

Meddelanden från Stockholms universitets
institution för geologiska vetenskaper No 383



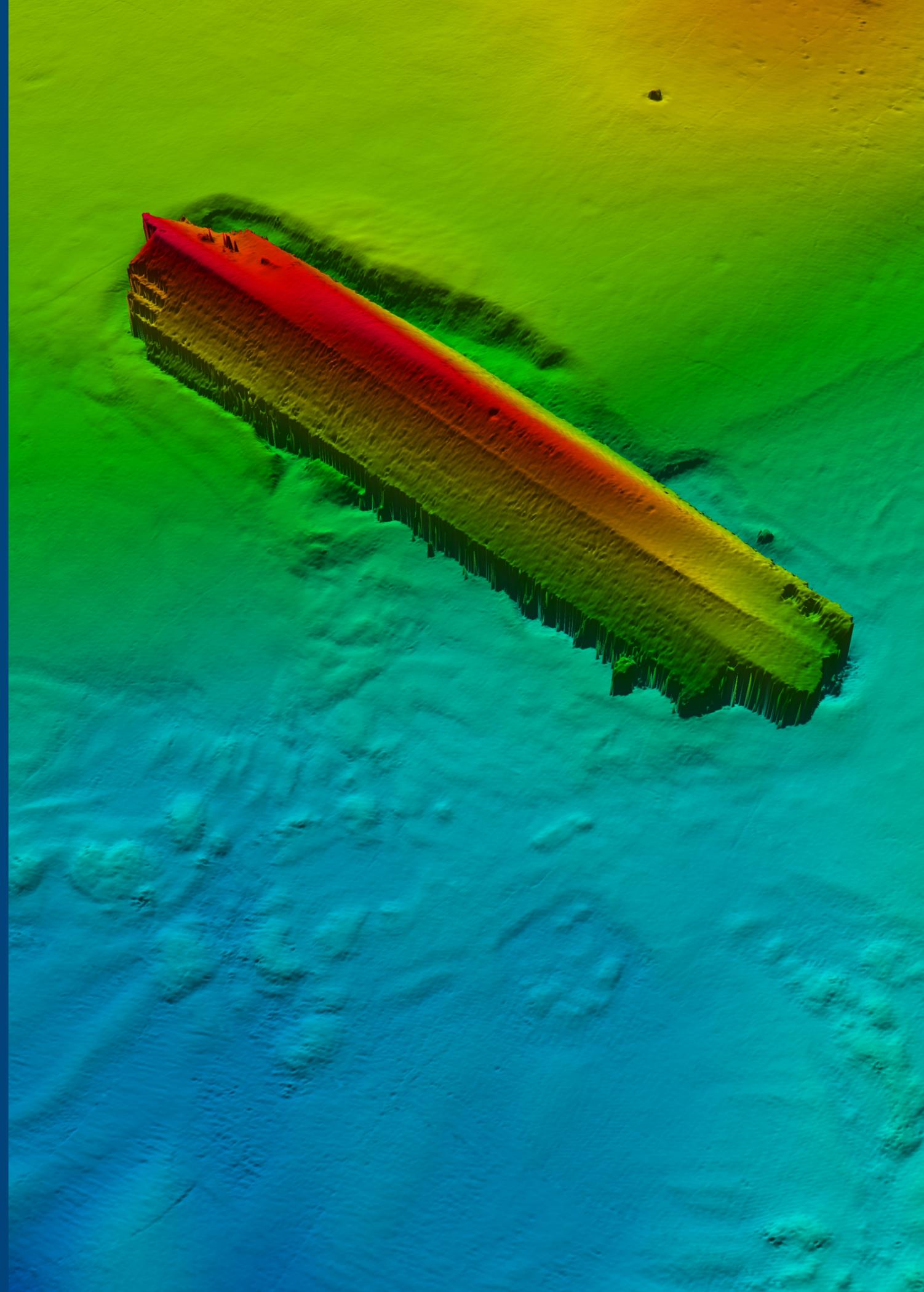
EL21-Estonia

Report of the MS *Estonia* shipwreck site survey with RV *Electra*

Appendix 7: Sediment coring

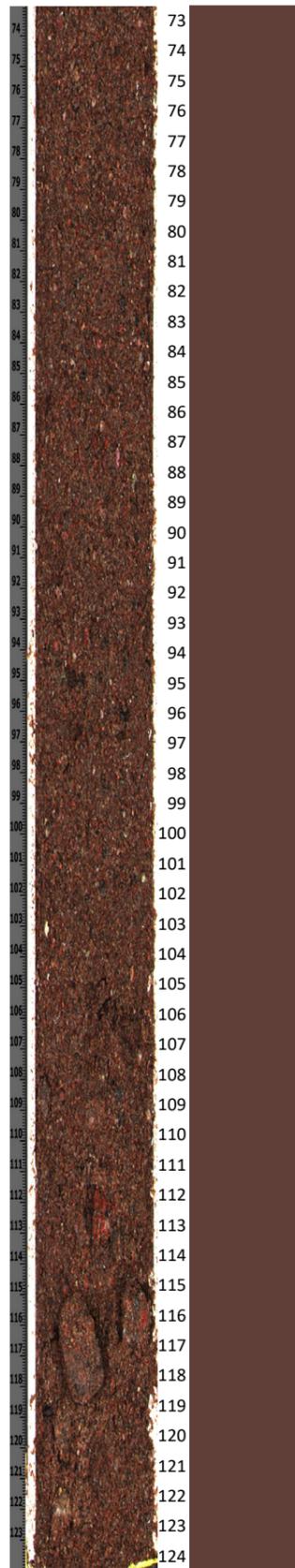
Martin Jakobsson, Christian Stranne, Rickard Fornander, Matt O'Regan, Anton Wagner
and the *EL21-Estonia* Shipboard Party

Stockholm 2021



Core description date 2021-08-24 **Observer** Martin Jakobsson
Core EL21-Estonia-PC01 **Core length (total, cm)** 205
Sections 2 **Position (Lat, Lon)** 59.3822711 21.67999556
Water depth 72

Section 1					Section 2						
Section length 81					Section 2 124						
