

Auk 2015074

STA 4421-4441

CRUISE: USGS AUK2015074 SBNMS NOV 2015 DEC		DATE EST NOV DEC	JD EST	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: LO CAM: GP STILLS FILE:
				FWD NON-HD VIDEO FILE UP CAM:	
USGS STA	SBNMS SITE	CONSEC. STATION	DAY - NIGHT		
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD
					NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS	DPH, m	Lat N 42 deg	min	Lon W 70 deg
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg	min	Lon W 70 deg
VIDEO OFF SEABED / SMPL	EST HH MM SS	DPH, m	Lat N 42 deg	min	Lon W 70 deg
Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = _____ hrs		UTC = EST +5 HRS
CTD CAST NO.					
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA				SAMPLE TYPES	
				sed grab temp logr	
				sand lance ctd upcast	
	att epifauna	herring eggs	skate	SEABED DESCRIPTION	
	Boltenia tunic.	lobster	Suberites spg	storm ripples	y. n
	brachiopod	moon snail	squid	crests: sharp	rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples	y. n
	cancer crab	Polymastia spg		sand partial veneer on gravel	y. n
	cod	red encr. spg		gravel pavement	y. n
	cunner	red hake		sand lance in water column	y. n
	dk yellow spg	sand dollars		sand lance on/in substrate	y. n
	Didemnum coils			sand lance in sed sample	y. n
	dogfish			SL size: sml med lg	
	Eucratea loricata	scallops		nos:	
	Filograna implexa	sculpin			
	finger spg	sea stars		trawled/dredged shell frags	y n
	flounder	shells & fragments		trawl/dredge marks	y. n
	haddock	silver hake		ambient light	y. n

Temp (Onset TidbiT v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ _____ sec interval; No. of photos = _____

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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5						

105690

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = _____ CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM

HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = _____ CM

USGS STATION _____

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site _____, CONSEC STA _____

NOV 30 = JD 334

DEC 1 = JD 335

<u>VIDEO CAMS</u>	<u>CAMERA HT ABOVE SEABED</u>		<u>RECL.</u>
	<u>vertical</u>	<u>slope distance</u>	
FWD UPPER GOPRO	120 cm	—	(H)
FWD LOWER GOPRO	88 cm	96 cm	(H)
FWD LOWER SEAVIEWER	88 cm	96 cm	(H)

UTC TIME = EST TIME + 5 HRS

UP cam to Reel
vert = 129 cm ; slope =
LO cam to Reel
vert = 188 cm ; slope = 96 cm

more sl injured
by grab (caught
in jaws)
than usual =
sl deeper in reel

CRUISE: USGS AUK2015074 SBNMS		DATE EST NOV Dec 1	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2905 LO CAM: 9821
USGS STA 4421		SBNMS SITE 54	CONSEC. STATION 1	FWD HD VIDEO FILE UP CAM: 353	GP STILLS FILE:

VIDEO START AT SURFACE EDT HH MM SS 14 49 48 UTC	VIDEO END AT SURFACE EDT HH MM SS	Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD 2	NAV GPS
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VIDEO ON SEABED / SMPL	EST HH-MM-SS 09 49 48	DPH, m 26	Lat N 42 deg 11.688 min	Lon W 70 deg 14.5246 min
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SAMPLE	EST HH-MM-SS 1335: 09:49:48	DPH, m	Lat N 42 deg min	Lon W 70 deg min
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VIDEO OFF SEABED / SMPL	EST HH-MM-SS 09 51 16	DPH, m	Lat N 42 deg 11.6975 min	Lon W 70 deg 14.5620 min
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Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = hrs	UTC = EST +5 HRS	CTD CAST NO.
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NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small

TIDE AT SCITUATE MA	SAMPLE TYPES sed grab sand lance temp log ctd upcast
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	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. n
	dk yellow spg	sand dollars		sand lance on/in substrate y. n
	Didemnum cols			sand lance in sed sample y. n
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos:
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y. n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset TidbiT v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
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2						
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4						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = 125 CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
 HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = 85 CM USGS STATION 4421
 " " " SEAVIEWER " " 85
 PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54, CONSEC STA 1

