH MM SS 00 15 33	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: (Onset TidbiT v2) 9.6 Surf 9.7 S-B = 0.1

1735 hrs

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 Auk2013044_sta_img #
1	11	17 31 49				
2	-	32 49				
3	-	33 40				
4	-	34 35				
5	15	35 10				
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 56 USGS STATION 4075

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4076	SBNMS SITE C4	SBNMS STA	CONSEC. STATION 57	DVD NO. 6	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 1634 EST = 2034 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	17 49 54	31	15.640 .6407 min	16.595 .5963 min
SAMPLE TAKEN	17 53 32		15.654 min	16.573 min
VIDEO OFF BOTTOM			.6539 min	.5741 min

STA

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 001533	END: HH MM SS 00 20 27	sed grab, temp logr, invert- grab, ctd

	att epifauna		herring eggs		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples 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				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

1753 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.6 Surf 9.7 S-B = 0.1

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 Auk2013044_sta_img #
1	16	175027				
2		5128				
3		5215				
4	19	5314				
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 57 USGS STATION 4076

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4077	SBNMS SITE C5	SBNMS STA	CONSEC. STATION 58	DVD NO. 6	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	18 05 04	28	42 deg 14.713 (.7135) min	70 deg 16.369 (.3699) min
SAMPLE TAKEN	18 08 50		42 deg 14.732 min	70 deg 16.333 min
VIDEO OFF BOTTOM			42 deg .7324 min	70 deg .3347 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			sed grab, temp logr
V TAPE COUNTER DOWN	00 20 27	00 24 56	invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples 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				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

Bottom temp deg C: (Onset TidbiT v2) 9.5 Surf 9.5 5-13 = 0

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 Auk2013044_sta_img #
1	20	18 0529				
2		0557				
3		0629			NO SMPL	
4		0709				
5	24	0810				
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 58 USGS STATION 4077

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4078	SBNMS SITE C6	SBNMS STA	CONSEC. STATION 59	DVD NO. 6	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 23 05	28	.6927 13.693 min	.4234 16.422 min
SAMPLE TAKEN	~~UTC HH MM SS~~ 18 26 44	DPH, m	Lat N 42 deg 13.703 min	Lon W 70 deg 16.387 min
VIDEO OFF BOTTOM	UTC HH MM SS	DPH, m	Lat N 42 deg .7039 min	Lon W 70 deg .3889 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 00 24 56	END: HH MM SS 00 29 06	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 up			**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: (Onset TidbiT v2) 9.1 Surf 9.2 S.B. 9.1

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 Auk2013044_sta_img #
1	25	18 2324				
2		2348				
3		2425			NO SMPL	
4		2504				
5	29	2624				
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 59 USGS STATION 4078

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4079	SBNMS SITE C7	SBNMS STA	CONSEC. STATION 60	DVD NO. 6	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 37 49	27	12.706 min	16.085 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg .7062 min	Lon W 70 deg .0868 min
VIDEO OFF BOTTOM	UTC HH MM SS 18 41 33	DPH, m	Lat N 42 deg .7173 12.717 min	Lon W 70 deg .0379 16.036 min

STA

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 00 29 06	END: HH MM SS 00 33 37	sed grab, temp logr, invert- grab, ctd

	att epifauna		**herring eggs**		skate	SEABED DESCRIPTION	
	Boltenia tunic.		lobster		Suberites spg	storm ripples at start	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: (Onset TidbiT v2) 9.6 Surf 9.6 S-B=0

1841 hrs

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 Auk2013044_sta_img #
1	30	183830				
2		3914				
3		3950			sample at start of drift	
4		4047				
5	34	4110				
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 60 USGS STATION 4079

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4080	SBNMS SITE C8	SBNMS STA	CONSEC. STATION 61	DVD NO. 6	DVD TITLE NO. 8

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ 1634 ~~EST = 2034~~ UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	18 5343	29	12.468 .4684 min	17.387 .3893 min
SAMPLE TAKEN	18 5426		12.471 .4710 min	17.379 .3801 min
VIDEO OFF BOTTOM	18 5720		12.478 .4780 min	17.350 .3513 min