Section	Core depth (cm)	Color (RGB)	Color (munsell)	Lithology	Comments	Section	Core depth (cm)	Color (RGB)	Color (munsell)	Lithology	Comments
	0		10R 3/3	Medium-coarse sand	Upper 7 cm is slightly		0		10R 3/3	Coarse sand	Lithology continues from
	1		(Dusky red)		finer than the rest and		1		(Dusky red)		section 1.
	2				has a higher water content.		2				
	3						3				
	4						4				
	5						5				
	6						6				
	7						7				
	8			Coarse sand	Well sorted sand		8				
	9				throughout the		9				
	10				rest of the section		10				
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	72						72				

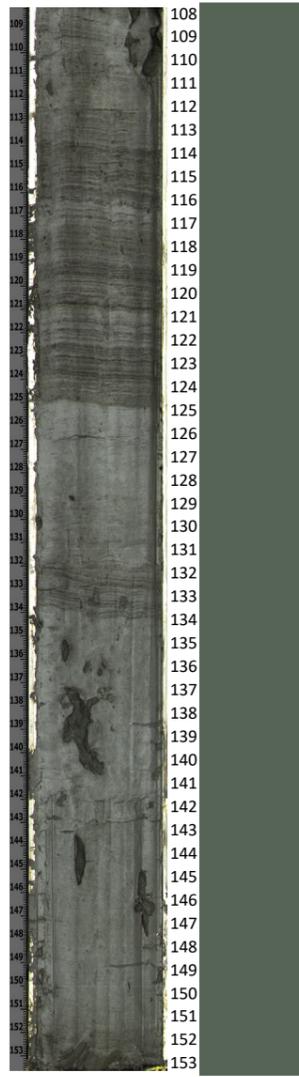
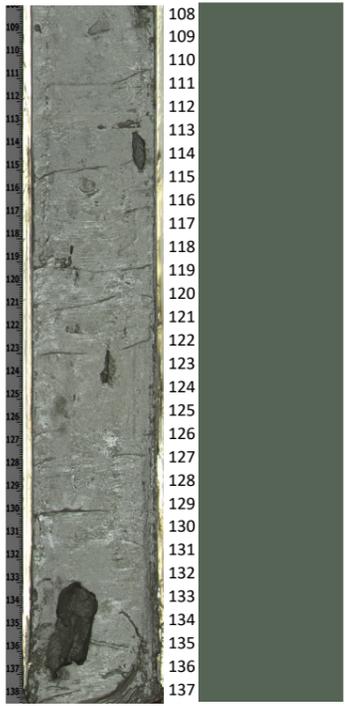