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2906 LO CAM: 9822 GP STILL FILE:
USGS STA <u>4422</u>	SBNMS SITE <u>54</u>	CONSEC. STATION <u>2</u>	<u>DAY - NIGHT</u>	FWD NON -HD VIDEO FILE UP CAM: <u>354</u>	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
				NAV GPS	
VIDEO ON SEABED / SMPL	EST HH MM SS <u>(100858)</u>	DPH, m <u>26</u>	Lat N 42 deg <u>11.780</u> min	Lon W 70 deg <u>14.499</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>100932</u>	DPH, m	Lat N 42 deg <u>11.7819</u> min	Lon W 70 deg <u>14.5116</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+/- hrs
				UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA		SAMPLE TYPES	
		<input checked="" type="checkbox"/> sed grab <input checked="" type="checkbox"/> sand lance <input type="checkbox"/> temp log <input type="checkbox"/> ctd upcast	
att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	storm ripples y. (n)
brachiopod	moon snail	squid	crests: sharp rounded
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
juvenile cod	ocean pout	yellow encr. spg	small ripples y. (n)
cancer crab	Polymastia spg		sand partial veneer on gravel y. n
cod	red encr. spg		gravel pavement y. n
cunner	red hake		sand lance in water column y. (n)
dk yellow spg	sand dollars		sand lance on/in substrate y. (n)
Didemnum cols			sand lance in sed sample y. (n)
dogfish			SL size: (sml) med lg
Eucratea loricata	scallops		nos: 1
Filograna implexa	sculpin		
finger spg	sea stars		trawled/dredged shell frags y. n
flounder	✓ shells & fragments	<u>crab legs</u>	trawl/dredge marks y. n
haddock	silver hake		ambient light y. n

Temp (Onset TidbiT v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval: No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4422

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54, CONSEC STA 2

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2907</u> LO CAM: <u>9823</u> GP STILL FILE:
USGS STA <u>4423</u>	SBNMS SITE <u>54</u>	CONSEC. STATION <u>3</u>	(<u>DAY</u>) - NIGHT	FWD HD -HD VIDEO FILE UP CAM: <u>355</u>	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED	EST HH MM SS <u>(102240)</u>	DPH, m <u>26</u>	Lat N 42 deg <u>11.799</u> min	Lon W 70 deg <u>14.472</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min	
VIDEO OFF SEABED	EST HH MM SS <u>102312</u>	DPH, m	Lat N 42 deg <u>11.8003</u> min	Lon W 70 deg <u>14.4803</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = <u> </u> hrs UTC = EST +5 HRS

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

TIDE AT SCITUATE MA			SAMPLE TYPES sed grab <u>temp log</u> sand lance <u>ctd upcast</u>
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				SEABED DESCRIPTION
att epifauna	herring eggs	skate		
Boltenia tunic.	lobster	Suberites spg	storm ripples	y, (n)
brachiopod	moon snail	squid	crests: sharp	rounded
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y, n
juvenile cod	ocean pout	yellow encr. spg	small ripples	y, (n)
cancer crab	Polymastia spg		sand partial veneer on gravel	y, n
cod	red encr. spg		gravel pavement	y, n
cunner	red hake		sand lance in water column	y, (n)
dk yellow spg	✓ sand dollars		sand lance on/in substrate	y, (n)
Didemnum cols			sand lance in sed sample	y, (n)
dogfish			SL size: sml med lg	
Eucratea loricata	scallops		nos:	
Filograna implexa	sculpin			
finger spg	sea stars		trawled/dredged shell frags	(y) n
flounder	✓ shells & fragments	<u>dudg/trl</u>	trawl/dredge marks	y, n
haddock	silver hake		ambient light	y, n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54, CONSEC STA 3 **USGS STATION 4423**

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV Dec 1	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2908 LO CAM: 9824 GP STILLS FILE:
USGS STA 4424	SBNMS SITE 54	CONSEC. STATION 4	(DAY) - NIGHT	FWD HD HD VIDEO FILE UP CAM: 356	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD 2
VIDEO ON SEABED SMPL		EST HH MM SS 10 35 06	DPH, m 26	Lat N 42 deg 11.785 min	Lon W 70 deg 14.502 min
SAMPLE		EST HH MM SS	DPH, m	Lat N 42 deg min	Lon W 70 deg min
VIDEO OFF SEABED SMPL		EST HH MM SS 10 35 38	DPH, m	Lat N 42 deg 11.7889 min	Lon W 70 deg 14.5140 min
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+/- = hrs
				UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp logr sand lance ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. (n)
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. (n)
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. (n)
	dk yellow spg	sand dollars		sand lance on/in substrate y. (n)
	Didemnum cols			sand lance in sed sample y. (n)
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos:
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags (y) n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 54, CONSEC STA 4424

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2909</u> LO CAM: <u>9825</u> GP STILL FILE:
USGS STA <u>4425</u>	SBNMS SITE <u>53</u>	CONSEC. STATION <u>5</u>	<u>DAY</u> - NIGHT	FWD HD HD VIDEO FILE UP CAM: <u>357</u>	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS <u>105324</u>	DPH, m <u>23</u>	Lat N 42 deg <u>11.549</u> min	Lon W 70 deg <u>16.467</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.5483</u> min	Lon W 70 deg <u>.4537</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>105410</u>	DPH, m	Lat N 42 deg <u>11.5525</u> min	Lon W 70 deg <u>16.4856</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = <u> </u> hrs UTC = EST +5 HRS

