

AUK 2017-043

STA 4634-4674

CRUISE: USGS AUK2017043

LOCATION: STELLWAGEN BANK NMS

MONTH YEAR: AUGUST 2017

LOCAL TIME: EDT

DAY OF MONTH LOCAL

AUG

JD LOCAL

☐ DAY☐ NIGHTSunset: Aug 22, 2017
1934 EDT = 2334 UTC

DAY OF MONTH UTC

AUG

JD UTC

VIDEO FWD

FILE

UPPER CAMERA

VIDEO FWD

FILE

LOWER CAMERA

USGS STA

SBNMS SITE

CONSECUTIVE STA

QUAD

VIDEO
CLIP

<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> WATER COLUMN	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	-70 deg min (nav file corr min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	-70 deg min (nav file corr min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT <input type="checkbox"/> VIDEO END <input type="checkbox"/> OFF SEABED	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTC

DDD : HH : MM : SS

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT _____

LEFT _____

RT _____ + LFT _____ = _____

SAMPLES / DATA COLLECTED

☐ SEDIMENT ☐ CTD UPCAIST ☐ GPS NAV FILE
☐ SAND LANCE ☐ INVERTS ☐ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

USGS STATION _____

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

SBNMS Site _____, CONSEC STA _____

- Invertebrate samples, plankton samples, and sand lance samples retained by Anna Robuck, URI.

- Note mistaken longitude degree labels on logbook form: 42 should read -70

- Lat/lon positions corrected using GPS nav. file

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 22	JD LOCAL 234	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 22	JD UTC 234	VIDEO FWD UPPER CAMERA	FILE _____
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA	FILE _____
LOCAL TIME: EDT					
USGS STA 4634 PT	SBNMS SITE LSB9	CONSECUTIVE STA 1	QUAD 2	VIDEO CLIP —	
<input checked="" type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 084138	DPH, m 63	42 deg 08.947 min (nav file corr 08.9574 min)	-70 deg 24.513 min (nav file corr 24.5083 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 085018	DPH, m 63	42 deg 08.424 min (nav file corr 08.4314 min)	-70 deg 24.692 min (nav file corr 24.6880 min)
	<input type="checkbox"/> SAMPLE	HH MM SS LOCAL	DPH, m	42 deg min	42 deg 70 min
				(nav file corr min)	(nav file corr min)
				42 deg min	42 deg 70 min
				(nav file corr min)	(nav file corr min)
				42 deg min	42 deg 70 min
				(nav file corr min)	(nav file corr min)

The time and location of a plankton tow were recorded in the log book as a courtesy to a non-USGS scientist sharing the cruise. No data (e.g. video, CTD, sediment sample) collected for USGS science purposes at this station.

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS

234 12 41 38

☒ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

SAMPLES / DATA COLLECTED

RIGHT

LEFT

RT

+ LFT

=

☐ SEDIMENT

☐ CTD UPCAST

☐ GPS NAV FILE

☐ SAND LANCE

☐ INVERTS

☐ GRAB STILL

☐ VERT. PLNK. TOW

☐ NO INVERTS PRESENT

☐ WATER SPL

horiz pl. tow ~ surface 2m
30m beam Anna Robuck, URI

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Botenia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4634 PT

SBNMS Site LSB9, CONSEC STA 1

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 22	JD LOCAL 234	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 22	JD UTC 234	VIDEO FWD UPPER CAMERA <i>UP</i> FILE <i>malfunc.</i>	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA <i>LO</i> FILE <i>3969?</i>	
LOCAL TIME: EDT					
USGS STA 4636	SBNMS SITE L5B3	CONSECUTIVE STA 3	QUAD 2	VIDEO CLIP 34	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 094334	DPH, m 62	42 deg 6.586 min (nav file corr 06.5845 min)	-70 deg 23.891 min (nav file corr 23.8893 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 094604	DPH, m	42 deg min (nav file corr 06.6038 min)	-70 deg min (nav file corr 23.8885 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL 094800	DPH, m	42 deg 06.415 min (nav file corr min)	42 deg 23.880 min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 094740	DPH, m	42 deg 06.615 min (nav file corr 06.6142 min)	42 deg 23.882 min (nav file corr 23.8822 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTCDDD : HH : MM : SS
234 13 47 40

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 0 LEFT 0

SED VOL IN GRAB, liters

RT 5.4 + LFT 5.4 = 10.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

mud, soil burrows

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
finger spg	scallop		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> smf <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4636
 SBNMS Site L5B3, CONSEC STA 3

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 22	234	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 22	234	UPPER CAMERA	VP 1885
				VIDEO FWD	FILE
				LOWER CAMERA	LO 3970
USGS STA	4637	SBNMS SITE	LSB 2	CONSECUTIVE STA	4
				QUAD	2
				VIDEO CLIP	319
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 100706	DPH, m 61	42 deg 05.849 min (nav file corr 05.8472 min)	-70 deg 23.371 min (nav file corr 23.3725 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 160932	DPH, m	42 deg min (nav file corr 05.8688 min)	-70 deg min (nav file corr 23.3611 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 101108	DPH, m	42 deg 05.861 min (nav file corr 05.8806 min)	42 deg 23.352 min (nav file corr 23.3530 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
234 14 11 08

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 0 LEFT 0

SED VOL IN GRAB, liters

RT 5.4 + LFT 5.4 = 10.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

mud, small burrows

			SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples	<input type="checkbox"/> Y, <input type="checkbox"/> N
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
bushy bry/hyd	moon snail		gvl in ripple troughs	<input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples	<input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled	<input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel	<input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement	<input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders	<input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags	<input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks	<input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column	<input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate	<input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample	<input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg	
herring			SL nos:	
	<input checked="" type="checkbox"/> silver hake			

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

4637

SBNMS Site

LSB 2

CONSEC STA 4

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 22	234	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	UP FILE 1886
LOCAL TIME: EDT		AUG 22	234	UPPER CAMERA	
				VIDEO FWD	FILE 3971
				LOWER CAMERA	LO

USGS STA 4638	SBNMS SITE LSB1	CONSECUTIVE STA 5	QUAD 2	VIDEO CLIP 320
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<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 05.581 min	-70 deg 21.984 min
	<input type="checkbox"/> WATER COLUMN	103008	61	(nav file corr 05.5788 min)	(nav file corr 21.9861 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	-70 deg
	<input checked="" type="checkbox"/> ON SEABED	103230		(nav file corr 05.6004 min)	(nav file corr 21.9691 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg	42 deg
				(nav file corr min)	(nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 5.613 min	42 deg 21.956 min
	<input checked="" type="checkbox"/> VIDEO END	103350		(nav file corr 05.6119 min)	(nav file corr 21.9594 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg	42 deg
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
234 14 33 50

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 0 LEFT 0

RT 5.4 + LFT 5.4 = 10.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ OTU/STILLS
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL.

mud, fine huffs

	att epifauna	herring eggs	skate	SEABED DESCRIPTION
	Boltenia tunic.	lobster	Suberites spg	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
	brachiopod	monkfish	squid	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
	bushy bry/hyd	moon snail		<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
	cancer crab	mussels	tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
	ceri burr anem	ocean pout	yellow encr. spg	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
	cod; cod juvenile			sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
	ctenophores	Polymastia spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
	coralline algae	red encr. spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
	cunner	red hake		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
	dk yellow spg	sand dollars		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
	Didemnum cols		shells/fragments	trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
	dogfish			trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
	finger spg	scallops		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
	flounder	sculpin		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
	haddock	sea stars		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	herring			SL size: <input type="checkbox"/> sm <input type="checkbox"/> med <input type="checkbox"/> lg
		silver hake		SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

PAUL VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA

USGS STATION 4638

SBNMS Site LSB1, CONSEC STA 5

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 22	234	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 1887
LOCAL TIME: EDT		AUG 22	234	UPPER CAMERA	VP
				VIDEO FWD	FILE 3972
				LOWER CAMERA	LO
USGS STA 4639	SBNMS SITE LSB6	CONSECUTIVE STA 6	QUAD 2	VIDEO CLIP 321	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 105514	DPH, m 64	42 deg 6.914 min (nav file corr 06.9128 min)	-70 deg 21.650 min (nav file corr 21.6519 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 105720	DPH, m	42 deg min (nav file corr 06.9322 min)	-70 deg min (nav file corr 21.6404 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 105904	DPH, m	42 deg 6.944 min (nav file corr 06.9438 min)	42 deg 21.631 min (nav file corr 21.6320 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
234 14 59 04

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 0.5, LEFT 0.5

RT 5.1 + LFT 5.1 = 10.2

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

mud, burrows, lg + sm l

			SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N	
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N	
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N	
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N	
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N	
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N	
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N	
cunner	red hake		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N	
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N	
dogfish			sand lance in water column <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N	
finger spg	scal/ops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N	
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N	
haddock	sea stars		SL size: <input type="checkbox"/> smf <input type="checkbox"/> med <input type="checkbox"/> lg	
herring			SL nos:	
	silver hake			