Coarse sand Pepples 1-5 cm
with pepples occur in the bottom
20 cm of the core.

Core description date 2021-08-25
 Core EL21-Estonia-PC02
 Sections 4
 Water depth 82

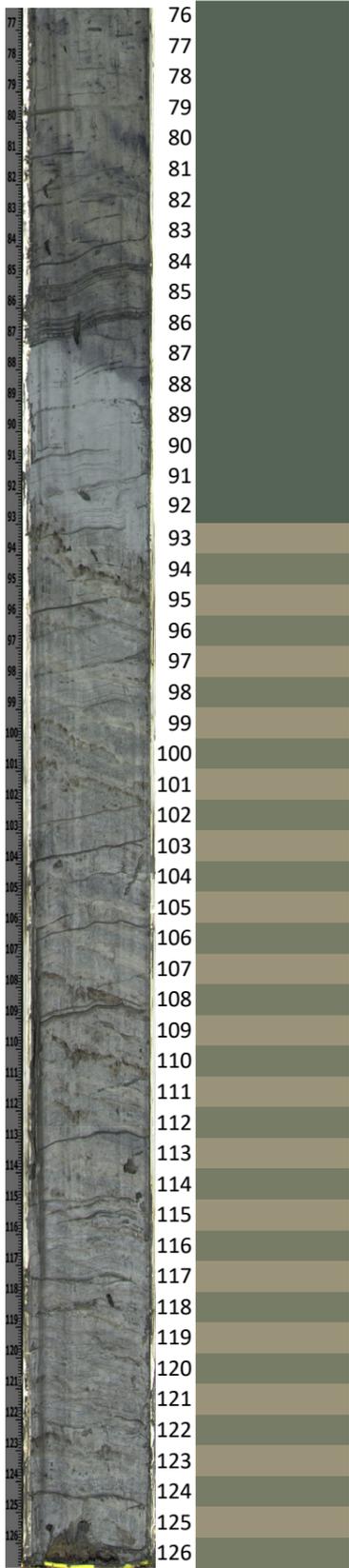
Observer Martin Jakobsson
 Core length (total) 547.5 (472 when water gap removed)
 Position (Lat, Lon) 59.379724 21.67611778