STA

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 003337	END: HH MM SS 003758	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

1857 ms

Bottom temp deg C: (Onset TidbiT v2) 9.5 surf 9.5 S-B=0

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 Auk2013044_sta_img #
1	35	18 5449				
2		5514			sample near start of drift	
3		5545				
4	38	5708				
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 61 USGS STATION 4080

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4081	SBNMS SITE C9	SBNMS STA	CONSEC. STATION 62	DVD NO. 6	DVD TITLE NO. 9

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	19 12 42	30	13.506 .5063 min	17.536 .5379 min
SAMPLE TAKEN	~~19 13 16~~		~~13.506 min~~	~~17.529 min~~
VIDEO OFF BOTTOM	19 16 40		13.5067 13.506 min	.4907 17.489 min

STA

~~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 00 37 58	END: HH MM SS 00 43 08	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 abt			**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

1916 ms

Bottom temp deg C: (Onset TidbiT v2) 9.6 surf 9.6 S-B = 0

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 Auk2013044_sta_img #
1	39	~~19 7~~	~~77~~			
2		1430				
3		1510				NO SMPL
4		1555				
5	43	1632				
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 62 USGS STATION 4081

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4082	SBNMS SITE C10	SBNMS STA	CONSEC. STATION 63	DVD NO. 6	DVD TITLE NO. 10

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	19 33 3	33	.5115 14.511 min	.6911 17.689 min
SAMPLE TAKEN	~~19 34 34~~		~~.509 min~~	~~.672 min~~
VIDEO OFF BOTTOM	19 37 04		.5057 14 .505 min	.6290 27 17 .6 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 004308	END: HH MM SS 004710	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 + + alt			**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

1937 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.7 Surf 10.0 S-B = 0.3

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 Auk2013044_sta_img #
1	44	193351				
2		3504				
3		3538				NO SMPL
4	47	3637				
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 63 USGS STATION 4082

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C10, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4083	SBNMS SITE C11	SBNMS STA	CONSEC. STATION 64	DVD NO. 6	DVD TITLE NO. 11

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

smpl STA

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	19 56 41	34	.6042 15.604 min	.8385 17.836 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 00 08	DPH, m	.6030 Lat N 42 deg 15.602 min	.7762 Lon W 70 deg 17.774 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 00 47 10	END: HH MM SS 00 51 44	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

2000 ms

Bottom temp deg C: (Onset TidbiT v2) 9.5 Surf 9.9 S-B = 0.3

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 Auk2013044_sta_img #
1	46	19 57 26				
2		58 22				
3		59 10			Smpl at start of drift	
4	51	59 58				
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 64 USGS STATION 4083

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C11, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 6

USGS STA 4084	SBNMS SITE C12	SBNMS STA	CONSEC. STATION 65	DVD NO. 6	DVD TITLE NO. 12

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	min	Lon W 70 deg	min
VIDEO ON BOTTOM	20 12 56	35	.4867 16.486		.1668 18.162	
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg	min	Lon W 70 deg	min
VIDEO OFF BOTTOM	20 16 30		.4892 16.499		.1071 18.106	

smpl STA

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 005144	END: HH MM SS 005615	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			sdy gvl	
	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

2016 WS

Bottom temp deg C: (Onset TidbiT v2) 9.5 surf 9.7 S-B=0.2

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

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 Auk2013044_sta_img #
1	52	20 1345				
2		1445			smpl at	start of drift
3		1522				
4	55	1619				
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 65 USGS STATION 4084

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7
USGS STA 4085 / SBNMS SITE C13	SBNMS STA	CONSEC. STATION 66	DVD NO. 7	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO ON BOTTOM	20 27 46	32	.4896 17.489	.2645 18.261
SAMPLE TAKEN	20 31 17		17.487	18.202
VIDEO OFF BOTTOM			.4872	.2045