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

4639
LSB6, CONSEC STA 6

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 22	JD LOCAL 234	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 22	JD UTC 234	VIDEO FWD UPPER CAMERA UP FILE 1888	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA LD FILE 3973	
LOCAL TIME: EDT					
USGS STA 4640	SBNMS SITE L5B5	CONSECUTIVE STA 7	QUAD 2	VIDEO CLIP 322	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 112102	DPH, m 64	42 deg 6.271 min (nav file corr 06.2685 min)	-70 deg 19.996 min (nav file corr 19.9963 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 112312	DPH, m	42 deg min (nav file corr 06.3030 min)	-70 deg min (nav file corr 19.9953 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT <input type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 112458	DPH, m	42 deg 6.324 min (nav file corr 06.3226 min)	42 deg 19.998 min (nav file corr 19.9986 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS STATION DATE AND TIME, UTC DDD : HH : MM : SS
234 15 24 58

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm RIGHT 0.5 LEFT 0.5	SED VOL IN GRAB, liters RT 5.1 + LFT 5.1 = 10.2	SAMPLES / DATA COLLECTED <input checked="" type="checkbox"/> SEDIMENT <input checked="" type="checkbox"/> CTD UPCAST <input checked="" type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input type="checkbox"/> GRAB STILLs <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL
mud, gravel		

			SEABED DESCRIPTION
<input type="checkbox"/> att epifauna	<input type="checkbox"/> herring eggs	<input type="checkbox"/> skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Botlenia tunic.	<input type="checkbox"/> lobster	<input type="checkbox"/> Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input type="checkbox"/> brachiopod	<input type="checkbox"/> monkfish	<input type="checkbox"/> squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input type="checkbox"/> bushy bry/hyd	<input type="checkbox"/> moon snail	<input type="checkbox"/> tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	<input type="checkbox"/> mussels	<input type="checkbox"/> yellow encr. spg	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ceri burr anem	<input type="checkbox"/> ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ctenophores	<input type="checkbox"/> Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> coralline algae	<input type="checkbox"/> red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cunner	<input type="checkbox"/> red hake		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dk yellow spg	<input type="checkbox"/> sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Didemnum cols		<input type="checkbox"/> shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> finger spg	<input type="checkbox"/> scallops	<input type="checkbox"/> hake	sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> flounder	<input type="checkbox"/> sculpin	<input type="checkbox"/> school	sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> haddock	<input type="checkbox"/> sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
<input type="checkbox"/> herring			SL nos:
	<input type="checkbox"/> silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM
PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA

USGS STATION 4640

SBNMS Site L5B5, CONSEC STA 7

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 22	234	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 1889
LOCAL TIME: EDT		AUG 22	234	UPPER CAMERA	OP
				VIDEO FWD	FILE 3974
				LOWER CAMERA	LO
USGS STA 4641	SBNMS SITE LSB4	CONSECUTIVE STA 8	QUAD 2	VIDEO CLIP 323	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 114242	DPH, m 62	42 deg 5.370 min (nav file corr 05.3684 min)	-70 deg 19.546 min (nav file corr 19.5450 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 114506	DPH, m	42 deg min (nav file corr 05.4041 min)	-70 deg min (nav file corr 19.5436 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 114640	DPH, m	42 deg 5.425 min (nav file corr 05.4242 min)	42 deg 19.541 min (nav file corr 19.5410 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS STATION DATE AND TIME, UTC DDD : HH : MM : SS
234 15 46 40

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm RIGHT 0 LEFT 0	SED VOL IN GRAB, liters RT 5.4 + LFT 5.4 = 10.8	SAMPLES / DATA COLLECTED <input checked="" type="checkbox"/> SEDIMENT <input checked="" type="checkbox"/> CTD UPCAST <input checked="" type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input type="checkbox"/> GRAB STILL <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL
mud, sm / burr		

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Bollenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 22		JD LOCAL 234		<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT		Sunset: Aug 22, 2017 1934 EDT = 2334 UTC	
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 22		JD UTC 234		VIDEO FWD UP FILE 1890 UPPER CAMERA VIDEO FWD LO FILE 3975 LOWER CAMERA			
MONTH YEAR: AUGUST 2017									
LOCAL TIME: EDT									
USGS STA 4642		SBNMS SITE LSB 12		CONSECUTIVE STA 9		QUAD 2		VIDEO CLIP 324	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 120836		DPH, m 66		42 deg 7.322 min (nav file corr 07.3194 min)		-70 deg 8.234 min (nav file corr 18.2357 min)	
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 121102		DPH, m		42 deg min (nav file corr 07.3631 min)		-70 deg min (nav file corr 18.2180 min)	
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL		DPH, m		42 deg min (nav file corr min)		42 deg min (nav file corr min)	
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 121220		DPH, m		42 deg 7.377 min (nav file corr 07.3768 min)		42 deg 18.217 min (nav file corr 18.2176 min)	
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL		DPH, m		42 deg min (nav file corr min)		42 deg min (nav file corr min)	

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTCDDD : HH : MM : SS
234 16 12 20

☐ **NO SEDIMENT SAMPLE:** ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 2, LEFT 2SED VOL IN GRAB, liters
RT 4.5 + LFT 4.5 = 9.0**SAMPLES / DATA COLLECTED**

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

mud, burr				SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N		
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
<input checked="" type="checkbox"/> ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N		
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N		
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N		
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N		
cunner	red hake		mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N		
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N		
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N		
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N		
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N		
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		
herring			SL nos:		
	silver hake				

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4642**SBNMS Site** LSB 12, **CONSEC STA** 9

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 22	234	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 22	234	UPPER CAMERA	UP 1891
				VIDEO FWD	FILE
				LOWER CAMERA	LO 3976
USGS STA	4643	SBNMS SITE	LSB 11	CONSECUTIVE STA	10
QUAD	2	VIDEO CLIP	325		
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 123046	DPH, m 65	42 deg 6.723 min (nav file corr 06.7197 min)	-70 deg 18.217 min (nav file corr 18.2203 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 123254	DPH, m	42 deg 0.457 min (nav file corr 06.7685 min)	-70 deg 1.103 min (nav file corr 18.1994 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 123420	DPH, m	42 deg 6.793 min (nav file corr 06.7915 min)	42 deg 18.187 min (nav file corr 18.1891 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
234 16 34 20

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 1, LEFT 1SED VOL IN GRAB, liters
RT 4.9, LFT 4.9, 9.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	<input checked="" type="checkbox"/> lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input checked="" type="checkbox"/> ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4643

SBNMS Site LSB 11, CONSEC STA 10

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	malfunc
				VIDEO FWD	FILE
				LOWER CAMERA	3977

USGS STA 4644	SBNMS SITE LSB10	CONSECUTIVE STA 11	QUAD 2	VIDEO CLIP 326
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<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 6.073 min	-70 deg 17.005 min
	<input checked="" type="checkbox"/> WATER COLUMN	094606	63	(nav file corr 06.0727 min)	(nav file corr 17.0077 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg min	-70 deg min
	<input checked="" type="checkbox"/> ON SEABED	094804		(nav file corr 06.0737 min)	(nav file corr 16.9878 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 06.068 min	42 deg 16.983 min
	<input checked="" type="checkbox"/> VIDEO END	094940		(nav file corr 06.0677 min)	(nav file corr 16.9855 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 13 49 40

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 0.5 LEFT 0.5

RT 5.1 + LFT 5.1 = 10.2

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☐ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

muddy; tubes, smpl rips

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltonia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	muddy <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	✓ silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4644

SBNMS Site LSB10, CONSEC STA 11

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA UP FILE 1893	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA LD FILE 3978	
LOCAL TIME: EDT					
USGS STA 4645	SBNMS SITE R28	CONSECUTIVE STA 12	QUAD 2	VIDEO CLIP 327	
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 101224	DPH, m 61	42 deg 5.101 min (nav file corr 05.1027 min)	-70 deg 14.555 min (nav file corr 14.5514 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 101450	DPH, m	42 deg min (nav file corr 05.0783 min)	-70 deg min (nav file corr 14.5872 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 101546	DPH, m	42 deg 5.070 min (nav file corr 05.0709 min)	42 deg 14.597 min (nav file corr 14.5956 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
UTC = EDT + 4 HRS, EST + 5 HRS		STATION DATE AND TIME, UTC		DDD : HH : MM : SS 235 14 15 46	

<input type="checkbox"/> NO SEDIMENT SAMPLE: <input type="checkbox"/> pre-tripped; <input type="checkbox"/> no smpl attempted; <input type="checkbox"/> jaws partly open; <input type="checkbox"/> washout; <input type="checkbox"/> refusal; <input type="checkbox"/> too gravelly/shelly; <input type="checkbox"/> smpl too small; <input type="checkbox"/> grvl in jaws;					
DPH TO SED SURF IN GRAB, cm RIGHT 7 LEFT		SED VOL IN GRAB, liters RT 2.3 + LFT 1.9 = 4.2		SAMPLES / DATA COLLECTED	
				<input checked="" type="checkbox"/> SEDIMENT <input type="checkbox"/> STD UPGRADE <input checked="" type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input checked="" type="checkbox"/> GRAB STILL <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL	
r. piled clean sand; 1 gwr bedforms					
			SEABED DESCRIPTION		
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N		
cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N		
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N		
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N		
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N		
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N		
dk yellow spg	<input checked="" type="checkbox"/> sand dollars ab		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N		
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N		
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N		
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N		
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N		
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		
herring			SL nos:		
	silver hake				