Section 1 Section length 137.5					Section 2 Section length 153				
Section Core depth (cm)	Color (RGB)	Color (munsell)	Lithology	Comments	Section Core depth (cm)	Color (RGB)	Color (munsell)	Lithology	Comments
0		Gley1 4/10GY	Fine gyttja clay	Fine gyttja clay or clay gyttja (likely the first)	0				Upper 25 cm cut
1		(Dark greenish gray)		Upper 23 cm with very dark greenish gray	1				for geotechnical
2		Bands:		laminations.	2				measurements
3		Gley1 3/10Y			3				Cut for geo-
4		((Dark greenish gray)			4				technical
5					5				measurements
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25			Fine gyttja clay	From 23 cm, not much visible laminations, apart from around 60 cm and some more faint laminations at other intervals	25			Gley1 4/10GY	Fine gyttja Dark greenish gray fine gyttja clay
26					26			(Dark greenish gray)	with very dark greenish gray mm-scale
27					27			Bands:	laminations.
28					28			Gley1 3/10Y	
29					29			(Greenish black)	
30					30				
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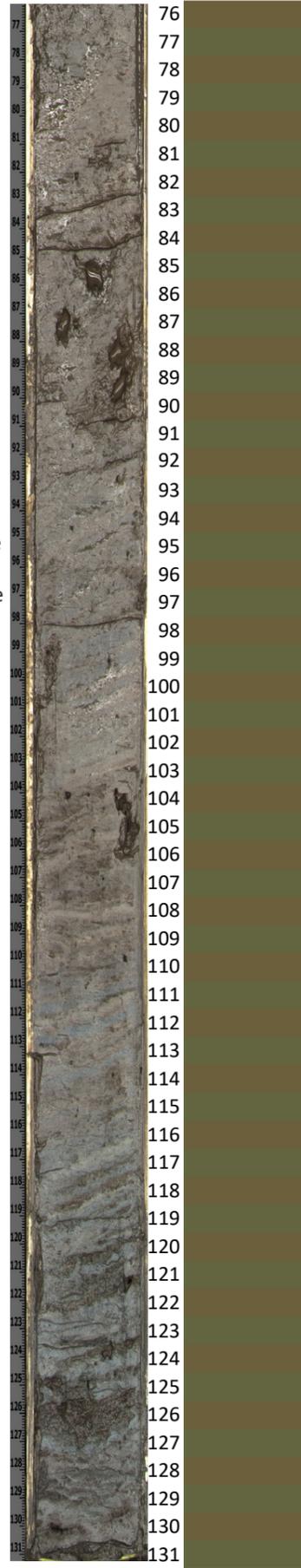


Fine gyttja From 124 there are no laminations
apart from between 132 and 135 cm.

Section 3 126					Section 4 126				
Core depth	Color (RGB)	Color (munsell)	Lithology	Comments	Core depth	Color (RGB)	Color (munsell)	Lithology	Comments
0		Gley1 4/10GY	Fine clay	Dark gyttja clay, homogenous to 14 cm.	0				Water gap, disturbed
1		(Dark greenish gray)			1				
2					2				
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15				From 14 cm, very dark greenish laminations.	15				
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68				Transition into a unit with no laminations, but with sulfide	68				
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74					74				
75					75				



Silty clay Transition into a siltier clay with 0.5 cm thick varves, color changes to 5Y 6/2 for the lighter parts of the varves the clay and the darker has has the color gley 1 5/N.
 5Y 6/2 (Light olive gray)
 gley 1 5/N (Gray)



Silty clay with sandy layers Varved clay with thick varves towards the bottom, som sandy
 Colors between Gley 1 4/10G anc 5Y 4/3
 Gley 1 4/10G (Dark greenish gray)
 5Y 4/3 (Olive)

Core description date 2021-08-24 **Observer** Martin Jakobsson
Core EL21-Estonia-PC03 **Core length (total, cm)** 234
Sections 2 **Position (Lat, Lon)** 59.38225 21.68233
Water depth 77

Section	1 Section length	90	Section	2 Section length	144	
Core depth (cm)	Color (RGB)	Color (munsell) Lithology	Comments	Core depth (cm)	Color (RGB) Color (munsell) Lithology	Comments
0		10R 3/3 Coarse sand	Well sorted sand. Same composition as in PC01.	0	10YR 5/2 Clay	Continued from section 1
1				1		
2		The core image has not captured the slight reddish taint to the sand, however this unit is less red than PC01.		2		
3				3		
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55			Contact to unit below is sharp but not straight. Sulfide staining visible in contact.	55		
56				56		
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59				59		
60		10YR 5/1 Clay	Likely glacial clay, disturbed varves can be seen with different color (Grayish brown: 10 YR 5/2). The bottom contact is horizontal.	60		
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74		10R 3/3 Coarse sand	Same lithology as the top unit	74		
75				75		
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86		10YR 5/2 Clay	Clay similar to the clay-unit further up-core, but more disturbed, no visible varves.	86		
87				87		
88				88		
89				89		
90				90		
91				91		
92				92		
93				93		