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

TIDE AT SCITUATE MA		SAMPLE TYPES
		sed grab temp-logr
		sand lance ctd upcast

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	
Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
brachiopod	moon snail	squid	crests: sharp rounded
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
juvenile cod	ocean pout	yellow encr. spg	small ripples y. n
cancer crab	Polymastia spg		sand partial veneer on gravel y. n
cod	red encr. spg		gravel pavement y. n
cunner	red hake		sand lance in water column y. n
dk yellow spg	sand dollars <u>ab</u>		sand lance on/in substrate y. n
Didemnum cols			sand lance in sed sample y. n
dogfish			SL size: sml <u>med</u> lg
Eucratea loricata	scallops		nos: <u>7</u>
Filograna implexa	sculpin		
finger spg	sea stars		trawled/dredged shell frags y. n
flounder	shells & fragments		trawl/dredge marks y. n
haddock	silver hake		ambient light y. n

Temp (Onset TidbiT v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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4						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 53 CONSEC STA 5

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2910</u> LO CAM: <u>9826</u>
USGS STA <u>4426</u>	SBNMS SITE <u>S3</u>	CONSEC. STATION <u>6</u>	<u>DAY</u> - NIGHT	FWD LOW -HD VIDEO FILE UP CAM: <u>358</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
GPS					
VIDEO ON SEABED / SMPL.	EST HH MM SS <u>(110740)</u>	DPH, m <u>23</u>	Lat N 42 deg <u>11.577</u> min	Lon W 70 deg <u>16.553</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.5758</u> min	Lon W 70 deg <u>.5386</u> min	
STA VIDEO OFF SEABED / SMPL	EST HH MM SS <u>11 08 14</u>	DPH, m	Lat N 42 deg <u>11.5795</u> min	Lon W 70 deg <u>16.5653</u> min	
Lo / Hi TIDE EST HH MM	Lo / Hi TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = <u> </u> hrs	UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab <input checked="" type="checkbox"/> temp log <input checked="" type="checkbox"/> sand lance <input checked="" type="checkbox"/> ctd upcast <input checked="" type="checkbox"/>

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples <u>y.</u> n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column <u>y.</u> <u>n</u>
	dk yellow spg	✓ sand dollars		sand lance on/in substrate <u>y.</u> <u>n</u>
	Didemnum cols			sand lance in sed sample <u>y.</u> <u>n</u>
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos:
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S3, CONSEC STA 6 USGS STATION 4426

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV Dec 1	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2911 LO CAM: 9827 GP STILL FILE:
USGS STA 4427	SBNMS SITE 53	CONSEC. STATION 7	DAY - NIGHT	FWD NON-HD VIDEO FILE UP CAM: 359	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD 2
				NAV GPS	
VIDEO ON SEABED / SMPL	EST HH MM SS 111952	DPH, m 23	Lat N 42 deg 11.555 min	Lon W 70 deg 16.480 min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg .5525 min	Lon W 70 deg .4658 min	
VIDEO OFF SEABED / SMPL	EST HH MM SS 112024	DPH, m	Lat N 42 deg 11.5573 min	Lon W 70 deg 16.4902 min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+ / - = hrs
				UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp logr
			sand lance ctd upcast

				SEABED DESCRIPTION
att epifauna	herring eggs	skate		
Boltenia tunic.	lobster	Suberites spg	storm ripples	y, n
brachiopod	moon snail	squid	crests: sharp	rounded
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y, n
juvenile cod	ocean pout	yellow encr. spg	small ripples	y, n
cancer crab	Polymastia spg		sand partial veneer on gravel	y, n
cod	red encr. spg		gravel pavement	y, n
cunner	red hake		sand lance in water column	y, n
dk yellow spg	sand dollars		sand lance on/in substrate	y, n
Didemnum cols			sand lance in sed sample	y, n
dogfish			SL size: sml med lg	
Eucratea loricata	scallops		nos:	
Filograna implexa	sculpin			
finger spg	sea stars		trawled/dredged shell frags	y n
flounder	shells & fragments		trawl/dredge marks	y, n
haddock	silver hake		ambient light	y, n