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site R28, CONSEC STA 12

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA <i>UP</i> FILE 1894	VIDEO FWD LOWER CAMERA <i>LD</i> FILE 3979
MONTH YEAR: AUGUST 2017					
LOCAL TIME: EDT					
USGS STA <i>4646</i>	SBNMS SITE <i>R27</i>	CONSECUTIVE STA <i>13</i>	QUAD <i>2</i>	VIDEO CLIP <i>328</i>	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input type="checkbox"/> WATER COLUMN	HH MM SS LOCAL <i>103146</i>	DPH, m <i>58</i>	42 deg <i>5.539</i> min (nav file corr <i>05.5386</i> min)	-70 deg <i>13.567</i> min (nav file corr <i>13.5640</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL <i>103348</i>	DPH, m	42 deg min (nav file corr <i>05.5372</i> min)	-70 deg min (nav file corr <i>13.5916</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL <i>003648</i>	DPH, m	42 deg <i>5.537</i> min (nav file corr <i>05.5369</i> min)	42 deg <i>13.627</i> min (nav file corr <i>13.6248</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 14 36 48

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT *3.5* LEFT *4*SED VOL IN GRAB, liters
RT *3.8* + LFT *3.6* = *7.4*

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☐ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☐ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail	tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	yellow encr. spg	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	<input checked="" type="checkbox"/> sand dollars <i>V. alb</i>		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

*4646*SBNMS Site *R27*, CONSEC STA *13*

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	UP FILE
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD	FILE
				LOWER CAMERA	LD FILE 3980
USGS STA 4647	SBNMS SITE R12	CONSECUTIVE STA 14	QUAD 2	VIDEO CLIP 329	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 105352	DPH, m 64	42 deg 6.282 min (nav file corr 06.2822 min)	-70 deg 15.476 min (nav file corr 15.4762 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 105600	DPH, m	42 deg min (nav file corr 06.2917 min)	-70 deg min (nav file corr 15.4809 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 105716	DPH, m	42 deg 6.296 min (nav file corr 06.2953 min)	42 deg 15.484 min (nav file corr 15.4835 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 14 57 16

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 9.5 LEFT 8

RT 1.3 + LFT 1.9 = 3.2

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
brachiopod	monkfish	squid	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
bushy bry/hyd	moon snail		<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	small ripples <i>intermitt</i> <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
	silver hake		SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4647
SBNMS Site R12, CONSEC STA 14

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA TOP FILE malfunc.	VIDEO FWD LOWER CAMERA 20 FILE 3981
MONTH YEAR: AUGUST 2017					
LOCAL TIME: EDT					
USGS STA 4648	SBNMS SITE RL3	CONSECUTIVE STA 15	QUAD 2	VIDEO CLIP 330	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 11 08 36	DPH, m 64	42 deg 06.810 min (nav file corr 06.8094 min)	-70 deg 15.437 min (nav file corr 15.4354 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 11 10 32	DPH, m	42 deg min (nav file corr 06.8181 min)	-70 deg min (nav file corr 15.4413 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 11 12 22	DPH, m	42 deg 06.829 min (nav file corr 06.8285 min)	42 deg 15.454 min (nav file corr 15.4511 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 15 12 22

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 9 LEFT 8.5

RT 1.5 + LFT 1.7 = 3.2

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

vip sand				SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N		
✓ cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N		
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N		
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N		
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N		
cunner	✓ red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N		
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N		
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N		
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N		
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N		
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		
herring			SL nos:		
	silver hake				

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

4648

SBNMS Site

RL3, CONSEC STA 15

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA UP	FILE 1895
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA LO	FILE 3982
USGS STA 4649		SBNMS SITE R15		CONSECUTIVE STA 16	QUAD 2
				VIDEO CLIP 331	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 112456	DPH, m 63	42 deg 7.306 min (nav file corr 07.3054 min)	-70 deg 16.650 min (nav file corr 16.6491 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 112644	DPH, m	42 deg min (nav file corr 07.3142 min)	-70 deg min (nav file corr 16.6591 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 112754	DPH, m	42 deg 7.316 min (nav file corr 07.3153 min)	42 deg 16.665 min (nav file corr 16.6643 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS STATION DATE AND TIME, UTC DDD : HH : MM : SS
235 15 27 54

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm RIGHT 10.5 LEFT 26	SED VOL IN GRAB, liters RT 1.0 + LFT 2.7 = 3.7	SAMPLES / DATA COLLECTED	
		<input checked="" type="checkbox"/> SEDIMENT	<input checked="" type="checkbox"/> CTD UPCAST
		<input type="checkbox"/> SAND LANCE	<input checked="" type="checkbox"/> GPS NAV FILE
		<input checked="" type="checkbox"/> INVERTS	<input type="checkbox"/> GRAB STILL
		<input type="checkbox"/> VERT. PLNK. TOW	<input type="checkbox"/> NO INVERTS PRESENT
		<input type="checkbox"/> WATER SPL	

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples ? <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	<input checked="" type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4649

SBNMS Site R15, CONSEC STA 16

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA <i>UP</i> FILE 1896	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA <i>LO</i> FILE 3983	
LOCAL TIME: EDT					
USGS STA 4650	SBNMS SITE R14	CONSECUTIVE STA 17	QUAD 2	VIDEO CLIP 332	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 113804	DPH, m 62	42 deg 7.323 min (nav file corr 07.3227 min)	-70 deg 15.866 min (nav file corr 15.8649 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 113948	DPH, m	42 deg min (nav file corr 07.3317 min)	-70 deg min (nav file corr 15.8690 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 114242	DPH, m	42 deg 7.345 min (nav file corr 07.3451 min)	42 deg 15.862 min (nav file corr 15.8813 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 15 42 42

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 7, LEFT 7SED VOL IN GRAB, liters
RT 2.3 + LFT 2.3 = 4.6

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

alt epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltonia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input checked="" type="checkbox"/> ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <i>intermitt</i> <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	<input checked="" type="checkbox"/> scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

SBNMS Site

USGS STATION

4650 R14, CONSEC STA 17

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UP FILE 1897	
MONTH YEAR: AUGUST 2017				VIDEO FWD LO FILE 3984	
LOCAL TIME: EDT					
USGS STA 4651	SBNMS SITE R24	CONSECUTIVE STA 18	QUAD 2	VIDEO CLIP 333	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 115602	DPH, m 58	42 deg 7.271 min (nav file corr 07.2712 min)	-70 deg 14.188 min (nav file corr 14.1887 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 115738	DPH, m	42 deg min (nav file corr 07.2873 min)	-70 deg min (nav file corr 14.1811 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 115948	DPH, m	42 deg 7.296 min (nav file corr 07.2960 min)	42 deg 14.187 min (nav file corr 14.1867 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
UTC = EDT + 4 HRS, EST + 5 HRS		STATION DATE AND TIME, UTC		DDD : HH : MM : SS 235 15 59 48	

<input type="checkbox"/> NO SEDIMENT SAMPLE: <input type="checkbox"/> pre-tripped; <input type="checkbox"/> no smpl attempted; <input type="checkbox"/> jaws partly open; <input type="checkbox"/> washout; <input type="checkbox"/> refusal; <input type="checkbox"/> too gravelly/shelly; <input type="checkbox"/> smpl too small; <input type="checkbox"/> grvl in jaws;					
DPH TO SED SURF IN GRAB, cm RIGHT 9.5 LEFT 10.5		SED VOL IN GRAB, liters RT 1.3 + LFT 1.0 = 2.3		SAMPLES / DATA COLLECTED	
intermitt v-p sand / csl hld grvl		<input checked="" type="checkbox"/> SEDIMENT <input checked="" type="checkbox"/> CTD UPGRADE <input checked="" type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input checked="" type="checkbox"/> GRAB STILL <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL			
		SEABED DESCRIPTION			
		storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded <input type="checkbox"/> straight <input type="checkbox"/> multi-rippled gvt in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N boulders <input type="checkbox"/> Y, <input type="checkbox"/> N mud <input type="checkbox"/> Y, <input type="checkbox"/> N trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg SL nos:			
att epifauna	herring eggs	skate			
Boltonia tunic.	lobster	Suberites spg			
brachiopod	monkfish	squid			
bushy bry/hyd	moon snail				
cancer crab	mussels	tunicate, B pilu.			
ceri burr anem	ocean pout	yellow encr. spg			
cod; cod juvenile					
ctenophores	Polymastia spg				
coralline algae	red encr. spg				
cunner	red hake				
dk yellow spg	sand dollars				
Didemnum cots		shells/fragments			
dogfish					
finger spg	scallops				
flounder	sculpin				
haddock	sea stars				
herring					
	silver hake				

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4651

SBNMS Site R24, CONSEC STA 18

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA UP FILE malfunc.	VIDEO FWD LOWER CAMERA 40 FILE 3985
MONTH YEAR: AUGUST 2017					
LOCAL TIME: EDT					
USGS STA 4652	SBNMS SITE R23	CONSECUTIVE STA 19	QUAD 2	VIDEO CLIP 334	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 120920	DPH, m 58	42 deg 7.246 min (nav file corr 07.2448 min)	-70 deg 13.610 min (nav file corr 13.6102 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 121102	DPH, m	42 deg min (nav file corr 07.2598 min)	-70 deg min (nav file corr 13.6043 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 121312	DPH, m	42 deg 7.263 min (nav file corr 07.2627 min)	42 deg 13.618 min (nav file corr 13.6176 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 16 13 12

☒ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☒ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT /

LEFT /

RT /

+LFT /

= /

rup sand / pc G

SAMPLES / DATA COLLECTED

☐ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☐ INVERTS ☐ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
<input type="checkbox"/> att epifauna	<input type="checkbox"/> herring eggs	<input type="checkbox"/> skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Botlenia tunic.	<input type="checkbox"/> lobster	<input type="checkbox"/> Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input type="checkbox"/> brachiopod	<input type="checkbox"/> monkfish	<input type="checkbox"/> squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input type="checkbox"/> bushy bry/hyd	<input type="checkbox"/> moon snail	<input type="checkbox"/> tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	<input type="checkbox"/> mussels	<input type="checkbox"/> yellow encr. spg	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ceri burr anem	<input type="checkbox"/> ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ctenophores	<input type="checkbox"/> Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> coralline algae	<input type="checkbox"/> red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cunner	<input checked="" type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dk yellow spg	<input type="checkbox"/> sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Didemnum cols		<input type="checkbox"/> shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> finger spg	<input type="checkbox"/> scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> flounder	<input type="checkbox"/> sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> haddock	<input type="checkbox"/> sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
<input type="checkbox"/> herring			SL nos:
	<input type="checkbox"/> silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4652

SBNMS Site R23

CONSEC STA 19

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA <i>VP</i> FILE <i>malFunc</i>	
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA <i>LO</i> FILE 3986	
USGS STA 4653	SBNMS SITE R26	CONSECUTIVE STA 20	QUAD 2	VIDEO CLIP 335	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 124140	DPH, m 56	42 deg 8.094 min (nav file corr 08.0938 min)	-70 deg 13.614 min (nav file corr 13.6189 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 124322	DPH, m	42 deg min (nav file corr 08.0982 min)	-70 deg min (nav file corr 13.5963 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 124550	DPH, m	42 deg 8.164 min (nav file corr 08.1037 min)	42 deg 13.580 min (nav file corr 13.5820 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
UTC = EDT + 4 HRS, EST + 5 HRS		STATION DATE AND TIME, UTC		DDD : HH : MM : SS 235 16 45 50	

<input type="checkbox"/> NO SEDIMENT SAMPLE: <input type="checkbox"/> pre-tripped; <input type="checkbox"/> no smpl attempted; <input type="checkbox"/> jaws partly open; <input type="checkbox"/> washout; <input type="checkbox"/> refusal; <input type="checkbox"/> too gravelly/shelly; <input type="checkbox"/> smpl too small; <input type="checkbox"/> grvl in jaws;																																																																																														
DPH TO SED SURF IN GRAB, cm		SED VOL IN GRAB, liters		SAMPLES / DATA COLLECTED																																																																																										
RIGHT 8	LEFT 8.5	RT 1.9 + LFT 1.7 = 3.6		<input checked="" type="checkbox"/> SEDIMENT <input checked="" type="checkbox"/> CTD UPCAST <input checked="" type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input checked="" type="checkbox"/> GRAB STILL <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL																																																																																										
intermittent rip sand																																																																																														
<table border="1"> <tr> <td>att epifauna</td> <td>herring eggs</td> <td>skate</td> </tr> <tr> <td>Boltenia tunic.</td> <td>lobster</td> <td>Suberites spg</td> </tr> <tr> <td>brachiopod</td> <td>monkfish</td> <td>squid</td> </tr> <tr> <td>bushy bry/hyd</td> <td>moon snail</td> <td></td> </tr> <tr> <td>cancer crab</td> <td>mussels</td> <td>tunicate, B pilu.</td> </tr> <tr> <td>ceri burr anem</td> <td>ocean pout</td> <td>yellow encr. spg</td> </tr> <tr> <td>cod; cod juvenile</td> <td></td> <td></td> </tr> <tr> <td>ctenophores</td> <td>Polymastia spg</td> <td></td> </tr> <tr> <td>coralline algae</td> <td>red encr. spg</td> <td></td> </tr> <tr> <td>cunner</td> <td>red hake</td> <td></td> </tr> <tr> <td>dk yellow spg</td> <td>sand dollars</td> <td></td> </tr> <tr> <td>Didemnum cols</td> <td></td> <td>shells/fragments</td> </tr> <tr> <td>dogfish</td> <td></td> <td></td> </tr> <tr> <td>finger spg</td> <td>scallops</td> <td></td> </tr> <tr> <td>flounder</td> <td>sculpin</td> <td></td> </tr> <tr> <td>haddock</td> <td>sea stars</td> <td></td> </tr> <tr> <td>herring</td> <td></td> <td></td> </tr> <tr> <td></td> <td>silver hake</td> <td></td> </tr> </table>			att epifauna	herring eggs	skate	Boltenia tunic.	lobster	Suberites spg	brachiopod	monkfish	squid	bushy bry/hyd	moon snail		cancer crab	mussels	tunicate, B pilu.	ceri burr anem	ocean pout	yellow encr. spg	cod; cod juvenile			ctenophores	Polymastia spg		coralline algae	red encr. spg		cunner	red hake		dk yellow spg	sand dollars		Didemnum cols		shells/fragments	dogfish			finger spg	scallops		flounder	sculpin		haddock	sea stars		herring				silver hake		<table border="1"> <tr> <th colspan="2">SEABED DESCRIPTION</th> </tr> <tr> <td>storm sand ripples</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded</td> <td></td> </tr> <tr> <td><input type="checkbox"/> straight <input type="checkbox"/> multi-rippled</td> <td></td> </tr> <tr> <td>gvl in ripple troughs</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>small ripples <i>int</i></td> <td><input checked="" type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>sand, unrippled</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>sand partial veneer on gravel</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>gravel pavement</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>boulders</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>mud</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>trawled/dredged shell frags</td> <td><input checked="" type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>trawl/dredge marks</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>sand lance in water column</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>sand lance on/in substrate</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>sand lance in sed sample</td> <td><input type="checkbox"/> Y, <input type="checkbox"/> N</td> </tr> <tr> <td>SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg</td> <td></td> </tr> <tr> <td>SL nos:</td> <td></td> </tr> </table>		SEABED DESCRIPTION		storm sand ripples	<input type="checkbox"/> Y, <input type="checkbox"/> N	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		gvl in ripple troughs	<input type="checkbox"/> Y, <input type="checkbox"/> N	small ripples <i>int</i>	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	sand, unrippled	<input type="checkbox"/> Y, <input type="checkbox"/> N	sand partial veneer on gravel	<input type="checkbox"/> Y, <input type="checkbox"/> N	gravel pavement	<input type="checkbox"/> Y, <input type="checkbox"/> N	boulders	<input type="checkbox"/> Y, <input type="checkbox"/> N	mud	<input type="checkbox"/> Y, <input type="checkbox"/> N	trawled/dredged shell frags	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	trawl/dredge marks	<input type="checkbox"/> Y, <input type="checkbox"/> N	sand lance in water column	<input type="checkbox"/> Y, <input type="checkbox"/> N	sand lance on/in substrate	<input type="checkbox"/> Y, <input type="checkbox"/> N	sand lance in sed sample	<input type="checkbox"/> Y, <input type="checkbox"/> N	SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		SL nos:	
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gvl in ripple troughs	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
small ripples <i>int</i>	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
sand, unrippled	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
sand partial veneer on gravel	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
gravel pavement	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
boulders	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
mud	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
trawled/dredged shell frags	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
trawl/dredge marks	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
sand lance in water column	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
sand lance on/in substrate	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
sand lance in sed sample	<input type="checkbox"/> Y, <input type="checkbox"/> N																																																																																													
SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg																																																																																														
SL nos:																																																																																														

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4653
 SBNMS Site R26, CONSEC STA 20

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA <i>UP. FILE malfunc</i>	
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA <i>LD FILE 3987</i>	
USGS STA	4654	SBNMS SITE	R 25	CONSECUTIVE STA	21
QUAD	2	VIDEO CLIP	336		
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	8.142 min
	<input checked="" type="checkbox"/> WATER COLUMN	125806	56	(nav file corr	08.1414 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	min
	<input checked="" type="checkbox"/> ON SEABED	125954		(nav file corr	08.1583 min)
	<input type="checkbox"/> SMPL ATTEMPT			(nav file corr	14.3375 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg	min
		1		(nav file corr	min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg	08.170 min
	<input checked="" type="checkbox"/> VIDEO END	130142		(nav file corr	08.1690 min)
	<input checked="" type="checkbox"/> OFF SEABED			(nav file corr	14.3232 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg	min
				(nav file corr	min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 17 01 42

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 10.5 LEFT 10.5

SED VOL IN GRAB, liters
RT 1.0 + LFT 1.0 = 2.0

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ STD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

125 v-p sand,

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
brachiopod	monkfish	squid	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
bushy bry/hyd	moon snail		<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
cancer crab	mussels	tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	small ripples <i>197</i> <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
	silver hake		SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4654

SBNMS Site R25, CONSEC STA 21

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	JP walfunc
				VIDEO FWD	FILE
				LOWER CAMERA	LO 3988
USGS STA	4655	SBNMS SITE	R18	CONSECUTIVE STA	22
				QUAD	2
				VIDEO CLIP	337
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 131558	DPH, m 58	42 deg 8.081 min (nav file corr 08.0791 min)	-70 deg 15.281 min (nav file corr 15.2929 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 131744	DPH, m	42 deg min (nav file corr 08.0979 min)	-70 deg min (nav file corr 15.2797 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 131924	DPH, m	42 deg 6.109 min (nav file corr 08.1080 min)	42 deg 15.279 min (nav file corr 15.2790 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 17 19 24