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 00 00 00	END: HH MM SS 00 04 41	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		calc alg	sand partial veneer on gravel	y, n
✓	cancer crab		Polymastia spg			gravel pavement	y, n
	cod		red encr. spg			gritty Snd	
	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			Sandpvv pcG	
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder		shells & fragments			trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

2031 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.5 Surf 9.6 5-B = 0.1

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 Auk2013044_sta_img #
1	56	20 28 31				
2		29 02				
3	58	30 04	7706		skate	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 66 USGS STATION 4085

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7
USGS STA 4086	SBNMS SITE C14	SBNMS STA	CONSEC. STATION 67	DVD NO. 7	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	20 45 23	29	42 deg 18.442 min (.4425)	70 deg 18.401 min (.4033)
SAMPLE TAKEN	20 45 48		42 deg .443 min	70 deg .394 min
VIDEO OFF BOTTOM	20 49 32		42 deg 18.446 min (.4462)	70 deg 18.337 min (.3388)

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 00 04 41	END: HH MM SS 00 09 41	sed grab, emp 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 (few)	y, n
	juvenile cod		ocean pout		calc alg	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: (Onset TidbiT v2) 9.6 Surf 9.5 S-B=0.1

2049 hrs

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 Auk2013044_sta_img #
1	59	204532				
2		4619				
3		4658			NO SMPL	
4		4744				
5		4823				
6	64	4923				
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 67 USGS STATION 4086

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7
USGS STA 4087	SBNMS SITE C1	SBNMS STA	CONSEC. STATION 68	DVD NO. 7	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 1634 EST = ~~2034~~ UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	21 45 53	34	.6040 18.604 min	.0829 17.081 min
SAMPLE TAKEN	21 46 56		42 deg 18.605 min	70 deg 17.066 min
VIDEO OFF BOTTOM	21 49 32		.6144 18.611 min	.0327 17.031 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
V TAPE COUNTER DOWN	START: HH MM SS 00 09 41	END: HH MM SS 00 14 33

SAMPLE TYPES: sed grab, temp logr, invert- grab, ~~std~~

	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" at end	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: (Onset TidbiT v2) 9.4 Surf 9.5 S-B = 0.1

2149 hrs

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 Auk2013044_sta_img #
1	65	214618			NO SMPL	
2		4730				
3		4804				
4		4836				
5	69	4907				
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 68 USGS STATION 4087

 SBNMS Site C1, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV ~~21~~ ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4088	SBNMS SITE C2	SBNMS STA	CONSEC. STATION 69	DVD NO. 7	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	22 00.42	32	.6513 17.651 min	.8515 16.849 min
SAMPLE TAKEN	22 0118		.6497 17.649 min	.8396 16.837 min
VIDEO OFF BOTTOM	220425		.6421 17.642 min	.7832 16.782 min

STA

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 001433	END: HH MM SS 001911	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			S/pbG	
	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: (Onset TidbiT v2) 9.5 surf 9.5 S-B=0

2204 WS

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 Auk2013044_sta_img #
1	70	22 0141				
2		0229				
3		0310				
4		0359				
5	74	0416				
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 69 USGS STATION 4088

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV ~~04~~ ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4089	SBNMS SITE C3	SBNMS STA	CONSEC. STATION 70	DVD NO. 7	DVD TITLE NO. 5

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5 .7283	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	22 15 21	31	.7178 16.718 min	16.~~225~~ 16.725 min
STA SAMPLE TAKEN	22 16 30		.7232 16.723 min	.7045 16.702 min
VIDEO OFF BOTTOM	22 19 34		16.738 .7390 min	16.638 .6405 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 001911	END: HH MM SS 002423	sed grab, temp logr, invert- grab, std

								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 at end	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**					cgS and cgS/pbG	
	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: (Onset TidbiT v2) 9.6 Surf 9.8 S-B = 0.2

2219 WS

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 Auk2013044_sta_img #
1	75	221535				
2		1617				
3		1747				
4		1832				
5	79	1905				
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 70 USGS STATION 4089