Temp (Onset Tidbit v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM

HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4427

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 53, CONSEC STA 7

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2912 LO CAM: 9828
USGS STA <u>4428</u>	SBNMS SITE <u>S11</u>	CONSEC. STATION <u>8</u>	<u>DAY</u> - NIGHT	FWD NEW HD VIDEO FILE UP CAM: <u>360</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
				NAV GPS	
VIDEO ON SEABED / SMPL	EST HH MM SS <u>114358</u>	DPH, m <u>27</u>	Lat N 42 deg <u>10.683</u> min	Lon W 70 deg <u>14.349</u> min	
SAMPLE	EST HH-MM-SS	DPH, m	Lat N 42 deg <u>.6820</u> min	Lon W 70 deg <u>.3390</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>114430</u>	DPH, m	Lat N 42 deg <u>10.6832</u> min	Lon W 70 deg <u>14.3549</u> min	
Lo/Hi HH MM	TIDE EST	Lo/Hi HH MM	TIDE EST	STA Lo/Hi HH MM	+ / - = _____ hrs
				UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp logr sand lance ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples (y.) n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. (n)
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. (n)
	Didemnum cols			sand lance in sed sample y. (n)
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos:
	Filograna implexa	✓ sculpin		
	finger spg	sea stars		trawled/dredged shell frags y n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4428

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S11, CONSEC STA 8

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2913</u> LO CAM: <u>9829</u>
USGS STA <u>4429</u>	SBNMS SITE <u>512</u>	CONSEC. STATION	<u>DAY - NIGHT</u>	FWD HD HD VIDEO FILE UP CAM: <u>361</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
				NAV GPS	
VIDEO ON SEABED / SMPL	EST HH MM SS <u>120030</u>	DPH, m <u>24</u>	Lat N 42 deg <u>10.634</u> min	Lon W 70 deg <u>16.278</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>10.6321</u> min	Lon W 70 deg <u>16.2671</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>120102</u>	DPH, m	Lat N 42 deg <u>10.6371</u> min	Lon W 70 deg <u>16.2860</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = _____ hrs
				UTC = EST +5 HRS	CTD CAST NO.
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA			SAMPLE TYPES		
			sed grab temp log		
			sand lance ctd upcast		

	att epifauna	herring eggs	skate	SEABED DESCRIPTION	
	Boltenia tunic.	lobster	Suberites spg	storm ripples	y. n
	brachiopod	moon snail	squid	crests: sharp	rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples	y. n
	cancer crab	Polymastia spg		sand partial veneer on gravel	y. n
	cod	red encr. spg		gravel pavement	y. n
	cunner	red hake		sand lance in water column	y. n
	dk yellow spg	✓ sand dollars		sand lance on/in substrate	y. n
	Didemnum cols			sand lance in sed sample	y. n
	dogfish			SL size: (sml) (med) (lg)	
	Eucratea loricata	scallops		nos: <u>45</u> <u>39</u> <u>107</u>	
	Filograna implexa	sculpin			
	finger spg	sea stars		trawled/dredged shell frags	y. n
	flounder	shells & fragments		trawl/dredge marks	y. n
	haddock	silver hake		ambient light	y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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4						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4429

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 91

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2914 LO CAM: 9830 GP STILL FILE:
USGS STA <u>4430</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>10</u>	<u>DAY</u> - NIGHT	FWD HD VIDEO FILE UP CAM: <u>362</u>	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED <u>SMPL</u>	EST HH MM SS <u>121336</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.552</u> min	Lon W 70 deg <u>16.346</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.5517</u> min	Lon W 70 deg <u>.3294</u> min	
VIDEO OFF SEABED <u>SMPL</u>	EST HH MM SS <u>121410</u>	DPH, m	Lat N 42 deg <u>10.5541</u> min	Lon W 70 deg <u>16.3526</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+/- = <u> </u> hrs UTC = EST +5 HRS CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp logr sand lance ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples <u>y</u> n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. <u>n</u>
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. <u>n</u>
	Didemnum cols			sand lance in sed sample <u>y</u> n
	dogfish			SL size: <u>sm</u> <u>med</u> lg
	Eucratea loricata	scallops		nos: <u>2 live 5-6 dead</u>
	Filograna implexa	sculpin		<u>eggs for 7/12 on deck</u>
	finger spg	sea stars		trawled/dredged shell frags y n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4430

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 10

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2915</u> LO CAM: <u>9831</u>
USGS STA <u>4431</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>11</u>	<u>DAY</u> - NIGHT	FWD NOV -HD VIDEO FILE UP CAM: <u>363</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
GPS		VIDEO ON SEABED / SMPL <u>123544</u>		EST HH MM SS <u>123544</u>	DPH, m <u>24</u>
SAMPLE		EST HH MM SS		DPH, m	Lat N 42 deg <u>10.561</u> min
VIDEO OFF SEABED / SMPL <u>123616</u>		EST HH MM SS <u>123616</u>		DPH, m	Lon W 70 deg <u>16.419</u> min
Lo/Hi TIDE EST HH MM		Lo/Hi TIDE EST HH MM		STA Lo/Hi + / - HH MM = <u> </u> hrs	UTC = EST +5 HRS
				CTD CAST NO.	