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 10.5 LEFT 8.5

RT 1.0 + LFT 1.7 = 2.7

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

sand, int rips

			SEABED DESCRIPTION	
att epifauna	<input checked="" type="checkbox"/>	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	<input checked="" type="checkbox"/>	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod		monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd		moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab		mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> ceri burr anem		ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile				sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores		Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae		red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	<input checked="" type="checkbox"/>	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg		sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols			shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish				sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg		scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	<input checked="" type="checkbox"/>	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock		sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring				SL nos:
	<input checked="" type="checkbox"/>	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M. MAX DEPTH = 15 CM. VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

CONSEC STA

4655

R18

22

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA <i>UP</i> FILE <i>malfunc</i>	FILE <i>malfunc</i>
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA <i>LO</i> FILE <i>malfunc</i>	
LOCAL TIME: EDT					
USGS STA <i>4656</i>	SBNMS SITE <i>R17</i>	CONSECUTIVE STA <i>23</i>		QUAD <i>2</i>	VIDEO CLIP <i>338</i>
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL <i>133424</i>	DPH, m <i>60</i>	42 deg <i>8.138</i> min (nav file corr <i>08.1371</i> min)	-70 deg <i>16.293</i> min (nav file corr <i>16.2946</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL <i>133610</i>	DPH, m	42 deg min (nav file corr <i>08.1522</i> min)	-70 deg min (nav file corr <i>16.2811</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL <i>133832</i>	DPH, m	42 deg <i>8.172</i> min (nav file corr <i>08.1702</i> min)	42 deg <i>16.265</i> min (nav file corr <i>16.2675</i> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 17 38 32

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm RIGHT <i>11</i> LEFT <i>10</i>	SED VOL IN GRAB, liters RT <i>0.8</i> + LFT <i>1.2</i> = <i>2.0</i>	SAMPLES / DATA COLLECTED	
<i>rip sand</i>		<input checked="" type="checkbox"/> SEDIMENT	<input checked="" type="checkbox"/> CTD UPCAST
		<input type="checkbox"/> SAND LANCE	<input checked="" type="checkbox"/> GPS NAV FILE
		<input checked="" type="checkbox"/> INVERTS	<input checked="" type="checkbox"/> GRAB STILL
		<input type="checkbox"/> VERT. PLNK. TOW	<input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION *4656*
 SBNMS Site *R17*, CONSEC STA *23*

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA VP	malfunc
				VIDEO FWD	FILE
				LOWER CAMERA	3989
USGS STA	4657	SBNMS SITE	R16	CONSECUTIVE STA	24
QUAD	2	VIDEO CLIP	339		
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 8.028 min	-70 deg 17.281 min
	<input checked="" type="checkbox"/> WATER COLUMN	135304	63	(nav file corr 08.0264 min)	(nav file corr 17.2844 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	-70 deg
	<input checked="" type="checkbox"/> ON SEABED	135450		(nav file corr 08.0460 min)	(nav file corr 17.2667 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 08.052 min	42 deg 17.257 min
		135524		(nav file corr 08.0509 min)	(nav file corr 17.2606 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 08.058 min	42 deg 17.249 min
	<input checked="" type="checkbox"/> VIDEO END	135620		(nav file corr 08.0575 min)	(nav file corr 17.2515 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg	42 deg
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 17 55 24

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 7 LEFT 9

RT 2.3 + LFT 1.5 = 3.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

v. rip sand		v. little brk sh	
att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltonia tunic.	lobster	Suberites spg	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
brachiopod	monkfish	squid	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
bushy bry/hyd	moon snail		<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
cancer crab	mussels	tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
	✓ silver hake		SL nos.

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4657

SBNMS Site R16, CONSEC STA 24

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA 0P FILE 7120 VIDEO FWD LOWER CAMERA LO FILE 3990	
MONTH YEAR: AUGUST 2017					
LOCAL TIME: EDT					
USGS STA 4658	SBNMS SITE LSB 13	CONSECUTIVE STA 25		QUAD 2	VIDEO CLIP 340
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 1411 24	DPH, m 60	42 deg 7.917 min (nav file corr 07.9161 min)	-70 deg 18.637 min (nav file corr 18.6399 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 1413 16	DPH, m	42 deg min (nav file corr 07.9363 min)	-70 deg min (nav file corr 18.6206 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 1414 28	DPH, m	42 deg 7.947 min (nav file corr 07.9459 min)	42 deg 18.604 min (nav file corr 18.6062 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTC

DDD : HH : MM : SS

235 19 14 28

☐ **NO SEDIMENT SAMPLE:** ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

RIGHT 2

LEFT 4

SED VOL IN GRAB, liters

RT 4.5 + LFT 3.6 = 8.1

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	<input checked="" type="checkbox"/> red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars	<input checked="" type="checkbox"/> burrows	boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	<input checked="" type="checkbox"/> scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring	<input checked="" type="checkbox"/> silver hake		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
			SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4658

SBNMS Site LSB13, CONSEC STA 25

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	7121
				VIDEO FWD	FILE
				LOWER CAMERA	3991
USGS STA	4659	SBNMS SITE	R1	CONSECUTIVE STA	26
				QUAD	2
				VIDEO CLIP	341
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 142730	DPH, m 54	42 deg 8.767 min (nav file corr 08.7665 min)	-70 deg 17.728 min (nav file corr 17.7280 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 142902	DPH, m	42 deg min (nav file corr 08.7720 min)	-70 deg min (nav file corr 17.7169 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 143046	DPH, m	42 deg 6.786 min (nav file corr 08.7852 min)	42 deg 17.694 min (nav file corr 17.6969 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 18 30 46

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 10, LEFT 5

RT 1.2 + LFT 3.1 = 4.3

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
<input type="checkbox"/> att epifauna	<input type="checkbox"/> herring eggs	<input type="checkbox"/> skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Boltenia tunic.	<input type="checkbox"/> lobster	<input type="checkbox"/> Subentes spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input type="checkbox"/> brachiopod	<input type="checkbox"/> monkfish	<input type="checkbox"/> squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input type="checkbox"/> bushy bry/hyd	<input type="checkbox"/> moon snail	<input type="checkbox"/> tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	<input type="checkbox"/> mussels	<input type="checkbox"/> yellow encr. spg	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ceri burr anem	<input type="checkbox"/> ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ctenophores	<input type="checkbox"/> Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> coralline algae	<input type="checkbox"/> red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cunner	<input type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dk yellow spg	<input type="checkbox"/> sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Didemnum cols		<input type="checkbox"/> shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> finger spg	<input checked="" type="checkbox"/> scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> flounder	<input type="checkbox"/> sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> haddock	<input type="checkbox"/> sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
<input type="checkbox"/> herring	<input checked="" type="checkbox"/> silver hake		SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4659
SBNMS Site R1, CONSEC STA 26

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA VP	7122
				VIDEO FWD	FILE
				LOWER CAMERA LD	3992
USGS STA 4660	SBNMS SITE R3	CONSECUTIVE STA 27		QUAD 2	VIDEO CLIP 342
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 9.117 min	-70 deg 17.167 min
	<input checked="" type="checkbox"/> WATER COLUMN	144024	56	(nav file corr 09.1168 min)	(nav file corr 17.1707 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg min	-70 deg min
	<input checked="" type="checkbox"/> ON SEABED	144116		(nav file corr 09.1201 min)	(nav file corr 17.1567 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
	<input type="checkbox"/> SAMPLE ATTEMPT			(nav file corr min)	(nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 9.130 min	42 deg 17.131 min
	<input checked="" type="checkbox"/> VIDEO END	144244		(nav file corr 09.1299 min)	(nav file corr 17.1342 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTC

DDD : HH : MM : SS

235 18 42 44

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 7.5 LEFT 7.5

SED VOL IN GRAB, liters
RT 2.1 + LFT 2.1 = 4.2

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

rip smd			SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N	
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N	
cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N	
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N	
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N	
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N	
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N	
dk yellow spg	sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N	
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N	
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N	
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N	
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N	
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg	
herring			SL nos:	
	silver hake			

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4660

SBNMS Site R3, CONSEC STA 27

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA	FILE 7123
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA	FILE 3993
USGS STA 4661	SBNMS SITE R4	CONSECUTIVE STA 28	QUAD 2	VIDEO CLIP 343	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 14 52 12	DPH, m 56	42 deg 9.078 min (nav file corr 09.0777 min)	-70 deg 16.341 min (nav file corr 16.3456 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 14 53 40	DPH, m	42 deg min (nav file corr 09.0889 min)	-70 deg min (nav file corr 16.3113 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 14 54 54	DPH, m	42 deg 9.099 min (nav file corr 09.0975 min)	42 deg 16.279 min (nav file corr 16.2833 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 18 54 54

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

SAMPLES / DATA COLLECTED

RIGHT 7 LEFT 7

RT 2.3 + LFT 2.3 = 4.6

☒ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

nyp and				SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N		
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N		
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N		
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N		
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N		
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N		
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N		
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N		
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N		
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N		
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		
herring			SL nos:		
	silver hake				