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4090	SBNMS SITE C4	SBNMS STA	CONSEC. STATION 71	DVD NO. 7	DVD TITLE NO. 6

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	22 29 13	29	15.776 (.7759) min	16.633 (.6350) min
SAMPLE TAKEN (STA)	22 29 43		15.778 (.7780) min	16.622 (.6246) min
VIDEO OFF BOTTOM	22 32 26		15.791 (.7917) min	16.567 (.5686) 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 00 24 23	END: HH MM SS 00 28 19	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: (Onset TidbiT v2) 9.5 Surf 9.7 S-B = 0.2

2232 hrs

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 Auk2013044_sta_img #
1	80	222926				
2		3019				
3		3115				
4	83	3217				
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 71 USGS STATION 4090

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4091	SBNMS SITE C5	SBNMS STA	CONSEC. STATION 72	DVD NO. 7	DVD TITLE NO. 7

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 1634 EST = 2034 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	22 42 21	28	42 deg 14.692 (.6924) min	70 deg 16.455 (.4577) min
STA SAMPLE TAKEN	22 43 25		42 deg 14 .695 (.6947) min	70 deg 16 .439 (.4411) min
VIDEO OFF BOTTOM	22 45 58		42 deg 14 .702 (.7024) min	70 deg 16 .400 (.4015) 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 00 28 19	END: HH MM SS 00 32 39	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 (at start)	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			mud later too	
	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

22 45 bus

Bottom temp deg C: (Onset TidbiT v2) 9.6 Surf 9.7 5-16 = 0.1

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 Auk2013044_sta_img #
1	84	22 42 37				
2		43 40				
3		44 12				
4		44 57				
5		45 10				
6	89	45 35				
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 72 USGS STATION 4091

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4092	SBNMS SITE C6	SBNMS STA	CONSEC. STATION 73	DVD NO. 7	DVD TITLE NO. 8

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: ~~Nov 4, 2013~~ 1634 EST = 2034 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	22 55 07	26	42 deg 13.683 (.6839) min	70 deg 16.401 (.4037) min
SAMPLE TAKEN (STA)	22 55 37		42 deg 13.681 (.6818) min	70 deg 16.391 (.3935) min
VIDEO OFF BOTTOM	22 58 42		42 deg 13.682 (.6825) min	70 deg 16.334 (.3357) 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			sed grab, temp logr
V TAPE COUNTER DOWN	00 32 39	00 36 44 (003644)	invert- grab, ~~sed~~

	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 abt 7			**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: (Onset TidbiT v2) 9.4 (2258 hrs) Surf 9.6 S-B = 0.2

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 Auk2013044_sta_img #
1	90	22 56 24				
2		57 14				
3		58 06				
4	93	58 30				
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 73 USGS STATION 4092

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4093	SBNMS SITE C7	SBNMS STA	CONSEC. STATION 74	DVD NO. 7	DVD TITLE NO. 9

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 09 03	25	.6615 12.661 min	.0838 16.084 min
SAMPLE TAKEN (57th)	23 09 26		.6600 12.659 min	.0777 16.075 min
VIDEO OFF BOTTOM	23 13 04		.6512 12.651 min	.0136 16.012 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 00 36 44	END: HH MM SS 00 41 53	sed grab, temp logr, invert- grab, ~~ptd~~

	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 patch	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**			herring? in water column at 230817 to 230820 hrs	
	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: (Onset TidbiT v2) 9.5 surf 9.8 5-B=0.3

2313 hrs

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 Auk2013044_sta_img #
1	94	230910				
2		1008				
3		1031				
4		1102				
5		1203				
6		1224			herring?	
7	100	1254				
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 74 USGS STATION 4093

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4094	SBNMS SITE C8	SBNMS STA	CONSEC. STATION 75	DVD NO. 7	DVD TITLE NO. 10