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp-logr
			sand lance ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples <u>y.</u> n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column <u>y.</u> <u>n</u>
	dk yellow spg	✓ sand dollars		sand lance on/in substrate <u>y.</u> <u>n</u>
	Didemnum cols			sand lance in sed sample <u>y.</u> <u>n</u>
	dogfish			SL size: <u>sml</u> med lg
	Eucratea loricata	scallops		nos: <u>1</u>
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4431

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 11

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE-EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2916</u> LO CAM: <u>9832</u>
USGS STA <u>4432</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>12</u>	<u>DAY</u> - NIGHT	FWD NAV -HD VIDEO FILE UP CAM: <u>364</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
NAV GPS					
VIDEO ON SEABED / SMPL	EST HH MM SS <u>(124318)</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.618</u> min	Lon W 70 deg <u>16.634</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6164</u> min	Lon W 70 deg <u>.6273</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>124450</u>	DPH, m	Lat N 42 deg <u>10.6286</u> min	Lon W 70 deg <u>16.6657</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+ / - = _____ hrs
				UTC = EST +5 HRS	CTD CAST NO.
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA			SAMPLE TYPES		
			sed grab temp log		
			sand lance ctd upcast		
att epifauna		herring eggs	skate	SEABED DESCRIPTION	
Boltonia tunic.	lobster	Suberites spg	storm ripples	y.	(n)
brachiopod	moon snail	squid	crests:	sharp	rounded
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y.	n
juvenile cod	ocean pout	yellow encr. spg	small ripples	y.	(n)
cancer crab	Polymastia spg		sand partial veneer on gravel	y.	n
cod	red encr. spg		gravel pavement	y.	n
cunner	red hake		sand lance in water column	y.	(n)
dk yellow spg	✓ sand dollars		sand lance on/in substrate	y.	(n)
Didemnum cols			sand lance in sed sample	y.	(n)
dogfish			SL size:	(sml)	(med)
Eucratea loricata	scallops		nos:	<u>4.5</u>	
Filograna implexa	sculpin				
finger spg	sea stars		trawled/dredged shell frags	(y)	(n)
flounder	✓ shells & fragments	<u>dredge</u>	trawl/dredge marks	y.	n
haddock	silver hake		ambient light	y.	n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description ✓ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
 HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4432

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 12

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV Dec 1	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2917 LO CAM: 9833 GP STILL FILE:
USGS STA 4433	SBNMS SITE 512	CONSEC. STATION 13	DAY - NIGHT	FWD NON-HD VIDEO FILE UP CAM: 365	
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD 2 NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS 130058	DPH, m 25	Lat N 42 deg 10.610 min	Lon W 70 deg 16.737 min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg .610 min	Lon W 70 deg .7238 min	
VIDEO OFF SEABED / SMPL	EST HH MM SS 130132	DPH, m	Lat N 42 deg 10.613 min	Lon W 70 deg 16.7494 min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - hrs UTC = EST +5 HRS CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES sed grab temp log sand lance ctd upcast
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			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm ripples y. n
Boltenia tunic.	lobster	Suberites spg	crests: sharp rounded
brachiopod	moon snail	squid	gvl in ripple troughs y. n
bushy bry/hyd	mussels	tunicate, B pilu.	small ripples (y) n
juvenile cod	ocean pout	yellow encr. spg	sand partial veneer on gravel y. n
cancer crab	Polymastia spg		gravel pavement y. n
cod	red encr. spg		sand lance in water column y. (n)
cunner	red hake		sand lance on/in substrate y. (n)
dk yellow spg	sand dollars		sand lance in sed sample (y) n
Didemnum cols			SL size: sml (med) (lg)
dogfish			nos: 5, 1 live, 4 dead
Eucrateria loricata	scallops		trawled/dredged shell frags (y) n
Filograna implexa	sculpin		trawl/dredge marks y. n
finger spg	sea stars		ambient light y. n
flounder	shells & fragments		
haddock	silver hake		

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 13 USGS STATION 4433

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2918</u> LO CAM: <u>9834</u>
USGS STA <u>4434</u>	SBNMS SITE <u>S12</u>	CONSEC. STATION <u>14</u>	<u>DAY - NIGHT</u>	FWD NON-HD VIDEO FILE UP CAM: <u>366</u>	GP STILLS FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
NAV GPS					
VIDEO ON SEABED / SMPL	EST HH MM SS <u>131730</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.645</u> min	Lon W 70 deg <u>16.681</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>10.6439</u> min	Lon W 70 deg <u>16.6731</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>131802</u>	DPH, m	Lat N 42 deg <u>10.6485</u> min	Lon W 70 deg <u>16.6869</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - hrs
UTC = EST +5 HRS				CTD CAST NO.	