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site R4, CONSEC STA 28

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 7124
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA UP	FILE 7124
				VIDEO FWD	FILE 3995
				LOWER CAMERA LO	FILE 3995
USGS STA 4662	SBNMS SITE R19	CONSECUTIVE STA 29		QUAD 2	VIDEO CLIP 344
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 8.756 min	-70 deg 16.055 min
	<input checked="" type="checkbox"/> WATER COLUMN	150534	57	(nav file corr 08.7550 min)	(nav file corr 16.0579 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg min	-70 deg min
	<input checked="" type="checkbox"/> ON SEABED	150656		(nav file corr 08.7668 min)	(nav file corr 16.0388 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 8.778 min	42 deg 16.009 min
	<input checked="" type="checkbox"/> VIDEO END	150826		(nav file corr 08.7780 min)	(nav file corr 16.0136 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)
UTC = EDT + 4 HRS, EST + 5 HRS		STATION DATE AND TIME, UTC		DDD : HH : MM : SS 235 19 08 26	

<input type="checkbox"/> NO SEDIMENT SAMPLE: <input type="checkbox"/> pre-tripped; <input type="checkbox"/> no smpl attempted; <input type="checkbox"/> jaws partly open; <input type="checkbox"/> washout; <input type="checkbox"/> refusal; <input type="checkbox"/> too gravelly/shelly; <input type="checkbox"/> smpl too small; <input type="checkbox"/> grvl in jaws;					
DPH TO SED SURF IN GRAB, cm		SED VOL IN GRAB, liters		SAMPLES / DATA COLLECTED	
RIGHT 8.5	LEFT 7	RT 1.7	+LFT 2.3 = 4.0	<input checked="" type="checkbox"/> SEDIMENT	<input checked="" type="checkbox"/> GPS NAV FILE
rip sand				<input type="checkbox"/> SAND LANCE	<input checked="" type="checkbox"/> INVERTS
				<input type="checkbox"/> VERT. PLNK. TOW	<input type="checkbox"/> NO INVERTS PRESENT
			WATER SPL		
			SEABED DESCRIPTION		
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N		
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded		
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled		
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N		
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N		
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N		
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N		
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N		
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N		
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N		
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N		
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N		
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N		
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N		
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg		
herring	<input checked="" type="checkbox"/> silver hake		SL nos:		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM
 PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA

USGS STATION 4662
 SBNMS Site R19, CONSEC STA 29

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA <u>VP</u> FILE <u>7125</u>	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA <u>LD</u> FILE <u>3997</u>	
LOCAL TIME: EDT					

USGS STA <u>4663</u>	SBNMS SITE <u>R5</u>	CONSECUTIVE STA <u>30</u>	QUAD <u>2</u>	VIDEO CLIP <u>345</u>
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<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL <u>151806</u>	DPH, m <u>57</u>	42 deg <u>8.885</u> min (nav file corr <u>08.8846</u> min)	-70 deg <u>15.455</u> min (nav file corr <u>15.4614</u> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL <u>151932</u>	DPH, m	42 deg min (nav file corr <u>08.8925</u> min)	-70 deg min (nav file corr <u>15.4264</u> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL <u>152112</u>	DPH, m	42 deg <u>8.901</u> min (nav file corr <u>08.9008</u> min)	42 deg <u>15.382</u> min (nav file corr <u>15.3867</u> min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 19 21 12

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 11, LEFT 10.5RT 0.8 + LFT 1.0 = 1.8

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

<u>rip sand</u>			SEABED DESCRIPTION	
att epifauna	herring eggs	skate	storm sand ripples	<input type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
bushy bry/hyd	moon snail		gvl in ripple troughs	<input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled	<input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel	<input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement	<input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders	<input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud	<input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags	<input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks	<input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column	<input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate	<input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample	<input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg	
herring			SL nos:	
	silver hake			

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4663SBNMS Site R5CONSEC STA 30

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 7126
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	FILE 3998
USGS STA 4664		SBNMS SITE R6	CONSECUTIVE STA 31	QUAD 2	VIDEO CLIP 346
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 153132	DPH, m 63	42 deg 9.105 min (nav file corr 09.1049 min)	-70 deg 14.505 min (nav file corr 14.5116 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 153256	DPH, m	42 deg min (nav file corr 09.1159 min)	-70 deg min (nav file corr 14.4698 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 153426	DPH, m	42 deg 9.122 min (nav file corr 09.1218 min)	42 deg 14.424 min (nav file corr 14.4305 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTCDDD : HH : MM : SS
235 19 34 26

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 11 LEFT 9SED VOL IN GRAB, liters
RT 0.8 + LFT 1.5 = 2.3

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	✓ silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

SBNMS Site

USGS STATION

CONSEC STA

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	UP 7127
				VIDEO FWD	FILE
				LOWER CAMERA	LO 3999
USGS STA	4665	SBNMS SITE	R20	CONSECUTIVE STA	32
QUAD	2	VIDEO CLIP	347		
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	min
	<input checked="" type="checkbox"/> WATER COLUMN	154350	52	(nav file corr 09.608)	(min) -70 deg 14.074 min
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg	min
	<input checked="" type="checkbox"/> ON SEABED	154526		(nav file corr 09.6201)	(min) -70 deg 14.0354 min
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg	min
	<input type="checkbox"/> SMPL ATTEMPT			(nav file corr)	(min) 42 deg min
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg	min
	<input checked="" type="checkbox"/> VIDEO END	154658		(nav file corr 09.633)	(min) 42 deg 13.995 min
	<input checked="" type="checkbox"/> OFF SEABED			(nav file corr 09.6321)	(min) (nav file corr 14.0008 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg	min
				(nav file corr)	(min) 42 deg min

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 19 46 58

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm	SED VOL IN GRAB, liters	SAMPLES / DATA COLLECTED
RIGHT 10.5 LEFT 9.5	RT 1.0 + LFT 1.3 = 2.3	
<input checked="" type="checkbox"/> SEDIMENT <input type="checkbox"/> CTD UPCAST <input type="checkbox"/> GPS NAV FILE <input type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input type="checkbox"/> GRAB STILL <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL		

np end

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
Boltonia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring	<input checked="" type="checkbox"/> silver hake		SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS

DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

CONSEC STA

4665

R20

32

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA 00	7128
				VIDEO FWD	FILE
				LOWER CAMERA LD	4000
USGS STA 4666	SBNMS SITE R21	CONSECUTIVE STA 33	QUAD 2	VIDEO CLIP 348	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 9.652 min	-70 deg 14.708 min
	<input checked="" type="checkbox"/> WATER COLUMN	155854	51	(nav file corr 09.6512 min)	(nav file corr 14.7118 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg min	-70 deg min
	<input checked="" type="checkbox"/> ON SEABED	160006		(nav file corr 09.6594 min)	(nav file corr 14.6874 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 9.675 min	42 deg 14.642 min
	<input checked="" type="checkbox"/> VIDEO END	160200		(nav file corr 09.6736 min)	(nav file corr 14.6474 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 20 02 00

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 9 LEFT 8

RT 1.5 + LFT 1.9 = 3.4

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☐ OTD UPCAST ☐ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

rip sand			SEABED DESCRIPTION	
att epifauna	herring eggs	<input checked="" type="checkbox"/> skate	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N	
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N	
<input checked="" type="checkbox"/> cancer crab	mussels	tunicate, B pilu.	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
ceri burr anem	<input checked="" type="checkbox"/> ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N	
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N	
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N	
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N	
cunner	<input checked="" type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N	
dk yellow spg	sand dollars		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N	
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N	
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N	
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N	
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg	
herring			SL nos:	
	silver hake			

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

CONSEC STA

4666

R21

33

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA	FILE 7129
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA	FILE 4001
USGS STA 4667	SBNMS SITE R11	CONSECUTIVE STA 34	QUAD 2	VIDEO CLIP 349	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 161832	DPH, m 46	42 deg 9.332 min (nav file corr 09.3320 min)	-70 deg 15.915 min (nav file corr 15.912 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 162002	DPH, m	42 deg min (nav file corr 09.3382 min)	-70 deg min (nav file corr 15.8887 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 162132	DPH, m	42 deg 9.347 min (nav file corr 09.3465 min)	42 deg 15.853 min (nav file corr 15.8592 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 20 21 32

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 10, LEFT 10

RT 1.2 + LFT 1.2 = 2.4

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☐ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna		herring eggs	<input checked="" type="checkbox"/> skate	SEABED DESCRIPTION	
Boltonia tunic.	lobster	Suberites spg		storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N	
brachiopod	monkfish	squid		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded	
bushy bry/hyd	moon snail			<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled	
cancer crab	mussels	tunicate, B pilu.		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N	
ceri burr anem	ocean pout	yellow encr. spg		small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
cod; cod juvenile				sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N	
ctenophores	Polymastia spg			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N	
coralline algae	red encr. spg			gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N	
cunner	red hake			boulders <input type="checkbox"/> Y, <input type="checkbox"/> N	
dk yellow spg	sand dollars			mud <input type="checkbox"/> Y, <input type="checkbox"/> N	
Didemnum cols		shells/fragments		trawled/dredged shell frags <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N	
dogfish				trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N	
finger spg	scallops			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N	
flounder	sculpin			sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N	
haddock	sea stars			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N	
herring	<input checked="" type="checkbox"/> silver hake			SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input checked="" type="checkbox"/> lg	
				SL nos:	