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 22 57	27	12.434 (.4344) min	17.386 (.3891) min
SAMPLE TAKEN	~~UTC HH MM SS~~ 23 24 26	DPH, m	12 .432 (.4322) min	17.371 (.3731) min
VIDEO OFF BOTTOM	23 26 36	DPH, m	12 .428 (.4287) min	17.347 (.3484) min

STA

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 00 41 53	END: HH MM SS 00 46 15	sed grab, temp logr, invert- grab, ~~otd~~

						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

2326 vns

Bottom temp deg C: (Onset TidbiT v2) 9.4 Surf 9.7 S-B=0.3

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 Auk2013044_sta_img #
1	101	23 23 16				
2		23 35				
3		25 04				
4		25 45				
5	105	26 13				
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 75 USGS STATION 4094

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4095	SBNMS SITE C9	SBNMS STA	CONSEC. STATION 76	DVD NO. 7	DVD TITLE NO. 11

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: ~~Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 36 28	28	13.488 (.4888) min	17.613 (.6149) min
SAMPLE TAKEN	23 37 08		13.488 (.4886) min	17.605 (.6064) min
VIDEO OFF BOTTOM	23 40 40		13.487 (.4874) min	17.567 (.5679) min

STA

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 004615	END: HH MM SS 005103	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 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

2340 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.6 Surf 9.7 S-B = 0.1 ✓ Cgs

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 Auk2013044_sta_img #
1	106	233644				
2		3746				
3		3755			cancercrab	
4		3840				
5		3903				
6		3953				
7	112	4031				
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 76 USGS STATION 4095

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 325	DATE (UTC) NOV 21 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 7

USGS STA 4096	SBNMS SITE C10	SBNMS STA	CONSEC. STATION 77	DVD NO. 7	DVD TITLE NO. 12

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013 1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	23 51 42	31	14.552 .5525 min	17.787 .7894 min
SAMPLE TAKEN	23 52 36		14.553 .5537 min	17.777 .7784 min
VIDEO OFF BOTTOM	23 55 30		14.558 .5581 min	17.740 .7407 min

STA

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 00 51 03	END: HH MM SS 00 56 21	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 Watt			**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

2355 ms

Bottom temp deg C: (Onset TidbiT v2) 9.9 Surf 9.7 S-B = -0.2

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 Auk2013044_sta_img #
1	113	23 5217				
2		5323				
3		5346				
4		5421				
5	117	5517				
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 77 USGS STATION 4096

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C10, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 326	DATE (UTC) NOV ~~22~~ ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 8
USGS STA 4097	SBNMS SITE C11	SBNMS STA	CONSEC. STATION 78	DVD NO. 8	DVD TITLE NO. 1

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: ~~Nov 4, 2013~~ 1634 ~~EST = 2034~~ UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N	Lon W
VIDEO ON BOTTOM	00 0602	32	42 deg 15.608 (.6084) min	70 deg 17.864 (.8676) min
SAMPLE TAKEN	00 0711		42 deg 15.614 (.6142) min	70 deg 17.840 (.8424) min
VIDEO OFF BOTTOM	00 1002		42 deg 15.625 (.6253) min	70 deg 17.783 (.7848) min

STA

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 00 00 00	END: HH MM SS 00 05 14	sed grab, temp logr, invert- grab, ~~vctd~~

	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			on sampler pull up: ?herring	
	Filograna implexa		sculpin				
	finger spg		sea stars				
	flounder	✓	shells & fragments			trawl/dredge marks	y, n
✓	haddock	✓	silver hake			ambient light	y, n

?

0010 lms

Bottom temp deg C: (Onset TidbiT v2) 9.8 Surf 9.8 5-16=0

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 Auk2013044_sta_img #
1	118	00 0640				
2		0751				
3		0826				
4		0927				
5	122	0950				
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 78 USGS STATION 4097

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site C11, Sta_____

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 326	DATE (UTC) NOV 22 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 8