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

TIDE AT SCITUATE MA	<u>NO SMPL</u>	SAMPLE TYPES
		sed grab <input checked="" type="checkbox"/> temp logr <input checked="" type="checkbox"/>
		sand lance <input checked="" type="checkbox"/> ctd upcast <input checked="" type="checkbox"/>

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Bolitenia tunic.	lobster	Suberites spg	storm ripples y. n
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples (y. n)
<input checked="" type="checkbox"/>	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. (n)
	dk yellow spg	<input checked="" type="checkbox"/> sand dollars		sand lance on/in substrate (y. n)
	Didemnum cols			sand lance in sed sample y. n
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos:
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y n
	flounder	shells & fragments		trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
3						
4						
5						

HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4434

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S12, CONSEC STA 14

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2919</u> LO CAM: <u>9835</u>
USGS STA <u>4435</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>15</u>	<u>DAY</u> - NIGHT	FWD NAV -HD VIDEO FILE UP CAM: <u>367</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
NAV GPS					
VIDEO ON SEABED / SMPL	EST HH MM SS <u>(132912)</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.618</u> min	Lon W 70 deg <u>16.646</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6167</u> min	Lon W 70 deg <u>.6400</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>132946</u>	DPH, m	Lat N 42 deg <u>10.6215</u> min	Lon W 70 deg <u>16.6527</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - hrs
UTC = EST +5 HRS				CTD CAST NO.	
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA		<u>NO SMPL</u>		SAMPLE TYPES	
				sed grab <input checked="" type="checkbox"/> temp log <input checked="" type="checkbox"/>	
				sand lance <input checked="" type="checkbox"/> ctd upcast <input checked="" type="checkbox"/>	
att epifauna		herring eggs		skate	
Boltenia tunic.		lobster		Suberites spg	
brachiopod		moon snail		squid	
bushy bry/hyd		mussels		tunicate, B pilu.	
juvenile cod		ocean pout		yellow encr. spg	
✓ cancer crab		Polymastia spg			
cod		red encr. spg			
cunner		red hake			
dk yellow spg		✓ sand dollars		many →	
Didemnum cols				at sampling	
dogfish					
Eucratea loricata		scallops			
Filograna implexa		✓ sculpin			
finger spg		sea stars			
flounder		✓ shells & fragments		dudg/trc	
haddock		silver hake			
				SEABED DESCRIPTION	
				storm ripples y. <input checked="" type="checkbox"/> n	
				crests: sharp rounded	
				gvl in ripple troughs y. n	
				small ripples y. <input checked="" type="checkbox"/> n	
				sand partial veneer on gravel y. n	
				gravel pavement y. n	
				sand lance in water column y. <input checked="" type="checkbox"/> n	
				sand lance on/in substrate y. <input checked="" type="checkbox"/> n	
				sand lance in sed sample y. <input checked="" type="checkbox"/> n	
				SL size: sml med lg	
				nos:	
				trawled/dredged shell frags y. <input checked="" type="checkbox"/> n	
				trawl/dredge marks y. n	
				ambient light y. n	

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 15 4435

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2920 LO CAM: 9836 GP STILL FILE:
				FWD NO -HD VIDEO FILE UP CAM: 368	
USGS STA <u>4436</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>16</u>	<u>DAY</u> - NIGHT		
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS <u>13 37 44</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.612</u> min	Lon W 70 deg <u>16.680</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6104</u> min	Lon W 70 deg <u>.6699</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>13 38 18</u>	DPH, m	Lat N 42 deg <u>10.6142</u> min	Lon W 70 deg <u>16.6882</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+ / - = <u> </u> hrs
				UTC = EST +5 HRS	CTD CAST NO.
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA			SAMPLE TYPES		
			sed grab temp logr sand lance ctd upcast		
att epifauna		herring eggs	skate	SEABED DESCRIPTION	
Boltenia tunic.	lobster		Suberites spg	storm ripples	y. n
brachiopod	moon snail		squid	crests: sharp	rounded
bushy bry/hyd	mussels		tunicate, B pilu.	gvl in ripple troughs	y. n
juvenile cod	ocean pout		yellow encr. spg	small ripples	y. n
cancer crab	Polymastia spg			sand partial veneer on gravel	y. n
cod	red encr. spg			gravel pavement	y. n
cunner	red hake			sand lance in water column	y. n
dk yellow spg	✓ sand dollars			sand lance on/in substrate	y. n
Didemnum cols				sand lance in sed sample	y. n
dogfish				SL size: sml (med) lg	
Eucratea loricata	scallops			nos: <u>7 live, 4 dead</u>	
Filograna implexa	sculpin				
finger spg	sea stars			trawled/dredged shell frags	y n
flounder	shells & fragments			trawl/dredge marks	y. n
haddock	silver hake			ambient light	y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 16 USGS STATION 4436