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

SBNMS Site

USGS STATION

CONSEC STA

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA	FILE 7130
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER CAMERA	FILE 4002
USGS STA 4668	SBNMS SITE 528	CONSECUTIVE STA 35	QUAD 2	VIDEO CLIP 350	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 164146	DPH, m 21	42 deg 9.923 min (nav file corr 09.9221 min)	-70 deg 17.481 min (nav file corr 17.4876 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 164222	DPH, m	42 deg min (nav file corr 09.9262 min)	-70 deg min (nav file corr 17.4723 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 164302	DPH, m	42 deg 9.934 min (nav file corr 09.9329 min)	42 deg 17.451 min (nav file corr 17.4561 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
UTC = EDT + 4 HRS, EST + 5 HRS		STATION DATE AND TIME, UTC		DDD : HH : MM : SS 235 20 43 02	

<input type="checkbox"/> NO SEDIMENT SAMPLE: <input type="checkbox"/> pre-tripped; <input type="checkbox"/> no smpl attempted; <input type="checkbox"/> jaws partly open; <input type="checkbox"/> washout; <input type="checkbox"/> refusal; <input type="checkbox"/> too gravelly/shelly; <input type="checkbox"/> smpl too small; <input type="checkbox"/> grvl in jaws;	
DPH TO SED SURF IN GRAB, cm RIGHT 2, LEFT 2.5	SED VOL IN GRAB, liters RT 4.5 + LFT 4.2 = 8.7
SAMPLES / DATA COLLECTED <input checked="" type="checkbox"/> SEDIMENT <input checked="" type="checkbox"/> CTD UPCAST <input checked="" type="checkbox"/> GPS NAV FILE <input checked="" type="checkbox"/> SAND LANCE <input checked="" type="checkbox"/> INVERTS <input checked="" type="checkbox"/> GRAB STILLs <input type="checkbox"/> VERT. PLNK. TOW <input type="checkbox"/> NO INVERTS PRESENT <input type="checkbox"/> WATER SPL	

att epifauna Boltenia tunic. brachiopod bushy bry/hyd cancer crab ceri burr anem cod; cod juvenile ctenophores coralline algae cunner dk yellow spg Didemnum cols dogfish finger spg flounder haddock herring			herring eggs lobster monkfish moon snail mussels ocean pout Polymastia spg red encr. spg red hake <input checked="" type="checkbox"/> sand dollars scallops sculpin sea stars silver hake			skate Suberites spg squid tunicate, B pilu. yellow encr. spg shells/fragments			SEABED DESCRIPTION storm sand ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N crests: <input type="checkbox"/> sharp <input checked="" type="checkbox"/> rounded <input type="checkbox"/> straight <input type="checkbox"/> multi-rippled gvl in ripple troughs <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N small ripples <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N boulders <input type="checkbox"/> Y, <input type="checkbox"/> N mud <input type="checkbox"/> Y, <input type="checkbox"/> N trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N sand lance in water column <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N sand lance on/in substrate <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N sand lance in sed sample <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg SL nos: 11 to A. Roback		
---	--	--	--	--	--	--	--	--	---	--	--

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM
 PAGE VALENTINE, USGS COASTAL AND MARINE GEOLOGY PROGRAM, WOODS HOLE, MA

USGS STATION 4668
 SBNMS Site 528, CONSEC STA 35

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA UP FILE 7131	
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA LO FILE 4003	
LOCAL TIME: EDT					
USGS STA 4669	SBNMS SITE 527	CONSECUTIVE STA 36	QUAD 2	VIDEO CLIP 351	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 165608	DPH, m 20	42 deg 9.611 min (nav file corr 09.6107 min)	-70 deg 18.303 min (nav file corr 18.3052 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 165652	DPH, m 1	42 deg min (nav file corr 09.6128 min)	-70 deg min (nav file corr 18.2930 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 165804	DPH, m	42 deg 9.616 min (nav file corr 09.6151 min)	42 deg 18.270 min (nav file corr 18.2728 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTCDDD : HH : MM : SS
235 20 58 04

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm
RIGHT 3 LEFT 2SED VOL IN GRAB, liters
RT 4.0 + LFT 4.5 = 9.5

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☐ CTD UPCAST ☐ GPS NAV FILE
☒ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

1-cgs w/ sand lance

			SEABED DESCRIPTION
alt epifauna	herring eggs	skate	storm sand ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input checked="" type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	<input checked="" type="checkbox"/> sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
<input checked="" type="checkbox"/> flounder 3 windows in 1st panel	sculpin		sand lance in sed sample <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
haddock scoured	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring put			SL nos: 10A, R. 5 Buck 6
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION 4669
 SBNMS Site 527, CONSEC STA 36

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 7132
LOCAL TIME: EDT		AUG 23	235	UPPER CAMERA	
				VIDEO FWD	FILE 4004
				LOWER CAMERA	
USGS STA 4670	SBNMS SITE 529	CONSECUTIVE STA 37	QUAD 2	VIDEO CLIP 352	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg 11.416 min	-70 deg 17.772 min
	<input checked="" type="checkbox"/> WATER COLUMN	171430	26	(nav file corr 11.4152 min)	(nav file corr 17.7754 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START	HH MM SS LOCAL	DPH, m	42 deg min	-70 deg min
	<input checked="" type="checkbox"/> ON SEABED	171518		(nav file corr 11.4214 min)	(nav file corr 17.7635 min)
	<input type="checkbox"/> SMPL ATTEMPT				
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 11.425 min	42 deg 17.755 min
		171542		(nav file corr 11.4246 min)	(nav file corr 17.7571 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg 11.437 min	42 deg 17.735 min
	<input checked="" type="checkbox"/> VIDEO END	171602		(nav file corr 11.4269 min)	(nav file corr 17.7533 min)
	<input checked="" type="checkbox"/> OFF SEABED				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
				(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 21 15 42

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 2, LEFT 2.5

RT 4.5 + LFT 4.2 = 8.7

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☒ INVERTS ☒ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
att epifauna	herring eggs	skate	storm sand ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
Boltenia tunic.	lobster	Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
brachiopod	monkfish	squid	<input type="checkbox"/> straight <input checked="" type="checkbox"/> multi-rippled
bushy bry/hyd	moon snail		gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cancer crab	mussels	tunicate, B pilu.	small ripples ? <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ceri burr anem	ocean pout	yellow encr. spg	sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	<input checked="" type="checkbox"/> sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
herring			SL nos:
	silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

4670

SBNMS Site 529, CONSEC STA 37

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	UP FILE 7133
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD	LO FILE 4005
USGS STA 4671		SBNMS SITE 523	CONSECUTIVE STA 38	QUAD 2	VIDEO CLIP 353
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 172752	DPH, m 29	42 deg 11.668 min (nav file corr 11.6686 min)	-70 deg 18.733 min (nav file corr 18.7344 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 172840	DPH, m	42 deg min (nav file corr 11.6667 min)	-70 deg min (nav file corr 18.7275 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 173232	DPH, m	42 deg 11.694 min (nav file corr 11.6928 min)	42 deg 18.691 min (nav file corr 18.6932 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 21 32 32

☒ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☒ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT / LEFT

RT / +LFT =

r-cgs / p-cg

SAMPLES / DATA COLLECTED

☐ SEDIMENT ☒ CTD UPCAST ☒ GPS NAV FILE
☐ SAND LANCE ☐ INVERTS ☐ GRAB STILL
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

			SEABED DESCRIPTION
<input type="checkbox"/> att epifauna	<input type="checkbox"/> herring eggs	<input type="checkbox"/> skate	storm sand ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Boltenia tunic.	<input type="checkbox"/> lobster	<input type="checkbox"/> Suberites spg	crests: <input type="checkbox"/> sharp <input checked="" type="checkbox"/> rounded
<input type="checkbox"/> brachiopod	<input type="checkbox"/> monkfish	<input type="checkbox"/> squid	<input type="checkbox"/> straight <input checked="" type="checkbox"/> multi-rippled
<input type="checkbox"/> bushy bry/hyd	<input type="checkbox"/> moon snail	<input type="checkbox"/> tunicate, B pilu.	gvl in ripple troughs <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	<input type="checkbox"/> mussels	<input type="checkbox"/> yellow encr. spg	small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ceri burr anem	<input type="checkbox"/> ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cod; cod juvenile			sand partial veneer on gravel <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ctenophores	<input type="checkbox"/> Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> coralline algae	<input type="checkbox"/> red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cunner	<input type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dk yellow spg	<input type="checkbox"/> sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Didemnum cols		<input type="checkbox"/> shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> finger spg	<input type="checkbox"/> scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> flounder	<input checked="" type="checkbox"/> sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> haddock	<input type="checkbox"/> sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
<input type="checkbox"/> herring			SL nos:
	<input type="checkbox"/> silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

CONSEC STA

4671

523

38

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input checked="" type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD	FILE 7134
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD	FILE 4006
USGS STA 4672		SBNMS SITE 524	CONSECUTIVE STA 39	QUAD 2	VIDEO CLIP 354
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 173952	DPH, m 29	42 deg 11.622 min (nav file corr 11.6211 min)	-70 deg 18.927 min (nav file corr 18.9292 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 174050	DPH, m	42 deg min (nav file corr 11.6289 min)	-70 deg min (nav file corr 18.9183 min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL 174132	DPH, m	42 deg 11.632 min (nav file corr 11.6318 min)	42 deg 18.907 min (nav file corr 18.9093 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 174532	DPH, m	42 deg 11.644 min (nav file corr 11.6438 min)	42 deg 18.856 min (nav file corr 18.8580 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND
TIME, UTCDDD : HH : MM : SS
235 21 41 32

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws; *V. Smpl / Smpl rock in jaws*