USGS STA 4098	SBNMS SITE C12	SBNMS STA	CONSEC. STATION 79	DVD NO. 8	DVD TITLE NO. 2

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	Sunset: Nov 4, 2013 1634 EST = 2034 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 1944	35	16.533 min	18.214 min
SAMPLE TAKEN	UTC HH MM SS	DPH, m	Lat N 42 deg .5334 min	Lon W 70 deg .2160 min
VIDEO OFF BOTTOM	00 2432		Lat N 42 deg 16.562 .5625 min	Lon W 70 deg 18.142 .1440 min

STN

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 00 05 14	END: HH MM SS 00 11 17	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 many		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			SPVO PC G	
	Filograna implexa		sculpin			~ pc present	
✓	finger spg		sea stars				
	flounder	✓	shells & fragments		trawl/dredged	trawl/dredge marks	y, n
	haddock		silver hake			ambient light	y, n

0024 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.8 Surf 9.6 S-B = -0.2

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 Auk2013044_sta_img #
1	123	00 1959				
2		2038				
3		2107			NO	SMPL
4		2147				
5		2210				
6		2315				
7		2331				
8		2359				
9	131	2421				
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 79 USGS STATION 4098

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 326	DATE (UTC) NOV 22 ,2013	NAV FILE NO. 3	VIDEO TAPE NO. 8
USGS STA 4099 / SBNMS SITE C13	SBNMS STA	CONSEC. STATION 80	DVD NO. 8	DVD TITLE NO. 3

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ 1634 EST = 2034 UTC	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 35 23	32	.4938 17.493 min	.3332 18.331 min
SAMPLE TAKEN	00 39 03		17.514 min	18.283 min
VIDEO OFF BOTTOM			.5145 min	.2850 min

STA

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 00 11 17	END: HH MM SS 00 15 57	sed grab, temp logr, invert- grab, ~~sed~~

								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		chlr alg			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**						
	Eucratea loricata		scallops					s pvo pc G	
	Filograna implexa		sculpin						
✓	finger spg		sea stars						
✓	flounder	✓	shells & fragments					trawl/dredge marks	y, n
✓	haddock		silver hake					ambient light	y, n

0039 wrs

Bottom temp deg C: (Onset TidbiT v2) 9.6 Surf 9.6 S-B=0

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 Auk2013044_sta_img #
1	132	00 35 41				
2		35 00				
3		36 15				
4		36 37				
5		37 24				
6		38 06				
7	138	38 36				
8						
9						
10						

sample washed

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 80 USGS STATION 4099

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC) 326	DATE (UTC) NOV 22 ,2013 =Nov 21 EST	NAV FILE NO. 3	VIDEO TAPE NO. 8

USGS STA 4100	SBNMS SITE C14	SBNMS STA	CONSEC. STATION 81	DVD NO. 8	DVD TITLE NO. 4

VIDEO START AT SURFACE UTC HH MM SS	VIDEO END AT SURFACE UTC HH MM SS	~~Sunset: Nov 4, 2013~~ ~~1634 EST = 2034 UTC~~	QUAD 5	NAV GPS

	UTC HH MM SS	DPH, m	Lat N 42 deg	Lon W 70 deg
VIDEO ON BOTTOM	00 5040	29	.4937 18.494 min	18.350 .3522 min
SAMPLE TAKEN	~~00 5116~~		~~18.498 min~~	~~18.342 min~~
VIDEO OFF BOTTOM	00 5502		.5282 18.528 min	.2948 18.293 min

STA

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 00 1557	END: HH MM SS 002129	sed grab temp logr invert- grab ~~std~~

						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 faint, small	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

0055 hrs

Bottom temp deg C: (Onset TidbiT v2) 9.6 surf 9.5 S-B = -0.1

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 Auk2013044_sta_img #
1	139	00 5058				
2		5154				
3		5236				
4		5348				NO SMPL
5		5410				
6		5438				
7	145	5451				
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 81 USGS STATION 4100

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

CRUISE: USGS AUK2013044 SBNMS 04NOV2013	JD (UTC)	DATE (UTC) NOV _____ ,2013	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: Nov 4, 2013 1634 EST = 2034 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: (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 Auk2013044_sta_img #
1						
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____USGS STATION_____