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2921</u> LO CAM: <u>9837</u> GP STILL FILE:
USGS STA <u>4437</u>	SBNMS SITE <u>S12</u>	CONSEC. STATION <u>17</u>	(DAY-NIGHT)		FWD NO HD VIDEO FILE UP CAM: <u>369</u>
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS <u>(135752)</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.607</u> min	Lon W 70 deg <u>16.617</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>-6049</u> min	Lon W 70 deg <u>-6113</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>135230</u>	DPH, m	Lat N 42 deg <u>10.617</u> min	Lon W 70 deg <u>16.6243</u> min	
Lo / Hi TIDE EST HH MM	Lo / Hi TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = _____ hrs	UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA	SAMPLE TYPES	
	sed grab	temp log
	sand lance	ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. <u>(n)</u>
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. <u>(n)</u>
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. <u>(n)</u>
	cunner	red hake		sand lance in water column y. <u>(n)</u>
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. <u>(n)</u>
	Didemnum cols			sand lance in sed-sample y. <u>(n)</u>
	dogfish			SL size: <u>sml</u> med lg
	Eucratea loricata	scallops		nos: <u>5</u>
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags <u>(y)</u> n
	flounder	✓ shells & fragments	<u>drdy / fl</u>	trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4437

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S12, CONSEC STA 17

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV Dec 1	JD EST 335	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: 2922 LO CAM: 9838
USGS STA 4438	SBNMS SITE S12	CONSEC. STATION 18	DAY - NIGHT	FWD HD- VIDEO FILE UP CAM: 370	GP STILLS FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD 2
GPS					
VIDEO ON SEABED / SMPL	EST HH MM SS (140400)	DPH, m 25	Lat N 42 deg 10.607 min	Lon W 70 deg 16.599 min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg -6059 min	Lon W 70 deg .5946 min	
VIDEO OFF SEABED / SMPL	EST HH MM SS 140434	DPH, m	Lat N 42 deg 10.6105 min	Lon W 70 deg 16.6036 min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+/- hrs
UTC = EST +5 HRS				CTD CAST NO.	

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab temp logr
			sand lance ctd upcast

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. (n)
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. (n)
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. (n)
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. n
	Didemnum cols			sand lance in sed sample y. n
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos: 13 ♀, 6 ♂ live, + 4 dead
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y. n
	flounder	✓ shells & fragments	dead fish	trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C ; Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site S12, CONSEC STA 18

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2923</u> LO CAM: <u>9839</u> GP STILLS FILE:
				FWD NON -HD VIDEO FILE UP CAM: <u>371</u>	
USGS STA <u>4439</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>19</u>	<u>DAY</u> - NIGHT		
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS <u>141920</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.633</u> min	Lon W 70 deg <u>16.615</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6310</u> min	Lon W 70 deg <u>.6097</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>141952</u>	DPH, m	Lat N 42 deg <u>10.6363</u> min	Lon W 70 deg <u>16.6175</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+ / - = <u> </u> hrs
				UTC = EST +5 HRS	CTD CAST NO.
NO SAMPLE pre-tripped; no smpl attempted; jaws partly open; washout; refusal; too gravelly/shelly; smpl too small					
TIDE AT SCITUATE MA			SAMPLE TYPES		
			sed grab <u> </u> temp logr <u> </u> sand lance <u> </u> did upcast <u> </u>		
		SEABED DESCRIPTION			
att epifauna	herring eggs	skate			
Boltenia tunic.	lobster	Suberites spg	storm ripples	y. (n)	
brachiopod	moon snail	squid	crests: sharp	rounded	
bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs	y. n	
juvenile cod	ocean pout	yellow encr. spg	small ripples	y. (n)	
cancer crab	Polymastia spg		sand partial veneer on gravel	y. n	
cod	red encr. spg		gravel pavement	y. n	
cunner	red hake		sand lance in water column	y. (n)	
dk yellow spg	✓ sand dollars		sand lance on/in substrate	y. n	
Didemnum cols			sand lance in sed sample	y. n	
dogfish			SL size: sml med lg		
Eucratea loricata	scallops		nos: <u>3/146 45</u>		
Filograna implexa	sculpin				
finger spg	sea stars		trawled/dredged shell frags	y. n	
flounder	✓ shells & fragments	<u>dogfish</u>	trawl/dredge marks	y. n	
haddock	silver hake		ambient light	y. n	

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description ✓ = in photo	Filename Auk2015074_sta_img #
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 19