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT 12.5 LEFT 13

RT 0.4 + LFT 0.3 = 0.7

SAMPLES / DATA COLLECTED

☒ SEDIMENT ☒ CTD UPGRADE ☒ GPS NAV FILE
☐ SAND LANCE ☐ INVERTS ☒ GRAB STILLs
☐ VERT. PLNK. TOW ☒ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltonia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input checked="" type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input checked="" type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input checked="" type="checkbox"/> Y, <input checked="" type="checkbox"/> N
cod; cod juvenile			small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
ctenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M, MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

USGS STATION

SBNMS Site

CONSEC STA

4672

524

39

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL	JD LOCAL	<input type="checkbox"/> DAY	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		AUG 23	235	<input type="checkbox"/> NIGHT	
MONTH YEAR: AUGUST 2017		DAY OF MONTH UTC	JD UTC	VIDEO FWD UPPER CAMERA UP FILE 7135	
LOCAL TIME: EDT		AUG 23	235	VIDEO FWD LOWER-CAMERA LD FILE 4007	
USGS STA 4673	SBNMS SITE 525	CONSECUTIVE STA 40	QUAD 2	VIDEO CLIP 355	
<input type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> WATER COLUMN	HH MM SS LOCAL 175332	DPH, m 30	42 deg 11.548 min (nav file corr 11.5478 min)	-70 deg 19.137 min (nav file corr 19.1389 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START <input checked="" type="checkbox"/> ON SEABED <input type="checkbox"/> SMPL ATTEMPT	HH MM SS LOCAL 175438	DPH, m	42 deg min (nav file corr 11.5501 min)	-70 deg min (nav file corr 19.1276 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE ATTEMPT	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)
<input checked="" type="checkbox"/> STA LOC	<input checked="" type="checkbox"/> SMPL ATTEMPT <input checked="" type="checkbox"/> VIDEO END <input checked="" type="checkbox"/> OFF SEABED	HH MM SS LOCAL 180002	DPH, m	42 deg 11.546 min (nav file corr 11.5460 min)	42 deg 19.063 min (nav file corr 19.0643 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO END	HH MM SS LOCAL	DPH, m	42 deg min (nav file corr min)	42 deg min (nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 22 00 02

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm RIGHT 9 LEFT 8.5	SED VOL IN GRAB, liters RT 1.5 + LFT 1.7 = 3.2	SAMPLES / DATA COLLECTED	
reg5/pc G sample is cgs veneer on gvl		<input checked="" type="checkbox"/> SEDIMENT	<input checked="" type="checkbox"/> CTD UPCAST
		<input type="checkbox"/> SAND LANCE	<input checked="" type="checkbox"/> GPS NAV FILE
		<input type="checkbox"/> VERT. PLNK. TOW	<input checked="" type="checkbox"/> GRAB STILL
		<input type="checkbox"/> NO INVERTS PRESENT	<input type="checkbox"/> WATER SPL

			SEABED DESCRIPTION
<input type="checkbox"/> aft epifauna	<input type="checkbox"/> herring eggs	<input type="checkbox"/> skate	storm sand ripples <input type="checkbox"/> Y, <input checked="" type="checkbox"/> N
<input type="checkbox"/> Botenia tunic.	<input type="checkbox"/> lobster	<input type="checkbox"/> Suberites spg	crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
<input type="checkbox"/> brachiopod	<input type="checkbox"/> monkfish	<input type="checkbox"/> squid	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
<input type="checkbox"/> bushy bry/hyd	<input type="checkbox"/> moon snail	<input type="checkbox"/> tunicate, B pilu.	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
<input checked="" type="checkbox"/> cancer crab	<input type="checkbox"/> mussels	<input type="checkbox"/> yellow encr. spg	small ripples <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ceri burr anem	<input type="checkbox"/> ocean pout		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cod; cod juvenile			sand partial veneer on gravel <input checked="" type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> ctenophores	<input type="checkbox"/> Polymastia spg		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> coralline algae	<input type="checkbox"/> red encr. spg		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> cunner	<input type="checkbox"/> red hake		mud <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dk yellow spg	<input type="checkbox"/> sand dollars		trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> Didemnum cols		<input type="checkbox"/> shells/fragments	trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> dogfish			sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> finger spg	<input type="checkbox"/> scallops		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> flounder	<input checked="" type="checkbox"/> sculpin		sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
<input type="checkbox"/> haddock	<input type="checkbox"/> sea stars		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
<input type="checkbox"/> herring			SL nos:
	<input type="checkbox"/> silver hake		

AREA OF VAN VEEN GRAB = 0.1 SQ M; MAX DEPTH = 15 CM; VOLUME = 10.8 LITERS
 DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

SBNMS Site

USGS STATION

4673
525, CONSEC STA 40

CRUISE: USGS AUK2017043		DAY OF MONTH LOCAL AUG 23	JD LOCAL 235	<input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT	Sunset: Aug 22, 2017 1934 EDT = 2334 UTC
LOCATION: STELLWAGEN BANK NMS		DAY OF MONTH UTC AUG 23	JD UTC 235	VIDEO FWD UPPER CAMERA	FILE _____
MONTH YEAR: AUGUST 2017				VIDEO FWD LOWER CAMERA	FILE _____
LOCAL TIME: EDT					
USGS STA 4674 PT		SBNMS SITE		CONSECUTIVE STA 41	QUAD 2
VIDEO CLIP					
<input checked="" type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START stop plank tow	HH MM SS LOCAL 181320	DPH, m 37	42 deg 11.283 min (nav file corr 11.2843 min)	-70 deg 20.161 min (nav file corr 20.1385 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> VIDEO START ON SEABED	HH MM SS LOCAL 182052	DPH, m 41	42 deg 11.262 min (nav file corr 11.2617 min)	-70 deg 21.008 min (nav file corr 20.9844 min)
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SMPL ATTEMPT				
<input type="checkbox"/> STA LOC	<input type="checkbox"/> SAMPLE	HH MM SS LOCAL	DPH, m	42 deg min	42 deg min
<p>The time and location of a plankton tow were recorded in the log book as a courtesy to a non-USGS scientist sharing the cruise. No data (e.g. video, CTD, sediment sample) collected for USGS science purposes at this station.</p>				(nav file corr min)	(nav file corr min)
		42 deg min	42 deg min		
		(nav file corr min)	(nav file corr min)		
		42 deg min	42 deg min	(nav file corr min)	(nav file corr min)

UTC = EDT + 4 HRS, EST + 5 HRS

STATION DATE AND TIME, UTC

DDD : HH : MM : SS
235 22 13 20

☐ NO SEDIMENT SAMPLE: ☐ pre-tripped; ☐ no smpl attempted; ☐ jaws partly open; ☐ washout; ☐ refusal;
☐ too gravelly/shelly; ☐ smpl too small; ☐ grvl in jaws;

DPH TO SED SURF IN GRAB, cm

SED VOL IN GRAB, liters

RIGHT ☒

LEFT ☒

RT ☒

+LFT ☒

= ☒

horiz plank tow 30 cm diam
surface tow A. Roebuck

SAMPLES / DATA COLLECTED

☐ SEDIMENT ☐ CTD UPCAST ☐ GPS NAV FILE
☐ SAND LANCE ☐ INVERTS ☐ GRAB STILLs
☐ VERT. PLNK. TOW ☐ NO INVERTS PRESENT ☐ WATER SPL

att epifauna	herring eggs	skate	SEABED DESCRIPTION
Boltenia tunic.	lobster	Suberites spg	
brachiopod	monkfish	squid	storm sand ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
bushy bry/hyd	moon snail		crests: <input type="checkbox"/> sharp <input type="checkbox"/> rounded
cancer crab	mussels	tunicate, B pilu.	<input type="checkbox"/> straight <input type="checkbox"/> multi-rippled
ceri burr anem	ocean pout	yellow encr. spg	gvl in ripple troughs <input type="checkbox"/> Y, <input type="checkbox"/> N
cod; cod juvenile			small ripples <input type="checkbox"/> Y, <input type="checkbox"/> N
clenophores	Polymastia spg		sand, unrippled <input type="checkbox"/> Y, <input type="checkbox"/> N
coralline algae	red encr. spg		sand partial veneer on gravel <input type="checkbox"/> Y, <input type="checkbox"/> N
cunner	red hake		gravel pavement <input type="checkbox"/> Y, <input type="checkbox"/> N
dk yellow spg	sand dollars		boulders <input type="checkbox"/> Y, <input type="checkbox"/> N
Didemnum cols		shells/fragments	mud <input type="checkbox"/> Y, <input type="checkbox"/> N
dogfish			trawled/dredged shell frags <input type="checkbox"/> Y, <input type="checkbox"/> N
finger spg	scallops		trawl/dredge marks <input type="checkbox"/> Y, <input type="checkbox"/> N
flounder	sculpin		sand lance in water column <input type="checkbox"/> Y, <input type="checkbox"/> N
haddock	sea stars		sand lance on/in substrate <input type="checkbox"/> Y, <input type="checkbox"/> N
herring			sand lance in sed sample <input type="checkbox"/> Y, <input type="checkbox"/> N
	silver hake		SL size: <input type="checkbox"/> sml <input type="checkbox"/> med <input type="checkbox"/> lg
			SL nos:

AREA OF VAN VEEN GRAB = 0.1 SQ M. MAX DEPTH = 15 CM, VOLUME = 10.8 LITERS
DISTANCE BETWEEN PARALLEL LASERS = 20 CM

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

SBNMS Site

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CONSEC STA

41