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2924</u> LO CAM: <u>9840</u> GP STILL FILE:
USGS STA <u>4440</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>20</u>	DAY - NIGHT <u>DAY</u>		FWD NON-HD VIDEO FILE UP CAM: <u>372</u>
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u> NAV GPS
VIDEO ON SEABED / SMPL	EST HH MM SS <u>(143420)</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.611</u> min	Lon W 70 deg <u>16.606</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6102</u> min	Lon W 70 deg <u>.6024</u> min	
VIDEO OFF SEABED / SMPL	EST HH MM SS <u>143454</u>	DPH, m	Lat N 42 deg <u>10.6120</u> min	Lon W 70 deg <u>16.6072</u> min	
Lo / Hi HH MM	TIDE EST HH MM	Lo / Hi HH MM	TIDE EST HH MM	STA Lo / Hi HH MM	+ / - = <u> </u> hrs UTC = EST +5 HRS
					CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES sed grab <u> </u> temp logr <u> </u> sand lance <u> </u> ctd upcast <u> </u>

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. <u>n</u>
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. n
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. <u>n</u>
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. <u>n</u>
	Didemnum cols			sand lance in sed sample y. <u>n</u>
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos: <u>7 live 4 dead</u>
	Filograna implexa	sculpin		
	finger spg	sea stars		trawled/dredged shell frags y. <u>n</u>
	flounder	✓ shells & fragments	<u>drift / tv l</u>	trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C ; Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 20 **USGS STATION 4440**

CRUISE: USGS AUK2015074 SBNMS NOV 2015		DATE EST NOV <u>Dec 1</u>	JD EST <u>335</u>	NAV FILE NO.	GO PRO FWD HD VIDEO, FILE: UP CAM: <u>2925</u> LO CAM: <u>9841</u>
USGS STA <u>4441</u>	SBNMS SITE <u>512</u>	CONSEC. STATION <u>21</u>	<u>DAY - NIGHT</u>	FWD NON-HD VIDEO FILE UP CAM: <u>373</u>	GP STILL FILE:
VIDEO START AT SURFACE EDT HH MM SS		VIDEO END AT SURFACE EDT HH MM SS		Sunset: Nov 30, 2015 1613 EST = 2113 UTC	QUAD <u>2</u>
NAV GPS					
VIDEO ON SEABED <u>SMPL</u>	EST HH MM SS <u>145736</u>	DPH, m <u>25</u>	Lat N 42 deg <u>10.687</u> min	Lon W 70 deg <u>16.697</u> min	
SAMPLE	EST HH MM SS	DPH, m	Lat N 42 deg <u>.6824</u> min	Lon W 70 deg <u>.6876</u> min	
VIDEO OFF SEABED <u>SMPL</u>	EST HH MM SS <u>145810</u>	DPH, m	Lat N 42 deg <u>10.6913</u> min	Lon W 70 deg <u>16.7008</u> min	
Lo/Hi HH MM	TIDE EST HH MM	Lo/Hi HH MM	TIDE EST HH MM	STA Lo/Hi HH MM	+/- hrs
				UTC = EST +5 HRS	CTD CAST NO.

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

TIDE AT SCITUATE MA			SAMPLE TYPES
			sed grab <input checked="" type="checkbox"/> temp log <input checked="" type="checkbox"/> sand lance <input checked="" type="checkbox"/> ctd upcast <input checked="" type="checkbox"/>

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm ripples y. <u>n</u>
	brachiopod	moon snail	squid	crests: sharp rounded
	bushy bry/hyd	mussels	tunicate, B pilu.	gvl in ripple troughs y. n
	juvenile cod	ocean pout	yellow encr. spg	small ripples y. <u>n</u>
	cancer crab	Polymastia spg		sand partial veneer on gravel y. n
	cod	red encr. spg		gravel pavement y. n
	cunner	red hake		sand lance in water column y. n
	dk yellow spg	✓ sand dollars		sand lance on/in substrate y. n
	Didemnum cols			sand lance in sed sample y. n
	dogfish			SL size: sml med lg
	Eucratea loricata	scallops		nos: <u>31 req's</u> , <u>1 dead</u>
	Filograna implexa	sculpin		
	finger spg	✓ sea stars		trawled/dredged shell frags <u>y</u> n
	flounder	✓ shells & fragments	<u>hdy/trl</u>	trawl/dredge marks y. n
	haddock	silver hake		ambient light y. n

Temp (Onset Tidbit v2): Seabed deg C : Surface (-1 m) deg C : Difference deg C

DIGITAL VIDEO STILL PHOTOS: GO PRO (3, 3+) @ sec interval; No. of photos =

No.	Cumul. No.	Time (EDT) HH MM SS	JPG image #	DVD #	Description √ = in photo	Filename Auk2015074_sta_img #
1						
2						
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4						
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HEIGHT OF FWD UPPER GO PRO ABOVE SEABED = CM DISTANCE BETWEEN PARALLEL LASERS = 20 CM
HEIGHT OF FWD LOWER GO PRO ABOVE SEABED = CM

USGS STATION 4441

PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA SBNMS Site 512, CONSEC STA 21

